

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

Form 20-F

(Mark One)

- REGISTRATION STATEMENT PURSUANT TO SECTION 12(b) OR (g) OF THE SECURITIES EXCHANGE ACT OF 1934
- or
- ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
for the fiscal year ended December 31, 2018
- or
- TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
for the transition period from _____ to _____
- or
- SHELL COMPANY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
Date of event requiring this shell company report _____
Commission file number 1-16055

PEARSON PLC

(Exact name of Registrant as specified in its charter)

England and Wales

(Jurisdiction of incorporation or organization)

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Securities registered or to be registered pursuant to Section 12(b) of the Act:

Title of Class	Name of Each Exchange on Which Registered
*Ordinary Shares, 25p par value	New York Stock Exchange
American Depositary Shares, each Representing One Ordinary Share, 25p per Ordinary Share	New York Stock Exchange

* Not for trading, but only in connection with the registration of American Depositary Shares, pursuant to the requirements of the SEC.

Securities registered or to be registered pursuant to Section 12(g) of the Act:

None

Securities for which there is a reporting obligation pursuant to Section 15(d) of the Act:

None

Indicate the number of outstanding shares of each of the issuer's classes of capital or common stock at the close of the period covered by the annual report:

Ordinary Shares, 25p par value 781,078,167

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No

If this report is an annual or transition report, indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934. Yes No

Note — Checking the box above will not relieve any registrant required to file reports pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 from their obligations under those Sections.

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports) and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or an emerging growth company. See definition of "accelerated filer", "large accelerated filer" and "emerging growth company", in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Emerging growth company

If an emerging growth company that prepares its financial statements in accordance with US GAAP, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

Indicate by check mark which basis of accounting the registrant has used to prepare the financial statements included in this filing

US GAAP International financial Reporting Standards as Issued by the International Accounting Standards Board Other

If "Other" has been checked in response to the previous question, indicate by check mark which financial statement item the Registrant has elected to follow: Item 17 Item 18

If this is an annual report, indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act): Yes No

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INTRODUCTION

In this Annual Report on Form 20-F (the “Annual Report”) references to “Pearson”, the “Company” or the “Group” are references to Pearson plc, its predecessors and its consolidated subsidiaries, except as the context otherwise requires. “Ordinary Shares” refer to the ordinary share capital of Pearson of par value 25p each. “ADSs” refer to American Depositary Shares which are Ordinary Shares deposited pursuant to the Second Amended and Restated Deposit Agreement dated August 15, 2014, amended and restated as of August 8, 2000 among Pearson, The Bank of New York Mellon as depositary (the “Depositary”) and owners and holders of ADSs (the “Deposit Agreement”). ADSs are represented by American Depositary Receipts (“ADRs”) delivered by the Depositary under the terms of the Deposit Agreement.

The Group has prepared the financial information contained in this Annual Report in accordance with International Financial Reporting Standards (“IFRS”) and IFRS Interpretations Committee (“IFRS IC”) interpretations as issued by the International Accounting Standards Board (“IASB”) and in conformity with International Financial Reporting Standards as adopted by the European Union (“EU”). Unless otherwise indicated, any reference in this Annual Report to consolidated financial statements is to the consolidated financial statements and the related notes, included elsewhere in this Annual Report.

The Group publishes its consolidated financial statements in sterling. The Group has included, however, references to other currencies. In this Annual Report:

- references to “sterling”, “pounds”, “pence” or “£” are to the lawful currency of the United Kingdom,
- references to “euro” or “€” are to the euro, the lawful currency of the participating Member States in the Third Stage of the European Economic and Monetary Union of the Treaty Establishing the European Commission, and
- references to “US dollars”, “dollars”, “cents” or “\$” are to the lawful currency of the United States.

For convenience and except where specified otherwise, the Group has translated some sterling figures into US dollars at the rate of £1.00 = \$1.28, the noon buying rate in The City of New York for cable transfers and foreign currencies as certified by the Federal Reserve Bank of New York for customs purposes on December 31, 2018. The Group does not make any representation that the amounts of sterling have been, could have been or could be converted into dollars at the rates indicated. On February 28, 2018 the noon buying rate for sterling was £1.00 = \$1.33.

The Group currently consists of its education business, plus a 25% interest in the consumer publishing business Penguin Random House. See “Item 4. Information on the Company — Overview of operating divisions”. The Pearson plc Consolidated Financial Statements are included in this report on pages F-1 to F-86. The Penguin Random House Venture Combined Financial Statements are included in this report on pages F-87 to F-160.

FORWARD-LOOKING STATEMENTS

You should not rely unduly on forward-looking statements in this Annual Report. This Annual Report, including the sections entitled “Item 3. Key Information — Risk Factors”, “Item 4. Information on the Company” and “Item 5. Operating and Financial Review and Prospects”, contains forward-looking statements within the meaning of Section 27A of the U.S. Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that relate to future events or the Group’s future financial performance. In some cases, you can identify forward-looking statements by terms such as “may”, “will”, “should”, “expect”, “intend”, “plan”, “anticipate”, “believe”, “estimate”, “predict”, “potential”, “continue” or the negative of these terms or other comparable terminology. Examples of these forward-looking statements include, but are not limited to, statements regarding the following:

- operations and prospects,
- growth strategy,
- funding needs and financing resources,
- expected financial position,
- market risk,
- currency risk,
- US federal and state spending patterns,
- debt levels, and
- general market and economic conditions.

These forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the Group’s or its industry’s actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by the forward-looking statements. In evaluating them, you should consider various factors, including the risks outlined under “Item 3. Key Information — Risk Factors”, which may cause actual events or industry results to differ materially from those expressed or implied by any forward-looking statement. Although the Group believes that the expectations reflected in the forward-looking statements are reasonable, it cannot guarantee future results, levels of activity, performance or achievements.

PART I

ITEM 1. IDENTITY OF DIRECTORS, SENIOR MANAGEMENT AND ADVISERS

Not applicable.

ITEM 2. OFFER STATISTICS AND EXPECTED TIMETABLE

Not applicable.

ITEM 3. KEY INFORMATION

Selected consolidated financial data

The table below shows selected consolidated financial data under IFRS as issued by the IASB and in conformity with IFRS as adopted by the EU. The selected consolidated income statement data for the years ended December 31, 2018, 2017 and 2016 and the selected consolidated balance sheet data as at December 31, 2018 and 2017 have been derived from the Group's audited consolidated financial statements included in "Item 18. Financial Statements" in this Annual Report.

On February 4, 2014, the Group completed the sale of the Mergermarket group. The Mergermarket business was classified as held for sale on the Group's balance sheet at December 31, 2013. The results of the Mergermarket business have been included in discontinued operations for all the years through to 2014.

On November 30, 2015, the Group completed the sale of The Financial Times to Nikkei Inc. The results of The Financial Times have been included in discontinued operations for all years through to 2014 and for the 11 months to November 30, 2015.

On October 16, 2015, the Group completed the sale of its 50% stake in The Economist Group. The share of profit after tax from the associate interest in the Economist Group has been included in discontinued operations for all years through to 2014 and for the period until October 16, 2015.

On October 5, 2017 the Group completed the sale of a 22% share in Penguin Random House to Bertelsmann, retaining a 25% share. The Group also received recapitalization dividends in 2017, with an additional amount due in 2018. The Group accounts for its remaining 25% associate interest in Penguin Random House on an equity basis.

On May 5, 2017, the Group announced that it was undertaking a strategic review of its US K12 courseware business. The US K12 business was classified as held for sale on the Group's balance sheet as at December 31, 2017 and December 31, 2018. On March 29, 2019 The Group completed the sale of its US K12 courseware business to Nexus Capital Management LP.

On August 16, 2017 the Group completed the sale of its test preparation business in China, Global English (GEDU), to Puxin Education.

On November 27, 2017 the Group announced that it had agreed to the sale of Wall Street English (WSE) to a consortium consisting of funds affiliated with Baring Private Equity Asia and CITIC Capital. Consequently WSE was classified as held for sale on the Group's balance sheet as at December 31, 2017. The disposal completed on March 15, 2018.

The selected consolidated financial information should be read in conjunction with "Item 5. Operating and Financial Review and Prospects" and the Group's consolidated financial statements and the related notes appearing elsewhere in this Annual Report. The information provided below is not necessarily indicative of the results that may be expected from future operations.

For convenience, the Group has translated the 2018 amounts into US dollars at the rate of £1.00 = \$1.28, the noon buying rate in The City of New York for cable transfers and foreign currencies as certified by the Federal Reserve Bank of New York for customs purposes on December 31, 2018.

	Year Ended December 31					
	2018	2018	2017	2016	2015	2014
	\$	£	£	£	£	£
(In millions, except for per share amounts)						
Consolidated Income Statement data						
Sales	5,285	4,129	4,513	4,552	4,468	4,540
Operating profit/(loss)	708	553	451	(2,497)	(404)	348
Profit/(loss) after taxation from continuing operations	755	590	408	(2,335)	(352)	199
Profit/(loss) for the financial year	755	590	408	(2,335)	823	470
Consolidated Earnings data per share						
Basic earnings/(loss) per equity share(1)	96.8¢	75.6p	49.9p	(286.8)p	101.2p	58.1p
Diluted earnings/(loss) per equity share(2)	96.6¢	75.5p	49.9p	(286.8)p	101.2p	58.0p
Basic earnings/(loss) from continuing operations per equity share(1)	96.8¢	75.6p	49.9p	(286.8)p	(43.3)p	24.7p
Diluted earnings/(loss) from continuing operations per equity share(2)	96.6¢	75.5p	49.9p	(286.8)p	(43.3)p	24.6p
Dividends per ordinary share	23.7¢	18.5p	17.0p	52.0p	52.0p	51.0p
Consolidated Balance Sheet data at period end						
Total assets (non-current assets plus current assets)	10,118	7,905	7,888	10,066	11,635	11,397
Net assets	5,792	4,525	4,021	4,348	6,418	5,985
Long-term obligations(3)	(1,595)	(1,246)	(1,662)	(3,794)	(3,310)	(3,225)
Capital stock	250	195	200	205	205	205
Number of equity shares outstanding (millions of ordinary shares)	781	781	802	822	821	820

Notes:

- (1) Basic earnings per equity share is based on profit for the financial period and the weighted average number of ordinary shares in issue during the period.
- (2) Diluted earnings per equity share is based on diluted earnings for the financial period and the diluted weighted average number of ordinary shares in issue during the period. Diluted earnings comprise earnings adjusted for the tax benefit on the conversion of share options by employees and the weighted average number of ordinary shares adjusted for the dilutive effect of share options. There is no dilution in 2015 and 2016 due to there being a loss from continuing operations.
- (3) Long-term obligations comprise any liabilities with a maturity of more than one year, including medium and long-term borrowings, derivative financial instruments, pension obligations and deferred income tax liabilities.

Dividend information

The Group pays dividends to holders of ordinary shares on dates that are fixed in accordance with the guidelines of the London Stock Exchange. The board of directors normally declares an interim dividend in July or August of each year to be paid in September or October. The board of directors normally recommends a final dividend following the end of the fiscal year to which it relates, to be paid in the following May or June, subject to shareholders' approval at the annual general meeting. At the Group's annual general meeting on April 26, 2019 shareholders will be asked to approve a final dividend of 13.0p per ordinary share for the year ended December 31, 2018.

The table below sets forth the amounts of interim, final and total dividends paid in respect of each fiscal year indicated, and is translated into cents per ordinary share at the noon buying rate in The City of New York on each of the respective payment dates for interim and final dividends. The final dividend for the 2018 fiscal year will be paid on May 10, 2019 (subject to shareholder approval).

<u>Fiscal year</u>	<u>Interim</u> (Pence per ordinary share)	<u>Final</u> (Pence per ordinary share)	<u>Total</u> (Pence per ordinary share)	<u>Interim</u> (Cents per ordinary share)	<u>Final</u> (Cents per ordinary share)	<u>Total</u> (Cents per ordinary share)
2018	5.5	13.0	18.5	7.2	16.7*	23.9*
2017	5.0	12.0	17.0	6.8	16.2	23.0
2016	18.0	34.0	52.0	23.6	43.8	67.4
2015	18.0	34.0	52.0	27.8	49.0	76.8
2014	17.0	34.0	51.0	27.6	51.5	79.1

* As the 2018 final dividend had not been paid by the filing date, the dividend has been translated into cents using the noon buying rate for sterling as at December 31, 2018.

Future dividends will be dependent on the Group's future earnings, financial condition and cash flow, as well as other factors affecting the Group. The dividend was rebased in 2017 to reflect portfolio changes, increased product investment, and the outlook for 2017.

Risk Factors

You should carefully consider the risk factors described below, as well as the other information included in the rest of this document. The Group's business, financial condition or results from operations could be materially adversely affected by any or all of these risks, or by other risks that it presently cannot identify.

The accelerated pace and scope of our business transformation initiatives increase our risk to execution timelines and to business adoption of change. The risk is that benefits may not be fully realized, costs may increase, or that the Group's business as usual activities are adversely impacted.

Business transformation and change initiatives in support of the Group's strategic goals to accelerate its digital transition and to simplify its business will continue throughout 2019. The pace and scope of change increases the risk that not all these changes will deliver within anticipated timeframes, and that the costs of these changes may increase. In addition, as a result of the increased pressure of transformational change, business as usual activities may not perform in line with plans or the level of customer service may not meet expectations. In parallel with the business transformation, as the Group responds to the digital revolution and shift from a product to a services business, it will continue to look at opportunities to develop business models and further refine organization structures. Resistance to change could restrict the organization from making the necessary changes to the business model.

Failure to effectively use the Group's data to enhance the quality and scope of current products and services in order to improve learning outcomes could adversely affect the Group's business.

The Group seeks to maximize data to enhance the quality and scope of current products and services in order to improve learning outcomes while managing associated risks. The Group's ability do so may be subject to factors beyond the Group's control. In addition, the unavailability of timely, complete and accurate data limits informed decision-making and increases the risk of non-compliance with legal, regulatory and reporting requirements. Business change and transformation success is dependent on migration of a significant number of datasets and our inability to effectively accomplish this could adversely affect the Group's results.

Global economy and cyclical market factors may adversely impact the Group's financial performance.

With the continued pressure and uncertainty in the worldwide economies, there remains a risk of a weakening in trading conditions, which could adversely impact future financial performance. The effect of

continued deterioration or lack of recovery in the global economy will vary across different businesses and will depend on the depth, length and severity of any economic downturn. The education market can be affected by cyclical factors which, although can have a positive impact for many of the Group's businesses, could for others lead to a reduction in demand for the Group's products and services.

Failure to successfully invest in and deliver the right products and services and respond to competitive threats could result in lower than expected revenues and profits.

A common trend facing all the Group's businesses is the digitization of content and proliferation of distribution channels, either over the internet, or via other electronic means, replacing traditional print formats. The digital migration brings the need for change in product and content distribution, consumers' perception of value and the publisher's position between consumers, retailers and authors.

This is a highly competitive market that is subject to rapid change. The Group faces competitive threats both from large media players and from smaller businesses, online and mobile portals and operators in the digital arena that provide alternative sources of content. Alternative distribution channels, e.g. digital format, the internet, online retailers, growing delivery platforms (e.g., e-readers or tablets), pose both threats and opportunities to traditional publishing business models, potentially impacting both sales volumes and pricing.

Students are seeking cheaper sources of content, e.g. second hand and rental copies, online discounters, file sharing and use of pirated copies. This change in behavior puts downward pressure on textbook prices in major markets, and this could adversely impact the Group's results.

If the Group does not adapt rapidly to these changes, it may lose business to 'faster' and more 'agile' competitors, who increasingly are non-traditional competitors, making their identification all the more difficult. The Group may be required to invest significant resources to further adapt to the changing competitive environment.

Changes in government policy and/or regulations have the potential to affect the Group's business model and/or decisions across all markets.

The Group's educational services and assessment businesses may be adversely affected by changes in government funding resulting from either trends that are beyond the Group's direct control, such as general economic conditions, changes in government educational funding, programs, policy decisions, legislation and/or changes in the procurement process, or the Group's failure to successfully deliver previous contracts.

The results and growth of the Group's US educational services and assessment businesses are dependent on the level of federal and state educational funding, which in turn is dependent on the robustness of state finances and the level of funding allocated to educational programs. State, local and municipal education funding pressures remain, competition from low price and disruptive new business models continues and open source is promoted as a way to keep costs down for customers. The current challenging environment could impact the Group's ability to collect on education-related debt.

State and local government leadership changes and resultant shifts in education policy can also affect the funding available for educational expenditure, which include the impact of educational reform. Similarly, changes in the government procurement process for textbooks, learning material and student tests, and vocational training programs can also affect the Group's markets. Political pressure on testing, changes in curricula, delays in the timing of the adoptions and changes in the student testing process can all affect these programs and therefore the size of the market in any given year. There is also a risk of political instability in the UK at the time of publication arising from the potential for Brexit 'no deal' plus wider uncertainty and instability in the rest of the world.

There are multiple competing demands for educational funds and there is no guarantee that new courseware or testing or training programs will be funded, or that the Group will win or retain this business.

Failure to comply with antitrust and competition legislation could result in costly legal proceedings and/or adversely impact the Group's reputation.

The Group is subject to global and local antitrust and competition law and although it is committed to conducting business in compliance with local and international laws, there is a risk that management, employees or representatives may act in a way that violates applicable antitrust or competition laws. As a result, there is a risk of litigation and regulatory proceedings in the countries in which the Group operates. These legal proceedings could result in greater scrutiny of the Group's operations in other countries for anti-competitive behavior and, in the worst case, incur a substantial financial cost. This would also have an adverse impact on the Group's reputation.

If the Group does not adequately protect its intellectual property and proprietary rights, its competitive position and results may be adversely affected and its ability to grow limited.

The Group's products and services largely comprise intellectual property delivered through a variety of print and digital media, online software applications and platforms. The Group relies on trademark, patent, copyright and other intellectual property laws to establish and protect its proprietary rights in these products and services. Failure to adequately manage, procure, register or protect intellectual property rights (including trademarks, patents, trade secrets and copyright) in the Group's brands, content and technology, may (1) prevent the Group from enforcing its rights, and (2) enable bad actors to illegally access and duplicate the Group's content (print and digital counterfeit, digital piracy), which will reduce sales and/or erode revenues.

The Group's intellectual property rights (IPR) in brands and content — historically its core assets — are generally well established in key markets. As technology has become an increasingly critical component of the Group's business strategy, it has also been steadily increasing investment in its patent program to expand its protection of high value inventions in the US.

Online copying and security circumvention have become increasingly sophisticated and resistant to available countermeasures. Notably, 2018 introduced "digital counterfeit" web sites selling unprotected PDF files of many of Pearson's titles, at scale, using modern and sophisticated ecommerce methods, with a professional and polished look and feel. From an IP perspective, increasing the Group's digital business exposes it to more trademark, copyright and patent infringement risks.

The Group's forward-looking IP strategy also includes plans to increase its global patent footprint in key markets outside the US. However, the Group also conducts business in other countries where its protection efforts have been limited or inconsistent and the extent of effective legal protection for intellectual property rights is uncertain, and this uncertainty could affect future growth. Where the Group has registered or otherwise established its IPR, it cannot guarantee that such rights will provide competitive advantages due to: the challenges and costs of monitoring and enforcement in jurisdictions where competition may be intense; the limited and/or ineffective IPR protection and enforcement mechanisms available to it in many countries; the potential that its IPR may lapse, be invalidated, circumvented, challenged, or abandoned, or that it may otherwise lose the ability to assert its intellectual property rights against others. The loss or diminution in value of these proprietary rights or the Group's intellectual property could have a material adverse effect on the Group's business and financial performance.

A control breakdown or service failure in the Group's school assessment and qualification businesses could result in financial loss and reputational damage.

The Group's professional services and assessment businesses involve complex contractual relationships with both government agencies and commercial customers for the provision of various testing services. The Group's financial results, growth prospects and/or reputation may be adversely affected if these contracts and relationships are poorly managed or face increased competitive pressures.

There are inherent risks associated with the Group's assessment and qualification businesses, both in the US and the UK. A service failure caused by a breakdown in testing and assessment processes could lead to a mis-grading of student tests and/or late delivery of test results to students and their schools. In either event the Group may be subject to legal claims, penalty charges under contracts, non-renewal of contracts and/or the suspension or withdrawal of its accreditation to conduct tests. A late delivery of qualification results could result in a potentially significant regulatory fine in addition to the contractual penalties. It is also possible that such events would result in adverse publicity, which may affect the Group's ability to retain existing contracts and/or obtain new customers.

The Group's investment in inherently riskier emerging markets may deliver returns that are lower than anticipated.

To take advantage of international growth opportunities and to reduce its reliance on the US and UK markets, the Group has invested in a number of emerging markets, some of which are inherently more risky than its traditional markets. Political, regulatory, economic and legal systems in emerging markets may be less predictable than in countries with more developed institutional structures. Political, regulatory, economic, currency, reputational and corporate governance and compliance risks (including fraud, sanctions, bribery and corruption) as well as unmanaged expansion are all factors which could limit returns on investments made in these markets.

Failure to effectively manage risks associated with compliance to global and local anti-bribery and corruption (ABC) legislation could result in costly legal investigations and/or adversely impact the Group's reputation.

Although the Group is committed to conducting business in a legal and ethical manner in compliance with local and international statutory requirements and standards applicable to its business, there is a risk that the Group's management, employees or representatives may take actions that violate applicable laws and regulations prohibiting the making of improper payments for the purposes of obtaining or keeping business, including laws such as the US Foreign Corrupt Practices Act or the UK Bribery Act. Responding to investigations is costly and requires a significant amount of management's time and attention. In addition, investigations may adversely impact the Group's reputation, or lead to litigation and financial impacts.

Failure to generate anticipated revenue growth, synergies and/or cost savings from acquisitions, mergers and other business combinations, could lead to goodwill and intangible asset impairments.

The Group periodically acquires and disposes of businesses to achieve its strategic objectives and will continue to consider both as means to pursue its strategic priorities, although it does not plan to make any significant acquisitions in the short term.

All the Group's businesses depend on Information Technology (IT) systems and technological change. Failure to maintain and support customer facing services, systems, and platforms, including addressing quality issues and execution on time of new products and enhancements, could negatively impact the Group's revenues and reputation.

All the Group's businesses, to a greater or lesser extent, are dependent on information technology. It either provides software and/or internet services to its customers or uses complex IT systems and products to support its business activities, including customer-facing systems, back-office processing and infrastructure. The Group faces several technological risks associated with software product development and service delivery, information technology security (including viruses and cyber-attacks), e-commerce, enterprise resource planning system implementation and upgrades. Although plans and procedures are in place to reduce such risks, from time to time the Group has experienced verifiable attacks on its systems by unauthorized parties. To date, such attacks have not resulted in any material damage, but the Group's businesses could be adversely affected if its systems and infrastructure experience a significant failure or interruption.

Failure to comply with data privacy regulations, or any unauthorized disclosure of personal information, could result in an incident or other issue potentially causing reputational damage to the Group's brands and financial loss.

Across its businesses, the Group holds large volumes of personally identifiable information including that of employees, customers, students and citizens. Any perceived or actual unauthorized disclosure of personally identifiable information, whether through breach of the Group's network by an unauthorized party, employee theft, misuse or error or otherwise, could harm the Group's reputation, impair its ability to attract and retain its customers, or subject the Group to claims or litigation arising from damages suffered by individuals, and thereby harm its business and operational results. Failure to adequately protect personally identifiable information could potentially lead to penalties, significant remediation costs, reputational damage, cancellation of some existing contracts and difficulty in competing for future business. In addition, the Group could incur significant costs in complying with the relevant laws and regulations regarding the unauthorized disclosure of personal information. Changes to data privacy legislation must also be monitored and acted upon to ensure the Group remains in compliance across different markets.

Failure to prevent or detect a malicious attack on the Group's systems could result in a breach of confidentiality, integrity and/or availability of sensitive information.

Information security and cyber risk is continually evolving and comprises many complex external drivers: increasing customer demand to demonstrate a strong security posture, external compliance requirements, ongoing digital revolution, increasing use of the cloud and increasingly sophisticated attack strategies. Across its businesses, the Group holds large volumes of personally identifiable information including that of employees, customers, students and citizens, and other highly sensitive business critical data such as financial data, internal sensitive information, and intellectual property. Despite its implementation of security measures, individuals may try to gain unauthorized access to the Group's data in order to misappropriate such information for potentially fraudulent purposes. A significant breach can result in a devastating impact on the Group's reputation, customer loyalty, and student experience. Inability to prove due diligence can result in severe penalties and loss of business (existing and future).

The Group's reported earnings and cash flows may be adversely affected by changes in its pension costs and funding requirements.

The Group operates a number of pension plans throughout the world, the principal ones being in the UK and the US. The major plans are self-administered with the plans' assets held independently of the Group. Regular valuations, conducted by independent qualified actuaries, are used to determine pension costs and funding requirements. As these assets are invested in the capital markets, which are often volatile, the plans may require additional funding from the Group, which could have an adverse impact on its results.

It is the Group's policy to ensure that each pension plan is adequately funded, over time, to meet its ongoing and future liabilities. The target for the UK defined benefit plan is a self-sufficient level of funding. The Group's earnings and cash flows may be adversely affected by the need to provide additional funding to eliminate pension fund deficits in its defined benefit plans. The Group's greatest exposure relates to the UK defined benefit pension plan, which is valued every three years. Pension fund deficits may arise because of inadequate investment returns, increased member life expectancy, changes in actuarial assumptions and changes in pension regulations, including accounting rules and minimum funding requests.

Although the UK defined benefit plan is significantly derisked (as it is in surplus with effect from 1 January 2018 as per the recent valuation), the ability to achieve and maintain this standard remains subject to market conditions, meaning that additional funding could still be required from the Group in the future.

Operational disruption to its business, including those caused by third party providers, a major disaster and/or external threats, could restrict the Group's ability to supply products and services to its customers.

Across all its businesses, the Group manages complex operational and logistical arrangements including distribution centers, data centers, and educational and office facilities, as well as relationships with third party print sites. It has also outsourced some support functions, including information technology, warehousing and logistics to third party providers. The failure of third parties to whom it has outsourced business functions could adversely affect its reputation or financial condition. Failure to recover from a major disaster, (e.g. fire, flood, etc.) at a key facility or the disruption of supply from a key third party vendor or partner (e.g. due to bankruptcy) could restrict the Group's ability to service its customers and meet the terms of its contractual relationships with both government agencies and commercial customers. Penalty clauses and/or the failure to retain these contracts at the end of the contract term could adversely impact future revenue growth.

A significant deterioration in the Group's profitability and/or cash flow caused by prolonged economic instability could reduce its liquidity and/or impair its financial ratios, and trigger a need to raise additional funds from the capital markets and/or renegotiate its banking covenants.

To the extent that worldwide economic conditions materially deteriorate, the Group's revenues, profitability and cash flows could be significantly reduced as customers would be unable to purchase products and services in the expected quantities and/or pay for them within normal agreed terms.

Disruption in capital markets or potential concerns about the Group's credit, such as downgrades or negative outlooks by the credit rating agencies, may mean that this capital may not be available on favorable terms or may not be available at all, although the reduced size of debt maturities mean that this risk is reduced.

The Group generates a substantial proportion of its revenue in foreign currencies, particularly the US dollar, and foreign exchange rate fluctuations could adversely affect the Group's earnings and the strength of its balance sheet.

As with any international business, the Group's earnings can be materially affected by exchange rate movements. The main exposure is to movements in the US dollar to sterling exchange rate as approximately 60% of the Group's total revenue is generated in US dollars. The Group also has exposure to a range of other international currencies including emerging market currencies. Operating profit for 2018, translated at 2017 average rates, would have been £17m or 4% higher.

A lack of sufficient capital resources could adversely impact the Group's ability to operate.

If the global economy weakens further and/or the global financial markets collapse, the Group may not have access to or could lose its bank deposits or suffer a significant increase in customer bad debts. Lack of sufficient capital resources could significantly limit the Group's ability to take advantage of business and strategic opportunities. If replacement funds are not available, the Group may be required to delay, reduce the scope of, or eliminate material parts of its business strategy, including potential additional acquisitions or development of new products, services and technologies. The Group is working to mitigate this risk by enforcing limits per counterparty, spreading its debt maturities and financing through strong counterparties.

Changes in tax law or perceptions on tax planning strategies may lead to higher effective tax rate or negative reputational impact.

Changes in corporate tax rates and/or other relevant tax laws in the UK, US or other jurisdictions could have a material impact on the Group's future reported tax rate and/or its future tax payments. The Group has been subject to audit by tax authorities. Although the Group believes its tax provision is reasonable, the final determination of its tax liability could be materially different from its historical income tax provisions, which could have a material effect on the Group's financial position, results of operations or cash flows.

The Group's tax strategy reflects its business strategy and the locations and financing needs of its operations. In common with many companies, the Group seeks to manage its tax affairs to protect value for its shareholders, in line with its broader fiduciary duties. The Group is committed to complying with all statutory obligations, to undertake full disclosure to tax authorities and to follow agreed policies and procedures with regard to tax planning and strategy.

If the Group fails to attract, retain and develop appropriately skilled employees, it may limit its ability to achieve its strategic and operational goals and its business may be harmed.

The Group's success depends on the skill, experience and engagement of its employees. If it is unable to attract, retain and develop sufficiently experienced and capable staff, especially in technology, product development, sales and leadership, its business and financial results may suffer. When talented employees leave, the Group may have difficulty replacing those skills, and its business may suffer. There can be no assurance that the Group will be able to successfully retain and attract the skills that it needs.

Failure to adequately protect learners could result in significant harm to one or more learners.

Incidents may occur where learners are abused or harassed. For example, where the Group has direct learner contact via online learning, or in its direct delivery businesses where it is operating, either directly or in a third party partnership. These incidents can cause harm to learners, which is something the Group takes extremely seriously, and could also have a negative financial, legal and reputational impact to the business.

Failure to adequately protect the health, safety and well-being of the Group's employees, learners and other stakeholders could adversely impact the Group's reputation, profitability and future growth.

Although the Group has invested in global Health and Safety procedures and controls to safeguard the health, safety and wellbeing of its employees and other stakeholders, accidents or incidents could still occur due to unforeseen risks, causing injury or harm to individuals and impacting the Group's business operations. This has the potential to lead to criminal and civil litigation, business disruption leading to operational loss, reduction in profitability and impact on the Group's global reputation.

Failure to ensure security for the Group's staff, learners, assets and reputation, due to increasing numbers of and variety of local and global threats.

Pearson is a global business with locations in diverse, sometimes high-risk, locations worldwide. Although it has protective measures in place to secure its staff, learners and assets, the Group could still be impacted by external threats, such as localized incidents, terrorist attacks, strikes or extreme weather. Future occurrences could cause harm to individuals and/or disrupt business operations. These have the potential to lead to operational loss, a reduction in profitability and impact on the Group's global reputation.

Environmental, social and governance risks may also adversely impact the Group's business.

The Group considers environmental, social and governance (ESG) risks no differently to the way it manages any other business risk. These include ethical business behaviour, compliance with UN Global Compact standards, environmental impact, people and editorial standards. A failure to comply with such standards would adversely affect the Group's reputation and have a negative impact on its relations with employees, vendors and customers.

The Group's business depends on a strong brand, and any failure to maintain, protect and enhance its brand would hurt its ability to retain or expand its business.

Protecting the Pearson brand is critical to expanding the Group's business and will depend largely on its ability to maintain its customers' trust in its solutions and in the quality and integrity of its products and services.

If the Group does not successfully maintain a strong brand, its business could be harmed. Beyond protection, strengthening the Pearson brand will enable the Group to more effectively engage governments, administrators, teachers, learners and influencers more effectively.

ITEM 4. INFORMATION ON THE COMPANY

Pearson plc

Pearson plc, (Pearson or the Group) is an international education company with its principal operations in the education and consumer publishing markets. The Group delivers content, assessment and services, powered by technology, in order to drive personalized learning at scale. The Group creates and manages intellectual property, which it promotes and sells to its customers under well-known brand names. The Group delivers its content in a variety of forms and through a variety of channels, including books and online services. The Group offers services as well as content, from test creation, administration and processing to teacher development and school software. Though it operates in more than 70 countries around the world, today its largest markets are North America (67% of sales) and Europe (15% of sales).

Pearson was incorporated and registered in 1897 under the laws of England and Wales as a limited company and re-registered under the UK Companies Act as a public limited company in 1981. The Group conducts its operations primarily through its subsidiaries and other affiliates. Its principal executive offices are located at 80 Strand, London WC2R 0RL, United Kingdom (telephone: +44 20 7010 2000) and its website address is www.pearson.com

Overview

The Group consists of its worldwide education business plus a 25% interest in Penguin Random House.

The Group is a leading provider of educational materials and learning technologies. It provides test development, processing and scoring services to governments, educational institutions, corporations and professional bodies around the world. It publishes across the curriculum and provides a range of education services including teacher development, educational software and system-wide solutions, and also owns and operates schools.

From January 1, 2014 the Group has been run as one global education company, organized around three geographical operating segments (North America, Core and Growth). Within each segment, the Group provides content, assessment and digital services to schools, colleges and universities, as well as professional and vocational education to learners.

The Group owns a 25% interest in Penguin Random House, which was formed on July 1, 2013, upon the completion of an agreement between Pearson and Bertelsmann to merge their respective publishing companies, Penguin and Random House. Pearson originally owned a 47% stake in Penguin Random House, but sold 22% on October 5, 2017. The Group accounts for its remaining interest in Penguin Random House on an equity basis.

Recent developments

During March 2019, the Group executed market tenders to repurchase €55m of its €500m Euro 1.875% notes due May 2021.

On March 29, 2019, the Group completed the sale of its US K12 courseware business to Nexus Capital Management LP for headline consideration of \$250m comprising an initial cash payment of \$25m and an unconditional vendor note for \$225m.

In February 2019, the UK Group pension plan purchased a further pensioner buy-in policy valued at approximately £500m with Legal & General. As a result of this latest transaction, 95% of the UK Group plan's pensioner liabilities are now matched with buy-in policies which significantly reduces longevity risk of the Group. The buy-in will be accounted for in 2019 and is expected to reduce the retirement benefit asset on the balance sheet but is not expected to have a material impact on the income statement.

The Group's strategy

The Group's mission is to help people make progress in their lives through learning and its vision is to have a direct relationship with millions of lifelong learners, to link education to the way people aspire to live and work every day and to collaborate with a wide group of partners to help shape the future of learning. To deliver on this, the Group has three key strategic priorities:

- Grow market share through the digital transformation of the Group's courseware and assessment businesses;
- Invest in structural growth opportunities; and
- Become a simpler, more efficient and more sustainable business.

The Group strives to leverage its core strengths in combining world-class content and assessment, powered by services and technology, to enable more effective teaching and personalized learning at scale. More detail on the three areas of focus is set out below.

Grow market share through digital transformation of the Group's courseware and assessment businesses

Digitization enables us to drive improvements in learning outcomes. It allows the Group to build a more sustainable and profitable business with a more visible and predictable revenue profile, based around access not ownership models. The businesses where digital transformation is the key focus are:

- Higher Education Courseware — the Group's course content and digital resources help educators gain better insights on their students and unlock learners' potential. The Group increasingly sells directly to consumers and to educational institutions enabling the business to become more predictable. The shift to digital means students can come to class better prepared from day one. This helps drive better learning experiences and outcomes.
- US Assessment — The Group partners with US educators and states to develop new, personalized ways of learning through effective, scalable assessments that measure 21st century skills and inform instruction for all learners.
- UK Assessment & Qualifications — In the UK, Pearson is a market leading organization offering academic and vocational qualifications including GCSEs, A Levels and BTECs. The Group is driving the adoption of artificial intelligence (AI) in assessment to support better learning.

Invest in structural growth opportunities

Investment in fast growing areas that will be the long-term growth drivers of Pearson, such as:

- Online Program Management (OPM) — Pearson helps higher education institutions launch or expand online degrees, enabling them to increase enrolments, support online learning, boost graduation rates and deliver on employability.
- Virtual Schools — Pearson delivers K12 online education to schools and students across the US and the world. Solutions include the accredited Connections Academy, an online school programme which is delivered via full time, online public schools. This is an option for families seeking personalized learning and a high-quality alternative to the traditional classroom. A global online private school, International Connections Academy, is also available.

- Professional Certification — Pearson helps organizations measure and make improvements to ensure the success of employees and learners, helping support lifelong learning. Test owners and test takers across the world choose us to help develop, manage, deliver and grow their computer based testing programmes. With some of the industry’s most secure testing environments, Pearson is a leader in computer-based testing.
- English Language Learning — Pearson English language teaching develops courses, qualifications and learning tools to make teaching English easier. Pearson’s fast-growing test, Pearson Test of English Academic (PTEA), is a leading computer-based test of English for study abroad and immigration.

Become a simpler and more efficient company

This third strategic priority involves further simplification through shared service centres, leaner organizations through reduction in headcount and a reduction in the number of legacy applications, data centres and office locations. This does not just cut costs, it also provides an important platform for future growth because it enables the Group to reallocate investment to its growth areas more quickly, innovate at scale, and build a more direct, longer term relationship with the tens of millions of learners who use Pearson products each year.

Operating divisions

Pearson is one of the leading providers of educational courseware, assessment and digital services. The Group provides test development, processing and scoring services to governments, educational institutions, corporations and professional bodies around the world. The Group publishes across the curriculum and provides a range of education services including teacher development, educational software and system-wide solutions.

The Group’s primary segments for management and reporting are geographical as follows: North America, comprising the courseware, assessment and services businesses in the US and Canada; Core, comprising the courseware, assessment and services businesses in more mature markets outside North America, including the UK, Australia and Italy; and Growth, comprising the courseware, assessment and services businesses in emerging markets, including Brazil, China, India and South Africa. In addition the Group separately reports on an equity basis the results from its 25% interest in Penguin Random House (PRH).

North America Segment

The North American business serves educators and students in the US and Canada from early education through elementary, middle and high schools and into higher education and beyond with a wide range of products and services: courseware including curriculum textbooks and other learning materials; assessments including test development and scoring; and services including the provision of online learning services. The Group has a leading position in each of these areas and a distinctive strategy of connecting those parts to support institutions and personalize learning. Across the US the business works with states, schools and colleges to help make education more effective, accessible and affordable for a diverse community of learners.

The North America Higher Education business offers learning services for students, colleges and universities in the US. It provides learning tools and technologies. Custom content and curriculum solutions offer educators the opportunity to tailor their programs based on the needs of students. The business also offers workforce education products and flexible workforce development solutions to fill the growing skills gap and increased demand for quality certification prep training.

Global digital user registrations of Mylab and related products are more than 13 million. The use of these digital homeworking platforms and integrated digital courseware provides a wealth of data and analytics to improve the performance of individual students. The business’s advanced capabilities in data, analytics and adaptive learning, and its leading efficacy research, enable it to design a smart learning path for every student.

The demand for online learning is steadily rising and management see this area as one of the fastest growing parts of the market with demand expected to increase significantly over the next few years both in school and higher education.

In higher education, Pearson Online Services provides Online Program Management (OPM) services to institutions including Arizona State University, Rutgers University and Maryville University, partnering with them to provide fully online undergraduate and graduate degree courses.

The North America school business offers early learning solutions that help educators and families teach fundamental math and literacy skills; elementary and secondary imprints publish school programs in reading, literature, math, science, and social studies; and digital instructional solutions for pre K-12, such as enVisionMATH and Miller-Levine Biology. In order to focus on its digital strategy, on March 29, 2019 the Group completed the sale of its US K12 courseware business.

The Connections Academy business provides school management services and operates virtual and blended schools, serving around 73,000 full time equivalent students.

Testing plays an integral role in determining educator and student success and the business is one of the largest providers of educational assessment services in the US. It marks large-scale school examinations for the US federal government and more than 23 American states, scoring billions of machine-scorable test questions and evaluating approximately 110 million essays, portfolios and open-ended test questions every year. Working with educators and education advocates, the business experts help to lead the development of Next-Generation Assessments that feature technology-enhanced items, performance-based assessments, and adaptive learning to foster problem-solvers and critical thinkers ready to compete in the global economy.

The business's solutions include learning assessments to help gauge how students learn, talent assessments to help growing companies develop their workforce, and clinical assessments to help psychologists and speech/language/hearing/occupational and physical therapists diagnose and monitor patients.

The professional certification business, Pearson VUE (VUE), is a leading provider of electronic testing for regulatory and certification boards, providing a full suite of services from test development to test delivery and data management. Pearson VUE offers exams through an extensive network of over 20,000 test centers across the globe, delivering the NCLEX exam for the National Council of State Boards of Nursing, the GMAT for the Graduate Management Admissions Council and numerous IT exams such as Cisco and CompTIA.

Pearson VUE also includes Certiport, the world-leader in IT performance-based exams delivered through a global network of academic test centers, and GED Testing Service, a joint venture with the American Council on Education to deliver a leading high school equivalency exam.

See "Item 5. Operating and Financial Review and Prospects — Results of Operations — Year ended December 31, 2018 compared to year ended December 31, 2017 — Sales and operating profit by division — North America" for a discussion of developments during 2018 with respect to this segment.

Core Segment

The biggest Core markets are the UK, Europe, APAC and North Africa. These are markets where the business works closely with educators and policy makers to improve learning through creating curriculum, designing assessments and developing digital learning systems. Additionally the business participates in many other markets, where it does not have scale itself, but collaborates with others who share its values and commitment to efficacy to maximize reach and impact.

Pearson is the UK's largest awarding organization offering academic and vocational qualifications that are globally recognized and benchmarked, with educational excellence rooted in names like Edexcel, BTEC and

LCCI. Learners take the business's qualifications in many countries worldwide. Online marking technology is used to mark the vast majority of examination papers and the ResultsPlus service provides detailed analysis of every learner's examination results. Innovation is also being driven through digital products such as Bug Club and ActiveLearn, and through supporting skills for employability for progression in study, work and life.

The Higher Education business has seen good growth in OPM in both Australia and the UK, launching degree programs with Monash and Griffith Universities in Australia and Kings College London, University of Leeds and Manchester Metropolitan University in the UK.

In English, the Pearson Test of English is being used to support visa applications to the Australian Department of Immigration and Border Protection resulting in significant growth in volumes.

In the UK, the professional certification business, Pearson VUE, works with professional and government bodies including the Driving and Vehicle Standards Agency (DVSA), Chartered Institute of Management Accountants (CIMA) and the Construction Industry Training Board (CITB).

See "Item 5. Operating and Financial Review and Prospects — Results of Operations — Year ended December 31, 2018 compared to year ended December 31, 2017 — Sales and operating profit by division — Core" for a discussion of developments during 2018 with respect to this segment.

Growth Segment

The business aims to take educational products and services and apply them at scale in countries such as Brazil, India, South Africa, Hispano-America, Hong Kong & China and the Middle East.

English language teaching and learning is one of the biggest opportunities in global education. The Group has refocused its activities in English, with disposals of its Chinese direct delivery businesses, GEDU and Wall Street English, taking place in 2017 and 2018 respectively. The opportunity in English is now addressed in three main ways:

- Pearson ELT courseware (institutional English language courses including FOCUS, Poptropica English and Longman) is number two in the market. MyEnglish Lab and other English courseware registrations were over one million;
- Pearson Test of English Academic, a computer-based test of English for study abroad and immigration; and the Brazilian adult English language school franchises including Wizard.
- In 2014, Pearson English released the Global Scale of English, the world's first common, global benchmark of English language learning. It measures English language progress on a numeric scale in a way that is consistent, granular and actionable for governments, corporates, academics, institutions and learners. The Scale has been created as the Open Standard for English that meets a global need.

The Brazilian business serves primary and secondary education with its 'sistemas' or learning systems which include COC, Dom Bosco and NAME.

In South Africa, the business is one of the largest players in the school textbook market and runs a private university with 8,500 students enrolled in courses ranging from undergraduate degrees in IT and sociology, to business diplomas and Masters courses in psychology.

See “Item 5. Operating and Financial Review and Prospects — Results of Operations — Year ended December 31, 2018 compared to year ended December 31, 2017 — Sales and operating profit by division — Growth” for a discussion of developments during 2018 with respect to this segment.

Penguin Random House

On July 1, 2013 Penguin Random House was formed, upon the completion of an agreement between Pearson and Bertelsmann to merge their respective publishing companies, Penguin and Random House, with the parent companies owning 47% and 53% respectively. The Group completed the sale of 22% of Penguin Random House to Bertelsmann on October 5, 2017 and also received recapitalization dividends. The Group used the proceeds from this transaction to maintain a strong balance sheet; invest in its business; and return excess capital to shareholders, whilst retaining an investment grade credit rating. The Group continues to hold a 25% stake in Penguin Random House, the investment is accounted for as an associate under the equity method.

Penguin Random House comprises the adult and children’s fiction and nonfiction print and digital book publishing businesses of Penguin and Random House in the US, UK, Canada, Australia, New Zealand and India, Penguin’s publishing activity in Asia and South Africa, as well as Dorling Kindersley worldwide, and Random House’s companies in Spain, Mexico, Argentina, Uruguay, Columbia and Chile.

Penguin Random House employs more than 10,000 people globally across almost 275 editorially and creatively independent imprints and publishing houses that collectively publish around 15,000 new titles annually. Its publishing list includes more than 70 Nobel Prize laureates and hundreds of the world’s most widely read authors.

Penguin Random House sells directly to bookshops and through wholesalers. Retail bookshops normally maintain relationships with both publishers and wholesalers and use the channel that best serves the specific requirements of an order. It also sells through online retailers such as Amazon.com, as well as its own websites and direct to the customer via digital sales agents.

In 2018, the Group’s share of Penguin Random House profit after tax was £46m.

See “Item 5. Operating and Financial Review and Prospects — Results of Operations — Year ended December 31, 2018 compared to year ended December 31, 2017 — Sales and operating profit by division — Penguin Random House” for a discussion of developments during 2018 with respect to Penguin Random House.

Operating cycles

The Group determines a normal operating cycle separately for each entity/cash generating unit with distinct economic characteristics. The “normal operating cycle” for each of the Group’s education businesses is primarily based on the expected period over which the educational programs and titles will generate cash flows, and also takes account of the time it takes to produce the educational programs. The operating cycles for the courseware markets are typically longer than one year as described below.

Particularly for the North American businesses, there are well established cycles operating in the courseware market:

- The School courseware market is primarily driven by an adoption cycle in which major state education boards ‘adopt’ programs and provide funding to schools for the purchase of these programs. There is an established and published adoption cycle with new adoptions taking place on average every 5 years for a particular subject. Once adopted, a program will typically sell over the course of the subsequent

5 years. The Company renews its pre-publication assets to meet the market adoption cycles. Therefore the operating cycle naturally follows the market cycle.

- The Higher Education courseware market has historically had a similar pattern, with colleges and professors typically refreshing their courses and selecting revised programs on a regular basis, often in line with the release of new editions or new technology offerings. The Company renews its pre-publication assets to meet the typical demand for new editions of, or revisions to, educational programs. Analysis of historical data shows that the typical life cycle of Higher Education content is up to 5 years. Again the operating cycle mirrors the market cycle.

Historically a development phase of typically 12 to 18 months for Higher Education and up to 24 months for School precedes the period during which the Company receives and delivers against orders for the products it has developed for the program.

The Core and Growth courseware markets operate in a similar way although often with less formal 'adoption' processes.

The operating cycles in respect of the Group's professional content are more specialized in nature as they relate to educational or heavy reference products released into smaller markets (e.g. the financial training and IT sectors). Nevertheless, in these markets, there is still a regular cycle of product renewal, in line with demand which management monitor. Typically the life cycle is 5 years for Professional content. Elsewhere in the Group, operating cycles are typically less than one year.

Competition

The Group's businesses operate in highly competitive environments.

The Group competes with other publishers and creators of educational materials and services. These companies include publishers such as Cengage Learning, McGraw-Hill Education and Houghton Mifflin Harcourt.

In services, the Group competes with companies such as K-12 Inc in virtual schools and 2U Inc. in online program management, alongside smaller niche players that specialize in a particular academic discipline or focus on a learning technology.

In US assessment, the Group competes with other companies offering test development and administration including Educational Testing Service (ETS), American Institute for Research (AIR), Measured Progress Inc, and others. The Professional Certification business competes with Prometric globally and a number of other smaller players in local markets.

In Core student assessment, the UK qualifications business competes with AQA and OCR in general qualifications and a number of smaller players in vocational qualifications.

In English language teaching (ELT) courseware, the Group competes with Oxford University Press, Macmillan and other publishers. In English language testing Pearson Test of English Academic competes with alternative tests including IELTS and TOEFL.

Competition is based on the ability to deliver quality products and services that address the specified curriculum needs and appeal to the student, organizations, school boards, educators and government officials making purchasing decisions.

Intellectual property

The Group's principal intellectual property assets consist of its:

- trademarks and other rights via its brands (including corporate and business unit brands, imprints, as well as product and service brands);
- copyrights for its textbook and related educational content and software code; and
- patents and trade secrets related to the innovative methods deployed in its key technologies.

The Group believes it has taken all reasonable legal steps to protect its key brands in its major markets and copyright in its content and has taken appropriate steps to develop a comprehensive patent program to ensure appropriate protection of emerging inventions that are critical to its new business strategies.

Raw materials

Paper remains the principal raw material used by the Group. The Group purchases most of its paper through its global outsourcing partner LSC Communications located in the United States. The Group has not experienced and does not anticipate difficulty in obtaining adequate supplies of paper for its operations, with sourcing available from numerous suppliers. While local prices fluctuate depending upon local market conditions, the Group has not experienced extensive volatility in fulfilling paper requirements. In the event of a sharp increase in paper prices, the Group has a number of alternatives to minimize the impact on its operating margins, including modifying the grades of paper used in production.

Government regulation

The manufacture of certain products in various markets is subject to governmental regulation relating to the discharge of materials into the environment. Operations are also subject to the risks and uncertainties attendant to doing business in numerous countries. Some of the countries in which the Group conducts these operations maintain controls on the repatriation of earnings and capital and restrict the means available for hedging potential currency fluctuation risks. The operations that are affected by these controls, however, are not material. Accordingly, these controls have not significantly affected the Group's international operations. Regulatory authorities may have enforcement powers that could have an impact. The Group believes, however, that in light of the nature of its business the risk of these sanctions does not represent a material threat.

Licenses, patents and contracts

The Group is not dependent upon any particular licenses, patents or new manufacturing processes that are material to its business or profitability. Likewise, it is not materially dependent upon any particular contracts with suppliers or customers, including contracts of an industrial, commercial or financial nature. Notwithstanding the foregoing, the Group's education business is dependent upon licensed rights since most textbooks and digital learning tools include content and/or software that is licensed to it by third parties (or assigned subject to royalty arrangements). In addition, some software products in various business lines, particularly those of its Clinical business, rely upon patents licensed from third parties.

Legal proceedings

The Group and its subsidiaries are from time to time the subject of legal proceedings incidental to the nature of its and their operations. These may include private litigation or arbitrations, governmental proceedings and investigations by regulatory bodies. The Group does not currently expect that the outcome of pending proceedings or investigations, either individually or in aggregate, will have a significant effect on its financial position or profitability nor have any such proceedings had such effect in the recent past. The Group is not aware of material proceedings in which any member of senior management or any of its affiliates is a party adverse to it or any of its subsidiaries or in respect of which any of those persons has a material interest adverse to it or any of its subsidiaries.

Organizational structure

Pearson plc is a holding company which conducts its business primarily through subsidiaries and other affiliates throughout the world. Below is a list of its significant subsidiaries and associates as at December 31, 2018, including name, country of incorporation or residence, proportion of ownership interest and, if different, proportion of voting power held.

<u>Name</u>	<u>Country of incorporation/residence</u>	<u>Percentage interest/voting power</u>
Pearson Education Inc.	United States (Delaware)	100%
Pearson Education Ltd.	England and Wales	100%
NCS Pearson Inc.	United States (Minnesota)	100%
Penguin Random House LLC.	United States (Delaware)	25%
Penguin Random House Ltd.	England and Wales	25%

During 2014, the Group disposed of its interest in the Mergermarket group of companies and its North America business disposed of its joint venture interests in Safari Books Online and CourseSmart.

In February 2014, the Group acquired Grupo Multi, Brazil's leading adult English language training company.

During 2015, the Group disposed of its interest in the FT Group including its 50% share of The Economist. The Financial Times sale was completed in November 2015 and the sale of the 50% share of The Economist Group was substantially completed in October 2015, with the remaining share sold in 2016. Also, in July 2015, the Group disposed of its interest in PowerSchool.

In May 2017, the Group announced that it was undertaking a strategic review of its US K12 courseware business. On March 29, 2019 the Group completed the sale of its US K12 courseware business to Nexus Capital Management LP.

In August 2017, the Group completed the sale of its test preparation in China (GEDU) to Puxin Education.

In October 2017, the Group disposed of 22% of Penguin Random House to Bertelsmann, retaining a 25% interest.

In November 2017, the Group announced that it had agreed the sale of Wall Street English to a consortium consisting of funds affiliated with Baring Private Equity Asia and CITIC Capital. The disposal completed on March 15, 2018.

There were no material acquisitions in 2016, 2017 or 2018.

Property, plant and equipment

The Group's headquarters are located at leasehold premises in London, England. As at December 31, 2018 it owned or leased approximately 750 properties, including approximately 530 testing/teaching centers in over 55 countries worldwide, the majority of which are located in the United Kingdom and the United States. Approximately 80 properties, primarily testing/teaching centers in China, were disposed in March 2018 as part of the WSE disposal.

The properties owned and leased by the Group consist mainly of offices, distribution centers and computer testing/ teaching centers.

In some cases properties leased by the Group are then sublet to third parties. These properties are not included in the list below as they are not considered to be principal properties.

The vast majority of printing is carried out by third party suppliers. The Group operates a small digital print operation as part of its Pearson Assessment & Testing businesses which provides short-run and print-on-demand products, typically custom client applications.

The Group owns the following principal properties at December 31, 2018:

<u>General use of property</u>	<u>Location</u>	<u>Area in square feet</u>
Office	Iowa City, Iowa, USA	312,760
Warehouse/Office	Cedar Rapids, Iowa, USA	205,000
Printing	Owatonna, Minnesota, USA	128,000

The Group leased the following principal properties at December 31, 2018:

<u>General use of property</u>	<u>Location</u>	<u>Area in square feet</u>
Teaching Centre	Midrand, South Africa	351,754
Office	Westminster, London, UK	282,923
Office	Hoboken, New Jersey, USA	216,273
Office	Glenview, Illinois, USA	187,500
Office	Bloomington, Minnesota, USA	147,159
Warehouse/Office	Uttar Pradesh, India	145,041
Office	Chandler, Arizona, USA	135,460
Teaching Centre	Pretoria, South Africa	134,553
Office	Boston, Massachusetts, USA	122,548
Warehouse/Office	Cedar Rapids, Iowa, USA	119,682
Office	San Antonio, Texas, USA	117,063
Warehouse	Naucalpan de Juarez, Mexico	113,638
Call Center/Office	Lawrence, Kansas, USA	105,000

Capital Expenditures

See “Item 5. Operating and Financial Review and Prospects — Liquidity and Capital Resources” for description of the Company’s capital expenditure.

ITEM 4A. UNRESOLVED STAFF COMMENTS

The Company has not received, 180 days or more before the end of the 2018 fiscal year, any written comments from the Securities and Exchange Commission staff regarding its periodic reports under the Exchange Act which remain unresolved.

ITEM 5. OPERATING AND FINANCIAL REVIEW AND PROSPECTS

The following discussion and analysis is based on and should be read in conjunction with the consolidated financial statements, including the related notes, appearing elsewhere in this Annual Report. The financial statements have been prepared in accordance with IFRS as issued by the IASB and in conformity with IFRS as adopted by the EU.

Where this discussion refers to constant currency comparisons, these are estimated by re-calculating the current year results using the exchange rates prevailing for the prior period. The increase or reduction in the value calculated is the estimate of the impact of exchange rates. The Group believes this presentation provides a more useful period to period comparison as changes due solely to movements in exchange rates are eliminated.

General overview

Introduction

The Group's primary segments for management and reporting are geographical as follows: North America, comprising the courseware, assessments and services businesses in the US and Canada; Core, comprising the courseware, assessments and services businesses in more mature markets outside North America, including the UK, Europe, Asia Pacific and North Africa, and Growth, comprising the courseware, assessments and services businesses in emerging markets, including Brazil, India, South Africa, Hispano-America Hong Kong and China and the Middle East. In addition the Group separately reports on an equity basis the results from its 25% interest in Penguin Random House (PRH).

On August 16, 2017, the Group completed the sale of its test preparation business in China (GEDU) to Puxin Education, realizing a pre-tax profit on sale of £44m. On October 5, 2017, the Group also completed the sale of a 22% share in Penguin Random House to Bertelsmann, realizing a pre-tax profit on sale of £96m.

On March 15, 2018, the Group completed the sale of Wall Street English (WSE) to a consortium of funds affiliated with Baring Private Equity Asia and CITIC Capital realising a profit before tax of £207m. The business had been classified as held for sale at December 31, 2017.

On March 29, 2019, the Group completed the sale of the US K12 courseware business (K12) to Nexus Capital Management LP for headline consideration of \$250m comprising an initial cash payment of \$25m and an unconditional vendor note for \$225m expected to be repaid in three to seven years. Following the repayment of the vendor note the Group is entitled to 20% of all future cash flows to equity holders and 20% of net proceeds if the business is sold. The K12 business had been held for sale on the balance sheet following a strategic review and discussion with potential buyers regarding a disposal since the end of 2017 and continues to be classified as held for sale on the balance sheet as at December 31, 2018.

None of the disposals referred to above were significant enough to meet the definition of a discontinued business and their results to the date of disposal are included in continuing operations.

The Group's total sales decreased from £4,513m in 2017 to £4,129m in 2018, a decrease of £384m or 9%. This year on year decrease was exacerbated by currency movements, primarily the comparative weakness of the US dollar relative to sterling during the year. In 2018 currency movements decreased sales by £134m when compared to the equivalent figures at constant 2017 rates. When measured at 2017 constant exchange rates, the Group's sales declined by 6%. Part of the decrease is due to the absence of sales from businesses sold during 2017 and 2018, partly offset by the impact of the adoption of IFRS 15 'Revenue from contracts with customers.' This new standard was adopted on January 1, 2018 but the comparative figures for 2017 have not been restated (see also note 1 within Item 18–Financial Statements). The impact of adopting IFRS 15 was to increase sales by £9m. The Group estimates that after excluding the impact of disposals and the adoption of IFRS 15, sales declined by 1% at constant exchange rates. This decrease is primarily explained by further declines in North America in higher education and school courseware, largely offset by aggregate growth in the rest of the business.

In 2018, the Group reported an operating profit of £553m compared to an operating profit of £451m in 2017. The increase in profit of £102m mainly reflects an increase in gains on disposal and reduced intangible charges which more than offset increased restructuring, the lost contribution from businesses disposed and the impact of currency movements. After stripping out the effect of gains on the sale of businesses, reduced intangible charges, increased restructuring costs and one-off pension related charges, profits from trading declined by around £30m. This trading decline was primarily due to currency movements and the lost contribution from businesses disposed which offset the increased year on year benefit from restructuring savings. The impact of adopting IFRS 15 on operating profit was similar to the impact on sales described above

increasing operating profit by £9m. The Group also adopted IFRS 9 'Financial instruments' on January 1, 2018 but this new standard did not have a material impact on operating profit (see also note 1 within Item 18–Financial Statements).

In May 2017, the Group announced a new restructuring program, the 2017-2019 restructuring program. This program began in the second half of 2017 and costs incurred were £79m in 2017 and £102m in 2018 and relate to delivery of cost efficiencies in the enabling functions and US higher education courseware business together with further rationalization of the property and supplier portfolio. The restructuring costs in 2018 relate predominantly to staff redundancies and the net cost of property rationalization. Included in the property rationalization in 2018 is the impact of the consolidation of the Group's property footprint in London which resulted in a charge for onerous leases of £91m partially offset by profit from the sale of property of £81m. The onerous lease provisions are the main driver for the overall increase in provisions on the balance sheet at December 31, 2018.

Operating profit in 2018 included a gain of £230m from the sale of businesses that relates to the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m, the disposal of the Group's equity interest in UTEL, the online University partnership in Mexico, realising a gain of £19m, and various other smaller disposal items realising a net gain of £4m. Operating profit in 2017 included a gain of £128m from the sale of businesses. The sale of the Group's test preparation business in China resulted in a pre-tax profit on sale of £44m, while the sale of a 22% share in PRH resulted in a pre-tax profit on sale of £96m. These were offset in part by net losses on other smaller disposals.

Currency movements decreased 2018 operating profit by £17m when compared to the equivalent figures translated at constant 2017 exchange rates.

The profit before taxation in 2018 of £498m compares to a profit before taxation of £421m in 2017. The increase in profit of £77m reflects the £102m increase in the reported operating profit identified above offset by an increase in net finance costs of £25m, from £30m in 2017 to £55m in 2018.

The Group's net interest payable decreased from £79m in 2017 to £24m in 2018. The decrease was primarily due to a reduction in gross debt achieved through the early redemption of bonds in 2017 and in early 2018. Charges relating to early redemptions increased finance charges in 2017 but were not as significant in 2018. Additionally there was a reduction in interest on tax provisions following reassessment of those provisions in 2018. Also included in net finance costs are net finance costs relating to employee benefit plans, foreign exchange and other gains and losses. In 2018 the total of these items was a loss of £31m compared to a gain of £49m 2017. Income relating to employee benefit plans was £8m higher in 2018 than in 2017 reflecting the higher net surplus on pension balances at the beginning of 2018 compared to the beginning of 2017. Other losses in 2018 primarily relate to foreign exchange differences on un-hedged cash and cash equivalents, and other financial instruments that generated gains in 2017.

The reported tax credit in 2018 was £92m (18.5%) compared to a charge of £13m (3.1%) in 2017. The movement in the tax rate reflects several one-off benefits in 2018 including provision releases due to the expiry of relevant statutes of limitation and due to the reassessment of historical positions, as well as a one-off benefit from a reassessment of the tax treatment of certain items of income and expenditure.

Net cash generated from operations increased to £547m in 2018 from £462m in 2017. The main reason for the improvement in cash generated from operations was the absence in 2018 of special pension contributions which in 2017 were £227m and related to the FT Group disposal (£25m) and to agreements relating to the PRH merger in 2013 (£202m). The benefit from the absence of these pension contributions in 2018 was partly offset by higher incentive payments in 2018 relating to 2017 performance and other unfavourable movements in working capital.

Net interest paid at £22m in 2018 compares to £69m in 2017 and reflects the decrease in interest charge for the year referred to above. Tax paid in 2018 was £43m compared to £75m in 2017 with the decrease mainly explained by tax refunds in the US.

Capital expenditure on property, plant and equipment was £70m in 2018 compared to £82m in 2017. Proceeds from the sale of property in 2018 of £128m includes proceeds from the sale of the Group's London property as part of the restructuring program. There were no material property sales in 2017. Capital expenditure on software intangibles reduced from £150m in 2017 to £130m in 2018. The expenditure on both tangible and intangible capital includes the continuing investment in enabling function technology designed to lower administrative costs.

There were no significant acquisitions in either 2018 or 2017 and the net cash outflow in respect of businesses and investments acquired was £15m in 2018 and £14m in 2017. The net cash inflow in respect of businesses and investments disposed was £107m in 2018 compared to £430m in 2017. In 2017 the cash received largely related to the PRH and GEDU disposals and in 2018 includes proceeds from the sale of WSE and UTEL.

Dividends from joint ventures and associates decreased from £458m in 2017 to £117m in 2018. The reduction is primarily due to the PRH sale transaction in 2017 which resulted in a reduced equity share from 47% to 25% and involved recapitalization dividends amounting to £312m in 2017 and £50m in 2018. Dividends paid to company shareholders in 2018 of £136m compares to £318m in 2017 reflecting the rebasing of the dividend in 2017 to reflect portfolio changes, increased investment and to align with profit expectations. Cash returned to shareholders via the share buyback program, announced in October 2017 and completed in February 2018, amounted to £149m in 2017 and £153m in 2018.

Overall the Group's net borrowings decreased from £432m at the end of 2017 to £143m at the end of 2018. The reduction in net debt was principally due to cash generated from operations and the proceeds from disposal of businesses and property in the year which more than offset interest, tax, share buy-back and dividend payments.

Outlook

In 2019, the Group expects to report adjusted operating profit of between £610m and £660m (including businesses held for sale and after taking account of the adoption of IFRS 16 — see also note 1 within Item 18 — Financial Statements.) Adjusted operating profit is the key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments over time by separating out those items of income and expenditure relating to acquisitions and disposals, major restructuring programs and certain other items that are not representative of underlying performance. Reconciliations of adjusted operating profit to statutory operating profit are included below under 'Sales and operating profit by segment' and in note 2 within Item 18 — Financial Statements. Due to the difficulty in making accurate forecasts of some of the information excluded from adjusted operating profit, the Group is unable to quantify expected 2019 statutory operating profit without unreasonable efforts, and consequently, no statement thereof, and no reconciliation of the Group's expected 2019 adjusted operating profit thereto, is included.

The outlook for 2019 is based on the following factors when comparing to 2018. Guidance is based on exchange rates at 31 December 2018 and these rates would generate approximately £26m more adjusted operating profit than would be the case at constant 2018 average exchange rates. In 2018, the Group generated approximately 64% of its sales in the US, 3% in Greater China, 5% in the Eurozone, 3% in Brazil, 3% in Canada, 3% in Australia, 2% in South Africa and 1% in India. Guidance for 2019 includes the K12 business even though it was sold in March 2019. This business contributed £364m to 2018 sales and around £20m to 2018 adjusted operating profit. In addition, the 2018 results include the WSE business to the point of sale in March 2018 and this business contributed £42m to 2018 sales and £4m to 2018 adjusted operating profit. In 2019, the Group expects cost inflation of around £50m together with increased investment in strategic growth areas of around £33m. Incremental in-year benefits from the 2017-2019 restructuring program are expected to be £130m in 2019. Further restructuring costs of £150m (excluded from adjusted operating profit) are expected in 2019.

In North America, the Group expects US Higher Education Courseware revenue to be flat to down 5% on the continuation of the pressures seen on end demand in 2018 with ongoing declines in enrolment and modest growth in open educational resources (OER) adoptions. For print revenue in this segment, there is scope for

further declines in gross sales and improvements in returns. Print continues to be impacted by the ongoing rise of secondary channels, such as rental, but channel inventory has now returned to more normalized levels following the 2016 inventory correction and its after effects. The channel is now optimising the stock it holds, both through reducing purchases and returns, and this is expected to continue in 2019. Growth in digital and direct sales will provide some offset to the continuing pressures on print. In Assessment, good growth is expected in Professional Certification and stable revenue in the Clinical Assessment business in the US. A modest decline in revenue is expected in North America Student Assessment on continued contraction in revenue associated with the Group's Partnership for Assessment of Readiness for College and Careers ("PARCC") and ACT Aspire contracts. Good growth is expected in revenue and enrolment in Connections Academy and in North America Online Program Management (OPM).

In Core, the Group is expecting stable revenue across Core, including student qualifications and assessment, with further revenue growth in OPM and Pearson Test of English Academic, offset by continued declines in its courseware businesses.

In Growth, The Group expects revenue to continue to increase in 2019 benefiting from new products and services across all divisions.

The Group anticipates a lower contribution from Penguin Random House from a normalized publishing performance and expects an annual after-tax contribution of around £60m-£65m to adjusted operating profit.

Sales information by segment

The following table shows sales information for each of the past three years by segment:

	Year ended December 31		
	2018	2017	2016
	£m	£m	£m
North America	2,784	2,929	2,981
Core	806	815	803
Growth	539	769	768
Total continuing operations	<u>4,129</u>	<u>4,513</u>	<u>4,552</u>

Sales information by geographic market supplied

The following table shows sales information for each of the past three years by geographic region:

	Year ended December 31		
	2018	2017	2016
	£m	£m	£m
Europe	623	646	648
North America	2,753	2,896	2,947
Asia Pacific	455	643	632
Other countries	298	328	325
Total continuing operations	<u>4,129</u>	<u>4,513</u>	<u>4,552</u>

In the table above sales are allocated based on the country in which the customer is located.

Exchange rate fluctuations

The Group earns a significant proportion of its sales and profits in overseas currencies, principally the US dollar. Sales and profits are translated into sterling in the consolidated financial statements using average rates.

The average rate used for the US dollar was £1:\$1.34 in 2018, £1:\$1.30 in 2017 and £1:\$1.33 in 2016. Fluctuations in exchange rates can have a significant impact on the Group's reported sales and profits. In 2018, the Group generated 64% of its continuing sales in the US (2017: 65%; 2016: 65%). In 2018 the Group estimates that a five cent change in the average exchange rate between the US dollar and sterling would have had an impact on its reported earnings per share of approximately 2p. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk" for more information on how foreign exchange risk is managed. The year-end US dollar rate for 2018 was £1:\$1.27 compared to £1:\$1.35 for 2017 and £1:\$1.23 for 2016. The total impact on shareholders' funds of foreign exchange translation was a gain of £86m in 2018 compared to a loss of £313m in 2017. These net movements are principally driven by movements in the US dollar as a significant portion of the Group's operations are in the US.

Critical accounting policies

The Group's consolidated financial statements, included in "Item 18. Financial Statements", are prepared based on the accounting policies described in note 1 to the consolidated financial statements.

Certain of these accounting policies require the application of management judgment in selecting assumptions when making significant estimates about matters that are inherently uncertain. Management bases its estimates on historical experience and other assumptions that it believes are reasonable. These policies are described in note 1a (3) in "Item 18. Financial Statements".

Results of operations

Year ended December 31, 2018 compared to year ended December 31, 2017

Consolidated results of operations

Sales

The Group's total sales decreased from £4,513m in 2017 to £4,129m in 2018, a decrease of £384m or 9%. The year on year movement was impacted by currency movements, primarily the comparative strength of the US dollar relative to sterling during the year. In 2018, currency movements decreased sales by £134m when compared to the equivalent figures at constant 2017 rates. When measured at 2017 constant exchange rates, the Group's sales declined by 6%. Part of the decrease is due to the absence of sales from businesses sold during the year offset by the £9m additional sales recorded as a result of adopting IFRS 15. The Group estimates that after excluding the impact of disposals and the adoption of IFRS 15, sales declined by 1% at constant exchange rates.

North America sales decreased by £145m or 5% from £2,929m in 2017 to £2,784m in 2018. The Group estimates that after excluding the impact of exchange, the contribution from businesses disposed in 2017 and 2018, and the impact of adopting IFRS 15, North America sales declined by 1% in 2018 compared to 2017. This decline was primarily due to North American Higher Education Courseware which declined 5%, School Courseware which was down 4%, impacted by weak Open Territory sales in the second half of the year, the continued decline in Learning Studio as that product moved towards retirement in 2019 and Student Assessment which declined moderately. Offsetting that, was good growth in Virtual Schools, Online Program Management (OPM) and Professional Certification revenue. North America continued to be the most significant source of the Group's sales and as a proportion of sales contributed 67% in 2018 and 65% in 2017.

Core sales decreased by £9m or 1% from £815m in 2017 to £806m in 2018. The Group estimates that after excluding the impact of exchange, the contribution from businesses disposed in 2018 and the impact of adoption of IFRS 15, Core sales were flat when comparing 2018 and 2017. Sales growth in Pearson Test of English Academic, OPM in the UK and Australia and Professional Certification were offset by declines in Higher Education and Student Assessment and Qualifications.

Growth sales decreased by £230m from £769m in 2017 to £539m in 2018 principally due to the lost contribution in China following the disposal of GEDU in 2017 and WSE in 2018. The Group estimates that after

excluding the impact of exchange, the contribution from businesses disposed and the impact of adoption of IFRS 15, Growth sales increased by 1% when comparing 2018 and 2017. Strong growth in China and modest growth in Brazil and Hispano-America were partially offset by declines in South Africa following a large one-off order in 2017.

Cost of goods sold and operating expenses

The following table summarizes the Group's cost of sales, net operating expenses and impairment of intangible assets:

	Year ended December 31	
	2018	2017
	£m	£m
Cost of goods sold	1,943	2,066
Operating expenses:		
Distribution costs	88	84
Selling, marketing and product development costs . . .	759	896
Administrative and other expenses	1,039	1,207
Restructuring costs	90	79
Other income	(69)	(64)
Total net operating expenses	1,907	2,202
Other net gains	(230)	(128)
Total continuing operations	<u>3,620</u>	<u>4,140</u>

Cost of goods sold. Cost of sales consists of costs for raw materials, primarily paper, printing and binding costs, amortization of pre-publication costs, royalty charges, the cost of service provision in the assessment and testing business and the cost of teaching and facilities in direct delivery businesses. The Group's cost of sales decreased by £123m, or 6%, from £2,066m in 2017, to £1,943m in 2018. The decrease largely reflects the decrease in sales but also includes some continuing benefit from restructuring. Cost of sales as a percentage of sales increased largely as a result of the mix effect caused by the disposal of businesses with generally higher gross margins than Pearson as a whole. Cost of sales was 47.1% of sales in 2018 compared to 45.8% in 2017.

Distribution costs. Distribution costs consist primarily of shipping costs, postage and packing. Distribution costs increased by £4m reflecting some one-off costs in the Core business relating to a change in distribution arrangements in 2018.

Selling, marketing and product development costs. The Group's selling, marketing and product development costs decreased by £137m or 15% from £896m in 2017 to £759m in 2018. The decrease is partly explained by the absence of costs from businesses disposed and restructuring savings realized in the year. As a percentage of sales, these costs decreased in 2018 from 19.9% in 2017 to 18.4% in 2018.

Administrative and other expenses. The Group's administrative and other expenses decreased by £168m or 13.9% from £1,207m in 2017 to £1,039m in 2018. This decrease is explained by reductions in intangible amortization relating to past acquisitions, the absence of costs from businesses disposed and the impact of restructuring savings particularly in enabling functions partly offset by continuing investment in technology.

Restructuring costs. Restructuring costs of £90m in 2018 and £79m in 2017 relate to the 2017-2019 restructuring program announced in May 2017. This programme began in the second half of 2017 and costs incurred were £79m in 2017 and £90m (excluding restructuring costs related to associates) in 2018 relating to delivery of cost efficiencies in enabling functions and the US higher education courseware business together with

further rationalization of the property and supplier portfolio. The restructuring costs in 2018 relate predominantly to staff redundancies and the net cost of property rationalization. Included in the property rationalization in 2018 is the impact of the consolidation of the Group's property footprint in London which resulted in a charge for onerous leases of £91m partially offset by profit from the sale of property of £81m.

Other income. Other operating income mainly consists of freight recharges, sub-rights and licensing income, distribution commissions, investment income and gains on minor asset disposals together with the service fee income from Penguin Random House. Other operating income increased to £69m in 2018 compared to £64m in 2017 mainly due to increased rights income and recoveries following legal settlements.

Other net gains and losses. Other net gains and losses relate to the sale of businesses and in 2018 these gains amounted to £230m and result from the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m, the disposal of the equity interest in UTEL, the online University partnership in Mexico, realising a gain of £19m, and various other smaller disposal items realising a net gain of £4m. Other net gains and losses in 2017 include the sale of the Group's test preparation business in China, which resulted in a pre-tax profit on sale of £44m, the sale of a 22% share in PRH, which resulted in a pre-tax profit on sale of £96m and net losses of £12m relating to other smaller disposals.

Share of results of joint ventures and associates

The contribution from the Group's joint ventures and associates decreased by £34m to £44m in 2018 from £78m in 2017. The decrease is mainly due to the sale of 22% of PRH in 2017 which resulted in a lower share of profits for the final quarter of 2017 and the whole of 2018. In addition there were restructuring costs incurred at PRH and in respect of the Group's ACT Aspire joint venture in 2018 that were absent in 2017.

Operating profit

In 2018, the Group reported an operating profit of £553m compared to an operating profit of £451m in 2017. The increase in profit of £102m mainly reflects an increase in gains on disposal and reduced intangible charges which more than offset increased restructuring, the lost contribution from businesses disposed and the impact of currency movements. After stripping out the effect of gains on the sale of businesses, reduced intangible charges, increased restructuring costs and one-off pension related charges, profits from trading declined by around £30m. This trading decline was primarily due to currency movements and the lost contribution from businesses disposed which offset the increased year on year benefit from restructuring savings.

Net finance costs

Net interest payable decreased from £79m in 2017 to £24m in 2018. The decrease was primarily due to a reduction in gross debt achieved through the early redemption of bonds in 2017 and in early 2018. Charges relating to early redemptions increased finance charges in 2017 but were not as significant in 2018. Additionally there was a reduction in interest on tax provisions following reassessment of those provisions in 2018. In February 2018, the Group bought back an aggregate nominal amount of €450,000,000 of 2021 and 2025 notes. There was a charge in respect of these early redemptions however there were partial year savings as a result which have flowed through the income statement in the period since redemption. In March and November 2017 respectively, the Group redeemed the \$550m 6.25% Global dollar bonds and \$300m 4.625% US dollar notes, both originally due in 2018. In addition, in August 2017, the Group redeemed \$383m out of the \$500m 3.75% US dollar notes due in 2022 and \$406m out of the \$500m 3.25% US dollar notes due in 2023. The charge in respect of these early redemptions was booked in 2017 with partial year savings in 2017 and the full annualized savings coming through in 2018.

Other net finance costs are finance income and costs on retirement benefits, foreign exchange, interest costs relating to acquisition consideration and other gains and losses on derivative financial instruments. In 2017 the

total of these items was a gain of £49m compared to a loss of £31m in 2018. Income relating to employee benefit plans was £8m higher in 2018 than in 2017 reflecting the higher net surplus on pension balances at the beginning of 2018 compared to the beginning of 2017. Other losses in 2018 primarily relate to foreign exchange differences on un-hedged cash and cash equivalents, and other financial instruments that generated gains in 2017.

For a more detailed discussion of the Group's borrowings and interest expenses see “— Liquidity and Capital Resources — Capital Resources” and “— Borrowings” below and “Item 11. Quantitative and Qualitative Disclosures about Market Risk”.

Taxation

The reported tax credit in 2018 was £92m (18.5%) compared to a charge of £13m (3.1%) in 2017. The movement in the tax rate mainly reflects several one-off benefits in 2018 including provision releases due to the expiry of relevant statutes of limitation and due to the reassessment of historical positions including those relating to prior year disposals (£111m), as well as a one off benefit from a reassessment of the tax treatment of certain items of income and expenditure (£25m). The provision releases in 2018 were more significant than they had been in 2017 although in 2017 these releases partly explain a lower tax rate than might be expected given the national tax rates that the group is exposed to. As a result of US tax reform, the reported tax charge in 2017 includes a benefit from revaluation of deferred tax balances to the reduced federal rate of £5m and a repatriation tax charge of £6m.

Discontinued operations

There were no discontinued operations in either 2017 or 2018.

Profit for the year

The profit for the financial year in 2018 was £590m compared to a profit in 2017 of £408m. The increased profit reflects increased operating profit and tax credits offset by higher net finance costs as set out above.

Earnings per ordinary share

The basic earnings per ordinary share, which is defined as the profit for the financial year divided by the weighted average number of shares in issue, was 75.6p in 2018 compared to 49.9p in 2017 based on a weighted average number of shares in issue of 778.1m in 2018 and 813.4m in 2017. The increase in earnings per share was due to the increase in profit for 2018 as described above and was also due to the decrease in the number of weighted average number of shares following the share buyback during late 2017 and early 2018.

The diluted earnings per ordinary share was 75.5p in 2018 and 49.9p in 2017, with the dilutive effect of options being minimal.

Exchange rate fluctuations

Currency movements decreased sales by £134m and decreased the operating profit by £17m. See “Item 11. Quantitative and Qualitative Disclosures about Market Risk” for a discussion regarding the Group's management of exchange rate risks.

Sales and operating profit by segment

The following tables summarize the Group's sales and adjusted operating profit for each of the Group's business segments. Adjusted operating profit is included as it is the key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments over time by separating out

those items of income and expenditure relating to acquisitions and disposals, major restructuring programs and certain other items that are not representative of underlying performance. Reconciliations of adjusted operating profit to statutory operating profit are included below and in note 2 within Item 18 — Financial Statements.

In the Group's adjusted operating profit it has excluded other net gains and losses, acquisition related costs, amortization and impairment of acquired intangibles and the cost of major restructuring programs. In 2018, the Group has also excluded the impact of adjustments arising from clarification of guaranteed minimum pension (GMP) equalization legislation in the UK and in 2017, excluded the impact of US tax reform on associate operating profit. The intangible charges relate only to intangible assets acquired through business combinations and acquisition costs are the direct costs of acquiring those businesses. The Group does not believe these charges are relevant to an understanding of the underlying performance. Charges relating to acquired intangible assets are non-cash charges that reflect the historical expenditure of the acquired business. These acquired intangible assets continue to be supported by ongoing expenditure that is reported within adjusted operating profit. Other net gains and losses that represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets are also excluded from adjusted operating profit as it is important to highlight their impact on operating profit, as reported, in the period in which the disposal transaction takes place in order to understand the underlying trend in the performance of the Group. The GMP equalization charge arises from the ruling in the Lloyds Bank High Court case in the UK in October 2018 that provided clarity on how pension plans should equalize GMP between males and females. The case ruling results in an income statement charge, an additional liability and the potential requirement to make back-payments to pensioners who may have been retired for some years. The Group has excluded this charge from adjusted earnings as it relates to historical circumstances. The charge is an estimate based on available data and revisions to these estimates in future years will be treated as assumption changes and recorded in other comprehensive income rather than the income statement. US tax reform in 2017 resulted in the revaluation of deferred tax balances in associates. These revaluations have been excluded from adjusted earnings in 2017 due to their one-off nature.

A reconciliation of operating profit to adjusted operating profit for continuing operations is included in the tables below:

	Year ended December 31, 2018				
	North America	Core	Growth	PRH	Total
	£m	£m	£m	£m	£m
Sales	2,784	806	539	—	4,129
	67%	20%	13%	—	100%
Total operating profit	216	25	266	46	553
Add back:					
Cost of major restructuring	78	16	—	8	102
Intangible charges	72	8	19	14	113
Other net gains and losses	(4)	—	(226)	—	(230)
UK pension GMP equalization	—	8	—	—	8
Total adjusted operating profit	<u>362</u>	<u>57</u>	<u>59</u>	<u>68</u>	<u>546</u>
	66%	10%	11%	13%	100%

	Year ended December 31, 2017				
	North America	Core	Growth	PRH	Total
	£m	£m	£m	£m	£m
Sales	2,929	815	769	—	4,513
	65%	18%	17%	—	100%
Total operating profit	242	27	28	154	451
Add back:					
Cost of major restructuring	60	11	8	—	79
Intangible charges	89	12	37	28	166
Other net gains and losses	3	—	(35)	(96)	(128)
Impact of US tax reform	—	—	—	8	8
Total adjusted operating profit	<u>394</u>	<u>50</u>	<u>38</u>	<u>94</u>	<u>576</u>
	68%	9%	7%	16%	100%

North America

Sales in North America decreased by £145m or 5% from £2,929m in 2017 to £2,784m in 2018 and adjusted operating profit decreased by £32m, or 8%, from £394m in 2017 to £362m in 2018. The Group estimates that after excluding the impact of exchange, the contribution from businesses disposed in 2018 and 2017 and the impact of adopting IFRS 15, North America sales declined by 1% in 2018 compared to 2017 and adjusted operating profit increased by 1%. The sales decline was primarily due to North American Higher Education Courseware declining 5%, School Courseware which was down 4%, impacted by weak Open Territory sales in the second half of the year, the continued decline in Learning Studio as the product moved towards the retirement in 2019 and Student Assessment which declined moderately. Offsetting that, was good growth in Virtual Schools, Online Program Management (OPM) and Professional Certification revenue. The adjusted operating profit benefited from restructuring savings which more than offset the impact of lower sales, inflation and other operating factors.

The North America results also include £78m in 2018 and £60m in 2017 in respect of the 2017-2019 restructuring program. Amortization relating to acquired intangibles was £72m in 2018 compared to £89m in 2017 and there were net gains on business disposals of £4m and net losses of £3m in 2017. None of the disposals in either 2018 or 2017 were material. Overall adjusted operating margins in the North America business decreased in 2018 to 13.0% compared to 13.5% in 2017 due to sales mix offset partly by restructuring savings.

On March 29, 2019 the Group completed the sale of the US K12 school courseware business to Nexus Capital Management LP for headline consideration of \$250m comprising an initial cash payment of \$25m and an unconditional vendor note for \$225m expected to be repaid in three to seven years. Following the repayment of the vendor note, the Group is entitled to 20% of all future cash flows to equity holders and 20% of net proceeds if the business is sold.

North America — courseware

In School Courseware, revenue declined primarily due to declines in Open Territory states. This was partially offset by growth in Adoption state revenue on strong performance in Science in Florida, South Carolina and Tennessee, Elementary Math in Oklahoma and Elementary Social Studies in California and South Carolina. The Group's new adoption participation rate rose to 80% in 2018 from 61% in 2017 and the Group won an estimated 33% share of adoptions competed for (38% in 2017) and 26% of total new adoption expenditure of \$509m (29% of \$365m in 2017).

In Higher Education Courseware, total US college enrolments, as reported by the National Student Clearinghouse, fell 1.4%, with combined two-year public and four-year for-profit enrolments declining 4.8%.

Enrolment weakness was particularly focused on part-time students where enrolment declined 2.9% compared to full-time enrolment which declined 1.1%. Net revenue in the US Higher Education Courseware business declined 5% during the year. The Group estimates that around 2% of this decline was driven by lower enrolment; around 1.5% from the adoption of Open Educational Resources (OER); around 2.5% from the combined impact of shifts in the secondary market, more cautious buying by the channel and lower returns; offset by around a 1% benefit from the shift to digital. In 2018, Pearson's US Higher Education Courseware market share, as reported by MPI, was within the 40-41.5% range seen over the last five years.

Digital revenue grew 2% benefiting from continued growth in direct sales and favourable mix. Global digital registrations of MyLab and related products were flat. In North America, digital registrations fell 3% with good growth in Science, Business & Economics and Revel offset by lower overall enrolment and continued softness in Developmental Mathematics. Revel registrations grew more than 40%. Including stand-alone eBook registrations, total North American digital registrations rose 1% and global registrations rose 3%.

The actions announced in early 2017 to promote access over ownership met with continued success. Stand-alone eBook volumes grew 34% in the US with revenue up 25% and the partner print rental programme has had a successful start with 130 titles in the programme in 2018. The Group plans to increase the number of titles in the programme to around 400 by fall 2019.

The North America business continued to make good progress with the Inclusive Access (Direct Digital Access) solutions product signing 192 new institutions in 2018, taking the total of not-for-profit and public institutions served to 617. Including 80 longer-standing contracts with for-profit colleges, there are now direct courseware relationships with nearly 700 institutions. Inclusive Access ensures that students have affordable access to the courseware that they need on day one of the course, whilst further shifting the Group's business model in this segment away from ownership and towards subscription. During the year, the business delivered over 1.4m course enrolments with inclusive access revenues from non-profit and public institutions rising to c.8% of the higher education courseware revenue as more colleges and faculties saw the benefit of this model.

North America — assessment

In Student Assessment, revenue declined moderately in 2018 due to the faster than expected contraction in revenue associated with the PARCC and ACT-Aspire multi-state volume-based contracts and a more disciplined competitive approach. During 2018, Pearson successfully renewed contracts in Arizona and Kentucky through competitive procurements and secured business with the District of Columbia, New Jersey, New Mexico, and Maryland under new contracts with these PARCC states. The business also won new contracts for Utah's High School Assessments and with the University of Iowa for the delivery of Iowa's new assessment system.

In 2018, the Group delivered 24m standardized online tests to K12 students, down 5% from 2017. TestNav 8, Pearson's next-generation online test platform, supported a peak load of 825,000 tests in a single day and provided 99.99% up time. The AI scoring systems scored 36m responses to open-ended test items, around 33% of the total. Paper based standardized test volumes fell 9% to 18.5m.

In Professional Certification, VUE global test volume rose 4% to over 15m. Revenue in North America was up due to growth in medical college admissions testing and certification for professional bodies, offset by continued declines in volumes in the GED High School Equivalency Test and higher-level IT certifications in an environment of low unemployment.

The business signed over 70 new contracts in 2018 and the renewal rate on existing contracts continued to be over 95%. During the year, over 80 contracts were renewed including the National Council of State Boards of Nursing (NCLEX exam), Microsoft and Adobe.

Clinical Assessment sales declined slightly on an absence of new major product introductions. Late in 2018 the Group launched a refresh of the Peabody Picture Vocabulary Test and Expressive Vocabulary Test (PPVT/

EVT). Q-interactive, Pearson's digital solution for Clinical Assessment administration, saw continued strong growth in license sales with sub-test administrations up more than 37% over the same period last year.

North America — services

Connections Academy, the K12 online school business grew revenue 8%. Connections Academy served 73,000 Full Time Equivalent (FTE) students through 37 continuing full-time virtual partner schools in 28 states, up 11% on last year. Total FTE virtual school students declined 3% to 75,400 as expected due to contract exits at Commonwealth Charter Academy in Pennsylvania and Florida Virtual School. Three new full-time online, state-wide partner schools opened in the 2018-19 school year in Florida, Michigan, and Ohio and it is anticipated that between two and five new partner schools will be opened in the 2019-20 school year. The 2018 Connections Academy Parent Satisfaction Survey continued to show solid endorsement for the schools with 93% of families with enrolled students stating they would recommend Connections virtual schools to others and 95% agreeing that the curriculum is of high quality.

In Pearson Online Services, revenue grew 3%, primarily due to growth in OPM, partially offset by a decline in Learning Studio revenue as the product is retired and declines as smaller non-OPM contracts were restructured. In OPM, revenue grew 9% as course registration grew strongly, up 14% to more than 388,000, in programs at key partners including Arizona State University Online, Maryville University, Regis College, Bradley University, Ohio University and the University of Southern California. The overall active program count grew by 33 to 325. The launch of 46 new programs were offset by 13 discontinued programs. During 2018, 27 new multi-year programs were signed including programs at new partners the University of North Dakota and Rider University. The business closed nine out of 15 renewal opportunities and as part of broader efforts around portfolio optimization agreed with partners to terminate 23 programs that were not mutually viable.

Core

Sales in Core markets decreased by £9m, or 1%, from £815m in 2017 to £806m in 2018 while adjusted operating profit increased by £7m, or 14%, from £50m in 2017 to £57m in 2018. At constant exchange and after excluding the contribution from disposals, Core sales were flat year on year and profits increased by 10%. Growth in Pearson Test of English Academic, OPM in the UK and Australia and Professional Certification was offset by declines in Higher Education and Student Assessment and Qualifications.

The increase in adjusted operating profit was mainly due to restructuring savings partly offset by cost inflation. Also included in the Core statutory operating profit were restructuring costs of £16m in 2018 and £11m in 2017 and amortization of acquired intangibles of £8m in 2018 and £12m in 2017. The statutory operating profit in 2018 also includes the one-off £8m charge in respect of guaranteed minimum pension (GMP) equalization in the UK. The GMP equalization charge arises from the ruling in the Lloyds Bank High Court case in the UK in October 2018 that provided clarity on how pension plans should equalize GMP between males and females. The case ruling results in an income statement charge, an additional liability and the potential requirement to make back- payments to pensioners who may have been retired for some years.

Core — courseware

Courseware revenue declined moderately. Slight growth in School Courseware was offset by declines in Higher Education Courseware. In Higher Education Courseware, revenue was down due to market declines in Europe and Asia, partially offset by growth in digital sales to institutional partners in the UK and Australia.

Core — assessments

In Student Assessment and Qualifications, revenue fell as modest growth in BTEC Firsts and GCE A-Level was more than offset by declines in AS levels, international GCSEs in the UK and UK Apprenticeships due to

policy changes in the schools qualifications and the apprenticeships market. The business successfully delivered the National Curriculum Test (NCT) for 2018, marking 3.6m scripts, up slightly from 2017 and will deliver the NCT again in 2019 before the test transitions to another provider in 2020.

Clinical Assessment sales declined, primarily in Australia, due to an absence of new major product introductions. Q-Interactive, Pearson's digital solution for Clinical Assessment administration, saw continued strong growth. Pearson Test of English Academic also saw continued strong growth in test volumes and successfully extended its agreement with the Department of Home Affairs in Australia for another two years. In Professional Certification, revenue was up modestly due to the launch of additional computer-based exams for an existing customer in the UK and the MOI, the French Driving Test.

Core — services

In Higher Education Services, revenue grew strongly. OPM revenue was up 34%. In Australia, there was good growth due to the successful partnership with Monash University, and continued success of the Graduate Diploma in Psychology. There were a total of around 10,200 course registrations across the seven programs in Australia up from around 9,300 in 2017. In the UK, there were 11 new programs launched and course registrations grew, reaching around 3,000 compared to around 1,400 in 2017. During the year, new partnerships with the University of Northumbria in the UK, and ESSEC Business School in France were announced.

Growth

Growth sales decreased by £230m, to £539m in 2018 from £769 in 2017. Adjusted operating profit increased by £21m or 55% to £59m in 2018 from £38m in 2017. The Group estimates that, after excluding the impact of exchange rates and the incremental contribution from businesses disposed in 2018 and 2017, sales were up 1% year on year. Strong growth in China and modest growth in Brazil and Hispano America were partially offset by declines in South Africa following a large one-off order in 2017.

The adjusted operating profit increase reflected the higher revenue and benefits of current and prior year restructuring. The Group's statutory operating profit included restructuring costs of £8m in 2017. In 2018 restructuring costs were offset by credits to leave a net charge of nil in 2018. Also included in the statutory operating profit was amortization of acquired intangibles of £19m in 2018 and £37m in 2017 and gains on business disposals. In 2018 these gains amounted to £226m and result from the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m and the disposal of the equity interest in UTEL, the online University partnership in Mexico, realising a gain of £19m. Gains in 2017 of £35m include the sale of the Group's test preparation business in China.

Growth — courseware

Courseware revenue grew slightly, with strong growth in English Language Courseware in China, partially offset by declines in School Courseware in South Africa following a large one-off order in 2017.

Growth — assessments

Professional Certification grew well due to a new ICT infrastructure certification contract. Pearson Test of English Academic saw strong growth in revenue with over 10% growth in the volume of tests taken in India, China and the Middle East and moderate price increases.

Growth — services

In English Services, revenue grew slightly in the English language school franchise, Wizard, due to new product launches. In School Services, revenue was flat, with declines in student enrolment in the public sistemas

business in Brazil offset by price increases, improved products and better student retention across the Group's private sistemas. In India, Pearson MyPedia, an inside service 'sistema' solution for schools, expanded to over 700 schools with over 200,000 learners. In Higher Education services revenue declined slightly due to business exits in India and slight revenue decline at Pearson Institute of Higher Education (formerly CTI), the university business in South Africa, due to a change in mix with total enrolment broadly flat and new student enrolment up 18%.

Penguin Random House

The Group owns 25% of Penguin Random House, the first truly global consumer book publishing company. The Group owned 47% until October 5, 2017, when it completed the sale of 22% to Bertelsmann. The Group's share of Penguin Random House adjusted operating profits were £68m in 2018 compared to £94m in 2017, the decrease is primarily due to the reduced contribution following the sale of part of the Group's share.

Penguin Random House performed solidly with underlying revenue growth on increased audio sales and stable print sales, whilst the business benefitted from international bestseller "Becoming" by Michelle Obama, the year's top-selling U.S. title, and bestsellers from Bill Clinton & James Patterson, Jordan Peterson, Jamie Oliver, Dr. Seuss, John Grisham, and Lee Child.

The Penguin Random House Venture Combined Financial Statements are included in this report on pages F-87 to F-160.

Results of operations

Year ended December 31, 2017 compared to year ended December 31, 2016

Consolidated results of operations

Sales

The Group's total sales decreased from £4,552m in 2016 to £4,513m in 2017, a decrease of £39m or 1%. The year on year movement was impacted by currency movements, primarily the comparative strength of the US dollar relative to sterling during the year. In 2017, currency movements increased sales by £126m when compared to the equivalent figures at constant 2016 rates. When measured at 2016 constant exchange rates, the Group's sales declined by 4%. Part of the decrease is due to the absence of sales from businesses sold during the year and the Group estimates that after excluding the impact of disposals, sales declined by 2% at constant exchange rates.

North America sales decreased by £52m or 2% from £2,981m in 2016 to £2,929m in 2017. The Group estimates that after excluding the impact of exchange and the contribution from businesses disposed in 2016 and 2017, North America sales declined by 4% in 2017 compared to 2016 due to declines in higher education and school courseware, school assessment and in Learning Studio, a learning management system that is being retired. North America continued to be the most significant source of the Group's sales and as a proportion of sales contributed 65% in both 2017 and 2016.

Core sales increased by £12m or 1% from £803m in 2016 to £815m in 2017. The Group estimates that after excluding the impact of exchange and the contribution from businesses disposed in 2016, Core sales were flat when comparing 2017 and 2016. Sales growth in OPM in the UK and Australia and growth in the Pearson Test of English Academic were offset by declines in school, higher education, English courseware and student assessment and qualifications.

Growth sales increased by £1m from £768m in 2016 to £769 in 2017. The Group estimates that after excluding the impact of exchange and the contribution from businesses disposed in 2017, Growth sales were flat

when comparing 2017 and 2016. Increases in China, school courseware in South Africa and Pearson Test of English Academic, were offset by declines in higher education services primarily due to lower enrolment at CTI, the university business in South Africa and business rationalization in India, and declines in Brazil.

Cost of goods sold and operating expenses

The following table summarizes the Group's cost of sales, net operating expenses and impairment of intangible assets:

	Year ended December 31	
	2017	2016
	£m	£m
Cost of goods sold	2,066	2,093
Operating expenses		
Distribution costs	84	88
Selling, marketing and product development costs ..	896	908
Administrative and other expenses	1,207	1,240
Restructuring costs	79	329
Other income	<u>(64)</u>	<u>(85)</u>
Total net operating expenses	2,202	2,480
Other net (gains) and losses	(128)	25
Impairment of intangible assets	<u>—</u>	<u>2,548</u>
Total continuing operations	<u>4,140</u>	<u>7,146</u>

Cost of goods sold. Cost of sales consists of costs for raw materials, primarily paper, printing and binding costs, amortization of pre-publication costs, royalty charges, the cost of service provision in the assessment and testing business and the cost of teaching and facilities in direct delivery businesses. The Group's cost of sales decreased by £27m, or 1%, from £2,093m in 2016, to £2,066m in 2017. The decrease largely reflects the decrease in sales but also includes some benefit from 2016 restructuring realized in 2017. Cost of sales was 45.8% of sales in 2017 compared to 46.0% in 2016.

Distribution costs. Distribution costs consist primarily of shipping costs, postage and packing. Distribution costs have decreased by £4m reflecting restructuring benefits and the continuing shift to digital and services products.

Selling, marketing and product development costs. The Group's selling, marketing and product development costs decreased by £12m or 1% from £908m in 2016 to £896m in 2017. As a percentage of sales, these costs were consistent at 19.9% in both 2016 and 2017.

Administrative and other expenses. The Group's administrative and other expenses decreased by £33m or 3% from £1,240m in 2016 to £1,207m in 2017. This decrease is largely due to the full impact of restructuring savings from the 2016 program flowing through in 2017, partly offset by continuing investment in technology.

Restructuring costs. In 2017, restructuring costs of £79m relate to the 2017-2019 restructuring program announced in May 2017 and include costs incurred in the second half of 2017 relating to this program. Total restructuring in 2016 amounted to £338m and included costs associated with headcount reductions, property rationalization and closure or exit from certain systems, platforms, products and supplier and customer relationships.

Other income. Other operating income mainly consists of freight recharges, sub-rights and licensing income, distribution commissions, investment income and gains on minor asset disposals together with the service fee

income from Penguin Random House. Other operating income decreased to £64m in 2017 compared to £85m in 2016 mainly due to a decline in investment income following the disposal of investments and the absence of gains on asset disposals.

Other net gains and losses. Other net gains and losses in 2017 include the sale of the Group's test preparation business in China, which resulted in a pre-tax profit on sale of £44m, the sale of a 22% share in PRH, which resulted in a pre-tax profit on sale of £96m and net losses of £12m relating to other smaller disposals. Included in other gains and losses in 2016 are losses of £25m associated with the closure of the English language schools in Germany and the sale of the Pearson English Business Solutions business.

Impairment of intangible assets. At the end of 2016, following trading in the final quarter of the year, the Group determined that the underlying issues in the North American higher education courseware market were more severe than anticipated. These issues related to declining student enrolments, changes in buying patterns of students and correction of inventory levels by distributors and bookshops. As a result, in January 2017, the Group revised its strategic plans and estimates for future cash flows and, as a consequence, recognized an impairment to North American goodwill of £2,548m. There were no impairments in 2017.

Share of results of joint ventures and associates

The contribution from the Group's joint ventures and associates decreased by £19m to £78m in 2017 from £97m in 2016. The decrease was mainly due to the sale of 22% of PRH resulting in a lower share of profits for the final quarter of the year, which is the peak selling season for consumer publishing businesses.

Operating profit/(loss)

In 2017, there was an operating profit of £451m compared to an operating loss on a continuing basis of £2,497m in 2016. The increase in profits primarily reflects the absence of impairment charges in 2017 (£2,548m in 2016), lower restructuring costs (£79m in 2017 compared to £338m in 2016) and gains from the sale of businesses (a gain of £128m in 2017 compared to a loss of £25m in 2016). After stripping out the absence of impairments, lower restructuring costs and gains on the sale of businesses, profits from trading declined by around £58m. This was primarily due to increased amortization charges, higher staff incentives and cost inflation, offset in part by the year on year benefit from restructuring savings.

Net finance costs

Net interest payable in 2017 was £79m, compared to £59m in 2016. The increase was primarily due to higher US interest rates in 2017, additional charges relating to the early redemption of various bonds during the year and some additional interest on tax provisions. In March and November 2017 respectively, the Group redeemed the \$550m 6.25% Global dollar bonds and \$300m 4.625% US dollar notes, both originally due in 2018. In addition, in August 2017, the Group redeemed \$383m out of the \$500m 3.75% US dollar notes due in 2022 and \$406m out of the \$500m 3.25% US dollar notes due in 2023. Although there was a charge in respect of the early redemptions, there were also partial year savings as a result which have flowed through the income statement in the period since redemption, with the full annualized savings coming through in 2018.

Other net finance costs are finance income and costs on retirement benefits, foreign exchange, interest costs relating to acquisition consideration and other gains and losses on derivative financial instruments. The decrease in finance income in respect of employee benefit plans from £11m in 2016 to £3m in 2017 reflects the lower net surplus on pension balances at the beginning of 2017 compared to the beginning of 2016. Both the exchange gain in 2017 of £44m and the exchange loss in 2016 of £20m mainly relate to foreign exchange differences on unhedged cash and cash equivalents and other financial instruments.

For a more detailed discussion of the Group's borrowings and interest expenses see "— Liquidity and Capital Resources — Capital Resources" and "— Borrowings" below and "Item 11. Quantitative and Qualitative Disclosures about Market Risk".

Taxation

The total tax charge in 2017 of £13m represents 3.1% of pre-tax profit and compares to a benefit of £222m or 8.7% of pre-tax losses in 2016. The tax benefit in 2016 was mainly due to the release of deferred tax liabilities relating to tax deductible goodwill that was impaired. The low tax rate in 2017 is largely attributable to uncertain tax position releases due to the expiry of the relevant statutes of limitation. As a result of US tax reform, the reported tax charge includes a benefit from revaluation of deferred tax balances to the reduced federal rate of £5m and a repatriation tax charge of £6m. In addition to the impact on the reported tax charge, the Group's share of profit from associates was adversely impacted by £8m.

Discontinued operations

There were no discontinued operations in either 2016 or 2017.

Profit/(loss) for the year

The profit for the financial year in 2017 was £408m compared to a loss in 2016 of £2,335m. The loss in 2016 includes the impairment charge of £2,548m and higher restructuring charges, as noted above.

Earnings/(loss) per ordinary share

The basic earnings per ordinary share, which is defined as the profit for the financial year divided by the weighted average number of shares in issue, was 49.9p in 2017 compared to a loss per share of 286.8p in 2016 based on a weighted average number of shares in issue of 813.4m in 2017 and 814.8m in 2016. The increase in earnings per share was due to the increase in profit for 2017 described above and was not significantly affected by the movement in the weighted average number of shares.

The diluted earnings per ordinary share was also 49.9p in 2017, with the dilutive effect of options being minimal. The diluted earnings per ordinary share in 2016 was the same as the basic earnings per ordinary share due to the loss for the year.

Exchange rate fluctuations

Currency movements increased sales by £126m and increased the operating profit by £13m. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk" for a discussion regarding the Group's management of exchange rate risks.

Sales and operating profit by segment

The following tables summarize the Group's sales and adjusted operating profit for each of the Group's business segments. Adjusted operating profit is included as it is the key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments over time by separating out those items of income and expenditure relating to acquisitions and disposals, major restructuring programs and certain other items that are not representative of underlying performance. Reconciliations of adjusted operating profit to statutory operating profit are included below and in note 2 within Item 18 — Financial Statements.

In the Group's adjusted operating profit it has excluded other net gains and losses, amortization and impairment of acquired intangibles, the cost of major restructuring programs and the impact of US tax reform. The intangible charges relate only to intangible assets acquired through business combinations and acquisition costs are the direct costs of acquiring those businesses. The Group does not believe these charges are relevant to an understanding of the underlying performance. Charges relating to acquired intangible assets are non-cash charges that reflect the historical expenditure of the acquired business. These acquired intangible assets continue

to be supported by ongoing expenditure that is reported within adjusted operating profit. Other net gains and losses that represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets are also excluded from adjusted operating profit as it is important to highlight their impact on operating profit, as reported, in the period in which the disposal transaction takes place in order to understand the underlying trend in the performance of the Group. US tax reform in 2017 resulted in the revaluation of deferred tax balances. These revaluations were excluded from adjusted operating profit in relation to post tax profits of associates in 2017 due to their one-off nature.

A reconciliation of operating profit to adjusted operating profit for continuing operations is included in the tables below:

	Year ended December 31, 2017				
	North America	Core	Growth	PRH	Total
	£m	£m	£m	£m	£m
Sales	2,929	815	769	—	4,513
	65%	18%	17%	—	100%
Total operating profit	242	27	28	154	451
Add back:					
Cost of major restructuring	60	11	8	—	79
Intangible charges	89	12	37	28	166
Other net gains and losses	3	—	(35)	(96)	(128)
Impact of US tax reform	—	—	—	8	8
Total adjusted operating profit	394	50	38	94	576
	68%	9%	7%	16%	100%

	Year ended December 31, 2016				
	North America	Core	Growth	PRH	Total
	£m	£m	£m	£m	£m
Sales	2,981	803	768	—	4,552
	65%	18%	17%	—	100%
Total operating profit	(2,448)	(33)	(100)	84	(2,497)
Add back:					
Cost of major restructuring	172	62	95	9	338
Intangible charges	2,684	16	33	36	2,769
Other net gains and losses	12	12	1	—	25
Total adjusted operating profit	420	57	29	129	635
	66%	9%	5%	20%	100%

North America

Sales in North America decreased by £52m or 2% from £2,981m in 2016 to £2,929m in 2017 and adjusted operating profit decreased by £26m, or 6%, from £420m in 2016 to £394m in 2017. The Group estimates that after excluding the impact of exchange and the contribution from businesses disposed in 2017 and 2016, North America sales declined by 4% in 2017 compared to 2016 primarily due to anticipated declines in higher education and school courseware, school assessment, and Learning Studio, a learning management system was retired.

There were no impairment charges in 2017. In 2016, the Group recognized an impairment to its US goodwill. At the end of 2016, following trading in the final quarter of the year, the Group determined that the

underlying issues in the North American higher education courseware market were more severe than anticipated. These issues related to declining student enrolments, changes in buying patterns of students and correction of inventory levels by distributors and bookshops. As a result, in January 2017, the Group revised its strategic plans and estimates for future cash flows and, as a consequence, recognized an impairment to North America goodwill of £2,548m. The 2017 North America results also include £60m in respect of the further major restructuring program announced during the year. 2016 results included £172m in respect of the previous major restructuring program and other losses on disposal mainly relating to the sale of the Pearson English Business Solutions business. Overall adjusted operating margins in the North America business declined in 2017 to 13.5% compared to 14.1% in 2016 due primarily to the impact of lower sales and other operating factors, partially offset by restructuring savings.

North America — courseware

In school courseware, revenue declined 6% primarily due to sharp declines across Open Territory states in the second half of the year. This was partially offset by growth in adoption state revenues where strong performance in Texas Grades K-12 Spanish, Indiana Grades K-12 Science and South Carolina Grades 6-8 Science outweighed a lower adoption participation rate resulting from the decision not to compete for the California Grades K-8 English Language Arts (ELA) adoption with a core basal program. The new adoption participation rate fell to 61% in 2017 from 64% in 2016. The Group won an estimated 38% share of adoptions competed for (30% in 2016) and 29% of total new adoption expenditure of \$365m (19% of \$470m in 2016).

In higher education, total US college enrolments, as reported by the National Student Clearinghouse, fell 1.1%, with combined two-year public and four-year for-profit enrolments declining 2.5%. Enrolment weakness was particularly focused on part-time students where enrolment declined 3.3%, a bigger decline than in any of the last five years. Full-time enrolment grew 0.3%, the first expansion since late 2010. Net revenues at constant exchange rates in the higher education courseware business declined 3% during the year. It is estimated that around 2% of this decline was driven by lower enrolment; just over 1% from the adoption of Open Educational Resources (OER); around 5% from the secondary market, new initiatives and other factors, primarily the growth in print rental; offset by an around 3% benefit from institutional selling and the shift to digital and a 2% benefit in 2017 from lower returns by the channel.

In 2017, the Group's US higher education courseware market share, as reported by MPI, was in the upper half of the 40-41.5% range seen over the previous five years. During 2017, the Group performed strongly in Statistics and Business Statistics, Biology and Accounting. Statistics benefited from the popularity of "best in class" learning application StatCrunch, Biology from the success of Campbell Biology 11e and MasteringBiology, and Accounting from the success of Miller-Nobles Horngren Accounting 11e and MyAccountingLab. This was offset by weakness in Information Technology, particularly in the for-profit sector, and continued softness in Developmental Mathematics.

Digital revenues grew 9% benefiting from continued growth in direct sales, favourable mix and selected price increases. Global digital registrations of MyLab and related products fell 1%. In North America, digital registrations fell 3% with good growth in Science, Business & Economics and Revel offset by lower overall enrolment and continued softness in Developmental Mathematics. Revel registrations grew more than 50%. Including stand-alone e-book registrations, total North American digital registrations were flat.

The actions announced in early 2017 to promote access over ownership were successfully implemented. The rental price of 2,000 eBook titles was reduced and resulted in eBook revenues increasing by more than 20% in response during 2017. In institutional courseware solutions, 210 institutions were signed up to the Group's Inclusive Access (Direct Digital Access, DDA) solutions, taking the total to over 500. During the year, over 1m course enrolments were delivered with inclusive access rising to around 5% of higher education revenue in 2017 as more colleges and faculties saw the benefit of this model.

North America — assessment

In school assessment (State and National assessments), revenues at constant exchange rates declined by 9% due to contract losses. Colorado announced in June 2017 they would be leaving the PARCC consortium after the 2017/2018 school year. The Group won the subsequent bid to deliver ELA, Math, Science, and Social Studies for at least the next six years and also secured contract extensions in Virginia, Indiana, Arizona, Minnesota, Puerto Rico, Kentucky, New York City and North Carolina and for the National Assessment of Educational Progress.

The Group delivered 25.3m standardized online tests to K-12 students in 2017, up 7% from 2016. TestNav8, the Group's next-generation online test platform, supported a peak load of 752,000 tests in a single day and provided 99.99% up time. AI scoring systems scored 35m responses to open-ended test items, around 30% of the total. Paper based standardized test volumes fell 7% to 20.4m.

In professional certification, revenues grew 2%. VUE global test volume rose 1% to over 15m. Revenues in North America were flat, with continued growth in certification for professional bodies, offset by modest declines in US teacher certification and the GED (General Educational Development, the high school equivalency test that is part of a joint venture with the American Council on Education), after a strong performance in 2016, and by weakness in higher level IT certifications in the second half of 2017.

The Group signed over 50 new contracts in 2017 including a ten-year contract with the Association of American Medical Colleges (AAMC) to administer the MCAT, and contracts with ExxonMobil for five years and the Project Management Institute for four years. Its renewal rate on existing contracts continues to be over 95%. During 2017, the Group renewed over 50 contracts including the American Board of Internal Medicine (ABIM) for nine years, Florida Teacher Licensure Assessments for five years, Pharmacy Technician Certification Board (PTCB) for five years, and The Institute of Internal Auditors for four years.

Clinical assessment sales increased 2% largely due to the effect of exchange rate movements and, at constant exchange rates, declined slightly on an absence of new major product introductions. Q-Interactive, the Group's digital solution for Clinical Assessment administration, saw continued strong growth in license sales with sub-test administrations up more than 33% over the same period in 2016.

North America — services

Connections Education the virtual school business, served nearly 78,000 Full Time Equivalent students through full-time virtual and blended school programs, up 6% on 2016. Two new full-time online, state-wide, partner schools opened for the 2017-2018 school year. Enrolment growth from new and existing schools was partially offset by the termination of a school partnership at the end of the 2016-2017 school year. Revenues grew modestly as enrolment growth was partially offset by increased in-sourcing, as some partners took non-core services in-house. The 2017 Connections Academy Parent Satisfaction Survey showed strong results with 92% of families with students enrolled in full-time online partner schools stating they would recommend the schools to others and 95% agreeing that the curriculum is of high quality.

In Pearson Online Services, revenues declined primarily due to a decline in Learning Studio revenues as the product is being retired and the restructuring of smaller non-OPM contracts. Learning Studio declined by just over 50% to a revenue contribution of £11m in 2017. In OPM, revenues grew modestly as course enrolments increased strongly, up 8% to more than 341,000, boosted by good growth and program extensions at key partners including Arizona State University Online, Maryville University, Rutgers University and University of Alabama at Birmingham and from new partners, partially offset by contract exits.

The Group signed 45 multi-year programs in 2017 renewed 19 programs and launched 14 new programs at partners including Maryville University, Duquesne University and Ohio University. During 2017, it also agreed the termination of nine programs that were not mutually viable and did not renew a further six programs.

Brinker International, Inc. (NYSE: EAT), one of the world's leading casual dining restaurant companies and owner of Chili's® Grill & Bar and Maggiano's Little Italy®, with over 1,600 owned, operated and franchised restaurant locations, partnered with the Group to launch a comprehensive employer-education program Best You EDU that provides free educational opportunities to Brinker employees including foundational, GED and Associate Degree programs.

Core

Sales in Core markets increased by £12m, or 1%, from £803m in 2016 to £815m in 2017 while adjusted operating profit decreased by £7m, or 12%, from £57m in 2016 to £50m in 2017. At constant exchange and after excluding the contribution from disposals, Core sales were flat year on year and profits declined by 14%. Growth in OPM sales in the UK and Australia and growth in Pearson Test of English Academic were offset by declines in school, higher education, English courseware and student assessment and qualifications.

The decline in adjusted operating profit was due to revenue mix, investment in new products and services and product line exits, partially offset by restructuring savings. The Group's statutory results in 2017 included restructuring costs of £11m. The statutory results in 2016 included restructuring costs of £62m and a loss on closure of Wall Street English Germany of £12m.

Core — courseware

Courseware revenues declined 2%. In school, revenues declined in Australia, due to market contraction in the primary sector partly offset by slight growth in secondary, and declines in smaller markets in Europe and Africa. In higher education, revenues were down slightly due to declines in smaller markets, whilst in Australia and the UK an increase in direct to institution sales and a further shift to digital offset declines in traditional textbook sales. In English, there were declines in smaller markets.

Core — assessments

In higher education and School assessment, revenues fell 4% primarily due to lower AS level, iGCSE and Apprenticeship volumes as a result of policy changes. BTEC revenues also declined modestly as revenues recognized in 2017 lagged the greater stability seen in registrations and billed revenue in the year. The Group successfully delivered the National Curriculum Test for 2017, marking 3.5m scripts, up slightly from 2016.

Clinical assessment grew 15% with revenues benefiting from strong growth in the new editions of the Wechsler Intelligence Scale for Children (WISC-V) and the Clinical Evaluation of Language Fundamentals (CELF-5).

Pearson Test of English Academic saw continued growth in test volumes which rose 84% from 2016, driven primarily by its use to support visa applications to the Australian Department of Immigration and Border Protection and good growth in New Zealand.

In Professional certification, revenues were flat as the impact of last year's renegotiated terms of the UK Driving Theory test for the DVSA was offset by growth from new and existing contracts.

Core — services

In higher education services, revenues grew 17% and OPM revenues grew by 33%. In Australia, there was good growth due to the successful partnership with Monash University, and the continued success of the Graduate Diploma in Psychology. There are a total of around 9,300 course registrations across the seven programs in Australia (up from around 6,900 registrations in 2016). In the UK, five new programs were launched in addition to the two launched in 2016. UK course registrations grew to about 1,400, compared to about 370 in 2016.

English services grew, with strong growth in WSE Italy, due to the opening of new centers in 2015 and 2016, partially offset by declines in Japan.

Growth

Growth sales increased by £1m, to £769m in 2017 from £768m in 2016. Adjusted operating profit increased by £9m or 31% to £38m in 2017 from £29m in 2016. The Group estimates that, after excluding the impact of exchange rates and the incremental contribution from businesses disposed in 2017 and 2016, sales were flat year on year. Growth in China, school courseware in South Africa and Pearson Test of English Academic was offset by declines in higher education services, primarily due to lower enrolment at CTI, business rationalization in India and declines in Brazil.

The adjusted operating profit increase reflected the benefits of prior year restructuring and the higher revenues in China, South Africa school courseware and PTEA in India, partially offset by lower revenues in Brazil. The Group's statutory results included restructuring costs of £8m in 2017 and £95m in 2016.

On November 27, 2017, The Group announced that it had agreed the sale of Wall Street English to a consortium of funds affiliated with Baring Private Equity Asia and CITIC Capital. The sale was completed on March 15, 2018.

Growth — courseware

Courseware revenues grew 7%, due to strong growth in school textbook sales in South Africa and English language courseware in China, partially offset by weakness in Brazil.

Growth — assessments

Professional Certification grew strongly. Pearson Test of English Academic saw over 30% growth in the volume of tests taken in India.

Growth — services

In English services, growth in Wall Street English in China, due to new center openings, was more than offset by declines in Brazil due to macroeconomic pressures.

In school services, revenue fell, with student enrolment in the sistemas business in Brazil falling 14% primarily due to NAME, the public sistema, where the Group took the strategic decision to exit two thirds of its contracts with municipalities due to unattractive economic prospects, together with a reduction in student enrolments in the Dom Bosco private sistema due to challenging economic conditions. In India, Pearson MyPedia, an inside service 'sistema' solution for schools, expanded to over 500 schools with approximately 157,000 learners.

In higher education services, revenues declined sharply due to a 14% fall in total student enrolment at CTI, the university business in South Africa, driven by the cumulative impact of economic factors in recent years, partially offset by improved new student enrolments in 2017, together with business exits in India.

Penguin Random House

The Group owns 25% of Penguin Random House, the first truly global consumer book publishing company. The Group owned 47% until October 5, 2017, when it completed the sale of 22% to Bertelsmann. The Group's share of Penguin Random House adjusted operating profits were £94m in 2017 compared to £129m in 2016, primarily due to the sale of part of the Group's share.

Penguin Random House performed in line with expectations with revenues up slightly year on year on rising audio sales, broadly stable print sales, and modest ongoing declines in demand for e-books, whilst the business benefitted from bestsellers by Dan Brown, R.J. Palacio, John Grisham, Jamie Oliver, and Dr. Seuss.

The Penguin Random House Venture Combined Financial Statements are included in this report on pages F-87 to F-160.

Liquidity and capital resources

Cash flows and financing

Net cash generated from operations increased to £547m in 2018 from £462m in 2017. The main reason for the improvement in cash generated from operations was the absence in 2018 of special pension contributions which in 2017 were £227m and related to the FT Group disposal (£25m) and to agreements relating to the PRH merger in 2013 (£202m). The benefit from the absence of these pension contributions in 2018 was partly offset by higher incentive payments in 2018 relating to 2017 performance and other unfavourable movements in working capital.

Net interest paid at £22m in 2018 compares to £69m in 2017 and reflects the decrease in interest charge for the year referred to above. Tax paid in 2018 was £43m compared to £75m in 2017 with the decrease mainly explained by tax refunds in the US.

Capital expenditure on property, plant and equipment was £70m in 2018 compared to £82m in 2017. Proceeds from the sale of property in 2018 of £128m includes proceeds from the sale of London property as part of the restructuring program. There were no material property sales in 2017. Capital expenditure on software intangibles reduced from £150m in 2017 to £130m in 2018. The expenditure on both tangible and intangible capital includes the continuing investment in enabling function technology designed to lower administrative costs.

There were no significant acquisitions in either 2018 or 2017 and the net cash outflow in respect of businesses and investments acquired was £15m in 2018 and £14m in 2017. The net cash inflow in respect of businesses and investments disposed was £107m in 2018 compared to £430m in 2017. In 2017 the cash received largely related to the PRH and GEDU disposals and in 2018 includes proceeds from the sale of WSE and UTEL.

Dividends from joint ventures and associates decreased from £458m in 2017 to £117m in 2018. The reduction is primarily due to the PRH sale transaction in 2017 which resulted in a reduced equity share from 47% to 25% and involved recapitalization dividends amounting to £312m in 2017 and £50m in 2018.

The cash outflow from financing of £729m in 2018 compares to £1,759m in 2017 and includes the repayment of borrowings of £441m in 2018 and £1,294m in 2017. These repayments include the early redemption of various bonds (and their associated swaps). In January 2018, the Group repurchased €250m of its €500m Euro 1.875% Notes due May 2021 and €200m of its €500m Euro 1.375% Notes due May 2025. In March and November 2017 respectively, the Group redeemed \$500m 6.25% Global dollar bonds and \$300 4.625% US dollar notes, both originally due in 2018. In addition, in August 2017, the Group redeemed \$383m out of the \$500m 3.75% US dollar notes due in 2022 and \$406m out of the 3.25% US dollar notes due in 2023.

Dividends paid to company shareholders in 2018 of £136m compares to £318m in 2017 reflecting the rebasing of the dividend in 2017 to reflect portfolio changes, increased investment and to align with profit expectations. Cash returned to shareholders via the share buyback program, announced in October 2017 and completed in February 2018, amounted to £149m in 2017 and £153m in 2018.

Overall the Group's net borrowings decreased from £432m at the end of 2017 to £143m at the end of 2018. The reduction in net debt was principally due to cash generated from operations and the proceeds from disposal of businesses and property in the year which more than offset interest, tax, share buy-back and dividend payments.

Capital resources

The Group's borrowings fluctuate by season due to the effect of the school year on the working capital requirements in the educational materials business. Assuming no acquisitions or disposals, the Group's maximum level of net debt normally occurs in July, and its minimum level of net debt normally occurs in December. Based on a review of historical trends in working capital requirements and of forecast monthly balance sheets for the next 12 months, the Group believes that it has sufficient funds available for the Group's present requirements, with an appropriate level of headroom given its portfolio of businesses and current plans. The Group's ability to expand and grow its business in accordance with current plans and to meet long-term capital requirements beyond this 12-month period will depend on many factors, including the rate, if any, at which its cash flow changes and the availability of public and private debt and equity financing, including its ability to secure bank lines of credit. The Group cannot be certain that additional financing, if required, will be available on favorable terms, if at all.

At December 31, 2018, the Group's net debt was £143m compared to £432m at December 31, 2017. The reduction in net debt was principally due to cash generated from operations and the proceeds from disposal of businesses and property in the year which more than offset interest, tax, share buy-back and dividend payments. Net debt is defined as all short-term, medium-term and long-term borrowing (including finance leases), less all cash, cash equivalents and liquid resources. Cash equivalents comprise short-term deposits with a maturity of up to 90 days, while liquid resources comprise short-term deposits with maturities of more than 90 days and other marketable instruments which are readily realizable and held on a short-term basis. Total short-term, medium-term and long-term borrowing amounted to £720m at December 31, 2018, compared to £1,085m at December 31, 2017 reflecting the bonds repaid during the year. At December 31, 2018, total cash and liquid resources were £568m, compared to £645m at December 31, 2017. This decrease reflects the utilization of cash to pay down long-term debt and create a more efficient balance sheet.

To ensure efficient use of the cash balances, during March 2019, the Group executed market tenders to repurchase €55m of its €500m 1.875% notes due 2021 of which €250m were outstanding at 31 December 2018.

Contractual obligations

The following table summarizes the maturity of the Group's borrowings, its obligations under non-cancellable leases, deferred consideration and pension funding obligations, exclusive of anticipated interest payments. Due to the variability of future interest payments, these have been excluded from the table below.

	Year ended December 31, 2018				
	Total	Less than one year	One to two years	Two to five years	After five years
	£m	£m	£m	£m	£m
Gross borrowings:					
Bank loans, overdrafts and commercial paper	43	43	—	—	—
Bonds	672	—	—	399	273
Finance lease obligations	5	3	1	1	—
Operating lease obligations	1,175	143	130	307	595
Deferred consideration	42	5	5	15	17
UK Pension funding obligations	—	—	—	—	—
Total	<u>1,895</u>	<u>189</u>	<u>131</u>	<u>707</u>	<u>868</u>

The UK pension plan's most recent triennial actuarial valuation for funding purposes was completed as at 1 January 2018 and this valuation revealed a technical provisions funding surplus of £163m. The plan expects to be able to provide benefits (in accordance with the plan rules) with a very low level of reliance on future funding from the Group.

At December 31, 2018 the Group had no capital commitments for fixed assets, including finance leases already under contract. There are contingent liabilities in respect of indemnities, warranties and guarantees in relation to former subsidiaries and in respect of guarantees in relation to subsidiaries and associates. In addition there are contingent liabilities in respect of legal and royalty claims. None of these claims or guarantees is expected to result in a material gain or loss.

At December 31, 2018, the Group had a \$1,750m committed revolving credit facility with a maturity date in August 2021. On March 6, 2019, the Group announced the refinancing of its bank facility, reducing its size to \$1.19bn and extending its maturity date to February 2024.

Off-balance sheet arrangements

The Group does not have any off-balance sheet arrangements, as defined by the SEC for the purposes of Form 20-F, that have or are reasonably likely to have a material current or future effect on the Group's financial position or results of operations.

Borrowings

The Group finances its operations by a mixture of cash flows from operations, short-term borrowings from banks and commercial paper markets, and longer term loans from banks and capital markets.

At December 31, 2018, the full \$1.75bn was available under the committed revolving credit facility. The refinanced \$1.19bn credit facility, set in place in March 2019, contains two key covenants measured for each 12 month period ending June 30 and December 31:

The Group must maintain the ratio of its profit before interest, tax and amortization to its net interest payable at no less than 3:1; and

The Group must maintain the ratio of its net debt to its EBITDA, explained below, at no more than 4:1.

"EBITDA" refers to earnings before interest, taxes, depreciation and amortization. The Group is currently in compliance with these covenants.

See note 18 of "Item 18. Financial Statements" for information on the Group's longer term loans from banks and capital markets.

Treasury policy

The Group's treasury policy is described in note 19 of "Item 18. Financial Statements". For a more detailed discussion of the Group's borrowing and use of derivatives, see "Item 11. Quantitative and Qualitative Disclosures about Market Risk".

Related parties

There were no significant or unusual related party transactions in 2018, 2017 or 2016. Refer to note 36 in "Item 18. Financial Statements".

Accounting policies

For a description of the Group's principal accounting policies used refer to note 1 in "Item 18. Financial Statements".

ITEM 6. *DIRECTORS, SENIOR MANAGEMENT AND EMPLOYEES*

Directors and senior management

The Group is managed by a board of directors and a chief executive who reports to the board and manages through an executive committee. The Group refers to the board of directors, the chair of the board of directors and the executive committee as its “senior management”.

The following table sets forth information concerning directors, as of February 28, 2019.

<u>Name</u>	<u>Age</u>	<u>Position</u>
Sidney Taurel	70	Chair
John Fallon	56	Chief Executive
Elizabeth Corley, CBE	62	Non-Executive Director
Vivienne Cox, CBE	59	Senior Independent Director
Josh Lewis	56	Non-Executive Director
Linda Lorimer	66	Non-Executive Director
Michael Lynton	59	Non-Executive Director
Tim Score	58	Non-Executive Director
Lincoln Wallen	58	Non-Executive Director
Coram Williams	45	Chief Financial Officer

Sidney Taurel

Appointed January 1, 2016. Member of the nomination & governance and remuneration committees.

Sidney has over 45 years of experience in business and finance, and is currently a Director of IBM Corporation, where he also serves on the directors and corporate governance committee. Sidney is an advisory board member at pharmaceutical firm Almirall. He was Chief Executive Officer of global pharmaceutical firm Eli Lilly and Company from 1998 until 2008, Chairman from 1999 until 2008, and has been Chairman Emeritus since 2009. He was also a Director at McGraw Hill Financial, Inc., a role which he held from 1996 until April 2016 and at ITT Industries from 1996 to 2001. In 2002, Sidney received three US presidential appointments to: the Homeland Security Advisory Council, the President’s Export Council and the Advisory Committee for Trade Policy and Negotiations, and is an officer of the French Legion of Honour. **Current notable commitments:** IBM Corporation (Non-Executive Director)

John Fallon

Appointed October 3, 2012.

John became Pearson’s Chief Executive on January 1, 2013. Since 2008, he had been responsible for the Company’s education businesses outside North America and a member of the Pearson management committee. He joined Pearson in 1997 as Director of Communications and was appointed President of Pearson Inc. in 2000. In 2003, he was appointed CEO of Pearson’s educational publishing businesses for Europe, Middle East & Africa. Prior to joining Pearson, John was Director of Corporate Affairs at Powergen plc and was also a member of the company’s executive committee. Earlier in his career, John held senior public policy and communications roles in UK local government. He is an advisory board member of the Global Business Coalition for Education.

Elizabeth Corley, CBE

Appointed May 1, 2014. Chair of the remuneration committee and member of the audit and nomination & governance committees.

Elizabeth has extensive experience in the financial services industry, having been CEO of Allianz Global Investors, initially for Europe then globally, from 2005 to 2016, and continues to act as a senior advisor to the firm. She was previously at Merrill Lynch Investment Managers and Coopers & Lybrand. Elizabeth is a Non-Executive Director of BAE Systems plc and Morgan Stanley Inc. Elizabeth is active in representing the investment industry and developing standards within it. She currently chairs a Taskforce for the UK government on social impact investing. She is a member of the Committee of 200. She was appointed Commander of the British Empire in the 2015 New Year Honours for her services to the financial sector. **Current notable commitments:** BAE Systems plc (Non-Executive Director), Morgan Stanley Inc. (Non-Executive Director)

Vivienne Cox, CBE

Appointed on January 1, 2012. Chair of the nomination & governance committee and member of the audit and reputation & responsibility committees.

Vivienne has wide experience in energy, natural resources and business innovation. She worked for BP plc for 28 years in global roles including Executive Vice President and Chief Executive of BP's gas, power and renewables business and its alternative energy unit. She is Chair of the supervisory board of Vallourec S.A., a leader in the seamless steel pipe markets, Non-Executive Director at pharmaceutical company GlaxoSmithKline plc and serves as Chair of the Rosalind Franklin Institute. She was appointed Commander of the British Empire in the 2016 New Year Honours for her services to the economy and sustainability. **Current notable commitments:** GlaxoSmithKline plc (Non-Executive Director), Vallourec S.A. (Chair of the supervisory board)

Josh Lewis

Appointed on March 1, 2011. Member of the remuneration and nomination & governance committees.

Josh's experience spans finance, education and the development of digital enterprises. He is founder of Salmon River Capital LLC, a New York-based private equity/venture capital firm focused on technology-enabled businesses in education, financial services and other sectors, through which he has taken on the role of Non-Executive Director of several enterprises. Over a 25-year career in active, principal investing, he has been involved in a broad range of successful companies, including several pioneering enterprises in the education sector. In addition, he has long been active in the non-profit education sector. **Current notable commitments:** Salmon River Capital LLC (Founder & Managing Principal)

Linda Lorimer

Appointed July 1, 2013. Chair of the reputation & responsibility committee and member of the audit committee.

Linda has spent almost 40 years serving higher education. She retired from Yale in 2016 after 34 years at the university where she served in an array of senior positions including Vice President for Global & Strategic Initiatives. She oversaw the development of Yale's burgeoning online education division and the expansion of Yale's international programs and centers. During her tenure, she was responsible for many administrative services, ranging from Yale's public communications and alumni relations to sustainability, human resources and the university press. She also served on the boards of several public companies, including as Presiding Director of the McGraw-Hill companies. Linda is a member of the board of Yale New Haven Hospital, where she chairs the nominating and governance committee.

Michael Lynton

Appointed on February 1, 2018. Member of the audit and reputation & responsibility committees.

Michael served as CEO of Sony Entertainment from 2012 until 2017, overseeing Sony's global entertainment businesses. He also served as Chairman and CEO of Sony Pictures Entertainment from 2004. Prior to that, he held senior roles within Time Warner and AOL, and earlier served as Chairman and CEO of Penguin Group where he extended the Penguin brand to music and the internet. Michael is Chairman of Snap, Inc., and currently serves on the boards of IEX, Warner Music and Ares Management Corporation LLC. **Current notable commitments:** Ares Management Corporation LLC (Non-Executive Director), Snap Inc. (Chairman)

Tim Score

Appointed January 1, 2015. Chair of the audit committee and member of the nomination & governance and remuneration committees.

Tim has extensive experience of the technology sector in both developed and emerging markets, having served as Chief Financial Officer of ARM Holdings plc, the world's leading semiconductor IP company, for 13 years. He is an experienced non-executive director and currently sits on the boards of The British Land Company plc and HM Treasury, in addition to being a Trustee of the National Theatre. He served on the board of National Express Group plc from 2005 to 2014, including time as interim Chairman and six years as the Senior Independent Director. Earlier in his career Tim held senior finance roles with Rebus Group, William Baird, LucasVaryity plc and BTR plc. **Current notable commitments:** The British Land Company plc (Non-Executive Director and Chairman-elect)

Lincoln Wallen

Appointed January 1, 2016. Member of the audit and reputation & responsibility committees.

Lincoln has extensive experience in the technology and media industries, and is currently CTO of Improbable, a technology start-up supplying next-generation cloud hosting and networking services to the video game industry. Lincoln was CEO of DWA Nova, a software-as-a-service company spun out of DreamWorks Animation Studios in Los Angeles, a position he held until 2017. He worked at DreamWorks Animation for nine years in a variety of leadership roles including Chief Technology Officer and Head of Animation Technology. He was formerly CTO at Electronic Arts Mobile, leading their entry into the mobile gaming business internationally. Lincoln is a Non-Executive Director of the Smith Institute for Industrial Mathematics and Systems Engineering. His early career involved 20 years of professional IT and mathematics research, including as a reader in Computer Science at Oxford. **Current notable commitments:** Improbable (Chief Technology Officer)

Coram Williams

Appointed August 1, 2015.

Coram joined Pearson in 2003 and has held a number of senior positions including Finance and Operations Director for Pearson's English language teaching business in Europe, Middle East & Africa, Interim President of Pearson Education Italia and Head of Financial Planning and Analysis for Pearson. In 2008, Coram became CFO of The Penguin Group and was latterly appointed CFO of Penguin Random House in 2013, where he oversaw the integration of the two businesses. Coram trained at Arthur Andersen, and subsequently worked in both the auditing and consulting practices of the firm. He is a Non-Executive Director and Chairman of the audit committee for the Guardian Media Group.

The following table sets forth information concerning the executive committee, as at February 28, 2019.

<u>Name</u>	<u>Position</u>
Tim Bozik	President Global Product
Rod Bristow	President UK & Core Markets
Kevin Capitani	President North America
Jonathan Chocqueel-Mangan	Chief Strategy Officer
Giovanni Giovannelli	President Growth Markets
Albert Hitchcock	Chief Technology & Operations Officer
Deirdre Latour	Chief Corporate Affairs Officer
Bjarne Tellmann	General Counsel & Chief Legal Officer
Anna Vikström Persson	Chief Human Resources Officer
Bob Whelan	President Pearson Assessments

Tim Bozik

Tim is President, Global Product at Pearson and has extensive experience in product development and higher education. He joined Pearson in 1983 as a sales representative and has since held several leadership roles in product and general management, including recent posts as President of US Higher Education and Global Higher Education. His work has included a focus on digital products and services, smart design, personalized learning, improving outcomes and bringing education and employment closer together.

Rod Bristow

Rod is President, UK & Core Markets for Pearson. Core Markets include those 100+ countries with, in general, developed economies and education systems. In 2010, Rod became President for Pearson UK and was appointed to lead all other Core Markets for Pearson in January 2014. Rod has worked in education, publishing and assessment for 30 years in universities, schools, colleges, professional training and learning technologies in the UK and internationally. He is a Trustee for the Education and Employers Taskforce, a Fellow of the Royal Society for Arts, Governor of the BMAT Multi-Academy Trust, Governor of Harlow College and past President of the Publishers Association. He is also Chair of the judging panel for the National Teaching Award and Honorary Group Captain of RAuxAF. Rod is a graduate of University College London.

Kevin Capitani

Kevin is President of North America at Pearson. Kevin’s background is in developing collaborative teams and fostering growth in customer-focused businesses. He has worked, managed and led in global, highly matrixed, technology organizations. Prior to Pearson, Kevin was General Manager and Chief Operating Officer for the enterprise software company, SAP. Throughout his career he has worked with Fortune 500 companies across multiple geographies and industries.

Jonathan Chocqueel-Mangan

Jonathan is Chief Strategy Officer at Pearson. He was formerly Chief Strategy and Transformation Officer at Kantar Consumer Insights. Jonathan has a masters degree in Consulting and Coaching for Change, from the Said Business School (Oxford University) and a Doctor of Business Administration (DBA) in organizational behavior, from the School of Management at the University of Surrey.

Giovanni Giovannelli

Gio is Pearson’s President of Growth Markets. He joined Pearson as Managing Director of Pearson Brazil. Gio was previously CEO of Grupo Multi, Brazil’s leading English language learning business, which was acquired by Pearson in December 2013. Prior to Grupo Multi, he held CEO positions in Brazil at three

companies, respectively in the utility, mining and HR services sectors. Gio is an Advisory Board Member of Azimut Brazil (Asset Management). Gio earned his undergraduate degree in Italy's Bocconi University, holds a Ph.D. in Economics from the American University in Washington D.C., and is an OPM graduate of Harvard Business School.

Albert Hitchcock

Albert is Chief Technology and Operations Officer for Pearson, where he joined the executive team in March 2014. Albert is responsible for the Technology & Operations organization within Pearson. In this role Albert leads digital product development, enterprise technology and operations encompassing supply chain, procurement, customer service and real estate. He previously held the position of Group Chief Information Officer at Vodafone and prior to this was Global CIO at Nortel. Albert is a Fellow of the Institute of Engineering and Technology and a Chartered Engineer. As of January 2019, Albert is also a Non-Executive Director for Nationwide Building Society.

Deirdre Latour

Deirdre joined Pearson in January 2019 as Chief Corporate Affairs Officer. She brings over 20 years of experience in corporate communications and issues management. Most recently, Deirdre was the Chief Communications Officer for GE, responsible for the company's communications function globally, including financial communications, public relations, sustainability, public affairs, talent development, and helping to shape the company's strategy and culture. Prior to this, Deirdre worked for the global public relations firm Edelman, where she was responsible for a variety of corporate communications, brand, cause, consumer and entertainment marketing efforts. She has previously been named Corporate PR Person of the Year by PR News and one of the most influential people by PR Week. Deirdre is a native of Massachusetts and a graduate of Holy Cross College.

Bjarne Tellmann

Bjarne is General Counsel and Chief Legal Officer of Pearson. Previously, Bjarne worked across Europe, Asia and the United States in various capacities with The Coca-Cola Company, most recently as Associate General Counsel. He has also held various legal positions at Kimberly-Clark and the law firms of Sullivan & Cromwell LLP and White & Case LLP. He holds a JD with honors from the University of Chicago, a MS (Econ.) from The London School of Economics and is a graduate of Harvard Business School's Advanced Management Program.

Anna Vikström Persson

Anna is Pearson's Chief Human Resources Officer. In this role, she is responsible for developing the people strategy to enable Pearson's overall business agenda. This includes talent management and succession planning, diversity and inclusion, performance management, and reward in order to secure a healthy and high performing organization. Anna previously served as Executive Vice President and Head of Group Human Resources for the global engineering company Sandvik, and similarly for SSAB, a global steel company. Prior to this, Anna was VP, HR & Organization for the global telecom company Ericsson. She has a masters in law, certificate in German as well as professional HR qualifications from both London Business School and Michigan Business School.

Bob Whelan

Bob is President, Pearson Assessments and has significant expertise in assessment and growing businesses. As President and Chief Executive Officer of Pearson VUE since January 2000, Bob led Pearson's growth as a global leader in computer-based assessments. He now leads Pearson's combined assessments businesses including K-12 and clinical assessment as well as Pearson VUE. Bob received his BA from the University of Alabama in finance and economics.

Compensation of senior management

It is the role of the remuneration committee (the committee) to approve the remuneration and benefits packages of the executive directors and other members of the Pearson Executive.

The principal duties of the committee are to:

- a) Determine and regularly review the remuneration policies for the executive directors, the presidents and other members of the Pearson executive management (who report directly to the CEO), and overview the approach for the senior leadership group. These policies include base salary, annual and long-term incentives, pension arrangements, any other benefits and termination of employment.
- b) Regularly review the implementation and operation of the remuneration policy for executive management and approve the individual remuneration and benefits packages of the executive directors.
- c) Approve the design of, and determine targets for, any performance-related pay plans operated by the group for Pearson executive management and approve the total payments to be made under such plans.
- d) Review the design of the company's long-term incentive and other share plans operated by the group and where relevant recommend such plans for approval by the board and shareholders.
- e) Advise and decide on general and specific arrangements in connection with the termination of employment of executive directors.
- f) Review and approve corporate goals and objectives relevant to executive directors' remuneration and evaluate the executive directors' performance in light of those goals and objectives.
- g) Delegated responsibility for determining the remuneration and benefits package of the chairman of the board.
- h) Ensure the company maintains an appropriate level of engagement with its shareholders and shareholder representative bodies in relation to the remuneration policy and its implementation.
- i) Appoint and set the terms of engagement for any remuneration consultants who advise the committee and monitor the cost of such advice.

Remuneration policy

The directors' remuneration policy described below was approved by shareholders at the Annual General Meeting held on May 5, 2017. The intention of the committee is that the policy will remain in place for three years from the date of its approval.

The committee's starting point continues to be that total remuneration should reward both short and long-term results, delivering competitive rewards for target performance, but outstanding rewards for exceptional performance.

Total remuneration is made up of fixed and performance-linked elements, with each element supporting different objectives. Base salary helps to recruit, reward and retain people and reflects competitive market level, role, skills, experience and individual contribution. Allowances and benefits help to recruit and retain people and reflect the local competitive market. Retirement benefits help to recruit and retain people and recognize their long-term commitment to the company. Annual incentives motivate the achievement of annual strategic goals and personal objectives, provide focus on key financial metrics and reward individual contribution to the success of the company. Long-term incentives help to recruit, reward and retain people, drive long-term earnings, share price growth and value creation, align interests of executives and shareholders, encourage long-term shareholding and commitment to the company and link management's long-term reward and wealth to corporate performance in a flexible way.

For Executive Director benchmarking purposes, the committee reviews remuneration by reference to different comparator groups including survey data from FTSE 100 companies of similar size and scope, excluding financial services companies.

Consistent with its policy, the committee places considerable emphasis on the performance-linked elements i.e. annual and long-term incentives. The committee will continue to review the mix of fixed and performance-linked remuneration on an annual basis, consistent with its overall philosophy.

Base salary

Base salaries are set to provide the appropriate rate of remuneration for the job, taking into account relevant recruitment markets, business sectors and geographic regions. Base salaries may be set in sterling or the local currency of the country in which the director is based.

Base salaries are normally reviewed annually for the following year taking into account: general economic and market conditions; the level of increases made across the company as a whole; particular circumstances such as changes in role, responsibilities or organization; the remuneration and level of increases for executives in similar positions in comparable companies; and individual performance.

Base salaries are paid in cash via the regular employee payroll (monthly in the UK and every two weeks in the US) and are subject to all necessary withholdings.

No malus or claw back provisions apply to base salary.

Base salary increases for executive directors will not ordinarily exceed 10% per annum and will take account of the base salary increases elsewhere within the company.

The committee will retain the discretion to deliver base salary increases up to 25% over the normal maximum limit in specific individual situations including internal promotions and material changes to the business or the role. This discretion will be exercised only in exceptional circumstances and the committee would consult with major shareholders before doing so, proceeding only where there was clear consensus in favor among those consulted.

Allowances and benefits

Allowances and benefits comprise cash allowances and non-cash benefits and inter alia include: travel-related benefits (comprising company car, car allowance and private use of a driver); health-related benefits (comprising health care, health assessment and gym subsidy); and risk benefits (comprising additional life cover and long-term disability insurance that are not covered by the company's retirement plans). Allowances may also include, where appropriate, location and market premium and housing allowance although no continuing director is in receipt of such allowances.

Allowances and benefits received in 2018 are set out in the annual remuneration report.

Directors are also covered by the company's directors' and officers' liability insurance and an indemnity in respect of certain third-party liabilities.

Other benefits may be offered on the same terms as to other employees. Allowances and benefits do not form part of pensionable earnings.

No malus or claw back provisions apply to allowances and benefits.

The provision and level of cash allowances and non-cash benefits are competitive and appropriate in the context of the local market.

The total value of cash allowances and non-cash benefits for executive directors will not ordinarily exceed 15% of base salary in any year, other than in the case of increases in the cost of benefits that are outside Pearson's control and changes in benefit providers. The committee will retain the further discretion to deliver a total value of benefits up to 25% above the normal limit in specific individual situations including changes in individual circumstances such as health status and changes in the role such as relocation. This discretion will be exercised only in exceptional circumstances and the committee would consult with major shareholders before doing so, proceeding only where there was clear consensus in favor among those consulted.

Executive directors are also eligible to participate in savings-related share acquisition programs which are not subject to any performance conditions, on the same terms as other employees.

Retirement benefits

New employees in the UK are eligible to join the Money Purchase 2003 section of the Pearson Group Pension Plan.

Under the Money Purchase 2003 section of the Pearson Group Pension Plan, normal retirement age is 62, but, subject to company consent, retirement is currently possible from age 55 or earlier in the event of ill-health. During service, the company and the employee makes contributions into a pension fund. Account balances are used to provide benefits at retirement. Pensions for a member's spouse, dependent children and/or nominated financial dependents are payable on death.

In the UK, company contributions for eligible employees to the Money Purchase 2003 section of the Pearson Group Pension Plan amount up to 16% of pensionable salary (double the amount of the employee contribution, which is limited according to certain age bands).

Depending on when they joined the company, directors may participate in the Final Pay section of the Pearson Group Pension Plan, which is closed to new members.

Under the Final Pay section of the Pearson Group Pension Plan, normal retirement age is 62, but, subject to company consent, retirement is currently possible from age 55 or earlier in the event of ill-health. During service, the employee makes a contribution of 5% of pensionable salary and the pension fund builds up based on final pensionable salary and pensionable service. The accrued pension is reduced on retirement prior to age 60. Pensions for a member's spouse, dependent children and/or nominated financial dependents are payable on death.

Executive directors may be entitled to additional pension benefits to take account of the cap on the amount of benefits that can be provided from the all-employee pension arrangements in the UK.

Members of the Pearson Group Pension Plan who joined after May 1989 are subject to an upper limit of earnings that can be used for pension purposes, known as the earnings cap. This limit, £108,600 as at April 6, 2006, was abolished by the Finance Act 2004. However, the Pearson Group Pension Plan has retained its own 'cap', which will increase annually in line with the UK Government's Index of Retail Prices (All Items). The cap was £160,800 as at April 6, 2018 and will rise to £166,200 as at April 6, 2019.

UK executive directors who are, or become, affected by the lifetime allowance or new hires who opt out of membership of the Plan may be provided with a cash supplement as an alternative to further accrual of pension benefits. With effect from 2018, the maximum cash allowance for any future Executive Director external appointments will be reduced from 26% to 16% of salary.

No malus or claw back provisions apply to retirement benefits.

If any executive director is from, or works, outside the UK, the committee retains a discretion to put in place retirement benefit arrangements for that director in line with local market practice including defined benefit pension arrangements operated by Pearson locally. The maximum value of such arrangement will reflect local market practice at the relevant time.

The committee will also honor all pre-existing retirement benefit obligations, commitments or other entitlements that were entered into by a member of the Pearson Group before that person became a director.

The pension entitlements of each director are as follows:

John Fallon

John attained the maximum service accrual for this benefit when he reached 20 years' service in October 2017. With effect from this date, he had accrued a benefit of two-thirds of his final pensionable salary and no further service-related benefits can accrue under the Plan. Based on the 2018/2019 earnings cap of £160,800, he will have accrued a pension of £105,884 per annum at this time. When the earnings cap under the Plan rules is increased in the future in line with increases in the UK retail price index, his final salary pension benefit will increase accordingly. In addition, he received a taxable and non-pensionable cash supplement (of 26% of salary) in lieu of the previous FURBS arrangement. During 2018, John received the pension supplement of 26% of salary only. There are no enhanced early retirement benefits.

Coram Williams

Accrual rate of 1/60th of pensionable salary per annum, restricted to the Plan earnings cap (£160,800 per annum in 2018/19), with continuous service with a service gap. There are no enhanced early retirement benefits.

Annual incentives

Annual incentive does not form part of pensionable earnings.

Measures and performance targets are set by the committee at the start of the year with payment made after year-end following the committee's assessment of performance relative to targets.

The plan is designed to incentivize and reward underlying performance. Actual results are adjusted to remove the effect of foreign exchange and portfolio changes (acquisitions and disposals) and other relevant factors that the committee considers do not reflect the underlying performance of the business in the performance year.

Annual incentive plans are discretionary. The committee reserves the right to adjust payments up or down before they are made if it believes exceptional factors warrant doing so. The committee may in exceptional circumstances make a special award where it is satisfied that the normal operation of the annual incentive does not provide an appropriate incentive or reward to participants.

The committee also reserves the right as a form of malus to adjust payments before they are made if special circumstances exist that warrant this, such as financial misstatement, individual misconduct or reputational damage to the company.

The committee also reserves, in the same special circumstances, a right to reclaim or claw back payments or awards that have already been made.

Annual incentives will not exceed 200% of base salary.

For the chief executive officer, the individual maximum incentive opportunity is 180% of base salary and 170% for the chief financial officer (which are the same opportunities as applied under the previous policy).

The committee has the discretion to select the performance measures, targets and relative weightings from year to year to ensure continuing alignment with strategy and to ensure targets are sufficiently stretching.

The committee establishes a threshold below which no pay-out is achieved and a maximum at or above which the annual incentive pays out in full.

The funding of annual incentives will normally be related to the performance against financial and strategic imperatives performance targets. For the 2019 financial year the annual bonus will be based 40% on operating profit, 20% on sale performance, 20% on operating cash flow and 20% on strategic measures. Each performance measure will operate independently. There will be no changes to the maximum annual incentive opportunities for 2018.

Strategic measures will be measured, using third party data or externally audited internal data (where third-party data is not available or applicable). Performance metrics linked to strategic imperatives can be selected annually to support the Group's transformation strategy.

A pay-out will only be made if a minimum level of performance has been achieved under the financial metrics, as determined by the committee each year.

Annual incentive pay-outs will also take into account individual performance against personal objectives. Personal objectives are agreed with the chief executive (or, in the case of the chief executive, the chairman) and may be functional, operational, strategic and non-financial and include inter alia objectives relating to environmental, social and governance issues.

Details of performance measures, weightings and targets will be disclosed in the annual remuneration report for the relevant financial year if and to the extent that the committee deems them to be no longer commercially sensitive.

The performance period is one year.

Long-term incentives

Awards of restricted shares are made on an annual basis.

Awards of restricted shares for executive directors vest on a sliding scale based on performance against stretching corporate performance targets measured at the end of the three-year performance period.

Performance will continue to be tested over three years and 75% of the vested shares will be released at that point. However, there is a mandatory restriction on participants' ability to dispose of the 75% of the vested shares (other than to meet personal tax liabilities) for a further two years. Furthermore, participants' rights to the release of the 25% of the vested shares will be subject to continued employment over the same period.

Where shares vest, participants also receive additional shares representing the gross value of dividends that would have been paid on these shares during the performance period and reinvested.

The plan permits awards of restricted shares to be made that are not subject to performance conditions to satisfy reward and retention objectives.

However, other than in the circumstances described in the recruitment section of this policy below, it is the company's policy not to award restricted shares to executive directors without performance conditions.

The long-term incentive plan also provides for the grant of stock options. Whilst it is not the committee's intention to grant stock options in 2018 or the foreseeable future, the committee believes that it should retain the flexibility of granting stock options in addition to, or instead of, restricted stock awards in the right circumstances. Any decision by the committee to grant stock options in the future would take account of best practice prevailing at the time. The committee would consult with shareholders before granting stock options to executive directors.

The Group's reported financial results for the relevant periods are used to measure performance.

The committee reserves the right to adjust pay-outs up or down before they are released taking into account exceptional factors that distort underlying business performance or if it believes exceptional factors warrant doing so. In making such adjustments, the committee is guided by the principle of aligning shareholder and management interests.

The committee also reserves the right as a form of malus to adjust pay-outs before they are released if exceptional circumstances exist that warrant this, such as financial misstatement, individual misconduct or reputational damage to the company.

The committee also reserves, in the same special circumstances, a right to reclaim or claw back payouts or awards that have already been released.

The committee sets the level of individual awards by taking into account: the face value of individual awards at the time of grant, assuming that performance targets are met in full; market practice for comparable companies and market assessments of total remuneration from its independent advisers; individual roles and responsibilities; and company and individual performance.

Restricted share awards to executive directors may normally be made up to a maximum face value of 400% of base salary. Awards in excess of 400% of base salary (and up to 25% over the normal maximum limit i.e. 500% of salary) may be made in exceptional circumstances, for example, for retention purposes or to reflect particular business situations. This discretion will be exercised only in exceptional circumstances and the committee would consult with major shareholders before doing so, proceeding only where there was clear consensus in favor among those consulted. In 2017, the committee reduced actual LTIP awards granted to executive directors by approximately 30% from prior levels, whilst retaining stretching performance targets. It has also reduced the proportion of these awards that will vest for threshold performance from 25% to an average of 18% of the award. The 2019 awards will be made with the same face value as a % of salary as those in 2017 and 2018 – 275% of salary for the CEO and 245% of salary for the CFO.

The committee determines the performance measures, weightings and targets governing an award of restricted shares prior to grant to ensure continuing alignment with strategy and to ensure that targets are sufficiently stretching.

The committee establishes a threshold below which no pay-out is achieved and a maximum at or above which the award pays out in full. The proportion of the award that vests at threshold level of performance under each performance condition is 25% for relative TSR and 15% for financial measures.

One third of any award will vest based on each of Adjusted Earnings Per Share (EPS), gross Return On Invested Capital (ROIC) and relative Total Shareholder Return (TSR) measured over three years. Awards will also be subject to a further two year holding period as described above. The eventual value of the awards will depend on the Group's share price performance and dividends paid to shareholders over a five-year period. The targets for the 2019 awards have been set as follows:

EPS Vesting schedule (% max)	EPS for FY21	ROIC Vesting schedule (% max)	ROIC for FY21	Relative TSR Vesting schedule (% max)	Ranked position vs FTSE 100
15%	65p	15%	5%	25%	Median
65%	70p	65%	6%		
100%	80p	100%	9%	100%	Upper quartile

As with restricted shares, the committee will determine the performance conditions that apply to any awards of stock options prior to grant. The intention would be that these conditions would be the same as apply to restricted shares.

Total shareholder return (TSR) is the return to shareholders from any growth in Pearson's share price and reinvested dividends over the performance period. For long-term incentive awards made in 2018 and onwards, TSR will be measured relative to the constituents of the FTSE 100 over a three-year period. Companies that drop out of the index are normally excluded i.e. only companies in the index for the entire period are counted. Share price is averaged over three months at the start and end of the performance period. Dividends are treated as reinvested on the ex-dividend date, in line with the Datastream methodology. The vesting of shares based on relative TSR is subject to the committee satisfying itself that the recorded TSR is a genuine reflection of the underlying financial performance of the business.

Gross Return on invested capital (ROIC) is adjusted operating profit less cash tax expressed as a percentage of gross invested capital (net operating assets plus gross goodwill).

Adjusted earnings per share (EPS) is calculated by dividing the adjusted earnings attributable to equity shareholders of the company by the weighted average number of ordinary shares in issue during the year, excluding any ordinary shares purchased by the company and held in trust.

The performance period is three years.

Shareholding policy

Executive directors are expected to build up a substantial shareholding in the company in line with the policy of encouraging widespread employee ownership and to align further the interests of executives and shareholders. With effect from 2014, target holding is 300% of salary for the chief executive and 200% of salary for the other executive directors. Shares that count towards these guidelines include any shares held unencumbered by the executive, their spouse and/or dependent children plus any shares vested but held pending release under a share plan. Executive directors have five years from the date of appointment to reach the guideline. With effect from 2014, these guidelines were extended to include all members of the Pearson executive management at 100% of salary. The CEO has met this guideline and the CFO is still within the five-year period.

Once met, the guideline is not re-tested, other than when shares are sold.

From 2018 Pearson also introduced a requirement whereby Executive Directors are required to retain half of the current guideline for a period of two years post-retirement in respect of shares vested from company incentive plans.

The shareholding guidelines do not apply to the chairman and non-executive directors. However, a minimum of 25% of the basic non-executive directors' fee is paid in Pearson shares that the non-executive directors have committed to retain for the period of their directorships.

Service agreements

In accordance with long established policy, all executive directors have service agreements under which, other than by termination in accordance with the terms of these agreements, employment continues indefinitely.

There are no special provisions for notice or compensation in the event of a change of control of Pearson.

It is the company's policy that the company may terminate the chairman's and executive directors' service agreements by giving no more than 12 months' notice. As an alternative, for executive directors the company may, at its discretion, pay in lieu of that notice. Payment-in-lieu of notice may be made in equal monthly instalments from the date of termination to the end of any unexpired notice period. Payment-in-lieu of notice in instalments may also be subject to mitigation and reduced taking into account earnings from alternative employment.

For executive directors, pay in lieu of notice comprises 100% of the annual salary at the date of termination and the annual cost to the company of providing pension and all other benefits. For the chairman, pay in lieu of notice comprises 100% of the annual fees at the date of termination. In limited circumstances, in addition to making a full payment in lieu of notice, the company may permit an executive director to stay employed after the announcement of his or her departure for a limited period to ensure an effective handover and/or allow time for a successor to be appointed.

The Group may, depending on the circumstances of the termination, determine that it will not pay the director in lieu of notice and may instead terminate a director's contract in breach and make a damages payment, taking into account as appropriate the director's ability to mitigate his or her loss. The Group may also pay an amount considered reasonable by the remuneration committee in respect of fees for legal and tax advice and outplacement support for the departing director.

On cessation of employment, save as otherwise provided for under the rules of Pearson's discretionary share plans, executive directors' entitlements to any unvested awards lapse automatically. In the case of injury, disability, ill-health or redundancy (as determined by the committee), where a participant's employing company ceases to be part of Pearson, or any other reason if the committee so decides in its absolute discretion: awards that are subject to performance conditions will stay in force as if the participant had not ceased employment and shall vest on the original vesting date; awards that are not subject to a performance condition will be released as soon as practicable following cessation of employment; the number of shares that are released shall be prorated for the period of the participant's service in the restricted period (although the committee may in its absolute discretion waive or vary the prorating).

In determining whether and how to exercise its discretion under Pearson's discretionary share plans, the committee will have regard to all relevant circumstances distinguishing between different types of leaver, the circumstances at the time the award was originally made, the director's performance and the circumstances in which the director left employment.

On cessation of employment, executive directors, having been notified of participation in an annual incentive plan for the relevant financial year, may, at the committee's discretion, retain entitlement to a pro rata annual incentive for their period of service in the financial year prior to their leaving date. Such payout will normally be calculated in good faith on the same terms and paid at the same time as for continuing executive directors.

Eligibility for allowances and benefits including retirement benefits normally ceases on retirement or on the termination of employment for any other reason.

The rules of Pearson's discretionary share plans make provision for the treatment of awards in respect of corporate activity, including a change of control of Pearson. The committee would act in accordance with the terms of the awards in these circumstances, which includes terms as to the assessment of performance conditions and time apportionment.

Details of each individual's service agreement are outlined in the table below. Employment agreements for other employees are determined according to local labor law and market practice.

Executive directors' non-executive directorships

The Group's policy is that executive directors may, by agreement with the board, serve as non-executives of other companies and retain any fees payable for their services.

Coram Williams is engaged as a non-executive director and chair of the audit committee of Guardian Media Group plc. He received fees of £39,000 during 2018. In accordance with the Group's policy, Coram is permitted to retain these fees.

Chairman's and non-executive directors' remuneration

The chairman is paid a single fee for all of his responsibilities.

The chairman's fee is set at a level that is competitive with those of chairmen in similar positions in comparable companies. The chairman is not entitled to any annual or long-term incentive, retirement or other employee benefits.

The non-executive directors are paid a basic fee. The committee chairmen and members of the main board committees and the senior independent director are paid an additional fee to reflect their extra responsibilities.

Following a review of the structure of the fees paid to non-executive directors, the board has determined that it would be appropriate to introduce additional fees for membership and chairmanship of the nomination and governance committee. Having taken independent advice from Deloitte, the fee that has been set by the board reflects the median level within the FTSE 100.

The chairman and the non-executive directors are covered by the company's normal arrangements for directors' and officers' liability insurance and an indemnity in respect of certain third-party liabilities.

The company reimburses the chairman's and non-executive directors' travel and other business expenses and any tax incurred thereon, if applicable.

A minimum of 25% of the chairman's and non-executive directors' basic fee is paid in Pearson shares that the non-executive directors have committed to retain for the period of their directorships. Shares are acquired quarterly at the prevailing market price with the individual after-tax fee payments.

Fees for non-executive directors are determined by the full board having regard to market practice and within the restrictions contained in the company's Articles of Association. The chairman and non-executive directors receive no other pay or benefits (other than reimbursement for expenses incurred in connection with their directorship of the company) and do not participate in the company's equity-based incentive plans.

Non-executive directors serve Pearson under letters of appointment which are renewed annually and do not have service contracts. For non-executive directors, there is no notice period or entitlement to compensation on the termination of their directorships.

The chairman's fees were reviewed in 2017 and have not been increased since his appointment. Fees for the non-executive directors were last increased with effect from May 1, 2014. Following a review of fees paid to non-executive directors, the board has determined that most fees will remain unchanged, other than a small increase to apply to membership and chairmanship of the reputation and responsibility committee. A fee has also been introduced for the newly formed nomination & governance committee. These changes took effect from the AGM on 5 May 2017.

The structure of non-executive directors' fees is as follows:

	<u>With effect from May 5, 2017</u>
Non-executive director	£70,000
Chairmanship of audit committee	£27,500
Chairmanship of remuneration committee	£22,000
Chairmanship of nomination and governance committee	£15,000
Chairmanship of reputation and responsibility committee	£13,000
Membership of audit committee	£15,000
Membership of remuneration committee	£10,000
Membership of nomination and governance committee	£ 8,000
Membership of reputation and responsibility committee	£ 6,000
Senior independent director	£22,000

Notes:

- (1) The fee paid to the chairman remains unchanged at £500,000.
- (2) A minimum of 25% of the basic fee is paid in Pearson shares that the chairman and non-executive directors have committed to retain for the period of their directorships.
- (3) Non-executive directors serve Pearson under letters of appointment and do not have service contracts. There is no entitlement to compensation on the termination of their directorships.

Remuneration of senior management

The remuneration received by the chairman and executive directors in respect of the financial year ending December 31, 2018 was as follows:

	<u>Base Salary/ Fees</u>	<u>Allowances & Benefits(1)</u>	<u>Annual Incentives</u>	<u>Long-term Incentives</u>	<u>Retirement Benefits</u>	<u>Total</u>
	£000	£000	£000	£000	£000	£000
Chairman						
Sidney Taurel	500	11	—	—	—	511
Non-executive directors						
Elizabeth Corley	115	—	—	—	—	115
Vivienne Cox	128	3	—	—	—	131
Josh Lewis	88	4	—	—	—	92
Linda Lorimer	98	4	—	—	—	102
Michael Lynton	69	—	—	—	—	69
Harish Manwani	29	1	—	—	—	30
Tim Score	116	—	—	—	—	116
Lincoln Wallen	91	5	—	—	—	96
Executive directors						
John Fallon	795	43	644	—	206	3,142
Coram Williams	525	14	401	—	54	1,837
Senior management as a group	<u>2,554</u>	<u>85</u>	<u>1,045</u>	<u>—</u>	<u>260</u>	<u>6,241</u>

Notes:

- (1) Benefits include company car, car allowance, private use of a driver, healthcare, additional life cover, long-term disability insurance and subsistence expenses.

Share options for senior management

There are no share options outstanding for senior management.

Share ownership of senior management

The table below shows the number of ordinary shares and conditional shares held by directors and their connected persons as at December 31, 2018. Additional information with respect to share options held by, and bonus awards for, these persons is set out above in “Remuneration of Senior Management” and “Share Options of Senior Management”. The total number of ordinary shares held by senior management as of December 31, 2018 was 487,669.

<u>As at 31 December 2018</u>	<u>Ordinary Shares(1)</u>	<u>Conditional Shares(2)</u>
Sidney Taurel	89,422	—
John Fallon	326,784	995,000
Coram Williams	15,010	582,000
Elizabeth Corley	13,245	—
Vivienne Cox	6,282	—
Josh Lewis	12,524	—
Linda Lorimer	8,902	—
Michael Lynton	3,488	—
Tim Score	26,489	—
Lincoln Wallen	6,346	—

Notes:

- (1) Ordinary shares include both ordinary shares listed on the London Stock Exchange and American Depositary Receipts (ADRs) listed on the New York Stock Exchange. The figures include both shares and ADRs acquired by individuals under the long-term incentive plan and any legacy share plans they might have participated in.
- (2) Conditional shares means unvested shares which remain subject to performance conditions and/or continuing employment for a pre-defined period.
- (2) The register of directors’ interests (which is open to inspection during normal office hours) contains full details of directors’ shareholdings and options to subscribe for shares. The market price on December 31, 2018 was 938.4p per share and the range during the year was 653.0p to 966.6p.
- (3) Ordinary shares do not include any shares vested but held pending release under a restricted share plan.

The total remuneration of the executive committee is set out in the table below:

<u>All figures in £ millions</u>	<u>2018</u>
Short-term employee benefits	6
Retirement benefits	1
Share-based payment costs	7
Total	14

Employee share ownership plans

In 1998, the Group introduced a worldwide save for shares plan. Under this plan, employees around the world have the option to save a portion of their monthly salary over periods of three or five years. At the end of this period, the employee has the option to purchase ordinary shares with the accumulated funds at a purchase price equal to 80% of the market price prevailing at the commencement of the employee’s participation in the plan.

In 2014, shareholders approved the renewal and extension of the life of the UK plan by a further ten years, until 2024 and the renewal of the directors’ authority to continue to operate equivalent arrangements for non-UK employees. As part of this renewal, the savings limit for the UK HMRC-approved part of the plan (which forms the basis of the plan in the rest of the world outside the US) was increased from £250 to £500 per month.

In the United States, this plan operates as a stock purchase plan under Section 423 of the US Internal Revenue Code of 1986. This plan was introduced in 2000 following Pearson's listing on the New York Stock Exchange. Under it, participants save a portion of their monthly salary over six month periods, at the end of which they have the option to purchase ADRs with their accumulated funds at a purchase price equal to 85% of the lower of the market price prevailing at the beginning or end of the period. The maximum employee contribution under the plan is \$1,000 per month.

Board practices

As at February 28, 2019, the Group's board comprises the chair, two executive directors and seven non-executive directors. The articles of association provide that at every annual general meeting, one-third of the board of directors, or the number nearest to one-third, shall retire from office. The directors to retire each year are the directors who have been longest in office since their last election or appointment. A retiring director is eligible for re-election. If at any annual general meeting, the place of a retiring director is not filled, the retiring director, if willing, is deemed to have been re-elected, unless at or prior to such meeting it is expressly resolved not to fill the vacated office, or unless a resolution for the re-election of that director has been put to the meeting and lost. The articles of association also provide that every director be subject to re-appointment by shareholders at the next annual general meeting following their appointment.

However in accordance with the UK Corporate Governance Code, the board has resolved that all directors should offer themselves for re-election on an annual basis at the company's annual general meeting. Accordingly, all of the directors will offer themselves for re-election at the forthcoming annual general meeting on April 26, 2019.

Pearson is listed on the New York Stock Exchange ("NYSE"). As a listed non-US issuer, the Group is required to comply with some of the NYSE's corporate governance rules, and otherwise must disclose on its website any significant ways in which its corporate governance practices differ from those followed by US companies under the NYSE listing standards. At this time, the Group believes that it is in compliance in all material respects with all the NYSE rules except that the Remuneration Committee and the Nomination & Governance Committee are not composed entirely of independent directors as the Chair, who is not considered independent under NYSE rules, is a member of each committee in addition to independent directors.

The board of directors has established the following formal committees, all of which report to the board. Each committee has its own written terms of reference setting out its authority and duties. These can be found on the Group's website (<https://www.pearson.com/governance>).

Audit committee

This committee appraises the Group's financial management and reporting and assesses the integrity of its accounting procedures and financial control. Tim Score chairs this committee and its other members are Elizabeth Corley, Vivienne Cox, Linda Lorimer, Michael Lynton and Lincoln Wallen. Tim Score is also the designated audit committee financial expert within the meaning of the applicable rules and regulations of the US Securities and Exchange Commission. Each member is "financially literate" for the purposes of the NYSE listing standards. The Group's internal and external auditors have direct access to the committee to raise any matter of concern and to report the results of work directed by the committee.

Remuneration committee

This committee meets regularly to determine the remuneration and benefits of the executive directors and oversees remuneration arrangements for the Pearson Executive. The committee also recommends the chair's remuneration to the board of directors for its decision. Elizabeth Corley chairs this committee and its other members are Josh Lewis, Tim Score and Sidney Taurel.

Nomination & governance committee

This committee reviews corporate governance matters including UK Corporate Governance Code compliance and board evaluation, considers the appointment of new directors, board experience and diversity, and reviews board induction and succession plans. The committee is chaired by Vivienne Cox and its other members are Elizabeth Corley, Josh Lewis, Tim Score and Sidney Taurel.

Reputation & responsibility committee

This committee considers the Group's impact on society and the communities in which the Group operates, including to ensure strategies are in place to manage and improve the Group's reputation. Linda Lorimer chairs this committee and its other members are Vivienne Cox, Michael Lynton and Lincoln Wallen.

Employees

The average number of persons employed by the Group in continuing operations during each of the three fiscal years ended 2018 were as follows:

- 24,322 in fiscal 2018, and
- 30,339 in fiscal 2017, and
- 32,719 in fiscal 2016.

Through its subsidiaries, the Group has entered into collective bargaining agreements with employees in various locations. The Group's management has no reason to believe that it would not be able to renegotiate any such agreements on satisfactory terms. The Group encourages employees to contribute actively to the business in the context of their particular job roles and believes that the relations with its employees are generally good.

The table set forth below shows for 2018, 2017 and 2016 the average number of persons employed in each of the Group's segments.

<u>Average number employed</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
North America	14,113	16,295	16,841
Core	5,192	5,291	5,664
Growth	4,521	8,268	9,868
Other	496	485	364
Continuing operations	<u>24,322</u>	<u>30,339</u>	<u>32,719</u>

The average number employed in discontinued operations was nil in 2018, nil in 2017, and nil in 2016.

ITEM 7. MAJOR SHAREHOLDERS AND RELATED PARTY TRANSACTIONS

As at February 28, 2019, the company had been notified under the Financial Conduct Authority's Disclosure and Transparency Rules of the following significant voting rights in its shares:

<u>Name of Shareholder</u>	<u>Number of ordinary shares held</u>	<u>% of outstanding ordinary shares represented by number of shares held*</u>
Schroders plc	91,631,219	11.730
Silchester International Investors LLP	77,889,093	9.980
The Goldman Sachs Group Inc	61,654,122	7.890
Lindsell Train Limited	41,393,237	5.035
Ameriprise Financial Inc and its group	41,236,375	5.019
Libyan Investment Authority**	24,431,000	3.010

* % of Issued share capital on date notified

** Based on notification to the company dated 7 June 2010. We have been notified of no change to this holding since that date. Assets belonging to, or owned, held or controlled since 16 September 2011 by the Libyan Investment Authority and located outside Libya on that date, are frozen in accordance with Article 5(4) of Regulation 2016/44 of the Council of the European Union.

On February 28, 2019, record holders with registered addresses in the United States held 23,334,699 ADRs, which represented 3.0% of the Group's outstanding ordinary shares. Some of these ADRs are held by nominees and so these numbers may not accurately represent the number of shares beneficially owned in the United States.

Loans and equity advanced to joint ventures and associates during the year and as at December 31, 2018 are shown in note 12 in "Item 18. Financial Statements." Dividends receivable from joint ventures and associates are set out in note 12 in "Item 18. Financial Statements". There were no other related party transactions in 2018.

ITEM 8. FINANCIAL INFORMATION

The financial statements filed as part of this Annual Report are included on pages F-1 through F-160 hereof.

Other than those events described in note 37 in "Item 18. Financial Statements" of this Form 20-F and seasonal fluctuations in borrowings, there has been no significant change to the Group's financial condition or results of operations since December 31, 2018. The Group's borrowings fluctuate by season due to the effect of the school year on the working capital requirements of the educational book business. Assuming no acquisitions or disposals, the maximum level of net debt normally occurs in the third quarter, and the minimum level of net debt normally occurs in December.

The Group's policy with respect to dividend distributions is described in response to "Item 3. Key Information" above.

See "Item 4. Information on the Company — Legal Proceedings" for information with respect to legal proceedings to which the Group may be subject from time to time.

ITEM 9. THE OFFER AND LISTING

The principal trading market for the Group's ordinary shares is the London Stock Exchange which trade under the symbol "PSON". Its ordinary shares also trade in the United States in the form of ADSs evidenced by ADRs under a sponsored ADR facility with The Bank of New York Mellon, as depositary. The Group established this facility in March 1995 and most recently amended it in August 2014 in connection with its New York Stock Exchange listing. Each ADS represents one ordinary share.

The ADSs trade on the New York Stock Exchange under the symbol "PSO".

ITEM 10. ADDITIONAL INFORMATION

Articles of association

The Group summarizes below the material provisions of its articles of association, as amended, which have been filed as an exhibit to its annual report on Form 20-F for the year ended December 31, 2018. The summary below is qualified entirely by reference to the Articles of Association. The Group has multiple business objectives and purposes and is authorized to do such things as the board may consider fit to further its interests or incidental or conducive to the attainment of its objectives and purposes.

Directors' powers

The Group's business shall be managed by the board of directors and the board may exercise all such of its powers as are not required by law or by the Articles of Association or by any directions given by the Company by special resolution, to be exercised in a general meeting.

Interested directors

For the purposes of section 175 of the Companies Act 2006, the board may authorize any matter proposed to it which would, if not so authorized, involve a breach of duty by a Director under that section, including, without limitation, any matter which relates to a situation in which a Director has, or can have, an interest which conflicts, or possibly may conflict, with the interests of the Company. Any such authorization will be effective only if:

- (a) any requirement as to quorum at the meeting at which the matter is considered is met without counting the Director in question or any other interested Director; and
- (b) the matter was agreed to without their voting or would have been agreed to if their votes had not been counted.

The board may (whether at the time of the giving of the authorization or subsequently) make any such authorization subject to any limits or conditions it expressly imposes but such authorization is otherwise given to the fullest extent permitted. The board may vary or terminate any such authorization at any time.

Provided that he has disclosed to the board the nature and extent of his interest (or else that the Director is not aware of the interest or not aware of the transaction or arrangement in question, or else that the interest cannot be reasonably regarded to give rise to a conflict of interest), a Director notwithstanding his office:

- (a) may be a party to, or otherwise interested in, any transaction or arrangement with the Company or in which the Company is otherwise (directly or indirectly) interested;
- (b) may act by himself or his firm in a professional capacity for the Company (otherwise than as auditor) and he or his firm shall be entitled to remuneration for professional services as if he were not a Director;
- (c) may be a director or other officer of, or employed by, or a party to a transaction or arrangement with, or otherwise interested in, any body corporate in which the Company is otherwise (directly or indirectly) interested.

A Director shall not, by reason of his office, be accountable to the Company for any remuneration or other benefit which he derives from any office or employment or from any transaction or arrangement or from any interest in any body corporate:

- (a) the acceptance, entry into or existence of which has been approved by the board (subject, in any such case, to any limits or conditions to which such approval was subject); or
- (b) which he is permitted to hold or enter into by virtue of paragraph (a), (b) or (c) above;

nor shall the receipt of any such remuneration or other benefit constitute a breach of his duty under section 176 of the Act.

A Director shall be under no duty to the Company with respect to any information which he obtains or has obtained otherwise than as a Director of the Company and in respect of which he owes a duty of confidentiality to another person. However, to the extent that his relationship with that other person gives rise to a conflict of interest or possible conflict of interest, the preceding sentence only applies if the existence of such relationship

has been approved by the board. In such circumstances, the Director shall not be in breach of the general duties he owes to the Company by virtue of sections 171 to 177 of the Act because he fails:

- (a) to disclose any such information to the board or to any Director or other officer or employee of the Company; and/or
- (b) to use or apply any such information in performing his duties as a Director of the Company.

Where the existence of a Director's relationship with another person has been approved by the board and his relationship with that person gives rise to a conflict of interest or possible conflict of interest, the Director shall not be in breach of the general duties he owes to the Company by virtue of sections 171 to 177 of the Act because he:

- (a) absents himself from meetings of the board at which any matter relating to the conflict of interest or possible conflict of interest will or may be discussed or from the discussion of any such matter at a meeting or otherwise; and/or
- (b) makes arrangements not to receive documents and information relating to any matter which gives rise to the conflict of interest or possible conflict of interest sent or supplied by the Company and/or for such documents and information to be received and read by a professional adviser, for so long as he reasonably believes such conflict of interest or possible conflict of interest subsists.

Except as stated below, a Director shall not vote in respect of any contract or arrangement or any other proposal whatsoever in which he has an interest which is, to his knowledge, a material interest, otherwise than by virtue of his interests in shares or debentures or other securities of or otherwise in or through the Company. A Director shall not be counted in the quorum at a meeting of the Board in relation to any resolution on which he is debarred from voting.

Notwithstanding the foregoing, a Director will be entitled to vote, and be counted in the quorum, on any resolution concerning any of the following matters:

- the giving of any guarantee, security or indemnity in respect of money lent or obligations incurred by him or by any other person at the request of or for the benefit of the Company or any of its subsidiaries;
- the giving of any guarantee, security or indemnity to a third party in respect of a debt or obligation of the Company or any of its subsidiaries for which he himself has assumed responsibility in whole or in part and whether alone or jointly with others under a guarantee or indemnity or by the giving of security;
- any proposal relating to the Company or any of its subsidiary undertakings where it is offering securities in which offer a Director is or may be entitled to participate as a holder of securities or in the underwriting or sub-underwriting of which a Director is to participate;
- any proposal relating to another company in which he and any persons connected with him do not to his knowledge hold an interest in shares (as that term is used in sections 820 to 825 of the Companies Act 2006) representing one per cent or more of either any class of the equity share capital, or the voting rights, in such company;
- any proposal relating to an arrangement for the benefit of the employees of the Company or any of its subsidiary undertakings which does not award him any privilege or benefit not generally awarded to the employees to whom such arrangement relates; and
- any proposal concerning insurance that the Company proposes to maintain or purchase for the benefit of directors or for the benefit of persons, including Directors.

Where proposals are under consideration concerning the appointment of two or more Directors to offices or employment with us or any company in which the Group is interested, these proposals may be divided and

considered separately and each of these directors, if not prohibited from voting under the provisions of the eighth paragraph before this one, will be entitled to vote and be counted in the quorum with respect to each resolution except that concerning his or her own appointment.

Borrowing powers

The board of Directors may exercise all powers to borrow money and to mortgage or charge the Group's undertaking, property and uncalled capital and to issue debentures and other securities, whether outright or as collateral security for any of its or any third party's debts, liabilities or obligations. The board of directors must restrict the borrowings in order to secure that the aggregate amount of undischarged monies borrowed by the Group (and any of its subsidiaries), but excluding any intra-group debts, shall not at any time (without the previous sanction of the Company in the form of an ordinary resolution) exceed a sum equal to twice the aggregate of the adjusted capital and reserves.

Other provisions relating to directors

Under the articles of association, directors are paid out of the Group's funds for their services as it may from time to time determine by ordinary resolution and, in the case of non-executive directors, up to an aggregate of £750,000 or such other amounts as resolved by the shareholders at a general meeting. Any Director who is not an Executive Director and who performs special services which in the opinion of the Board are outside the scope of the ordinary duties of a Director, may be paid such extra remuneration by way of additional fee, salary, commission or otherwise as the Board may determine in accordance with the Group's remuneration policy. Under the articles of association, Directors currently are not required to hold any share qualification. However, the remuneration policy mandates a shareholding guideline for executive directors which they are expected to build towards over a specified period.

Annual general meetings

Pursuant to the Companies Act 2006, the Company must hold an annual general meeting ('AGM') (within six months beginning with the day following its accounting reference date) at a place and time determined by the board. The following matters are usually considered at an annual general meeting:

- approving final dividends;
- consideration of the accounts and balance sheet;
- ordinary reports of the board of directors and auditors and any other documents required to be annexed to the balance sheet;
- the appointment or election of directors Notwithstanding the provisions of the Articles, the board has resolved that all directors should offer themselves for re-election annually, in accordance with the UK Corporate Governance Code;
- appointment or reappointment of, and determination of the remuneration of, the auditors; and
- the renewal, limitation, extension, variation or grant of any authority to the board in relation to the allotment of securities.

The board may call a general meeting whenever it thinks fit. If at any time there are not within the United Kingdom sufficient directors capable of acting to form a quorum, any director or any two members may convene a general meeting in the same manner as nearly as possible as that in which meetings may be convened by the board.

No business shall be dealt with at any general meeting unless a quorum is present when the meeting proceeds to business. Three members present in person and entitled to vote shall be a quorum for all purposes. A corporation being a member shall be deemed to be personally present if represented by its duly authorized representative.

If a quorum for a meeting convened at the request of shareholders is not present within fifteen minutes of the appointed time, the meeting will be dissolved. In any other case, the general meeting will be adjourned to the same day in the next week, at the same time and place, or to a time and place that the chair fixes. If at that rescheduled meeting a quorum is not present within fifteen minutes from the time appointed for holding the meeting, the shareholders present in person or by proxy will be a quorum. The chair or, in his absence, the deputy chair or any other director nominated by the board, will preside as chair at every general meeting. If no director is present at the general meeting or no director consents to act as chair, the shareholders present shall elect one of their number to be chair of the meeting.

Share Certificates

Every person whose name is entered as a member in the Company's Register of Members shall be entitled to one certificate in respect of each class of shares held (the law regarding this does not apply to stock exchange nominees). Subject to the terms of issue of the shares, certificates are issued following allotment or receipt of the relevant transfer by the Group's registrar, Equiniti, Aspect House, Spencer Road, Lancing, West Sussex, BN99 6DA, United Kingdom, telephone number +44 121-415-7062.

Share capital

Any share may be issued with such preferred, deferred or other special rights or other restrictions as may be determined by way of a shareholders' vote in general meeting. Subject to the Companies Act 2006, any shares may be issued which are to be redeemed or are liable to be redeemed at the option of the Company or the shareholders.

There are no provisions in the Articles of Association which discriminate against any existing or prospective shareholder as a result of such shareholder owning a substantial number of shares.

Subject to the terms of the shares which have been issued, the directors may from time to time make calls upon the shareholders in respect of any moneys unpaid on their shares, provided that (subject to the terms of the shares so issued) no call on any share shall be payable at less than fourteen clear days from the last call. The directors may, if they see fit, receive from any shareholder willing to advance the same, all and any part of the moneys uncalled and unpaid upon any shares held by him.

Changes in capital

The Group may, from time to time by ordinary resolution subject to the Companies Act 2006:

- consolidate and divide all or any of its share capital into shares of a larger nominal amount than its existing shares; or
- sub-divide all of or any of its existing shares into shares of smaller nominal amounts.

The Group may, from time to time increase its share capital by allotting new shares in accordance with the prescribed threshold authorized by shareholders at the last annual general meeting and subject to the consents and procedures required by the Companies Act 2006, may by special resolution reduce its share capital.

Voting rights

Every holder of ordinary shares present in person or by proxy at a meeting of shareholders has one vote on a vote taken by a show of hands. On a poll, every holder of ordinary shares who is present in person or by proxy has one vote for every twenty-five pence of nominal share capital (being one ordinary share) of which he or she is the holder. Voting at any meeting of shareholders is usually on a poll rather than by show of hands. Voting on

a poll is more transparent and equitable because it includes the votes of all shareholders, including those cast by proxies, rather than just the votes of those shareholders who attend the meeting. A poll may be also demanded by:

- the chair of the meeting;
- at least three shareholders present in person or by proxy and entitled to vote;
- any shareholder or shareholders present in person or by proxy representing not less than one-tenth of the total voting rights of all shareholders having the right to vote at the meeting; or
- any shareholder or shareholders present in person or by proxy holding shares conferring a right to vote at the meeting being shares on which the aggregate sum paid up is equal to not less than one-tenth of the total sum paid up on all shares conferring that right.

Dividends

Holders of ordinary shares are entitled to receive dividends out of Group profits that are available by law for distribution, as the Group may declare by ordinary resolution, subject to the terms of issue thereof. However, no dividends may be declared in excess of an amount recommended by the board of directors. The board may pay interim dividends on the shares of any class as it deems fit. It may invest or otherwise use all dividends left unclaimed for six months after having been declared for its benefit, until claimed. All dividends unclaimed for a period of twelve years after having been declared will be forfeited and revert to the Group.

The directors may, with the sanction of an ordinary resolution of the shareholders, offer any holders of ordinary shares the right to elect to receive ordinary shares credited as fully paid, in whole or in part, instead of cash in respect of such dividend.

The directors may deduct from any dividend payable to any shareholder all sums of money (if any) presently payable by that shareholder to the Group on account of calls or otherwise in relation to its shares.

Liquidation rights

In the event of the Group's liquidation, after payment of all liabilities, its remaining assets would be used to repay the holders of ordinary shares the amount they paid for their ordinary shares. Any balance would be divided among the holders of ordinary shares in proportion to the nominal amount of the ordinary shares held by them.

Other provisions of the articles of association

Whenever the Group's capital is divided into different classes of shares, the special rights attached to any class may, unless otherwise provided by the terms of the issue of the shares of that class, be varied or abrogated, either with the written consent of the holders of three-fourths of the issued shares of the class (excluding any issued as treasury shares) or with the sanction of a special resolution passed at a separate meeting of these holders. In the event that a shareholder or other person appearing to the board of directors to be interested in ordinary shares fails to comply with a notice requiring him or her to provide information with respect to their interest in voting shares pursuant to section 793 of the Companies Act 2006, the board may serve that shareholder with a notice of default. After service of a default notice, that shareholder shall not be entitled to attend or vote at any general meeting or at a separate meeting of holders of a class of shares or on a poll until he or she has complied in full with the Group's information request.

If the shares described in the default notice represent at least one-fourth of 1% in nominal value of the issued ordinary shares, then the default notice may additionally direct that in respect of those shares:

- the Group will not pay dividends (or issue shares in lieu of dividends); and
- the Group will not register transfers of shares unless the shareholder is not himself in default as regards supplying the information requested and the transfer, when presented for registration, is in such form as

the board of directors may require to the effect that after due and careful inquiry, the shareholder is satisfied that no person in default is interested in any of the ordinary shares which are being transferred or the transfer is an approved transfer, as defined in the Group's articles of association.

No provision of the articles of association expressly governs the ordinary share ownership threshold above which shareholder ownership must be disclosed. Under the Disclosure and Transparency Rules of the Financial Conduct Authority, any person who acquires, either alone or, in specified circumstances, with others an interest in the Group's voting share capital equal to or in excess of 3% comes under an obligation to disclose prescribed particulars to the Group in respect of those ordinary shares. A disclosure obligation also arises where a person's notifiable interests fall below 3%, or where, at or above 3%, the percentage of the Group's voting share capital in which a person has a notifiable interest increases or decreases by 1% or more.

Limitations affecting holders of ordinary shares or ADSs

Under English law and articles of association, persons who are neither UK residents nor UK nationals may freely hold, vote and transfer ordinary shares in the same manner as UK residents or nationals.

With respect to the items discussed above, applicable UK law is not materially different from applicable US law.

Material contracts

The Group has not entered into any contracts outside the ordinary course of business during the two-year period immediately preceding the date of this annual report.

Executive employment contracts

The Group has entered into agreements with each of its executive directors pursuant to which such executive director is employed by the Group. These agreements describe the duties of such executive director and the compensation to be paid by us. See "Item 6. Directors, Senior Management and Employees — Compensation of Senior Management".

It is the Group's policy that it may terminate the executive directors' service agreements by giving no more than 12 months' notice. As an alternative, the Group may at its discretion pay in lieu of that notice. Payment-in-lieu of notice may be made in equal monthly installments from the date of termination to the end of any unexpired notice period. In the case of the CEO, payment-in-lieu of notice in installments may also be subject to mitigation and reduced taking into account earnings from alternative employment. For executive directors, pay in lieu of notice comprises 100% of the annual salary at the date of termination and the annual cost to the company of providing pension and all other benefits. In limited circumstances, in addition to making a full payment in lieu of notice, the Group may permit an executive director to stay employed after the announcement of his or her departure for a limited period to ensure an effective hand-over and/or allow time for a successor to be appointed. The Group may, depending on the circumstances of the termination, determine that it will not pay the director in lieu of notice and may instead terminate a director's contract in breach and make a damages payment, taking into account as appropriate the director's ability to mitigate his or her loss.

Exchange controls

There are no UK government laws, decrees, regulations or other legislation which restrict or which may affect the import or export of capital, including the availability of cash and cash equivalents for use by us or the remittance of dividends, interest or other payments to nonresident holders of the Group's securities, except as otherwise described under "— Tax Considerations" below.

Tax considerations

The following is a discussion of the material US federal income tax considerations and UK tax considerations arising from the acquisition, ownership and disposition of ordinary shares and ADSs by a US holder. A US holder is:

- an individual citizen or resident of the US, or
- a corporation created or organized in or under the laws of the US or any of its political subdivisions, or
- an estate or trust the income of which is subject to US federal income taxation regardless of its source.

This discussion deals only with ordinary shares and ADSs that are held as capital assets by a US holder, and does not address tax considerations applicable to US holders that may be subject to special tax rules, such as:

- dealers or traders in securities or currencies,
- financial institutions or other US holders that treat income in respect of the ordinary shares or ADSs as financial services income,
- insurance companies,
- tax-exempt entities,
- persons acquiring shares or ADSs in connection with employment,
- US holders that hold the ordinary shares or ADSs as a part of a straddle or conversion transaction or other arrangement involving more than one position,
- US holders that own, or are deemed for US tax purposes to own, 10% or more of the total combined voting power of all classes of the Group's voting stock,
- US holders that have a principal place of business or "tax home" outside the United States, or
- US holders whose "functional currency" is not the US dollar.

For US federal income tax purposes, holders of ADSs will be treated as the owners of the ordinary shares represented by those ADSs. In practice, HM Revenue & Customs (HMRC) will also regard holders of ADSs as the beneficial owners of the ordinary shares represented by those ADSs, although case law has cast some doubt on this. The discussion below assumes that HMRC's position is followed.

In addition, the following discussion assumes that The Bank of New York Mellon will perform its obligations as depositary in accordance with the terms of the depositary agreement and any related agreements.

Because US and UK tax consequences may differ from one holder to the next, the discussion set out below does not purport to describe all of the tax considerations that may be relevant to you and your particular situation. Accordingly, you are advised to consult your own tax advisor as to the US federal, state and local, UK and other, including foreign, tax consequences of investing in the ordinary shares or ADSs. Except where otherwise indicated, the statements of US and UK tax law set out below are based on the laws, interpretations and tax authority practice in force or applicable as of February 28, 2019, and are subject to any changes occurring after that date, possibly with retroactive effect.

UK income taxation of distributions

The UK does not impose dividend withholding tax on dividends paid by the Company.

A US holder that is not resident in the UK for UK tax purposes and does not carry on a trade, profession or vocation in the UK through a branch or agency (or in the case of a company a permanent establishment) to which the ordinary shares or ADSs are attributable will not generally be liable to pay UK tax on dividends paid by the Company.

US income taxation of distributions

Distributions that the Group makes with respect to the ordinary shares or ADSs, other than distributions in liquidation and distributions in redemption of stock that are treated as exchanges, will be taxed to US holders as ordinary dividend income to the extent that the distributions do not exceed the Group's current and accumulated earnings and profits. The amount of any distribution will equal the amount of the cash distribution. Distributions, if any, in excess of the Group's current and accumulated earnings and profits will constitute a non-taxable return of capital to a US holder and will be applied against and reduce the US holder's tax basis in its ordinary shares or ADSs. To the extent that these distributions exceed the tax basis of the US holder in its ordinary shares or ADSs, the excess generally will be treated as capital gain.

Dividends that the Group pays will not be eligible for the dividends received deduction generally allowed to US corporations under Section 243 of the Code.

In the case of distributions in pounds sterling, the amount of the distributions generally will equal the US dollar value of the pounds sterling distributed, determined by reference to the spot currency exchange rate on the date of receipt of the distribution by the US holder in the case of shares or by The Bank of New York Mellon in the case of ADSs, regardless of whether the US holder reports income on a cash basis or an accrual basis. The US holder will realize separate foreign currency gain or loss only to the extent that this gain or loss arises on the actual disposition of pounds sterling received. For US holders claiming tax credits on a cash basis, taxes withheld from the distribution are translated into US dollars at the spot rate on the date of the distribution; for US holders claiming tax credits on an accrual basis, taxes withheld from the distribution are translated into US dollars at the average rate for the taxable year.

A distribution by the Company to non-corporate shareholders will be taxed as net capital gain at a maximum rate of 20%, provided certain holding periods are met, to the extent such distribution is treated as a dividend under US federal income tax principles. In addition, a 3.8% Medicare tax will generally be imposed on the net investment income, which generally would include distributions treated as dividends under US federal income tax principles, of non-corporate taxpayers whose adjusted gross income exceeds a threshold amount.

UK taxation of capital gains

A US holder that is not resident in the UK for UK tax purposes and who does not carry on a trade, profession or vocation in the UK through a branch or agency (or in the case of a company a permanent establishment) to which the ordinary shares or ADSs are attributable will not generally be liable for UK taxation on capital gains or eligible for relief for allowable losses, realized on the sale or other disposal of the ordinary shares or ADSs.

A US holder who is an individual who has been resident for tax purposes in the UK but who ceases to be so resident or becomes regarded as resident outside the UK for the purposes of any double tax treaty ("Treaty Non-resident") and continues to not be resident in the UK, or continues to be Treaty Non-resident, for a period of five years or less and who disposes of his ordinary shares or ADSs during that period may also be liable on his return to the UK to UK tax on capital gains, subject to any available exemption or relief, even though he is not resident in the UK, or is Treaty Non-resident, at the time of the disposal.

US income taxation of capital gains

Upon a sale or exchange of ordinary shares or ADSs to a person other than Pearson, a US holder will recognize gain or loss in an amount equal to the difference between the amount realized on the sale or exchange and the US holder's adjusted tax basis in the ordinary shares or ADSs. Any gain or loss recognized will be capital gain or loss and will be long-term capital gain or loss if the US holder has held the ordinary shares or ADSs for more than one year. Long-term capital gain of a non-corporate US holder is generally taxed at a maximum rate of 20%. In addition, a 3.8% Medicare tax will generally be imposed on the net investment income, which generally would include capital gains, of non-corporate taxpayers whose adjusted gross income exceeds a threshold amount.

Gain or loss realized by a US holder on the sale or exchange of ordinary shares or ADSs generally will be treated as US-source gain or loss for US foreign tax credit purposes.

Estate and gift tax

The current Estate and Gift Tax Convention (referred to in this paragraph as the “Convention”), between the US and the UK generally relieves from UK inheritance tax (the equivalent of US estate and gift tax) the transfer of ordinary shares or of ADSs where the transferor is domiciled in the US for the purposes of the Convention. This relief will not apply if the ordinary shares or ADSs are part of the business property of an individual’s permanent establishment in the UK or pertain to the fixed base in the UK of a person providing independent personal services. If no relief is given under the Convention, inheritance tax may be charged on death and also on the amount by which the value of an individual’s estate is reduced as a result of any transfer made by way of gift or other gratuitous or undervalue transfer, in general within seven years of death, and in certain other circumstances. In the unusual case where ordinary shares or ADSs are subject to both UK inheritance tax and US estate or gift tax, the Convention generally provides for tax paid in the UK to be credited against tax payable in the US or for tax paid in the US to be credited against tax payable in the UK based on priority rules set forth in the Convention.

Stamp duty

No stamp duty or stamp duty reserve tax (SDRT) will generally be payable in the UK on the purchase or transfer of an ADS, provided that the ADS, and any separate instrument or written agreement of transfer, remain at all times outside the UK and that the instrument or written agreement of transfer is not executed in the UK. Subject to the following paragraph, UK legislation does however provide for SDRT or (in the case of transfers) stamp duty to be chargeable at the rate of 1.5% of the amount or value of the consideration or, in some circumstances, the value of the ordinary shares (rounded up to the next multiple of £5 in the case of stamp duty), where ordinary shares are issued or transferred to a person whose business is or includes issuing depositary receipts, or to a nominee or agent for such a person, or issued or transferred to a person whose business is or includes the provision of clearance services or to a nominee or agent for such a person.

Following litigation, HM Revenue & Customs (HMRC) has accepted that it will no longer seek to apply the 1.5% SDRT charge when new shares are issued to a clearance service or depositary receipt system on the basis that the charge is not compatible with EU law. The UK Government have announced their intention to continue with this approach following the UK’s departure from the EU. HMRC’s view is that the 1.5% SDRT or stamp duty charge will continue to apply to transfers of shares into a clearance service or depositary receipt system, unless they are an integral part of an issue of share capital. However, further litigation indicates that certain other transfers are also not chargeable under EU law. **Accordingly, specific professional advice should be sought before paying the 1.5% SDRT or stamp duty charge in any circumstances.**

A transfer for value of the underlying ordinary shares will generally be subject to either stamp duty or SDRT, normally at the rate of 0.5% of the amount or value of the consideration (rounded up to the next multiple of £5 in the case of stamp duty). A transfer of ordinary shares from a nominee to its beneficial owner, including the transfer of underlying ordinary shares from the Depositary to an ADS holder, under which no beneficial interest passes will not be subject to stamp duty or SDRT.

Close company status

The Group believes that the close company provisions of the UK Corporation Tax Act 2010 do not apply to it.

Documents on display

Copies of the Group’s Memorandum and Articles of Association and filed as exhibits to this Annual Report and certain other documents referred to in this Annual Report are available for inspection at its registered office

at 80 Strand, London WC2R 0RL (c/o the Company Secretary), during usual business hours upon reasonable prior request.

ITEM 11. *QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK*

Introduction

Pearson's treasury policies set out the group's principles for addressing key financial risks including capital risk, liquidity risk, foreign exchange risk and interest rate risk and sets out measurable targets for each. The Audit Committee receive quarterly reports incorporating compliance with these measurable targets and review and approve the treasury policies annually.

The treasury function is permitted to use derivatives where their use reduces a risk or allows a transaction to be undertaken more cost effectively. Derivatives permitted include swaps, forwards and collars to manage foreign exchange and interest rate risk, with foreign exchange swap and forward contracts the most commonly executed. Speculative transactions are not permitted.

Capital risk

The Group's objectives when managing capital are:

- To maintain a strong balance sheet and a solid investment grade rating;
- To continue to invest in the business;
- To have a sustainable and progressive dividend policy, and;
- To return surplus cash to our shareholders where appropriate.

The Group is currently rated BBB (stable outlook) with Standard and Poor's and Baa2 (stable outlook) with Moody's.

Interest and foreign exchange rate management

The Group's principal currency exposure is to the US dollar (USD) which represents more than 60% of the Group's sales. A portion of the Group's debt is held in US dollars to provide a natural hedge of this exposure.

Pearson achieves this mix in one of three ways:

1. Issuing fixed rate debt in USD;
2. Issuing fixed debt in euro and swapping it to British Pounds Sterling (GBP) either at fixed or floating rates and swapping an element to USD either using cross currency swaps or foreign exchange swaps;
3. Borrowing in USD at floating rates on the group's bank facility.

At December 31, 2018, the group had contracts to fix \$477mm of debt for the next 12 months (2017: \$579m).

Liquidity and re-financing risk management

The Group regularly reviews the level of cash and debt facilities required to fund its activities. This involves preparing a prudent cash flow forecast for the next three to five years, determining the level of debt facilities required to fund the business, planning for repayments of debt at its maturity and identifying an appropriate amount of headroom to provide a reserve against unexpected outflows.

At December 31, 2018, the Group had cash of £0.5 billion and an undrawn US dollar denominated revolving credit facility due 2021 of \$1.75 billion (£1.4 billion). At December 31, 2017, the Group had cash of £0.6 billion and an undrawn US dollar denominated revolving credit facility due 2021 of \$1.75 billion (£1.3 billion). The \$1.75 billion facility contains interest cover and leverage covenants which the Group has complied with for both the years ended December 31, 2017 and December 31, 2018.

Financial counterparty risk management

Counterparty credit limits, which take published credit rating and other factors into account, are set to cover the Group's total aggregate exposure to a single financial institution. The limits applicable to published credit ratings bands are approved by the chief financial officer within guidelines approved by the board. Exposures and limits applicable to each financial institution are reviewed on a regular basis.

ITEM 12. DESCRIPTION OF SECURITIES OTHER THAN EQUITY SECURITIES

AMERICAN DEPOSITARY SHARES

Fees paid by ADR holders

The Group's ordinary shares trade in the United States under a sponsored ADR facility with The Bank of New York Mellon as depositary.

The depositary collects its fees for delivery and surrender of ADSs directly from investors depositing shares or surrendering ADSs for the purpose of withdrawal, or from intermediaries acting for them. The depositary collects fees for making distributions to investors by deducting those fees from the amounts distributed or by selling a portion of distributable property to pay the fees. The depositary may collect its annual fee for depositary services by deductions from cash distributions or by directly billing investors or by charging the book-entry system accounts of participants acting for them. The depositary may generally refuse to provide fee-attracting services until its fees for those services are paid.

The following table summarizes various fees currently charged by The Bank of New York Mellon:

Person depositing or withdrawing shares must pay to the depositary:	For:
\$5.00 (or less) per 100 ADSs (or portion of 100 ADSs)	<ul style="list-style-type: none"> • Issuance of ADSs, including issuances resulting from a distribution of shares or rights or other property • Cancellation of ADSs for the purpose of withdrawal, including if the deposit agreement terminates
\$.05 (or less) per ADS A fee equivalent to the fee that would be payable if securities distributed had been shares and the shares had been deposited for issuance of ADSs	<ul style="list-style-type: none"> • Any cash distribution to ADS registered holders • Distribution of securities by the depositary to ADS registered holders of deposited securities
\$.05 (or less) per ADS per calendar year	<ul style="list-style-type: none"> • Depositary services
Registration of transfer fees	<ul style="list-style-type: none"> • Transfer and registration of shares on the share register to or from the name of the depositary or its agent when shares are deposited or withdrawn
Expenses of the depositary	<ul style="list-style-type: none"> • Cable, telex and facsimile transmissions (when expressly provided in the deposit agreement) • Converting foreign currency to US dollars
Taxes and other governmental charges the depositary or the custodian have to pay on any ADS or share underlying an ADS, for example, stock transfer taxes, stamp duty or withholding taxes	<ul style="list-style-type: none"> • As necessary
Any charges incurred by the depositary or its agents for servicing the deposited securities	<ul style="list-style-type: none"> • As necessary

Fees incurred in past annual period and fees to be paid in the future

The Company received \$56,624 as reimbursement from the depositary with respect to 2018 for standard out-of-pocket maintenance costs for the ADRs (consisting of the expenses of postage and envelopes for mailing the proxy voting materials, and tabulation for the non-registered holders, any applicable performance indicators relating to the ADR facility, and legal fees).

The depositary has agreed to reimburse the Company for expenses they incur that are related to establishment and maintenance expenses of the ADS program. The depositary also agrees to pay the standard out-of-pocket maintenance costs for the registered ADR holders, which consists of the expenses of postage and envelopes for mailing proxy voting materials, printing and distributing dividend cheques, electronic filing of US Federal tax information, mailing required tax forms, stationery, postage, facsimile and telephone calls. It has also agreed to reimburse the Company annually for certain investor relationship programs or special investor relations promotional activities. In certain instances, the depositary has agreed to provide additional payments to the Company based on any applicable performance indicators relating to the ADR facility. There are limits on the amount of expenses for which the depositary will reimburse the Company, but the amount of reimbursement available to the Company is not necessarily tied to the amount of fees the depositary collects from investors.

PART II

ITEM 13. *DEFAULTS, DIVIDEND ARREARAGES AND DELINQUENCIES*

None.

ITEM 14. *MATERIAL MODIFICATIONS TO THE RIGHTS OF SECURITY HOLDERS AND USE OF PROCEEDS*

None.

ITEM 15. *CONTROLS AND PROCEDURES*

Disclosure controls and procedures

An evaluation of the effectiveness the Group's disclosure controls and procedures as of December 31, 2018 was carried out by management, under the supervision and with the participation of the Chief Executive Officer and Chief Financial Officer. Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures (as defined in Rules 13a- 15(e) and 15d-15(e) under the Securities Exchange Act of 1934, as amended) were effective as at December 31, 2018 at a reasonable assurance level. A controls system, no matter how well designed and operated, cannot provide absolute assurance to achieve its objectives.

Management's annual report on internal control over financial reporting

Management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Internal control over financial reporting is a process designed by, or under the supervision of, the Chief Executive Officer and Chief Financial Officer, or persons performing similar functions, and effected by the Company' board of directors, management and other personnel to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Management has assessed the effectiveness of internal control over financial reporting as of December 31, 2018 based on the framework in *Internal Control — Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO"). Based on this evaluation, management has concluded that the Company's internal control over financial reporting was effective as of December 31, 2018 based on criteria in *Internal Control — Integrated Framework* (2013) issued by the COSO.

PricewaterhouseCoopers LLP, an independent registered public accounting firm, has audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2018, as stated in their report which appears on page F-2.

Change in internal control over financial reporting

During the period covered by this Annual Report on Form 20-F, the Company has embarked on a program of work to deliver a single Pearson-wide solution to integrate data, systems and processes across human resources, finance, procurement and supply chain. This program went live in the UK in 2016 and in part of the US in 2018 with a resulting change in some aspects of the control environment. Other than the foregoing, there have been no changes in our internal control over financial reporting during the year ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 16A. *AUDIT COMMITTEE FINANCIAL EXPERT*

The members of the Board of Directors of Pearson plc have determined that Tim Score is an audit committee financial expert within the meaning of the applicable rules and regulations of the US Securities and Exchange Commission.

ITEM 16B. CODE OF ETHICS

Pearson has adopted a code of ethics (the Pearson code of conduct) which applies to all employees including the chief executive officer and chief financial officer and other senior financial management. This code of ethics is available on the Group's website (www.pearson.com/corporate/code-of-conduct.html). The information on this website is not incorporated by reference into this report.

ITEM 16C. PRINCIPAL ACCOUNTANT FEES AND SERVICES

In line with best practice, the Group's relationship with PricewaterhouseCoopers LLP (PwC) is governed by its external auditor policy, which is reviewed and approved annually by the audit committee. The policy establishes procedures to ensure the auditors' independence is not compromised as well as defining those non-audit services that PwC may or may not provide to Pearson. These allowable services are in accordance with relevant UK and US legislation.

The audit committee approves all audit and non-audit services provided by PwC. Where appropriate, services will be tendered prior to awarding this work to the auditor.

The following table sets forth remuneration paid to PwC for 2018 and 2017:

<u>Auditors' Remuneration</u>	<u>2018</u>	<u>2017</u>
	<u>£m</u>	<u>£m</u>
Audit fees	6	6
Tax fees	—	—
Audit-related fees	1	1
All other fees	—	1

Audit fees include £35,000 (2017: £35,000) of audit fees relating to the audit of the parent company.

Fees for the audit of the effectiveness of the Group's internal control over financial reporting are allocated to audit fees paid.

Included in audit related fees is audit related work in relation to disposal transactions and other assurance work related to the audit of the Group's efficacy programme.

ITEM 16D. EXEMPTIONS FROM THE LISTING STANDARDS FOR AUDIT COMMITTEES

Not applicable.

ITEM 16E. PURCHASES OF EQUITY SECURITIES BY THE ISSUER AND AFFILIATED PURCHASES

<u>Period</u>	<u>Total number of shares purchased</u>	<u>Average price paid per share</u>	<u>Total number of units purchased as part of publicly announced plans or programs</u>	<u>Approximate maximum value of shares that may yet be purchased under the plans or programs</u>
August 1, 2016 – August 31, 2016	3,000,000	£8.92	n/a	n/a
October 1, 2017 – October 31, 2017	4,846,809	£7.03	4,846,809	£266m
November 1, 2017 – November 30, 2017	11,210,922	£6.99	11,210,922	£187m
December 1, 2017 – December 31, 2017	4,938,170	£7.23	4,938,170	£151m
January 1, 2018 – January 31, 2018	9,895,690	£7.03	9,895,690	£ 81m
February 1, 2018 – February 28, 2018	11,943,986	£6.77	11,943,986	£ nil

Purchases of shares in 2016 and 2017 were made to satisfy obligations under Pearson employee share award programs. All purchases were made in open-market transactions.

In October 2017, the Group announced a £300m share buyback program. In 2017, the Group's brokers purchased 21m shares at a total value of £153m of which £149m had been cancelled at December 31, 2017. Cash payments of £149m had been made in respect of the purchases with the outstanding £4m settlement made at the beginning of January 2018. This £4m together with the remaining value of the buyback program of £147m was recorded as a liability at December 31, 2017. A further 22m shares were purchased under the program in 2018. The shares bought back were cancelled and the nominal value of these shares was transferred to a capital redemption reserve. The nominal value of shares cancelled at December 31, 2018 was £11m (2017: £5m).

ITEM 16F. CHANGE IN REGISTRANT'S CERTIFYING AUDITOR

Not applicable.

ITEM 16G. CORPORATE GOVERNANCE

Pearson is listed on the New York Stock Exchange ("NYSE"). As a listed non-US issuer, the Group is required to comply with some of the NYSE's corporate governance rules, and otherwise must disclose on its website any significant ways in which its corporate governance practices differ from those followed by US companies under the NYSE listing standards. At this time, the Company believes that it is in compliance in all material respects with all the NYSE rules except that the Remuneration Committee and the Nomination & Governance Committee are not composed entirely of independent directors as the Chairman, who is not considered independent under NYSE rules, is a member of each committee in addition to independent directors.

ITEM 16H. MINE SAFETY DISCLOSURE

Not applicable.

PART III

ITEM 17. FINANCIAL STATEMENTS

Not applicable.

ITEM 18. FINANCIAL STATEMENTS

The financial statements filed as part of this Annual Report are included on pages F-1 through F-151 hereof.

ITEM 19. EXHIBITS

- 1.1 Articles of Association of Pearson plc. ∞
- 2.1 Indenture dated May 8, 2012 between Pearson Funding Four plc, as the Issuer, Pearson plc, Guarantor, and The Bank of New York Mellon, as trustee, Paying Agent and Calculation Agent. φ
- 2.2 Indenture dated May 8, 2013 between Pearson Funding Five plc, as the Issuer, Pearson plc, Guarantor, and The Bank of New York Mellon, as trustee, Paying Agent and Calculation Agent. θ
- 2.3 Trust Deed dated May 19, 2014 between Pearson Funding Five plc, as the Issuer, Pearson plc, Guarantor, and The Law Debenture Trust Corporation P.L.C, as trustee. ∞
- 2.4 Trust Deed dated May 6, 2015 between Pearson Funding Five plc, as the Issuer, Pearson plc, Guarantor, and The Law Debenture Trust Corporation P.L.C, as trustee. λ
- 8.1 List of Significant Subsidiaries.
- 12.1 Certification of Chief Executive Officer.
- 12.2 Certification of Chief Financial Officer.
- 13.1 Certification of Chief Executive Officer.
- 13.2 Certification of Chief Financial Officer.
- 15.1 Consent of PricewaterhouseCoopers LLP.
- 15.2 Consent of PricewaterhouseCoopers GmbH.
- 101.INS XBRL Instance Document.
- 101.SCH XBRL Taxonomy Extension Schema Document.
- 101.CAL XBRL Taxonomy Extension Calculation Linkbase Document.
- 101.DEF XBRL Taxonomy Extension Definition Linkbase Document.
- 101.LAB XBRL Taxonomy Extension Label Linkbase Document.
- 101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.

φ Incorporated by reference from the Form 20-F of Pearson plc for the year ended December 31, 2012 and filed March 22, 2013.

θ Incorporated by reference from the Form 20-F of Pearson plc for the year ended December 31, 2013 and filed March 27, 2014.

∞ Incorporated by reference from the Form 20-F of Pearson plc for the year ended December 31, 2014 and filed March 26, 2015.

λ Incorporated by reference from the Form 20-F of Pearson plc for the year ended December 31, 2015 and filed March 23, 2016

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Pearson plc

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Pearson plc and its subsidiaries (the “Company”) as of December 31, 2018 and 2017 and the related consolidated income statements, consolidated statements of comprehensive income, consolidated statements of changes in equity and consolidated cash flow statements for each of the three years in the period ended December 31, 2018, including the related notes (collectively referred to as the “consolidated financial statements”). We also have audited the Company’s internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017 and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2018 in conformity with International Financial Reporting Standards as issued by the International Accounting Standards Board. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting at December 31, 2018, based on criteria established in Internal Control — Integrated Framework (2013) issued by the COSO.

Basis for Opinions

The Company’s management is responsible for these consolidated financial statements, for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in “Management’s Annual Report on Internal Control over Financial Reporting” appearing under item 15 of this Form 20-F. Our responsibility is to express opinions on the Company’s consolidated financial statements and on the Company’s internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control over Financial Reporting

A company’s internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in

accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP
London, United Kingdom
4 April 2019

We have served as the Company's auditor since 1996.

Consolidated income statement

Year ended 31 December 2018

All figures in £ millions	Notes	2018	2017	2016
Continuing operations				
Sales	2	4,129	4,513	4,552
Cost of goods sold	4	(1,943)	(2,066)	(2,093)
Gross profit		2,186	2,447	2,459
Operating expenses	4	(1,907)	(2,202)	(2,480)
Other net gains and losses	4	230	128	(25)
Impairment of intangible assets	11	—	—	(2,548)
Share of results of joint ventures and associates	12	44	78	97
Operating profit	2	553	451	(2,497)
Finance costs	6	(91)	(110)	(97)
Finance income	6	36	80	37
Profit before tax		498	421	(2,557)
Income tax	7	92	(13)	222
Profit for the year		590	408	(2,335)
Attributable to:				
Equity holders of the company		588	406	(2,337)
Non-controlling interest		2	2	2
Earnings per share attributable to equity holders of the company during the year (expressed in pence per share)				
– basic	8	75.6p	49.9p	(268.8)p
– diluted	8	75.5p	49.9p	(268.8)p

Consolidated statement of comprehensive income

Year ended 31 December 2018

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Profit/(loss) for the year		590	408	(2,335)
Items that may be reclassified to the income statement				
Net exchange differences on translation of foreign operations –				
Group		91	(158)	910
Net exchange differences on translation of foreign operations –				
associates		(1)	(104)	3
Currency translation adjustment disposed		(4)	(51)	—
Attributable tax	7	(4)	9	(5)
Items that are not reclassified to the income statement				
Fair value gain on other financial assets		8	13	—
Attributable tax	7	—	(4)	—
Remeasurement of retirement benefit obligations – Group	25	22	175	(268)
Remeasurement of retirement benefit obligations – associates ...		3	7	(8)
Attributable tax	7	9	(42)	58
Other comprehensive income/(expense) for the year	29	<u>124</u>	<u>(155)</u>	<u>690</u>
Total comprehensive income for the year		<u>714</u>	<u>253</u>	<u>(1,645)</u>
Attributable to:				
Equity holders of the company		712	251	(1,648)
Non-controlling interest		<u>2</u>	<u>2</u>	<u>3</u>

Consolidated balance sheet

As at 31 December 2018

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>
Assets			
Non-current assets			
Property, plant and equipment	10	237	281
Intangible assets	11	3,009	2,964
Investments in joint ventures and associates	12	392	398
Deferred income tax assets	13	60	95
Financial assets – derivative financial instruments	16	67	140
Retirement benefit assets	25	571	545
Other financial assets	15	93	77
Trade and other receivables	22	100	103
		<u>4,529</u>	<u>4,603</u>
Current assets			
Intangible assets – pre-publication	20	817	741
Inventories	21	164	148
Trade and other receivables	22	1,178	1,110
Financial assets – derivative financial instruments	16	1	—
Financial assets – marketable securities	14	—	8
Cash and cash equivalents (excluding overdrafts)	17	568	518
		<u>2,728</u>	<u>2,525</u>
Assets classified as held for sale	32	648	760
Total assets		<u>7,905</u>	<u>7,888</u>
Liabilities			
Non-current liabilities			
Financial liabilities – borrowings	18	(674)	(1,066)
Financial liabilities – derivative financial instruments	16	(36)	(140)
Deferred income tax liabilities	13	(136)	(164)
Retirement benefit obligations	25	(100)	(104)
Provisions for other liabilities and charges	23	(145)	(55)
Other liabilities	24	(155)	(133)
		<u>(1,246)</u>	<u>(1,662)</u>

Consolidated balance sheet continued

As at 31 December 2018

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>
Current liabilities			
Trade and other liabilities	24	(1,400)	(1,342)
Financial liabilities – borrowings	18	(46)	(19)
Financial liabilities – derivative financial instruments	16	(23)	—
Current income tax liabilities		(72)	(231)
Provisions for other liabilities and charges	23	(20)	(25)
		<u>(1,561)</u>	<u>(1,617)</u>
Liabilities classified as held for sale	32	(573)	(588)
Total liabilities		(3,380)	(3,867)
Net assets		4,525	4,021
Equity			
Share capital	27	195	200
Share premium	27	2,607	2,602
Treasury shares	28	(33)	(61)
Capital redemption reserve		11	5
Fair value reserve		19	13
Translation reserve		678	592
Retained earnings		<u>1,039</u>	<u>662</u>
Total equity attributable to equity holders of the company		4,516	4,013
Non-controlling interest		<u>9</u>	<u>8</u>
Total equity		4,525	4,021

These financial statements have been approved for issue by the Board of Directors on 4 April 2019 and signed on its behalf by



Coram Williams
Chief Financial Officer

Consolidated statement of changes in equity
Year ended 31 December 2018

All figures in £ millions	Equity attributable to equity holders of the company							Non-controlling interest	Total equity	
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Fair value reserve	Translation reserve	Retained earnings			Total
At 1 January 2018	200	2,602	(61)	5	13	592	662	4,013	8	4,021
Adjustment on initial application of IFRS 15 net of tax (see note 1b)	—	—	—	—	—	—	(108)	(108)	—	(108)
Adjustment on initial application of IFRS 9 net of tax (see note 1c)	—	—	—	—	—	—	(10)	(10)	—	(10)
At 1 January 2018 (restated)	200	2,602	(61)	5	13	592	544	3,895	8	3,903
Profit for the year	—	—	—	—	—	—	588	588	2	590
Other comprehensive income	—	—	—	—	8	86	30	124	—	124
Total comprehensive income	—	—	—	—	8	86	618	712	2	714
Equity-settled transactions	—	—	—	—	—	—	37	37	—	37
Tax on equity settled transactions	—	—	—	—	—	—	4	4	—	4
Issue of ordinary shares under share option schemes	1	5	—	—	—	—	—	6	—	6
Buyback of equity	(6)	—	—	6	—	—	(2)	(2)	—	(2)
Release of treasury shares	—	—	28	—	—	—	(28)	—	—	—
Transfer of gain on disposal of FVOCI investment	—	—	—	—	(2)	—	2	—	—	—
Changes in non-controlling interest	—	—	—	—	—	—	—	—	—	—
Dividends	—	—	—	—	—	—	(136)	(136)	(1)	(137)
At 31 December 2018	195	2,607	(33)	11	19	678	1,039	4,516	9	4,525

All figures in £ millions	Equity attributable to equity holders of the company							Non-controlling interest	Total equity	
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Fair value reserve	Translation reserve	Retained earnings			Total
At 1 January 2017	205	2,597	(79)	—	—	905	716	4,344	4	4,348
Profit for the year	—	—	—	—	—	—	406	406	2	408
Other comprehensive income/(expense)	—	—	—	—	13	(313)	145	(155)	—	(155)
Total comprehensive income/(expense)	—	—	—	—	13	(313)	551	251	2	253
Equity-settled transactions	—	—	—	—	—	—	33	33	—	33
Tax on equity settled transactions	—	—	—	—	—	—	—	—	—	—
Issue of ordinary shares under share option schemes	—	5	—	—	—	—	—	5	—	5
Buyback of equity	(5)	—	—	5	—	—	(300)	(300)	—	(300)
Release of treasury shares	—	—	18	—	—	—	(18)	—	—	—
Transfer of gain on disposal of FVOCI investment	—	—	—	—	—	—	—	—	—	—
Changes in non-controlling interest	—	—	—	—	—	—	(2)	(2)	2	—
Dividends	—	—	—	—	—	—	(318)	(318)	—	(318)
At 31 December 2017	200	2,602	(61)	5	13	592	662	4,013	8	4,021

Consolidated statement of changes in equity continued
Year ended 31 December 2018

All figures in £ millions	Equity attributable to equity holders of the company							Total	Non-controlling interest	Total equity
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Fair value reserve	Translation reserve	Retained earnings			
At 1 January 2016	205	2,590	(72)	—	—	(7)	3,698	6,414	4	6,418
Loss for the year	—	—	—	—	—	—	(2,337)	(2,337)	2	(2,335)
Other comprehensive income/(expense)	—	—	—	—	—	912	(223)	689	1	690
Total comprehensive income/(expense)	—	—	—	—	—	912	(2,560)	(1,648)	3	(1,645)
Equity-settled transactions	—	—	—	—	—	—	22	22	—	22
Issue of ordinary shares under share option schemes	—	7	—	—	—	—	—	7	—	7
Buyback of equity	—	—	—	—	—	—	—	—	—	—
Purchase of treasury shares	—	—	(27)	—	—	—	—	(27)	—	(27)
Release of treasury shares	—	—	20	—	—	—	(20)	—	—	—
Transfer of gain on disposal of FVOCI investment	—	—	—	—	—	—	—	—	—	—
Changes in non-controlling interest	—	—	—	—	—	—	—	—	(3)	(3)
Dividends	—	—	—	—	—	—	(424)	(424)	—	(424)
At 31 December 2016	<u>205</u>	<u>2,597</u>	<u>(79)</u>	<u>—</u>	<u>—</u>	<u>905</u>	<u>716</u>	<u>4,344</u>	<u>4</u>	<u>4,348</u>

The capital redemption reserve reflects the nominal value of shares cancelled in the Group's share buyback programme. The fair value reserve arises on revaluation of other financial assets. The translation reserve includes exchange differences arising from the translation of the net investment in foreign operations and of borrowings and other currency instruments designated as hedges of such investments.

Consolidated cash flow statement

Year ended 31 December 2018

All figures in £ millions	Notes	2018	2017	2016
Cash flows from operating activities				
Net cash generated from operations	33	547	462	522
Interest paid		(42)	(89)	(67)
Tax paid		(43)	(75)	(45)
Net cash generated from operating activities		462	298	410
Cash flows from investing activities				
Acquisition of subsidiaries, net of cash acquired	30	(5)	(11)	(15)
Purchase of investments		(10)	(3)	(6)
Purchase of property, plant and equipment		(70)	(82)	(88)
Purchase of intangible assets		(130)	(150)	(157)
Disposal of subsidiaries, net of cash disposed	31	83	19	(54)
Proceeds from sale of associates	31	18	411	4
Proceeds from sale of investments		6	—	92
Proceeds from sale of property, plant and equipment	33	128	—	4
Proceeds from sale of liquid resources		10	20	42
Loans repaid by/(advance to) related parties		46	(13)	14
Investment in liquid resources		(2)	(18)	(24)
Interest received		20	20	16
Dividends received from joint ventures and associates		117	458	131
Net cash generated from/(used in) investing activities		211	651	(41)
Cash flows from financing activities				
Proceeds from issue of ordinary shares	27	6	5	7
Buyback of equity	27	(153)	(149)	—
Purchase of treasury shares		—	—	(27)
Proceeds from borrowings		—	2	4
Repayment of borrowings		(441)	(1,294)	(249)
Finance lease principal payments		(4)	(5)	(6)
Dividends paid to company's shareholders	9	(136)	(318)	(424)
Dividends paid to non-controlling interest		(1)	—	—
Transactions with non-controlling interest		—	—	(2)
Net cash used in financing activities		(729)	(1,759)	(697)
Effects of exchange rate changes on cash and cash equivalents		(49)	16	81
Net decrease in cash and cash equivalents		(105)	(794)	(247)
Cash and cash equivalents at beginning of year		630	1,424	1,671
Cash and cash equivalents at end of year	17	525	630	1,424

Notes to the consolidated financial statements

General information

Pearson plc (the company), its subsidiaries and associates (together the Group) are international businesses covering educational courseware, assessments and services, and consumer publishing through its associate interest in Penguin Random House.

The company is a public limited company incorporated and domiciled in England. The address of its registered office is 80 Strand, London WC2R 0RL.

The company has its primary listing on the London Stock Exchange and is also listed on the New York Stock Exchange.

These consolidated financial statements were approved for issue by the Board of Directors on 4 April 2019.

1a. Accounting policies

The principal accounting policies applied in the preparation of these consolidated financial statements are set out below.

Basis of preparation

These consolidated financial statements have been prepared on the going concern basis and in accordance with International Financial Reporting Standards (IFRS) and IFRS Interpretations Committee (IFRS IC) interpretations as issued by the IASB and in conformity with IFRS as adopted by the European Union (EU).

These consolidated financial statements have been prepared under the historical cost convention as modified by the revaluation of financial assets and liabilities (including derivative financial instruments) at fair value.

These accounting policies have been consistently applied to all years presented, unless otherwise stated.

1. Interpretations and amendments to published standards effective 2018 The following standards were adopted in 2018:

- IFRS 15 Revenue from Contracts with Customers
- IFRS 9 Financial Instruments

The impact of the adoption of these new standards is set out in notes 1b and 1c.

A number of other new pronouncements are also effective from 1 January 2018 but they do not have a material impact on the consolidated financial statements. Additional disclosure has been given where relevant.

2. Standards, interpretations and amendments to published standards that are not yet effective New accounting standards and interpretations have been published that are not mandatory for the year ended 31 December 2018. The Group has elected not to early-adopt these new standards and interpretations. The Group's assessment of the impact of these new standards is set out below.

IFRS 16 'Leases', effective for annual reporting periods beginning on or after 1 January 2019. The Group will apply IFRS 16 on 1 January 2019 using the modified retrospective approach. Under this approach, the

Notes to the consolidated financial statements

1a. Accounting policies continued

Basis of preparation continued

cumulative effect of adopting IFRS 16 will be recognised as an adjustment to the opening balance of retained earnings on 1 January 2019, with no restatement of comparative information.

IFRS 16 requires lessees to recognise right-of-use assets and lease liabilities on the balance sheet for all applicable leases with associated depreciation and interest charges recorded in the income statement together with changes to the classification of cash flows. In addition, IFRS 16 requires an intermediate lessor to assess and classify subleases as either a finance lease or an operating lease.

The Group has assessed the impact of adopting IFRS 16 with reference to its existing lease portfolio. The most significant part of the portfolio is property leases, amounting to approximately 750, together with a number of low value vehicle and equipment leases. The lease liability has been measured at the present value of the remaining lease payments, discounted using the incremental borrowing rate at transition. The right-of-use asset is measured at its carrying amount as if the standard had been applied since the commencement of the lease, discounted using the incremental borrowing rate at transition. Where data is not available to enable this measurement to be made, the right-of-use asset is measured at an amount equal to the lease liability. Transition recognition exemptions relating to short-term and low value leases have been applied as well as practical expedients taken, where available, to simplify the transition process.

Adoption of the new standard will have a material impact on the Group. It is estimated that on transition the lease liability to be brought on balance sheet will be around £910m with the corresponding right-of-use asset valued at around £435m. In addition, certain subleases have been reclassified as finance leases resulting in an additional lease receivable of around £215m being brought on balance sheet. The net impact on the balance sheet will be a reduction of net assets of around £100m after taking into account existing liabilities relating to onerous lease provisions and lease incentives. The impact on the income statement in 2019 is expected to reduce profit before tax by approximately £10m (increasing operating profit by approximately £20m and increasing net finance costs by approximately £30m); the operating lease expense recognised under the existing standard (IAS 17) being replaced by depreciation and finance costs and finance income. There will be no impact on the Group's cash and cash equivalents.

In June 2015, the IASB issued an exposure draft ED/2015/5 'Remeasurement on a Plan Amendment, Curtailment or Settlement/ Availability of a Refund from a Defined benefit Plan (Proposed Amendments to IAS 19 and IFRIC 14)'. The proposed amendments to IFRIC 14, which may have restricted the Group's ability to recognise a pension asset in respect of pension surpluses in its UK defined benefit plan, are currently on hold with the IASB.

A number of other new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2019, and have not been applied in preparing these financial statements. None of these is expected to have a material impact on the consolidated financial statements.

3. Critical accounting assumptions and judgements The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting assumptions. It also requires management to exercise its judgement in the process of applying the Group's accounting policies. The areas requiring a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are discussed in the relevant accounting policies under the following headings and in the notes to the accounts where appropriate:

Intangible assets: Goodwill

Intangible assets: Pre-publication assets

Taxation

Revenue recognition including provisions for returns

Employee benefits: Pensions

Provisions: Onerous leases

Notes to the consolidated financial statements

1a. Accounting policies continued

Consolidation

1. Business combinations The acquisition method of accounting is used to account for business combinations.

The consideration transferred for the acquisition of a subsidiary is the fair value of the assets transferred, the liabilities incurred and the equity interest issued by the Group. The consideration transferred includes the fair value of any asset or liability resulting from a contingent consideration arrangement. Acquisition-related costs are expensed as incurred in the operating expenses line of the income statement. Identifiable assets acquired and identifiable liabilities and contingent liabilities assumed in a business combination are measured initially at their fair values at the acquisition date. The determination of fair values often requires significant judgements and the use of estimates, and, for material acquisitions, the fair value of the acquired intangible assets is determined by an independent valuer. The excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired is recorded as goodwill (see note 30).

See the 'Intangible assets' policy for the accounting policy on goodwill. If this is less than the fair value of the net assets of the subsidiary acquired, in the case of a bargain purchase, the difference is recognised directly in the income statement.

On an acquisition-by-acquisition basis, the Group recognises any non-controlling interest in the acquiree either at fair value or at the non-controlling interest's proportionate share of the acquiree's net assets.

IFRS 3 'Business Combinations' has not been applied retrospectively to business combinations before the date of transition to IFRS.

Management exercises judgement in determining the classification of its investments in its businesses, in line with the following:

2. Subsidiaries Subsidiaries are entities over which the Group has control. The Group controls an entity when the Group is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Subsidiaries are fully consolidated from the date on which control is transferred to the Group. They are deconsolidated from the date that control ceases.

3. Transactions with non-controlling interests Transactions with non-controlling interests that do not result in loss of control are accounted for as equity transactions, that is, as transactions with the owners in their capacity as owners. Any surplus or deficit arising from disposals to a non-controlling interest is recorded in equity. For purchases from a non-controlling interest, the difference between consideration paid and the relevant share acquired of the carrying value of the subsidiary is recorded in equity.

4. Joint ventures and associates Joint ventures are entities in which the Group holds an interest on a long-term basis and has rights to the net assets through contractually agreed sharing of control. Associates are entities over which the Group has significant influence but not the power to control the financial and operating policies, generally accompanying a shareholding of between 20% and 50% of the voting rights. Ownership percentage is likely to be the key indicator of investment classification; however, other factors, such as Board representation, may also affect the accounting classification. Judgement is required to assess all of the qualitative and quantitative factors which may indicate that the Group does, or does not, have significant influence over an investment. Penguin Random House is the Group's only material associate – see note 12 for further details on the judgements involved in its accounting classification. Investments in joint ventures and associates are accounted for by the equity method and are initially recognised at the fair value of consideration transferred.

Notes to the consolidated financial statements

1a. Accounting policies continued

Consolidation continued

The Group's share of its joint ventures' and associates' post-acquisition profits or losses is recognised in the income statement and its share of post-acquisition movements in reserves is recognised in reserves.

The Group's share of its joint ventures' and associates' results is recognised as a component of operating profit as these operations form part of the core publishing business of the Group and are an integral part of existing wholly-owned businesses. The cumulative post-acquisition movements are adjusted against the carrying amount of the investment. When the Group's share of losses in a joint venture or associate equals or exceeds its interest in the joint venture or associate, the Group does not recognise further losses unless the Group has incurred obligations or made payments on behalf of the joint venture or associate.

Unrealised gains and losses on transactions between the Group and its joint ventures and associates are eliminated to the extent of the Group's interest in these entities.

5. Contribution of a subsidiary to an associate or joint venture The gain or loss resulting from the contribution or sale of a subsidiary to an associate or a joint venture is recognised in full. Where such transactions do not involve cash consideration, significant judgements and estimates are used in determining the fair values of the consideration received.

Foreign currency translation

1. Functional and presentation currency Items included in the financial statements of each of the Group's entities are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The consolidated financial statements are presented in sterling, which is the company's functional and presentation currency.

2. Transactions and balances Foreign currency transactions are translated into the functional currency using the exchange rates prevailing at the dates of the transactions. Foreign exchange gains and losses resulting from the settlement of such transactions and from the translation at year-end exchange rates of monetary assets and liabilities denominated in foreign currencies are recognised in the income statement, except when deferred in equity as qualifying net investment hedges.

3. Group companies The results and financial position of all Group companies that have a functional currency different from the presentation currency are translated into the presentation currency as follows:

- i) Assets and liabilities are translated at the closing rate at the date of the balance sheet
- ii) Income and expenses are translated at average exchange rates
- iii) All resulting exchange differences are recognised as a separate component of equity.

On consolidation, exchange differences arising from the translation of the net investment in foreign entities, and of borrowings and other currency instruments designated as hedges of such investments, are taken to shareholders' equity. The Group treats specific inter-company loan balances, which are not intended to be repaid in the foreseeable future, as part of its net investment. When a foreign operation is sold, such exchange differences are recognised in the income statement as part of the gain or loss on sale.

The principal overseas currency for the Group is the US dollar. The average rate for the year against sterling was \$1.34 (2017: \$1.30) and the year-end rate was \$1.27 (2017: \$1.35, 2016: \$1.23).

Notes to the consolidated financial statements

1a. Accounting policies continued

Property, plant and equipment

Property, plant and equipment are stated at historical cost less depreciation. Cost includes the original purchase price of the asset and the costs attributable to bringing the asset to its working condition for intended use. Land is not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost less their residual values over their estimated useful lives as follows:

Buildings (freehold):	20 – 50 years
Buildings (leasehold):	over the period of the lease
Plant and equipment:	3 – 10 years

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

The carrying value of an asset is written down to its recoverable amount if the carrying value of the asset is greater than its estimated recoverable amount.

Intangible assets

1. Goodwill For the acquisition of subsidiaries made on or after 1 January 2010, goodwill represents the excess of the consideration transferred, the amount of any non-controlling interest in the acquiree and the acquisition date fair value of any previous equity interest in the acquiree over the fair value of the identifiable net assets acquired. For the acquisition of subsidiaries made from the date of transition to IFRS to 31 December 2009, goodwill represents the excess of the cost of an acquisition over the fair value of the Group's share of the net identifiable assets acquired. Goodwill on acquisitions of subsidiaries is included in intangible assets. Goodwill on acquisition of associates and joint ventures represents the excess of the cost of an acquisition over the fair value of the Group's share of the net identifiable assets acquired. Goodwill on acquisitions of associates and joint ventures is included in investments in associates and joint ventures.

Goodwill is tested at least annually for impairment and carried at cost less accumulated impairment losses. An impairment loss is recognised to the extent that the carrying value of goodwill exceeds the recoverable amount. The recoverable amount is the higher of fair value less costs of disposal and value in use. These calculations require the use of estimates in respect of forecast cash flows and discount rates and significant management judgement in respect of CGU and cost allocation. A description of the key assumptions and sensitivities is included in note 11. Goodwill is allocated to aggregated cash-generating units for the purpose of impairment testing. The allocation is made to those aggregated cash-generating units that are expected to benefit from the business combination in which the goodwill arose.

Gains and losses on the disposal of an entity include the carrying amount of goodwill relating to the entity sold.

2. Acquired software Software separately acquired for internal use is capitalised at cost. Software acquired in material business combinations is capitalised at its fair value as determined by an independent valuer. Acquired software is amortised on a straight-line basis over its estimated useful life of between three and eight years.

3. Internally developed software Internal and external costs incurred during the preliminary stage of developing computer software for internal use are expensed as incurred. Internal and external costs incurred to develop computer software for internal use during the application development stage are capitalised if the Group expects economic benefits from the development. Capitalisation in the application development stage begins once the Group can reliably measure the expenditure attributable to the software development and has demonstrated its intention to complete and use the software. Internally developed software is amortised on a straight-line basis over its estimated useful life of between three and eight years.

Notes to the consolidated financial statements

1a. Accounting policies continued

Intangible assets continued

4. *Acquired intangible assets* Acquired intangible assets include customer lists, contracts and relationships, trademarks and brands, publishing rights, content, technology and software rights. These assets are capitalised on acquisition at cost and included in intangible assets. Intangible assets acquired in material business combinations are capitalised at their fair value as determined by an independent valuer. Intangible assets are amortised over their estimated useful lives of between two and 20 years, using an amortisation method that reflects the pattern of their consumption.

5. *Pre-publication assets* Pre-publication assets represent direct costs incurred in the development of educational programmes and titles prior to their publication. These costs are recognised as current intangible assets where the title will generate probable future economic benefits and costs can be measured reliably.

Pre-publication assets are amortised upon publication of the title over estimated economic lives of five years or less, being an estimate of the expected operating lifecycle of the title, with a higher proportion of the amortisation taken in the earlier years.

The assessment of the useful economic life and the recoverability of pre-publication assets involves a significant degree of judgement based on historical trends and management estimation of future potential sales. An incorrect amortisation profile could result in excess amounts being carried forward as intangible assets that would otherwise have been written off to the income statement in an earlier period.

Reviews are performed regularly to estimate recoverability of pre-publication assets. The carrying amount of pre-publication assets is set out in note 20.

The investment in pre-publication assets has been disclosed as part of cash generated from operations in the cash flow statement (see note 33).

Other financial assets

Other financial assets are non-derivative financial assets classified and measured at estimated fair value.

Marketable securities and cash deposits with maturities of greater than three months are classified and subsequently measured at fair value through profit and loss.

They are remeasured at each balance sheet date by using market data and the use of established valuation techniques. Any movement in the fair value is immediately recognised in finance income or finance costs in the income statement.

Investments in the equity instruments of other entities are classified and subsequently measured at fair value through other comprehensive income. Changes in fair value are recorded in equity in the fair value reserve via other comprehensive income. On subsequent disposal of the asset, the net fair value gains or losses are reclassified from the fair value reserve to retained earnings. Any dividends received from equity investments classified as fair value through other comprehensive income are recognised in the P&L unless they represent a return of capital.

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method or an approximation thereof, such as the first in first out (FIFO) method. The cost of finished goods and

Notes to the consolidated financial statements

1a. Accounting policies continued

Inventories continued

work in progress comprises raw materials, direct labour, other direct costs and related production overheads. Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs necessary to make the sale. Provisions are made for slow-moving and obsolete stock.

Royalty advances

Advances of royalties to authors are included within trade and other receivables when the advance is paid less any provision required to adjust the advance to its net realisable value. The realisable value of royalty advances relies on a degree of management estimation in determining the profitability of individual author contracts. If the estimated realisable value of author contracts is overstated, this will have an adverse effect on operating profits as these excess amounts will be written off.

The recoverability of royalty advances is based upon an annual detailed management review of the age of the advance, the future sales projections for new authors and prior sales history of repeat authors.

The royalty advance is expensed at the contracted or effective royalty rate as the related revenues are earned. Royalty advances which will be consumed within one year are held in current assets. Royalty advances which will be consumed after one year are held in non-current assets.

Cash and cash equivalents

Cash and cash equivalents in the cash flow statement include cash in hand, deposits held on call with banks, other short-term highly liquid investments with original maturities of three months or less, and bank overdrafts. Bank overdrafts are included in borrowings in current liabilities in the balance sheet.

Short-term deposits and marketable securities with maturities of greater than three months do not qualify as cash and cash equivalents and are reported as financial assets. Movements on these financial assets are classified as cash flows from financing activities in the cash flow statement where these amounts are used to offset the borrowings of the Group or as cash flows from investing activities where these amounts are held to generate an investment return.

Share capital

Ordinary shares are classified as equity.

Incremental costs directly attributable to the issue of new shares or options are shown in equity as a deduction, net of tax, from the proceeds.

Where any Group company purchases the company's equity share capital (treasury shares), the consideration paid, including any directly attributable incremental costs, net of income taxes, is deducted from equity attributable to the company's equity holders until the shares are cancelled, reissued or disposed of. Where such shares are subsequently sold or reissued, any consideration received, net of any directly attributable transaction costs and the related income tax effects, is included in equity attributable to the company's equity holders.

Ordinary shares purchased under a buyback programme are cancelled and the nominal value of the shares is transferred to a capital redemption reserve.

Notes to the consolidated financial statements

1a. Accounting policies continued

Borrowings

Borrowings are recognised initially at fair value, which is proceeds received net of transaction costs incurred. Borrowings are subsequently stated at amortised cost with any difference between the proceeds (net of transaction costs) and the redemption value being recognised in the income statement over the period of the borrowings using the effective interest method. Accrued interest is included as part of borrowings.

Where a debt instrument is in a fair value hedging relationship, an adjustment is made to its carrying value in the income statement to reflect the hedged risk.

Where a debt instrument is in a net investment hedge relationship gains and losses on the effective portion of the hedge are recognised in other comprehensive income.

Derivative financial instruments

Derivatives are recognised at fair value and remeasured at each balance sheet date. The fair value of derivatives is determined by using market data and the use of established estimation techniques such as discounted cash flow and option valuation models.

For derivatives in a hedge relationship, the currency basis spread is excluded from the designation as a hedging instrument and is separately accounted for as a cost of hedging, which is recognised in equity in a cost of hedging reserve.

Changes in the fair value of derivatives are recognised immediately in finance income or costs. However, derivatives relating to borrowings and certain foreign exchange contracts are designated as part of a hedging transaction.

The accounting treatment is summarised as follows:

<u>Typical reason for designation</u>	<u>Reporting of gains and losses on effective portion of the hedge</u>	<u>Reporting of gains and losses on disposal</u>
Net investment hedge		
The derivative creates a foreign currency liability which is used to hedge changes in the value of a subsidiary which transacts in that currency.	Recognised in other comprehensive income.	On disposal, the accumulated value of gains and losses reported in other comprehensive income is transferred to the income statement.
Fair value hedges		
The derivative transforms the interest profile on debt from fixed rate to floating rate. Changes in the value of the debt as a result of changes in interest rates are offset by equal and opposite changes in the value of the derivative. When the Group's debt is swapped to floating rates, the contracts used are designated as fair value hedges.	Gains and losses on the derivative are reported in finance income or finance costs. However, an equal and opposite change is made to the carrying value of the debt (a 'fair value adjustment') with the benefit/cost reported in finance income or finance costs. The net result should be a zero charge on a perfectly effective hedge.	If the debt and derivative are disposed of, the value of the derivative and the debt (including the fair value adjustment) are reset to zero. Any resultant gain or loss is recognised in finance income or finance costs.

Notes to the consolidated financial statements

1a. Accounting policies continued

Derivative financial instruments continued

<u>Typical reason for designation</u>	<u>Reporting of gains and losses on effective portion of the hedge</u>	<u>Reporting of gains and losses on disposal</u>
Non-hedge accounted contracts		
These are not designated as hedging instruments. Typically these are short-term contracts to convert debt back to fixed rates or foreign exchange contracts where a natural offset exists.	No hedge accounting applies.	

Taxation

Current tax is recognised at the amounts expected to be paid or recovered under the tax rates and laws that have been enacted or substantively enacted at the balance sheet date.

Deferred income tax is provided, using the balance sheet liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts. Deferred income tax is determined using tax rates and laws that have been enacted or substantively enacted by the balance sheet date and are expected to apply when the related deferred tax asset is realised or the deferred income tax liability is settled.

Deferred tax assets are recognised to the extent that it is probable that future taxable profit will be available against which the temporary differences can be utilised.

Deferred income tax is provided in respect of the undistributed earnings of subsidiaries, associates and joint ventures other than where it is intended that those undistributed earnings will not be remitted in the foreseeable future.

Current and deferred tax are recognised in the income statement, except when the tax relates to items charged or credited directly to equity or other comprehensive income, in which case the tax is also recognised in equity or other comprehensive income.

The Group is subject to income taxes in numerous jurisdictions. Significant judgement is required in determining the estimates in relation to the worldwide provision for income taxes. There are many transactions and calculations for which the ultimate tax determination is uncertain during the ordinary course of business. The Group recognises tax provisions when it is considered probable that there will be a future outflow of funds to a tax authority. The provisions are based on management's best judgement of the application of tax legislation and best estimates of future settlement amounts (see note 7). Where the final tax outcome of these matters is different from the amounts that were initially recorded, such differences will impact the income tax and deferred tax provisions in the period in which such determination is made.

Deferred tax assets and liabilities require management judgement and estimation in determining the amounts to be recognised. In particular, when assessing the extent to which deferred tax assets should be recognised, significant judgement is used when considering the timing of the recognition and estimation is used to determine the level of future taxable income together with any future tax planning strategies (see note 13).

Notes to the consolidated financial statements

1a. Accounting policies continued

Employee benefits

1. Pensions The retirement benefit asset and obligation recognised in the balance sheet represents the net of the present value of the defined benefit obligation and the fair value of plan assets at the balance sheet date. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting estimated future cash flows using yields on high-quality corporate bonds which have terms to maturity approximating the terms of the related liability.

When the calculation results in a potential asset, the recognition of that asset is limited to the asset ceiling – that is the present value of any economic benefits available in the form of refunds from the plan or a reduction in future contributions. Management uses judgement to determine the level of refunds available from the plan in recognising an asset.

The determination of the pension cost and defined benefit obligation of the Group's defined benefit pension schemes depends on the selection of certain assumptions, which include the discount rate, inflation rate, salary growth and longevity (see note 25).

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

The service cost, representing benefits accruing over the year, is included in the income statement as an operating cost. Net interest is calculated by applying the discount rate to the net defined benefit obligation and is presented as finance costs or finance income.

Obligations for contributions to defined contribution pension plans are recognised as an operating expense in the income statement as incurred.

2. Other post-retirement obligations The expected costs of post-retirement medical and life assurance benefits are accrued over the period of employment, using a similar accounting methodology as for defined benefit pension obligations. The liabilities and costs relating to significant other post-retirement obligations are assessed annually by independent qualified actuaries.

3. Share-based payments The fair value of options or shares granted under the Group's share and option plans is recognised as an employee expense after taking into account the Group's best estimate of the number of awards expected to vest. Fair value is measured at the date of grant and is spread over the vesting period of the option or share. The fair value of the options granted is measured using an option model that is most appropriate to the award. The fair value of shares awarded is measured using the share price at the date of grant unless another method is more appropriate. Any proceeds received are credited to share capital and share premium when the options are exercised.

Provisions Provisions are recognised if the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are discounted to present value where the effect is material.

The Group recognises a provision for deferred consideration. Where this is contingent on future performance or a future event, judgement is exercised in establishing the fair value.

Notes to the consolidated financial statements

1a. Accounting policies continued

Employee benefits continued

The Group recognises a provision for onerous lease contracts when the expected benefits to be derived from a contract are less than the unavoidable costs of meeting the obligations under the contract. The calculation of onerous lease provisions involves estimates of potential sublet income, lease terms including rent free periods, void periods, lease incentives and running costs.

The provision is based on the present value of future payments for surplus leased properties under non-cancellable operating leases, net of estimated sub-leasing income.

Revenue recognition

The Group's revenue streams are courseware, assessments and services. Courseware includes curriculum materials provided in book form and/or via access to digital content. Assessments includes test development, processing and scoring services provided to governments, educational institutions, corporations and professional bodies. Services includes the operation of schools, colleges and universities, including sistemas in Brazil, as well as the provision of online learning services in partnership with universities and other academic institutions.

Revenue is recognised in order to depict the transfer of control of promised goods and services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods and services. This process begins with the identification of our contract with a customer, which is generally through a master services agreement, customer purchase order, or a combination thereof. Within each contract, judgement is applied to determine the extent to which activities within the contract represent distinct performance obligations to be delivered and the total amount of transaction price to which we expect to be entitled.

The transaction price determined is net of sales taxes, rebates and discounts, and after eliminating sales within the Group. Where a contract contains multiple performance obligations such as the provision of supplementary materials or online access with textbooks, revenue is allocated on the basis of relative standalone selling prices. Where a contract contains variable consideration significant estimation is required to determine the amount to which the Group is expected to be entitled.

Revenue is recognised on contracts with customers when or as performance obligations are satisfied which is the period or the point in time where control of goods or services transfer to the customer. Judgement is applied to determine first whether control passes over time and if not, then the point in time at which control passes. Where revenue is recognised over time judgement is used to determine the method which best depicts the transfer of control. Where an input method is used significant estimation is required to determine the progress towards delivering the performance obligation.

Revenue from the sale of books is recognised net of a provision for anticipated returns. This provision is based primarily on historical return rates, customer buying patterns and retailer behaviours including stock levels (see note 22). If these estimates do not reflect actual returns in future periods then revenues could be understated or overstated for a particular period. When the provision for returns is remeasured at each reporting date to reflect changes in estimates, a corresponding adjustment is also recorded to revenue.

The Group may enter into contracts with another party in addition to our customer. In making the determination as to whether revenue should be recognised on a gross or net basis, the contract with the customer is analysed to understand which party controls the relevant good or service prior to transferring to the customer. This judgement is informed by facts and circumstances of the contract in determining whether the Group has promised to provide the specified good or service or whether the Group is arranging for the transfer of the specified good

Notes to the consolidated financial statements

1a. Accounting policies continued

Revenue recognition continued

or service, including which party is responsible for fulfillment, has discretion to set the price to the customer and is responsible for inventory risk. On certain contracts, where the Group acts as an agent, only commissions and fees receivable for services rendered are recognised as revenue. Any third-party costs incurred on behalf of the principal that are rechargeable under the contractual arrangement are not included in revenue.

Income from recharges of freight and other activities which are incidental to the normal revenue-generating activities is included in other income.

The Group has applied IFRS 15 using the cumulative effect method and therefore comparative information has not been restated and continues to be reported under IAS 18 and IAS 11. The details of accounting policies under IAS 18 and IAS 11 are disclosed separately if they are different from those under IFRS 15. A description of the changes impacting the Group as well as a quantitative impact analysis has been disclosed in note 1b.

Additional details on the Group's revenue streams are also included in note 3.

Leases

Leases of property, plant and equipment where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the commencement of the lease at the lower of the fair value of the leased property and the present value of the minimum lease payments. Each lease payment is allocated between the liability and finance charges to achieve a constant rate on the finance balance outstanding. The corresponding rental obligations, net of finance charges, are included in financial liabilities – borrowings. The interest element of the finance cost is charged to the income statement over the lease period to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases are depreciated over the shorter of the useful life of the asset or the lease term.

Leases where a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases by the lessee. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

Dividends

Final dividends are recorded in the Group's financial statements in the period in which they are approved by the company's shareholders. Interim dividends are recorded when paid.

Discontinued operations

A discontinued operation is a component of the Group's business that represents a separate major line of business or geographical area of operations that has been disposed of or meets the criteria to be classified as held for sale.

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

Assets and liabilities held for sale

Assets and liabilities are classified as held for sale and stated at the lower of carrying amount and fair value less costs to sell if it is highly probable that the carrying amount will be recovered principally through a sale

Notes to the consolidated financial statements

1a. Accounting policies continued

Assets and liabilities held for sale continued

transaction rather than through continuing use. No depreciation is charged in respect of non-current assets classified as held for sale. Amounts relating to non-current assets and liabilities held for sale are classified as discontinued operations in the income statement where appropriate.

Trade receivables

Trade receivables are stated at fair value after provision for bad and doubtful debts. Following the adoption of IFRS 9 in 2018, provisions for bad and doubtful debts are based on the expected credit loss model. The 'simplified approach' is used with the expected loss allowance measured at an amount equal to the lifetime expected credit losses. In 2017, trade receivables are also stated after provision for anticipated future sales returns (also see Revenue recognition policy and note 1b).

1b. Change of accounting policy: IFRS 15

The Group has adopted IFRS 15 'Revenue from Contracts with Customers' at 1 January 2018 and applied the modified retrospective approach. Comparatives for 2017 have not been restated and the cumulative impact of adoption has been recognised as a decrease to retained earnings with a corresponding decrease in net assets at 1 January 2018 as follows:

<u>All figures in £ millions</u>	<u>2018</u> <u>1 January</u>
Retained earnings	
Unexercised customer rights (or breakage)	(103)
Online Program Management (OPM) marketing	(38)
Administration fees	(2)
Commissions	1
Income tax	34
Total impact at 1 January 2018	(108)
Current assets	
Inventories	12
Trade and other receivables	133
Assets classified as held for sale	31
Non-current liabilities	
Deferred income tax liabilities	16
Current liabilities	
Trade and other liabilities	(215)
Liabilities classified as held for sale	(85)
Total impact at 1 January 2018	(108)

IFRS 15 has had an impact on retained earnings in four areas as outlined below. There was no net impact on any associate investments of the Group.

Unexercised customer rights (or breakage): The Group sells rights to future performance to customers which may go unexercised. While the customer has paid for future performance, usage is at the customer's discretion and those rights may expire prior to usage, or never be used. The Group maintains historical customer data to understand usage patterns over time (i.e. redemption rates). Where the Group expects to have no future

Notes to the consolidated financial statements

1b. Change of accounting policy: IFRS 15 continued

obligation (based on these redemption rates), revenue has historically been recognised immediately for this portion of the sale. Under IFRS 15, where the Group previously recognised this breakage element on subscriptions, revenue is now recognised evenly over the period of use. Where breakage relates to sales of tests or vouchers, revenue is now recognised when the underlying tests are delivered. This revised treatment in respect of breakage has primarily affected the school and higher education businesses in North America and resulted in higher deferred income at adoption on 1 January 2018.

Online Program Management (OPM) marketing: Historically the OPM business recognised revenue for the pre-semester costs of marketing and recruitment as a separate performance obligation from course delivery during the semester (i.e. revenue was recognised in line with the marketing costs incurred). Under IFRS 15, revenue has been recognised on a straight-line basis over the semester with no revenue recognised up front for pre-semester recruitment and marketing costs based on management's judgement under the new standard's requirements assessing the start of the Group's contract and determining the Group's performance obligations. This revised treatment of pre-semester costs only affects the OPM business in North America and has resulted in a lower contract related asset balance at adoption on 1 January 2018.

Administration fees: This relates to non-refundable up front administration fees charged to customers which do not relate to the transfer of a promised good or service to the customer. Rather these fees are charged to cover internal costs, such as registration fees for testing candidate exams. Historically administration fees have been recognised in revenue up-front when charged. Under IFRS 15, such fees have been deferred and recognised over the period over which services are provided as they do not relate to a specific performance obligation. This revised treatment primarily affects the UK Assessments business and has resulted in higher deferred income at adoption on 1 January 2018.

Commissions: This relates to incremental costs of obtaining customer contracts, such as sales incentive plans or sales commissions specifically linked to obtaining new contracts. Historically such commissions have been charged to the profit and loss account as incurred. Under IFRS 15, sales commissions in respect of customer transactions with an accounting period of greater than one year have been capitalised and amortised over that accounting period, using practical expedients permissible under the new standard. This revised treatment affects the US Assessments business and resulted in a higher contract related asset upon adoption on 1 January 2018.

Notes to the consolidated financial statements

1b. Change of accounting policy: IFRS 15 continued

In addition to the changes above, IFRS 15 also requires that the Group's provision for sales returns is reclassified. This provision was previously netted off in trade receivables and from 1 January 2018 this is now shown in two parts as a separate sales return liability within trade and other liabilities and an inventory returns asset within inventory. The effect on transition was to increase trade and other receivables by £170m, increase trade and other liabilities by £182m and inventory by £12m. In addition, held for sale assets and liabilities were both increased by £13m. The impact of adoption on the results for 2018 is outlined below.

All figures in £ millions	2018			
	Amounts pre IFRS 15	Transition adjustment	In period adjustment	Amounts as reported
Sales	4,120	—	9	4,129
Operating profit	544	—	9	553
Profit before tax	489	—	9	498
Income tax	94	—	(2)	92
Profit for the year	583	—	7	590
Other comprehensive income/(expense) for the year	130	—	(6)	124
Total comprehensive income for the year ...	713	—	1	714
Current assets				
Inventories	154	12	(2)	164
Trade and other receivables	1,058	133	(13)	1,178
Assets classified as held for sale	630	31	(13)	648
Non-current liabilities				
Deferred income tax liabilities	(154)	16	2	(136)
Current liabilities				
Trade and other liabilities	(1,193)	(215)	8	(1,400)
Liabilities classified as held for sale	(507)	(85)	19	(573)
Net assets	4,632	(108)	1	4,525

Had the Group been applying IFRS 15 during 2017, it is estimated that both sales and profit before tax would have been £2m higher for the full year, with the balance sheet impact at the beginning and end of the year being similar.

1c. Change of accounting policy: IFRS 9

The Group adopted IFRS 9 'Financial Instruments' at 1 January 2018 and applied the new rules in accordance with the transitional provisions. Comparatives for 2017 have not been restated. The Group has assessed the impact of adopting IFRS 9 and the only material adjustment is an increase in the provision for losses against trade debtors which was reflected as an adjustment to retained earnings at 1 January 2018 as shown below.

All figures in £ millions	2018 1 January
Retained earnings	
Provision for losses against trade debtors	(13)
Income tax	3
Total impact at 1 January 2018	(10)
Non-current assets	
Deferred income tax assets	3
Current assets	
Trade and other receivables	(12)
Assets classified as held for sale	(1)
Total impact at 1 January 2018	(10)

Notes to the consolidated financial statements

1c. Change of accounting policy: IFRS 9 continued

The adjustment arises from adoption of the expected credit loss model for impairments under IFRS 9. The adoption of this model requires the recognition of impairment provisions based on expected credit losses rather than only incurred credit losses, as is the case under IAS 39. Although there is a transition impact from adoption of the new model there was no material impact on profit before tax for 2018.

Under IFRS 9, the Group's equity financial investments continue to be recognised at fair value and the Group has elected to take the option to recognise all movements in fair value in other comprehensive income (FVOCI). Gains or losses realised on the subsequent sale of these financial assets (FVOCI investments) are no longer recycled through the profit and loss account, but are instead reclassified from the FVOCI reserve to retained earnings. There was one small disposal of these assets during 2018 resulting in a reclassification of a £2m gain.

IFRS 9 also introduced a new, simpler hedge accounting model with a principles-based approach designed to align the accounting result with the economic hedging strategy. The Group previously used fair value hedge relationships to hedge interest rate risk and currency risk on its bond borrowings and also used net investment hedging relationships to hedge currency re-translation risk on its overseas assets. The Group has confirmed that its previous hedge relationships continue to qualify as hedges under IFRS 9 in 2018.

The following table shows the original classification and measurement categories of financial assets and liabilities under IAS 39 and the new classification and measurement categories under IFRS 9 as at 1 January 2018. The effect of adopting IFRS 9 on the carrying amounts of financial assets and liabilities relates solely to the new impairment requirements as shown in the previous table, all other carrying values remained the same.

	<u>Original classification and measurement under IAS 39</u>	<u>New classification and measurement under IFRS 9</u>
Financial assets		
Investments in unlisted securities	Available for sale – fair value	Fair value through OCI
Cash and cash equivalents	Loans and receivables – amortised cost	Financial assets at amortised cost
Marketable securities	Available for sale – fair value	Fair value through profit or loss
Derivative financial instruments used for hedging	Derivatives in a hedge relationship – fair value	Fair value – hedging instrument
Other derivative financial instruments	Held for trading – fair value	Fair value through profit or loss
Trade receivables	Loans and receivables – amortised cost	Financial assets at amortised cost
Financial liabilities		
Derivative financial instruments used for hedging	Derivatives in a hedge relationship – fair value	Fair value – hedging instrument
Other derivative financial instruments	Held for trading – fair value	Fair value through profit or loss
Trade payables	Other liabilities – amortised cost	Other financial liabilities – amortised cost
Liability to purchase own shares	Other liabilities – amortised cost	Other financial liabilities – amortised cost
Bank loans and overdrafts	Other liabilities – amortised cost	Other financial liabilities – amortised cost
Finance lease liabilities	Other liabilities – amortised cost	Other financial liabilities – amortised cost
Bonds	Other liabilities – amortised cost	Other financial liabilities – amortised cost

Notes to the consolidated financial statements

2. Segment information

The primary segments for management and reporting are geographies as outlined below. In addition, the Group separately discloses the results from the Penguin Random House associate.

The chief operating decision-maker is the Pearson executive.

North America: Courseware, Assessments and Services businesses in the US and Canada.

Core: Courseware, Assessments and Services businesses in more mature markets including UK, Europe, Asia Pacific and North Africa.

Growth: Courseware, Assessments and Services businesses in emerging markets including Brazil, India, South Africa, Hispano-America, Hong Kong and China, and the Middle East.

For more detail on the services and products included in each business segment refer to Item 4.

All figures in £ millions	Notes	2018					Group
		North America	Core	Growth	Penguin Random House	Corporate	
Sales		2,784	806	539	—	—	4,129
Adjusted operating profit		362	57	59	68	—	546
Cost of major restructuring		(78)	(16)	—	(8)	—	(102)
Intangible charges		(72)	(8)	(19)	(14)	—	(113)
Other net gains and losses		4	—	226	—	—	230
UK pension GMP equalisation		—	(8)	—	—	—	(8)
Operating profit		216	25	266	46	—	553
Finance costs	6						(91)
Finance income	6						36
Profit before tax							498
Income tax	7						92
Profit for the year							590
Segment assets		4,366	1,975	536	—	636	7,513
Joint ventures	12	—	—	—	—	—	—
Associates	12	—	5	—	387	—	392
Total assets		4,366	1,980	536	387	636	7,905
Other segment items							
Share of results of joint ventures and associates	12	(4)	1	1	46	—	44
Capital expenditure	10, 11	135	25	36	—	—	196
Pre-publication investment	20	234	90	64	—	—	388
Depreciation	10	41	12	13	—	—	66
Amortisation	11, 20	344	92	89	—	—	525

Notes to the consolidated financial statements

2. Segment information continued

Included in the North America segment above is £60m in pre-publication investment and £67m in amortisation relating to assets held for sale.

All figures in £ millions	Notes	2017					Group
		North America	Core	Growth	Penguin Random House	Corporate	
Sales		2,929	815	769	—	—	4,513
Adjusted operating profit		394	50	38	94	—	576
Cost of major restructuring		(60)	(11)	(8)	—	—	(79)
Intangible charges		(89)	(12)	(37)	(28)	—	(166)
Other net gains and losses		(3)	—	35	96	—	128
Impact of US tax reform		—	—	—	(8)	—	(8)
Operating profit		<u>242</u>	<u>27</u>	<u>28</u>	<u>154</u>	<u>—</u>	<u>451</u>
Finance costs	6						(110)
Finance income	6						80
Profit before tax							<u>421</u>
Income tax	7						(13)
Profit for the year							<u>408</u>
Segment assets		4,116	1,914	667	—	793	7,490
Joint ventures	12	—	—	3	—	—	3
Associates	12	4	3	—	388	—	395
Total assets		<u>4,120</u>	<u>1,917</u>	<u>670</u>	<u>388</u>	<u>793</u>	<u>7,888</u>
Other segment items							
Share of results of joint ventures and associates	12	5	1	1	71	—	78
Capital expenditure	10,11	162	35	43	—	—	240
Pre-publication investment	20	218	84	59	—	—	361
Depreciation	10	56	13	21	—	—	90
Amortisation	11,20	<u>348</u>	<u>103</u>	<u>110</u>	<u>—</u>	<u>—</u>	<u>561</u>

Notes to the consolidated financial statements

2. Segment information continued

All figures in £ millions	Notes	2016					Group
		North America	Core	Growth	Penguin Random House	Corporate	
Continuing operations							
Sales		2,981	803	768	—	—	4,552
Adjusted operating profit		420	57	29	129	—	635
Cost of major restructuring		(172)	(62)	(95)	(9)	—	(338)
Intangible charges		(2,684)	(16)	(33)	(36)	—	(2,769)
Other net gains and losses		(12)	(12)	(1)	—	—	(25)
Operating (loss)/profit		(2,448)	(33)	(100)	84	—	(2,497)
Finance costs	6						(97)
Finance income	6						37
Loss before tax							(2,557)
Income tax	7						222
Loss for the year from continuing operations							(2,335)
Segment assets		4,859	1,461	859	—	1,640	8,819
Joint ventures	12	—	—	2	—	—	2
Associates	12	1	4	—	1,240	—	1,245
Total assets		4,860	1,465	861	1,240	1,640	10,066
Other segment items							
Share of results of joint ventures and associates	12	(1)	1	(1)	98	—	97
Capital expenditure	10, 11	153	42	51	—	—	246
Pre-publication investment	20	235	92	68	—	—	395
Depreciation	10	56	12	27	—	—	95
Amortisation	11, 20	394	109	116	—	—	619
Impairment	11	2,548	—	—	—	—	2,548

There were no material inter-segment sales in either 2018, 2017 or 2016.

Adjusted operating profit is shown in the above tables as it is the key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments. The measure also enables investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments over time by separating out those items of income and expenditure relating to acquisition and disposal transactions, major restructuring programmes and certain other items that are also not representative of underlying performance, which are explained below.

Cost of major restructuring: In May 2017, the Group announced a restructuring programme, to run between 2017 and 2019, to drive significant cost savings. This programme began in the second half of 2017 and net costs incurred were £79m in 2017 and £102m in 2018 and relate to delivery of cost efficiencies in the enabling functions and the US Higher Education Courseware business together with further rationalisation of the property and supplier portfolio. The restructuring costs in 2018 relate predominantly to staff redundancies and the net cost

Notes to the consolidated financial statements

2. Segment information continued

of property rationalisation. Included in the property rationalisation in 2018 is the impact of the consolidation of the Group's property footprint in London which resulted in a charge for onerous leases of £91m partially offset by profit from the sale of property of £81m. The costs of this restructuring programme are significant enough to exclude from the adjusted operating profit measure so as to better highlight the underlying performance (see note 4). In January 2016, the Group announced that it was embarking on a restructuring programme to simplify the business, reduce costs and position the Group for growth in its major markets. The costs of this programme of £338m in 2016 were significant enough to exclude from the adjusted operating profit measure so as to better highlight the underlying performance. These costs included costs associated with headcount reductions, property rationalisation and closure or exit from certain systems, platforms, products and supplier and customer relationships.

Intangible charges: These represent charges in respect of intangible assets acquired through business combinations and the direct costs of acquiring those businesses. These charges are excluded as they reflect past acquisition activity and do not necessarily reflect the current year performance of the Group. Intangible amortisation charges in 2018 were £113m compared to a charge of £166m in 2017. In 2016, intangible charges included an impairment of goodwill in the Group's North America business of £2,548m (see note 11).

Other net gains and losses: These represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets and are excluded from adjusted operating profit as they distort the performance of the Group as reported on a statutory basis. Other net gains of £230m in 2018 relate to the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m, the disposal of the Group's equity interest in UTEL, the online University partnership in Mexico, realising a gain of £19m, and various other smaller disposal items for a net gain of £4m. Other net gains of £128m in 2017 relate to the sale of the test preparation business in China which resulted in a profit on sale of £44m and the part sale of the Group's share in Penguin Random House which resulted in a profit of £96m and other smaller disposal items for a net loss of £12m (see note 31). In 2016, the net losses in the Core segment mainly relate to the closure of the Group's English language schools in Germany and in the North America segment relate to the sale of the Pearson English Business Solutions business.

UK pension GMP equalisation: In 2018, also excluded is the impact of adjustments arising from clarification of guaranteed minimum pension (GMP) equalisation legislation in the UK as this relates to historical circumstances (see note 25).

Impact of US tax reform: In 2017, as a result of US tax reform, the Group's share of profit from associates was adversely impacted by £8m. This amount was excluded from adjusted operating profit as it is considered to be a transition adjustment that is not expected to recur in the near future.

Corporate costs are allocated to business segments on an appropriate basis depending on the nature of the cost and therefore the total segment result is equal to the Group operating profit.

Segment assets, excluding corporate assets, consist of property, plant and equipment, intangible assets, inventories, receivables, deferred taxation and other financial assets and exclude cash and cash equivalents and derivative assets. Corporate assets comprise cash and cash equivalents, marketable securities and derivative financial instruments. Capital expenditure comprises additions to property, plant and equipment and software (see notes 10 and 11).

Property, plant and equipment and intangible assets acquired through business combinations were £nil (2017: £nil) (see note 30).

Notes to the consolidated financial statements

2. Segment information continued

The Group operates in the following main geographic areas:

All figures in £ millions	Sales			Non-current assets	
	2018	2017	2016	2018	2017
UK	377	384	393	900	796
Other European countries	246	262	255	143	128
US	2,627	2,770	2,829	2,162	2,247
Canada	126	126	118	250	240
Asia Pacific	455	643	632	146	151
Other countries	298	328	325	137	184
Total	4,129	4,513	4,552	3,738	3,746

Sales are allocated based on the country in which the customer is located. This does not differ materially from the location where the order is received. The geographical split of non-current assets is based on the subsidiary's country of domicile. This is not materially different to the location of the assets. Non-current assets comprise property, plant and equipment, intangible assets, investments in joint ventures and associates and trade and other receivables.

3. Revenue from contracts with customers

The following tables analyse the Group's revenue streams. Courseware includes curriculum materials provided in book form and/or via access to digital content. Assessments includes test development, processing and scoring services provided to governments, educational institutions, corporations and professional bodies. Services includes the operation of schools, colleges and universities, including sistemas in Brazil as well as the provision of online learning services in partnership with universities and other academic institutions.

All figures in £ millions	2018			
	North America	Core	Growth	Group
Sales:				
Courseware				
School Courseware	378	172	127	677
Higher Education Courseware	1,042	87	57	1,186
English Courseware	16	58	102	176
	<u>1,436</u>	<u>317</u>	<u>286</u>	<u>2,039</u>
Assessments				
School and Higher Education Assessments	332	247	23	602
Clinical Assessments	140	45	—	185
Professional and English Certification	344	150	64	558
	<u>816</u>	<u>442</u>	<u>87</u>	<u>1,345</u>
Services				
School Services	288	2	47	337
Higher Education Services	244	40	29	313
English Services	—	5	90	95
	<u>532</u>	<u>47</u>	<u>166</u>	<u>745</u>
Total	2,784	806	539	4,129

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

<u>All figures in £ millions</u>	2017			
	<u>North America</u>	<u>Core</u>	<u>Growth</u>	<u>Group</u>
Sales:				
Courseware				
School Courseware	394	171	139	704
Higher Education Courseware	1,146	93	63	1,302
English Courseware	20	60	102	182
	<u>1,560</u>	<u>324</u>	<u>304</u>	<u>2,188</u>
Assessments				
School and Higher Education Assessments	355	256	23	634
Clinical Assessments	146	46	—	192
Professional and English Certification	341	138	60	539
	<u>842</u>	<u>440</u>	<u>83</u>	<u>1,365</u>
Services				
School Services	274	5	54	333
Higher Education Services	253	34	32	319
English Services	—	12	296	308
	<u>527</u>	<u>51</u>	<u>382</u>	<u>960</u>
Total	<u>2,929</u>	<u>815</u>	<u>769</u>	<u>4,513</u>

<u>All figures in £ millions</u>	2016			
	<u>North America</u>	<u>Core</u>	<u>Growth</u>	<u>Group</u>
Sales:				
Courseware				
School Courseware	418	173	127	718
Higher Education Courseware	1,147	92	60	1,299
English Courseware	21	65	97	183
	<u>1,586</u>	<u>330</u>	<u>284</u>	<u>2,200</u>
Assessments				
School and Higher Education Assessments	378	268	21	667
Clinical Assessments	143	40	—	183
Professional and English Certification	333	112	49	494
	<u>854</u>	<u>420</u>	<u>70</u>	<u>1,344</u>
Services				
School Services	259	6	54	319
Higher Education Services	269	29	46	344
English Services	13	18	314	345
	<u>541</u>	<u>53</u>	<u>414</u>	<u>1,008</u>
Total	<u>2,981</u>	<u>803</u>	<u>768</u>	<u>4,552</u>

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

The Group derived revenue for the year to 31 December 2018 from the transfer of goods and services over time and at a point in time in the following major product lines:

<u>All figures in £ millions</u>	<u>North America</u>	<u>Core</u>	<u>Growth</u>	<u>Total</u>
Courseware				
Products transferred at a point in time (sale or return)	718	313	197	1,228
Products transferred at a point in time (other)	—	—	35	35
Products and services transferred over time	<u>718</u>	<u>4</u>	<u>54</u>	<u>776</u>
	1,436	317	286	2,039
Assessments				
Products transferred at a point in time	146	65	6	217
Products and services transferred over time	<u>670</u>	<u>377</u>	<u>81</u>	<u>1,128</u>
	816	442	87	1,345
Services				
Products transferred at a point in time	—	26	38	64
Products and services transferred over time	<u>532</u>	<u>21</u>	<u>128</u>	<u>681</u>
	<u>532</u>	<u>47</u>	<u>166</u>	<u>745</u>
Total sales	<u><u>2,784</u></u>	<u><u>806</u></u>	<u><u>539</u></u>	<u><u>4,129</u></u>

a. Nature of goods and services

The following is a description of the nature of the Group's performance obligations within contracts with customers broken down by revenue stream, along with significant judgements and estimates made within each of those revenue streams.

Courseware

Revenue is generated from customers through the sales of print and digital courseware materials to schools, bookstores, and direct to individual learners. Goods and services may be sold separately or purchased together in bundled packages. The goods and services included in bundled arrangements are considered distinct performance obligations, except for where Pearson provides both a licence of intellectual property and an on-going hosting service. As the licence of intellectual property is only available with the concurrent hosting service, the licence is not treated as a distinct performance obligation separate from the hosting service.

The transaction price is allocated between distinct performance obligations on the basis of their relative standalone selling prices.

In determining the transaction price, variable consideration exists in the form of discounts and anticipated returns. Discounts reduce the transaction price on a given transaction. A provision for anticipated returns is made based primarily on historical return rates, customer buying patterns and retailer behaviours including stock levels (see note 22). If these estimates do not reflect actual returns in future periods then revenues could be understated or overstated for a particular period. Variable consideration as described above is determined using the expected value approach.

While payment for these goods and services generally occurs at the start of these arrangements, the length of time between payment and delivery of the performance obligations is generally short-term in nature or the reason for early payment relates to reasons other than financing, including customers securing a vendor in a longer-term

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

a. Nature of goods and services continued

Courseware continued

arrangement or the transfer of goods or services is at the discretion of the customer. For these reasons and the use of the practical expedient on short-term financing, significant financing components are not recognised within Courseware transactions.

Revenue from the sale of physical books is recognised at a point in time when control passes. This is generally at the point of shipment when title passes to the customer, when the Group has a present right to payment and the significant risks and rewards of ownership have passed to the customer. Revenue from physical books sold through the direct print rental method is recognised over the rental period, as the customer is simultaneously receiving and consuming the benefits of this rental service through the passage of time.

Revenue from the sale of digital courseware products is recognised on a straight-line basis over the subscription period, unless hosted by a third-party or representative of a downloadable product, in which case Pearson has no on-going obligation and recognises revenue when control transfers as the customer is granted access to the digital product.

Revenue from the sale of ‘off-the-shelf’ software is recognised on delivery or on installation of the software where that is a condition of the contract. In certain circumstances, where installation is complex, revenue is recognised when the customer has completed their acceptance procedures.

Assessments

Revenue is primarily generated from multi-year contractual arrangements related to large-scale assessment delivery, such as contracts to process qualifying tests for individual professions and government departments, and is recognised as performance occurs. Under these arrangements, while the agreement spans for multiple years, the contract duration has been determined to be each testing cycle based on contract structure, including clauses regarding termination. While in some cases the customer may have the ability to terminate during the term for convenience, significant financial or qualitative barriers exist limiting the potential for such terminations in the middle of a testing cycle.

Within each testing cycle, a variety of service activities are performed such as test administration, delivery, scoring, reporting, item development, operational services, and programme management. While each of these service activities is capable of being distinct, they are not treated as distinct in the context of the customer contract as Pearson provides an integrated managed service offering and these activities are accounted for together as one comprehensive performance obligation.

Within each testing cycle, the transaction price may contain both fixed and variable amounts. Variable consideration within these transactions primarily relates to expected testing volumes to be delivered in the cycle. The assumptions, risks and uncertainties inherent to long-term contract accounting can affect the amounts and timing of revenue and related expenses reported. Variable consideration is measured using the expected value method, except where amounts are contingent upon a future event’s occurrence, such as performance bonuses. Such event-driven contingency payments are measured using the most likely amount approach. To the extent a higher degree of uncertainty exists regarding variable consideration, these amounts are excluded from the transaction price and expensed when the uncertainty is reasonably removed.

Customer payments are generally defined in the contract through a payment schedule, which may require customer acceptance for services rendered. Pearson has a history of providing satisfactory services which are accepted by the customer. While a delay between rendering of services and payment may exist, payment terms

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

a. Nature of goods and services continued

Assessments continued

are within 12 months and the Group has elected to use the practical expedient available in IFRS 15 and not identify a significant financing component on these transactions.

Revenue is recognised for Assessment contracts over time as the customer is benefiting as performance takes place through a continuous transfer of control to the customer. This continuous transfer of control to the customer is supported by clauses in the contracts which may allow the customer to terminate for convenience, compensate us for work performed to date, and take possession of work in process.

As control transfers over time, revenue is recognised based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgement and is based on the nature of the services provided. Revenue is recognised on a percentage completion basis calculated using the proportion of the total estimated costs incurred to date. Percentage of completion is used to recognise the transfer of control of services provided as these services are not provided evenly throughout the testing cycle and involve varying degrees of effort during the term.

Losses on contracts are recognised in the period in which the loss first becomes foreseeable. Contract losses are determined to be the amount by which estimated total costs of the contract exceed the estimated total revenues that will be generated.

In Assessments contracts driven primarily by transactions directly to end users, Pearson's main obligation to the customer involves test delivery and scoring. Test delivery and scoring are defined as a single performance obligation delivered over time whether the test is subsequently manually scored or digitally scored on the day of the assessment. Customers may also purchase print and digital supplemental materials. Print products in this revenue stream are recognised at a point in time when control passes to the customer upon shipment. Recognition of digital revenue will occur based on the extent of Pearson's on-going hosting obligation.

Services

Revenue is primarily generated from multi-year contractual arrangements related to large-scale educational service delivery to academic institutions, such as schools and higher education universities. Under these arrangements, while an agreement may span for multiple years, the contract duration has been determined to be each academic period based on the structure of contracts, including clauses regarding termination. While in some cases the customer may have the ability to terminate during the term for convenience, significant financial or qualitative barriers exist limiting the potential for such terminations in the middle of an academic period. The academic period for this customer base is normally an academic year for schools and a semester for higher education universities.

Within each academic period, while a variety of services are provided such as programme development, student acquisition, education technology and student support services. While each of these services is capable of being distinct, they are not distinct in the context of the customer contract as Pearson provides an integrated managed service offering and these activities are accounted for together as a comprehensive performance obligation.

Where Services are provided to university customers, volumes and transaction price is fixed at the start of the semester. Where Services are provided to School customers, the transaction price may contain both fixed and variable amounts which require estimation during the academic period. Estimation is required where consideration is based upon average enrolments or other metrics which are not known at the start of the academic

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

a. Nature of goods and services continued

Services continued

year. Variable consideration is measured using the expected value method. To the extent a higher degree of uncertainty exists regarding variable consideration, these amounts are excluded from the transaction price and recognised when the uncertainty is reasonably removed.

Customer payments are generally defined in the contract as occurring shortly after invoicing. Where there is a longer payment term offered to a customer through a payment schedule, payment terms are within 12 months and the Group has elected to use the practical expedient available in IFRS 15 and not identify a significant financing component on these transactions.

Revenue is recognised for Service contracts over time as the customer is benefiting as performance takes place through a continuous transfer of control to the customer. This continuous transfer of control to the customer is supported by clauses in the contracts which may allow the customer to terminate for convenience, compensate us for work performed to date, and take possession of work in process.

As control transfers over time, revenue is recognised based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgement and is based on the nature of the products or services provided. Within the comprehensive service obligation, the timing of services occurs relatively evenly over each academic period and as such, time elapsed is used to recognise the transfer of control to the customer on a straight-line basis.

Losses on contracts are recognised in the period in which the loss first becomes foreseeable. Contract losses are determined to be the amount by which estimated total costs of the contract exceed the estimated total revenues that will be generated.

In cases of optional or add-on purchases, institutions may purchase physical goods priced at their standalone value, which are accounted for separately and recognised at the point in time when control passes to the customer upon shipment.

b. Disaggregation of revenue

The tables in notes 2 and 3 show revenue from contracts with customers disaggregated by operating segment, geography and revenue stream. These disaggregation categories are appropriate as they represent the key groupings used in managing and evaluating underlying performance of each of the businesses. The categories also reflect groups of similar types of transactional characteristics, among similar customers, with similar accounting conclusions.

c. Contract balances

Transactions within the Courseware revenue stream generally entail customer billings at or near the contract's inception and accordingly Courseware deferred income balances are primarily related to subscription performance obligations to be delivered over time.

Transactions within the Assessments and Services revenue streams generally entail customer billings over time based on periodic intervals, progress towards milestones or enrolment census dates. As the performance obligations within these arrangements are delivered over time, the extent of accrued income or deferred income will ultimately depend upon the difference between revenue recognised and billings to date.

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

c. Contract balances continued

Refer to note 22 for opening and closing balances of accrued income. Refer to note 24 for opening and closing balances of deferred income. Revenue recognised during the period from changes in deferred income was driven primarily by the release of revenue over time from digital subscriptions.

d. Contract costs

The Group capitalises incremental costs to obtain contracts with customers where it is expected these costs will be recoverable. Incremental costs to obtain contracts with customers are considered those which would not have been incurred if the contract had not been obtained. For the Group, these costs relate primarily to sales commissions. The Group has elected to use the practical expedient as allowable by IFRS 15 whereby such costs will be expensed as incurred where the expected amortisation period is one year or less. Where the amortisation period is greater than one year, these costs are amortised over the contract term on a systematic basis consistent with the transfer of the underlying goods and services within the contract to which these costs relate, which will generally be on a ratable basis. Impairment of capitalised contract costs was £nil in 2018.

The Group does not recognise any material costs to fulfill contracts with customers as these types of activities are governed by other accounting standards.

Refer to note 22 for further details of opening and closing balances of these costs reflected within deferred contract costs.

e. Remaining transaction price

The below table depicts the remaining transaction price on unsatisfied or partially unsatisfied performance obligations from contracts with customers as at 31 December 2018.

	<u>Sales</u>	<u>Deferred income</u>	<u>Committed sales</u>	<u>Total remaining transaction price</u>	<u>2019</u>	<u>2020</u>	<u>2021 and later</u>
Courseware							
Products transferred at a point in time (sale or return)	1,228	1	—	1	1	—	—
Products transferred at a point in time (other)	35	—	—	—	—	—	—
Products and services transferred over time	<u>776</u>	<u>679</u>	<u>8</u>	<u>687</u>	<u>272</u>	<u>131</u>	<u>284</u>
Assessments							
Products transferred at a point in time	217	—	—	—	—	—	—
Products and services transferred over time	<u>1,128</u>	<u>196</u>	<u>402</u>	<u>598</u>	<u>420</u>	<u>173</u>	<u>5</u>
Services							
Products transferred at a point in time	64	—	—	—	—	—	—
Products and services transferred over time – subscriptions	310	17	—	17	13	3	1
Products and services transferred over time – other ongoing performance obligations	<u>371</u>	<u>19</u>	<u>145</u>	<u>164</u>	<u>162</u>	<u>1</u>	<u>1</u>
Total	<u>4,129</u>	<u>912</u>	<u>555</u>	<u>1,467</u>	<u>868</u>	<u>308</u>	<u>291</u>

Committed sales amounts are equal to the transaction price from contracts with customers excluding those amounts previously recognised as revenue and amounts currently recognised in deferred income. The total of committed sales and deferred income is equal to the remaining transaction price.

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

e. Remaining transaction price continued

Time bands represented above represent the expected timing of when the remaining transaction price will be recognised as revenue.

4. Operating expenses

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
By function:			
Cost of goods sold	<u>1,943</u>	<u>2,066</u>	<u>2,093</u>
Operating expenses			
Distribution costs	88	84	88
Selling, marketing and product development costs	759	896	908
Administrative and other expenses	1,039	1,207	1,240
Restructuring costs	90	79	329
Other income	<u>(69)</u>	<u>(64)</u>	<u>(85)</u>
Total net operating expenses	1,907	2,202	2,480
Other net gains and losses	(230)	(128)	25
Impairment of intangible assets	<u>—</u>	<u>—</u>	<u>2,548</u>
Total	<u>3,620</u>	<u>4,140</u>	<u>7,146</u>

Included in other income is service fee income from Penguin Random House of £3m (2017: £3m, 2016: £4m). Included in administrative and other expenses are research and efficacy costs of £14m (2017: £14m, 2016: £23m). In addition to the restructuring costs shown above, there were major restructuring costs in relation to associates of £12m (2017: £nil, 2016: £9m).

An analysis of major restructuring costs is as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
By nature:			
Product costs	12	15	32
Employee costs	56	11	139
Depreciation and amortisation	1	13	29
Property and facilities	(5)	24	43
Technology and communications	1	2	7
Professional and outsourced services	9	12	31
General and administrative costs	<u>16</u>	<u>2</u>	<u>48</u>
Total restructuring – operating expenses	90	79	329
Share of associate restructuring	<u>12</u>	<u>—</u>	<u>9</u>
Total	<u>102</u>	<u>79</u>	<u>338</u>

Notes to the consolidated financial statements

4. Operating expenses continued

The 2017-2019 restructuring programme was announced in May 2017, began in the second half of 2017 and is expected to drive significant cost savings. The costs of this programme have been excluded from adjusted operating profit so as to better highlight the underlying performance. In 2018, property and facilities costs include gains on the disposal of properties sold as part of the restructuring programme.

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
By nature:				
Royalties expensed		236	246	264
Other product costs		516	564	616
Employee benefit expense	5	1,637	1,805	1,888
Contract labour		161	152	206
Employee-related expense		115	127	122
Promotional costs		233	229	217
Depreciation of property, plant and equipment	10	66	90	95
Amortisation of intangible assets – pre-publication	20	338	338	350
Amortisation of intangible assets – software	11	88	85	84
Amortisation of intangible assets – other	11	99	138	185
Impairment of intangible assets		—	—	2,548
Property and facilities		147	202	243
Technology and communications		192	218	188
Professional and outsourced services		396	322	378
Other general and administrative costs		85	140	140
Costs capitalised to intangible assets		(390)	(324)	(318)
Other net gains and losses		(230)	(128)	25
Other income		(69)	(64)	(85)
Total		<u>3,620</u>	<u>4,140</u>	<u>7,146</u>

During the year the Group obtained the following services from the Group's auditors:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
The audit of parent company and consolidated financial statements	4	4	5
The audit of the company's subsidiaries	2	2	2
Total audit fees	<u>6</u>	<u>6</u>	<u>7</u>
Audit-related and other assurance services	1	1	1
Other non-audit services	—	1	1
Total other services	<u>1</u>	<u>2</u>	<u>2</u>
Total non-audit services	<u>1</u>	<u>2</u>	<u>2</u>
Total	<u>7</u>	<u>8</u>	<u>9</u>

Reconciliation between audit and non-audit service fees is shown below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Group audit fees including fees for attestation under section 404 of the Sarbanes-Oxley Act	6	6	7
Non-audit fees	1	2	2
Total	<u>7</u>	<u>8</u>	<u>9</u>

Fees for attestation under section 404 of the Sarbanes-Oxley Act are allocated between fees payable for the audits of consolidated and subsidiary accounts.

Notes to the consolidated financial statements

4. Operating expenses continued

Included in non-audit fees is audit related work in relation to disposal transactions and other assurance work related to the audit of the Group's efficacy programme.

5. Employee information

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Employee benefit expense				
Wages and salaries (including termination costs)		1,421	1,567	1,661
Social security costs		112	130	124
Share-based payment costs	26	37	33	22
Retirement benefits – defined contribution plans	25	56	57	67
Retirement benefits – defined benefit plans	25	23	19	16
Other post-retirement medical benefits	25	(12)	(1)	(2)
Total		<u>1,637</u>	<u>1,805</u>	<u>1,888</u>

The details of the emoluments of the Directors of Pearson plc are shown in the report on Directors' remuneration.

<u>Average number employed</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Employee numbers			
North America	14,113	16,295	16,841
Core	5,192	5,291	5,664
Growth	4,521	8,268	9,868
Other	496	485	346
Total	<u>24,322</u>	<u>30,339</u>	<u>32,719</u>

6. Net finance costs

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Interest payable on financial liabilities at amortised cost and associated derivatives		(42)	(99)	(74)
Net foreign exchange losses		(36)	—	(21)
Finance costs associated with transactions		(1)	(6)	—
Derivatives not in a hedge relationship		(7)	(5)	(2)
Derivatives in a hedge relationship		(5)	—	—
Finance costs		<u>(91)</u>	<u>(110)</u>	<u>(97)</u>
Interest receivable on financial assets at amortised cost		18	20	15
Net finance income in respect of retirement benefits	25	11	3	11
Net foreign exchange gains		—	44	1
Derivatives not in a hedge relationship		6	12	10
Derivatives in a hedge relationship		1	1	—
Finance income		<u>36</u>	<u>80</u>	<u>37</u>
Net finance costs		<u>(55)</u>	<u>(30)</u>	<u>(60)</u>

Notes to the consolidated financial statements

6. Net finance costs continued

Included in interest receivable is £1m (2017: £1m, 2016: £1m) of interest receivable from related parties. There was a net movement of £nil on fair value hedges in 2018 (2017: £1m, 2016: £nil), comprising a gain of £4m (2017: gain of £37m, 2016: loss of £4m) on the underlying bonds, offset by a loss of £4m (2017: loss of £36m, 2016: gain of £4m) on the related derivative financial instruments.

7. Income tax

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Current tax				
Credit/(charge) in respect of current year		92	(121)	(66)
Adjustments in respect of prior years		34	(2)	27
Total current tax credit/(charge)		126	(123)	(39)
Deferred tax				
In respect of temporary differences		(6)	96	277
Other adjustments in respect of prior years		(28)	14	(16)
Total deferred tax (charge)/credit	13	(34)	110	261
Total tax credit/(charge)		92	(13)	222

The adjustments in respect of prior years in both 2018 and 2017 primarily arise from revising the previous year's reported tax provision to reflect the tax returns subsequently filed. This results in a change between deferred and current tax as well as an absolute benefit to the total tax charge.

The tax on the Group's profit before tax differs from the theoretical amount that would arise using the UK tax rate as follows.

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Profit before tax	498	421	(2,557)
Tax calculated at UK rate (2018: 19%, 2017: 19.25%, 2016: 20%) ..	(94)	(81)	511
Effect of overseas tax rates	(28)	15	424
Joint venture and associate income reported net of tax	8	15	19
Intangible impairment not subject to tax	—	—	(722)
Intra-group financing benefit	25	26	34
Movement in provisions for tax uncertainties	111	49	(37)
Impact of US tax reform	—	(1)	—
Net expense not subject to tax	(29)	(39)	(8)
Benefit from change in US tax accounting treatment	25	—	—
Gains and losses on sale of businesses not subject to tax	77	8	15
Utilisation of previously unrecognised tax losses and credits	—	(1)	—
Unrecognised tax losses	(9)	(16)	(25)
Adjustments in respect of prior years	6	12	11
Total tax credit/(charge)	92	(13)	222
UK	37	(36)	46
Overseas	55	23	176
Total tax credit/(charge)	92	(13)	222
Tax rate reflected in earnings	(18.5)%	3.1%	8.7%

Notes to the consolidated financial statements

7. Income tax continued

Included in net expense not subject to tax are foreign taxes not creditable, the tax impact of share-based payments and other expenses not deductible.

Factors which may affect future tax charges include changes in tax legislation, transfer pricing regulations, the level and mix of profitability in different countries, and settlements with tax authorities.

The movement in provisions for tax uncertainties primarily reflects releases due to the expiry of relevant statutes of limitation and the reassessment of historical tax positions. The current tax liability of £72m (2017: £231m) includes £181m (2017: £280m) of provisions for tax uncertainties principally in respect of a number of issues in the US, the UK and China. The issues provided for include the allocation between territories of proceeds of historical business disposals and the potential disallowance of intra-group recharges. The Group is currently under audit in a number of countries, and the timing of any resolution of these audits is uncertain. Of the balance of £181m, £57m relates to 2014 and earlier and is mostly under audit. In most countries tax years up to and including 2014 are now statute barred from examination by tax authorities. Of the remaining balance, £66m relates to 2015, £29m to 2016, £23m to 2017 and £6m to 2018. If relevant enquiry windows pass with no audit, management believes it is reasonably possible that provision levels will reduce by an estimated £50m within the next 12 months. However the tax authorities may take a different view from management and the final liability may be greater than provided. For items currently under audit if tax authorities are successful, liabilities could increase by £25m (2017: £25m).

The tax benefit/(charge) recognised in other comprehensive income is as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Net exchange differences on translation of foreign operations	(4)	9	(5)
Fair value gain on other financial assets	—	(4)	—
Remeasurement of retirement benefit obligations . . .	<u>9</u>	<u>(42)</u>	<u>58</u>
	<u>5</u>	<u>(37)</u>	<u>53</u>

A tax charge of £4m (2017: £nil, 2016: £nil) relating to share-based payments has been recognised directly in equity.

8. Earnings per share

Basic

Basic earnings per share is calculated by dividing the profit attributable to equity shareholders of the company by the weighted average number of ordinary shares in issue during the year, excluding ordinary shares purchased by the company and held as treasury shares.

Diluted

Diluted earnings per share is calculated by adjusting the weighted average number of ordinary shares to take account of all dilutive potential ordinary shares and adjusting the profit attributable, if applicable, to account for any tax consequences that might arise from conversion of those shares.

Notes to the consolidated financial statements

8. Earnings per share continued

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Earnings/(loss) for the year from continuing operations		590	408	(2,335)
Non-controlling interest		(2)	(2)	(2)
Earnings/(loss) attributable to equity holders of the company		588	406	(2,337)
Weighted average number of shares (millions)		778.1	813.4	814.8
Effect of dilutive share options (millions)		0.6	0.3	—
Weighted average number of shares (millions) for diluted earnings		778.7	813.7	814.8
Earnings/(loss) per share				
Basic		75.6p	49.9p	(286.8)p
Diluted		75.5p	49.9p	(286.8)p

9. Dividends

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Final paid in respect of prior year 12.0p (2017: 34.0p, 2016: 34.0p)	93	277	277
Interim paid in respect of current year 5.5p (2017: 5.0p, 2016: 18.0p)	43	41	147
	136	318	424

The Directors are proposing a final dividend in respect of the financial year ended 31 December 2018 of 13.0p per share which will absorb an estimated £102m of shareholders' funds. It will be paid on 10 May 2019 to shareholders who are on the register of members on 5 April 2019. These financial statements do not reflect this dividend.

10. Property, plant and equipment

<u>All figures in £ millions</u>	<u>Land and buildings</u>	<u>Plant and equipment</u>	<u>Assets in course of construction</u>	<u>Total</u>
Cost				
At 1 January 2017	398	560	20	978
Exchange differences	(20)	(29)	(2)	(51)
Additions	26	40	24	90
Disposals	(13)	(34)	—	(47)
Disposal through business disposal	(11)	(5)	—	(16)
Reclassifications	5	8	(13)	—
Transfer to intangible assets	—	(11)	—	(11)
Transfer to assets classified as held for sale	(55)	(2)	—	(57)
At 31 December 2017	330	527	29	886
Exchange differences	11	14	1	26
Additions	32	22	12	66
Disposals	(75)	(97)	—	(172)
Reclassifications	19	(8)	(11)	—
Transfer to intangible assets	—	—	(11)	(11)
Transfer to intangible assets – pre-publication	—	—	(2)	(2)
At 31 December 2018	317	458	18	793

Notes to the consolidated financial statements

10. Property, plant and equipment continued

<u>All figures in £ millions</u>	<u>Land and buildings</u>	<u>Plant and equipment</u>	<u>Assets in course of construction</u>	<u>Total</u>
Depreciation				
At 1 January 2017	(229)	(406)	—	(635)
Exchange differences	12	23	—	35
Charge for the year	(35)	(55)	—	(90)
Disposals	9	26	—	35
Disposal through business disposal	6	3	—	9
Transfer to assets classified as held for sale	40	1	—	41
At 31 December 2017	(197)	(408)	—	(605)
Exchange differences	(5)	(11)	—	(16)
Charge for the year	(20)	(46)	—	(66)
Disposals	34	97	—	131
Reclassifications	(7)	7	—	—
At 31 December 2018	(195)	(361)	—	(556)
Carrying amounts				
At 1 January 2017	169	154	20	343
At 31 December 2017	133	119	29	281
At 31 December 2018	122	97	18	237

Depreciation expense of £18m (2017: £23m) has been included in the income statement in cost of goods sold and £48m (2017: £67m) in operating expenses.

The Group leases certain equipment under a number of finance lease agreements. The net carrying amount of leased plant and equipment included within property, plant and equipment was £7m (2017: £9m).

11. Intangible assets

<u>All figures in £ millions</u>	<u>Goodwill</u>	<u>Software</u>	<u>Acquired customer lists, contracts and relationships</u>	<u>Acquired trademarks and brands</u>	<u>Acquired publishing rights</u>	<u>Other intangibles acquired</u>	<u>Total</u>
Cost							
At 1 January 2017	2,341	798	974	353	211	600	5,277
Exchange differences	(148)	(46)	(74)	(26)	(6)	(50)	(350)
Additions – internal development	—	133	—	—	—	—	133
Additions – purchased	—	17	—	—	—	—	17
Disposals	—	(23)	—	—	—	—	(23)
Disposal through business disposal	—	(4)	(9)	(19)	—	(27)	(59)
Transfer from property, plant and equipment	—	11	—	—	—	—	11
Transfer to assets classified as held for sale ..	(163)	(4)	(2)	(27)	(21)	(34)	(251)
At 31 December 2017	2,030	882	889	281	184	489	4,755
Exchange differences	74	32	39	(2)	—	1	144
Additions – internal development	—	124	—	—	—	—	124
Additions – purchased	—	6	—	—	—	—	6
Disposals	—	(94)	(18)	(12)	—	(33)	(157)
Disposal through business disposal	—	(2)	—	—	—	—	(2)
Transfer from property, plant and equipment	—	11	—	—	—	—	11
Transfer from assets classified as held for sale	7	—	—	—	—	—	7
At 31 December 2018	2,111	959	910	267	184	457	4,888

Notes to the consolidated financial statements

11. Intangible assets continued

All figures in £ millions	Goodwill	Software	Acquired customer lists, contracts and relationships	Acquired trademarks and brands	Acquired publishing rights	Other intangibles acquired	Total
Amortisation							
At 1 January 2017	—	(461)	(555)	(209)	(198)	(412)	(1,835)
Exchange differences	—	30	43	13	4	36	126
Charge for the year	—	(85)	(77)	(18)	(3)	(40)	(223)
Disposals	—	21	—	—	—	—	21
Disposal through business disposal	—	2	8	18	—	22	50
Transfer to assets classified as held for sale	—	—	1	16	19	34	70
At 31 December 2017	—	(493)	(580)	(180)	(178)	(360)	(1,791)
Exchange differences	—	(23)	(26)	1	2	(10)	(56)
Charge for the year	—	(88)	(59)	(14)	(2)	(24)	(187)
Disposals	—	92	18	12	—	33	155
Disposal through business disposal	—	—	—	—	—	—	—
At 31 December 2018	—	(512)	(647)	(181)	(178)	(361)	(1,879)
Carrying amounts							
At 1 January 2017	2,341	337	419	144	13	188	3,442
At 31 December 2017	2,030	389	309	101	6	129	2,964
At 31 December 2018	2,111	447	263	86	6	96	3,009

Goodwill

The goodwill carrying value of £2,111m relates to acquisitions completed after 1 January 1998. Prior to 1 January 1998 all goodwill was written off to reserves on the date of acquisition. For acquisitions completed between 1 January 1998 and 31 December 2002, no value was ascribed to intangibles other than goodwill which was amortised over a period of up to 20 years. On adoption of IFRS on 1 January 2003, the Group chose not to restate the goodwill balance and at that date the balance was frozen (i.e. amortisation ceased). If goodwill had been restated, then a significant value would have been ascribed to other intangible assets, which would be subject to amortisation, and the carrying value of goodwill would be significantly lower. For acquisitions completed after 1 January 2003, value has been ascribed to other intangible assets which are amortised.

Other intangible assets

Other intangibles acquired include content, technology and software rights.

Intangible assets are valued separately for each acquisition and the primary method of valuation used is the discounted cash flow method. The majority of acquired intangibles are amortised using an amortisation profile based on the projected cash flows underlying the acquisition date valuation of the intangible asset, which generally results in a larger proportion of amortisation being recognised in the early years of the asset's life. The Group keeps the expected pattern of consumption under review.

Amortisation of £18m (2017: £17m) is included in the income statement in cost of goods sold and £169m (2017: £206m) in operating expenses.

Notes to the consolidated financial statements

11. Intangible assets continued

Other intangible assets continued

The range of useful economic lives for each major class of intangible asset (excluding goodwill and software) is shown below:

<u>Class of intangible asset</u>	<u>2018</u>
	<u>Useful economic life</u>
Acquired customer lists, contracts and relationships	3-20 years
Acquired trademarks and brands	2-20 years
Acquired publishing rights	5-20 years
Other intangibles acquired	2-20 years

The expected amortisation profile of acquired intangible assets is shown below:

<u>All figures in £ millions</u>	<u>2018</u>			<u>Total</u>
	<u>One to five years</u>	<u>Six to ten years</u>	<u>More than ten years</u>	
Class of intangible asset				
Acquired customer lists, contracts and relationships	187	66	10	263
Acquired trademarks and brands	49	27	10	86
Acquired publishing rights	5	1	—	6
Other intangibles acquired	77	19	—	96

Impairment tests for cash-generating units (CGUs) containing goodwill

Impairment tests have been carried out where appropriate as described below. Goodwill was allocated to CGUs, or an aggregation of CGUs, where goodwill could not be reasonably allocated to individual business units. Impairment reviews were conducted on these CGUs (including Growth given the recent write down of goodwill). The recoverable amount for each unit exceeds its carrying value, therefore there is no impairment in 2018. The carrying value of the goodwill in each of the CGUs is summarised below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
North America	930	1,013
Core	701	641
Growth (includes Brazil, China, India and South Africa)	—	—
Pearson VUE	480	376
Total	<u>2,111</u>	<u>2,030</u>

The recoverable amount of each aggregated CGU is based on fair value less costs of disposal. Goodwill is tested at least annually for impairment. Other than goodwill there are no intangible assets with indefinite lives. The goodwill is generally denominated in the currency of the relevant cash flows and therefore the impairment review is not materially sensitive to exchange rate fluctuations.

Key assumptions

For the purpose of estimating the fair value less costs of disposal of the CGUs, management has used an income approach based on present value techniques. The calculations use cash flow projections based on financial budgets approved by management covering a five-year period, management's best estimate about future

Notes to the consolidated financial statements

11. Intangible assets continued

Key assumptions continued

developments and market assumptions. The fair value less costs of disposal measurement is categorised as Level 3 on the fair value hierarchy. The key assumptions used by management in the fair value less costs of disposal calculations were:

Discount rates The discount rate is based on the risk-free rate for government bonds, adjusted for a risk premium to reflect the increased risk in investing in equities. The risk premium adjustment is assessed for each specific CGU. The average post-tax discount rates range from 7.9% to 15.8%. Discount rates are lower for those businesses which operate in more mature markets with low inflation and higher for those operating in emerging markets with higher inflation.

Perpetuity growth rates A perpetuity growth rate of 2.0% was used for cash flows subsequent to the approved budget period for CGUs operating in mature markets. This perpetuity growth rate is a conservative rate and is considered to be lower than the long-term historical growth rates of the underlying territories in which the CGU operates and the long-term growth rate prospects of the sectors in which the CGU operates. CGU growth rates between 3.0% and 6.5% were used for cash flows subsequent to the approved budget period for CGUs operating in emerging markets with high inflation. These growth rates are also below the long-term historical growth rates in these markets.

The key assumptions used by management in setting the financial budgets for the initial five-year period were as follows:

Forecast sales growth rates Forecast sales growth rates are based on past experience adjusted for the strategic direction and near-term investment priorities within each CGU. Key assumptions include growth in Online Program Management, Virtual Schools and Professional Certification, stabilisation in UK Qualifications and US Assessments, and ongoing pressures in the US Higher Education Courseware market. The five-year sales forecasts use average nominal growth rates between 2% and 3% for mature markets and between (1)% and 12% for emerging markets with high inflation.

Operating profits Operating profits are forecast based on historical experience of operating margins, adjusted for the impact of changes to product costs and cost-saving initiatives, including the impact of the implementation of our cost efficiency programme.

Cash conversion Cash conversion is the ratio of operating cash flow to operating profit. Management forecasts cash conversion rates based on historical experience.

Sensitivities

Impairment testing for the year ended 31 December 2018 has identified the following CGUs, or groups of CGUs, as being sensitive to changes in assumptions. The table below shows the headroom at 31 December 2018 and the cumulative impact of changes in the assumptions used in calculating the fair value.

All figures in £ millions	Headroom at 31 December 2018	1% increase in average discount rate	5% decrease in annual contribution	10% decrease in annual contribution	1% decrease in perpetuity growth rate
Headroom/(impairment)					
North America	356	128	27	(301)	167
Core	210	67	84	(42)	83
Brazil	20	(8)	3	(14)	(4)

Notes to the consolidated financial statements

11. Intangible assets continued

Sensitivities continued

The above analysis is performed at the exchange rates used in the Group's strategic planning process. CGU contribution excludes fixed costs and corporate overheads. The goodwill related to the Brazil CGU was fully impaired in prior years, and the intangibles related to the Brazil CGU are amortised over their useful economic life.

2016 impairment tests

At the end of 2016, following trading in the final quarter of the year, it became clear that the underlying issues in the US higher education courseware business market were more severe than anticipated. These issues related to declining student enrolments, changes in buying patterns of students and correction of inventory levels by distributors and bookshops. As a result, in January 2017, strategic plans and estimates for future cash flows were revised and we determined during the goodwill impairment review that the fair value less costs of disposal of the North America CGU no longer supported the carrying value of this goodwill and as a consequence impaired goodwill by £2,548m.

12. Investments in joint ventures and associates

The amounts recognised in the balance sheet are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Associates	<u>392</u>	395
Joint ventures	—	<u>3</u>
Total	<u>392</u>	<u>398</u>

The amounts recognised in the income statement are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Associates	<u>43</u>	77
Joint ventures	<u>1</u>	<u>1</u>
Total	<u>44</u>	<u>78</u>

Investment in associates

The Group has the following material associates:

	<u>Principal place of business</u>	<u>Ownership interest</u>	<u>Nature of relationship</u>	<u>Measurement method</u>
Penguin Random House Ltd	UK/Global	25%	See below	Equity
Penguin Random House LLC	US	25%	See below	Equity

On 1 July 2013, Penguin Random House was formed, upon the completion of an agreement between Pearson and Bertelsmann to merge their respective trade publishing companies, Penguin and Random House, with the parent companies owning 47% and 53% of the combined business respectively. On 5 October 2017, Pearson sold a 22% stake in Penguin Random House to Bertelsmann, retaining a 25% share. Pearson owns its 25% interest in Penguin Random House via 25% interests in each of the two entities listed in the table above. Despite the separate legal structures of the two Penguin Random House entities, Pearson regards Penguin Random House as one combined global business. Consequently, Pearson discloses Penguin Random House as one single operating segment and presents disclosures related to its interests in Penguin Random House on a combined basis.

The shareholder agreement includes protective rights for Pearson as the minority shareholder, including rights to dividends. Management considers ownership percentage, Board composition and the additional protective rights,

Notes to the consolidated financial statements

12. Investments in joint ventures and associates continued

Investment in associates continued

and exercises judgement to determine that Pearson has significant influence over Penguin Random House and Bertelsmann has the power to direct the relevant activities and therefore control. Following the transaction in 2017 the assessment of significant influence has not changed. Penguin Random House does not have a quoted market price.

The summarised financial information of the material associate is detailed below:

	<u>2018</u>	<u>2017</u>
	<u>Penguin Random House</u>	<u>Penguin Random House</u>
All figures in £ millions		
Assets		
Non-current assets	1,043	1,048
Current assets	1,929	1,758
Liabilities		
Non-current liabilities	(1,104)	(859)
Current liabilities	(1,546)	(1,579)
Net assets	322	368
Sales	2,775	2,693
Profit for the year	185	171
Other comprehensive income/(expense)	13	(60)
Total comprehensive income	198	111
Dividends received from associate in relation to profits	67	146
Re-capitalisation dividends received from associate	50	312

The information above reflects the amounts presented in the financial statements of the associate, adjusted for fair value and similar adjustments. The tax on Penguin Random House LLC is settled by the partners. For the purposes of clear and consistent presentation, the tax has been shown in the associate line items in the consolidated income statement and consolidated balance sheet, recording the Group's share of profit after tax consistently for the Penguin Random House associates.

A reconciliation of the summarised financial information to the carrying value of the material associate is shown below:

	<u>2018</u>	<u>2017</u>
	<u>Penguin Random House</u>	<u>Penguin Random House</u>
All figures in £ millions		
Opening net assets	368	1,386
Exchange differences	18	(18)
Profit for the year	185	171
Other comprehensive income/(expense)	13	(60)
Dividends, net of tax paid	(262)	(1,167)
Tax adjustments in relation to disposals	—	56
Closing net assets	322	368
Share of net assets	80	92
Goodwill	307	296
Carrying value of associate	387	388

Notes to the consolidated financial statements

12. Investments in joint ventures and associates continued

Investment in associates continued

Information on other individually immaterial associates is detailed below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
(Loss)/profit for the year	<u>(3)</u>	<u>7</u>
Total comprehensive (expense)/income	<u>(3)</u>	<u>7</u>

Transactions with material associates

From time to time the Group loans funds to Penguin Random House which are unsecured and interest is calculated based on market rates. The amount outstanding at 31 December 2018 was £nil (2017: £46m). The loans are provided under a working capital facility and fluctuate during the year. The loan outstanding at 31 December 2017 was repaid in its entirety in January 2018.

The Group also has a current asset receivable of £17m (2017: £19m) from Penguin Random House and a current liability payable of £nil (2017: £3m) arising from the provision of services. Included in other income (note 4) is £3m (2017: £3m) of service fees. In addition, the Group received a further re-capitalisation dividend of £50m in April 2018, which was triggered by the Group's decision to sell a 22% stake in Penguin Random House in 2017.

Investment in joint ventures

Information on joint ventures, all of which are individually immaterial, is detailed below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Profit for the year	<u>1</u>	<u>1</u>
Total comprehensive income	<u>1</u>	<u>1</u>

13. Deferred income tax

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Deferred income tax assets	<u>60</u>	<u>95</u>
Deferred income tax liabilities	<u>(136)</u>	<u>(164)</u>
Net deferred income tax	<u>(76)</u>	<u>(69)</u>

Substantially all of the deferred income tax assets are expected to be recovered after more than one year.

Deferred income tax assets and liabilities shall be offset when there is a legally enforceable right to offset current income tax assets with current income tax liabilities and where the deferred income taxes relate to the same fiscal authority. At 31 December 2018, the Group has unrecognised deferred income tax assets of £31m (2017: £32m) in respect of UK losses, £28m (2017: £18m) in respect of US losses and approximately £90m (2017: £86m) in respect of losses in other territories. The UK losses are capital losses. The US losses relate to state taxes and therefore have expiry periods of between five and 20 years. Other deferred tax assets of £12m (2017: £12m) have not been recognised.

Deferred tax assets of £43m (2017: £75m) have been recognised in countries that reported a tax loss in either the current or preceding year. The majority arises in Brazil in respect of tax deductible goodwill. It is considered more likely than not that there will be sufficient future taxable profits to realise these assets.

Notes to the consolidated financial statements

13. Deferred income tax continued

The recognition of the deferred income tax assets is supported by management's forecasts of the future profitability of the relevant countries.

The movement in deferred income tax assets and liabilities during the year is as follows:

<u>All figures in £ millions</u>	<u>Trading losses</u>	<u>Returns provisions</u>	<u>Retirement benefit obligations</u>	<u>Deferred revenue</u>	<u>Goodwill and intangibles</u>	<u>Other</u>	<u>Total</u>
Deferred income tax assets/(liabilities)							
At 1 January 2017	22	35	37	117	(295)	69	(15)
Exchange differences	(2)	(3)	(4)	(8)	19	(8)	(6)
Income statement (charge)/benefit	(11)	6	7	(9)	118	(1)	110
Disposal through business disposal	—	—	—	—	—	(3)	(3)
Tax benefit in other comprehensive income ..	—	—	(84)	—	—	(5)	(89)
Transfer to assets/(liabilities) classified as held for sale	—	(4)	—	(73)	3	8	(66)
At 31 December 2017	9	34	(44)	27	(155)	60	(69)
Adjustment on initial application of IFRS 15 (see note 1b)	—	—	—	15	—	1	16
Adjustment on initial application of IFRS 9 (see note 1c)	—	—	—	—	—	3	3
Exchange differences	—	1	1	6	(16)	(5)	(13)
Income statement (charge)/benefit	11	(4)	(21)	20	(34)	(14)	(42)
Disposal through business disposal	—	—	—	—	—	16	16
Tax charge in other comprehensive income ..	—	—	9	—	—	—	9
Tax charge in equity	—	—	—	—	—	4	4
At 31 December 2018	20	31	(55)	68	(205)	65	(76)

Other deferred income tax items include temporary differences in respect of share-based payments, provisions, depreciation and royalty advances.

In addition, £98m (2017: £68m asset and £2m liability) of deferred income tax assets are included in assets classified as held for sale with a charge of £8m in 2018 relating to assets and liabilities held for sale.

Notes to the consolidated financial statements

14. Classification of financial instruments

The accounting classification of each class of the Group's financial assets, and their carrying values, is as follows:

All figures in £ millions	Notes	2018					2017				
		Fair value			Amortised cost		Fair value			Amortised cost	
		FVOCI	FVTPL	Fair value – hedging instrument	Financial assets	Total carrying value	Available for sale	Derivatives held for trading	Derivatives in hedge relationship	Loans and receivables	Total carrying value
Investments in unlisted securities	15	93	—	—	—	93	77	—	—	—	77
Cash and cash equivalents	17	—	—	—	568	568	—	—	—	518	518
Cash and cash equivalents – within assets classified as held for sale	32	—	—	—	—	—	—	—	—	127	127
Marketable securities		—	—	—	—	—	8	—	—	—	8
Derivative financial instruments	16	—	4	64	—	68	—	3	137	—	140
Trade receivables	22	—	—	—	904	904	—	—	—	760	760
Trade receivables – within assets classified as held for sale		—	—	—	49	49	—	—	—	22	22
Total financial assets		93	4	64	1,521	1,682	85	3	137	1,427	1,652

The carrying value of the Group's financial assets is equal to, or approximately equal to, the market value. Following the adoption of IFRS 9 in 2018 the terminology used to describe financial assets has been changed (see note 1c).

The accounting classification of each class of the Group's financial liabilities, together with their carrying values and market values, is as follows:

All figures in £ millions	Notes	2018					2017				
		Fair value		Amortised cost			Fair value		Amortised cost		
		FVTPL	Fair value – hedging instrument	Other financial liabilities	Total carrying value	Total market value	Derivatives held for trading	Derivatives in hedge relationship	Other liabilities	Total carrying value	Total market value
Derivative financial instruments	16	—	(59)	—	(59)	(59)	—	(140)	—	(140)	(140)
Trade payables	24	—	—	(311)	(311)	(311)	—	—	(265)	(265)	(265)
Trade payables – within liabilities classified as held for sale		—	—	(22)	(22)	(22)	—	—	(20)	(20)	(20)
Liability to purchase own shares	24	—	—	—	—	—	—	—	(151)	(151)	(151)
Bank loans and overdrafts	18	—	—	(43)	(43)	(43)	—	—	(15)	(15)	(15)
Other borrowings due within one year	18	—	—	(3)	(3)	(3)	—	—	(4)	(4)	(4)
Borrowings due after more than one year	18	—	—	(674)	(674)	(663)	—	—	(1,066)	(1,066)	(1,070)
Total financial liabilities		—	(59)	(1,053)	(1,112)	(1,101)	—	(140)	(1,521)	(1,661)	(1,665)

Notes to the consolidated financial statements

14. Classification of financial instruments continued

Following the adoption of IFRS 9 in 2018 the terminology used to describe financial liabilities has been changed (see note 1c).

Fair value measurement

As shown above, the Group's derivative assets and liabilities, unlisted securities and marketable securities are held at fair value. Financial instruments that are measured subsequently to initial recognition at fair value are grouped into levels 1 to 3, based on the degree to which the fair value is observable, as follows:

Level 1 fair value measurements are those derived from unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 fair value measurements are those derived from inputs, other than quoted prices included within level 1, that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices).

Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Group's derivative assets valued at £68m (2017: £140m) and derivative liabilities valued at £59m (2017: £140m) are classified as level 2. The Group's marketable securities valued at £nil (2017: £8m) are classified as level 2. The Group's investments in unlisted securities are valued at £93m (2017: £77m) and are classified as level 3.

The following table analyses the movements in level 3 fair value remeasurements:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
	<u>Investments in unlisted securities</u>	<u>Investments in unlisted securities</u>
At beginning of year	77	65
Exchange differences	4	(4)
Acquisition of investments	13	3
Fair value movements	7	13
Disposal of investments	<u>(8)</u>	<u>—</u>
At end of year	<u>93</u>	<u>77</u>

The fair value of the investments in unlisted securities is determined by reference to the financial performance of the underlying asset, recent funding rounds and amounts realised on the sale of similar assets.

15. Other financial assets

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
At beginning of year	77	65
Exchange differences	4	(4)
Acquisition of investments	13	3
Fair value movements	7	13
Disposal of investments	<u>(8)</u>	<u>—</u>
At end of year	<u>93</u>	<u>77</u>

Notes to the consolidated financial statements

15. Other financial assets continued

Other financial assets comprise unlisted securities of £93m (2017: £77m) that are classified at fair value through other comprehensive income (FVOCI). The assets, which are not held for trading, relate to the Group's interests in new and innovative educational ventures across the world. These are strategic investments and the Group considers the classification as FVOCI to be more relevant. None of the investments are individually significant to the financial statements. In 2018, equities held at a fair value of £8m (2017: £nil) were disposed. The cumulative gain on disposal was £nil and £2m was recycled from the fair value reserve to retained earnings.

16. Derivative financial instruments and hedge accounting

The Group's approach to the management of financial risks is set out in note 19. The Group's outstanding derivative financial instruments are as follows:

All figures in £ millions	2018			2017		
	Gross notional amounts	Assets	Liabilities	Gross notional amounts	Assets	Liabilities
Interest rate derivatives – in a fair value hedge relationship	404	13	—	799	23	—
Interest rate derivatives – not in a hedge relationship	362	3	—	429	3	—
Cross-currency rate derivatives – in a hedge relationship	577	51	(35)	1,522	114	(140)
FX forwards and collars – in a hedge relationship	434	—	(24)	—	—	—
Other derivatives – not in a hedge relationship	473	1	—	—	—	—
Total	2,250	68	(59)	2,750	140	(140)
Analysed as expiring:						
In less than one year	771	1	(23)	—	—	—
Later than one year and not later than five years	795	22	(1)	1,638	65	(95)
Later than five years	684	45	(35)	1,112	75	(45)
Total	2,250	68	(59)	2,750	140	(140)

The Group's fixed rate USD debt is held as fixed rate instruments at amortised cost.

The majority of the Group's fixed rate euro debt is converted to a floating rate exposure using interest rate and cross-currency swaps. The Group receives interest under its euro debt related swap contracts to match the interest on the bonds (ranging from a receipt of 1.375% on its euro 2025 notes to 1.875% on its euro 2021 notes) and, in turn, pays either a floating US dollar or sterling variable rates of GBP Libor + 0.81% and US Libor + 1.36%.

GBP and USD Interest rate swaps are subsequently used to fix an element of the interest charge. The all-in rates (including the spread above Libor) that the Group pays are between 2.2% and 3.8%. At 31 December 2018, the Group had interest rate swap contracts to fix £361m of debt and a further £256m of outstanding fixed rate bonds bringing the total fixed rate debt to £617m. These pay fixed interest rate derivatives are not in designated hedging relationships. Additionally the group uses FX derivatives including forwards, collars and cross currency swaps to create synthetic USD debt as a hedge of its USD assets and to achieve certainty of USD currency conversion rates, in line with the Group's FX hedging policy. Outstanding contracts as at 31 December 2018 were held at an average GBP/USD rate of 1.39. These derivatives are in designated net investment hedging relationships. Outstanding contracts on the cross currency swaps at 31 December 2018 were held at an average EUR/GBP rate of 0.79. These derivatives are in designated fair value hedging relationships.

Notes to the consolidated financial statements

16. Derivative financial instruments and hedge accounting continued

At the end of 2018, the currency split of the mark-to-market values of rate derivatives, including the exchange of principal on cross currency rate derivatives, was US dollar £(185)m, sterling (215)m and euro £432m (2017: US dollar £(869)m, sterling £12m and euro £857m).

The Group's portfolio of rate derivatives is diversified by maturity, counterparty and type. Natural offsets between transactions within the portfolio and the designation of certain derivatives as hedges significantly reduce the risk of income statement volatility. The sensitivity of the portfolio to changes in market rates is set out in note 19.

Fair value hedges

The group uses Interest Rate Swaps and Cross Currency Swaps as Fair value hedges of the Groups euro issued debt.

Interest rate exposure arises from movements in the fair value of the Group's euro debt attributable to movements in euro interest rates. The hedged risk is the change the euro bonds fair value attributable to interest rate movements. The hedged items are the Group's euro bonds which are issued at a fixed rate. The hedging instruments are fixed to floating euro interest rate swaps where the Group receives fixed interest payments and pays three month Euribor.

As the critical terms of the interest rate swaps match the bonds such there is an expectation that the value of the hedging instrument and the value of the hedged item move in the opposite direction as a result of movements in the zero coupon Euribor curve. The hedge ratio is 100%. Sources of hedge ineffectiveness are a reduction or modification in the hedged item or a material change in the credit risk of swap counterparties.

A foreign currency exposure arises from foreign exchange fluctuations on translation of the Group's euro debt into GBP. The hedged risk is the risk of changes in the GBPEUR spot rate that will result in changes in the value of the euro debt when translated into GBP. The hedged items are a portion of the Group's euro bonds. The hedging instruments are floating to floating cross currency swaps which creates an exposure to euro strengthening against GBP within the hedge item. The final exchange on the cross currency swap creates an exposure to euro weakening against GBP.

As the critical terms of the cross currency swap match the bonds there is an expectation that the value of the hedging instrument and the value of the hedged item move in the opposite direction as a result of movements in the EURGBP exchange rate. The hedge ratio is 100%. Sources of hedge ineffectiveness are a reduction or modification in the hedged item or a material change in the credit risk of swap counterparties.

At December 2018, the Group held the following instruments to hedge exposures to changes in interest rates and foreign currency risk associated with borrowings.

<u>All figures in £ millions</u>	<u>Carrying amount of hedging instruments</u>	<u>Change in fair value of hedging instrument used to determine hedge ineffectiveness</u>	<u>Nominal amounts of hedging instruments</u>
Interest rate risk			
Financial assets – derivative			
financial instruments	13	(7)	404
Currency risk			
Financial assets – derivative			
financial instruments	51	3	404

Notes to the consolidated financial statements

16. Derivative financial instruments and hedge accounting continued

Fair value hedges continued

The amounts at the reporting date relating to items designated as hedge items were as follows:

<u>All figures in £ millions</u>	<u>Carrying amount of hedged items</u>	<u>Accumulated amount of fair value hedge adjustments on the hedged item included in the carrying amount</u>	<u>Change in fair value of hedged item used to determine hedge ineffectiveness</u>	<u>Hedge ineffectiveness</u>	<u>Line item in profit or loss that includes hedge ineffectiveness</u>
Interest rate risk					
Financial liabilities –					
borrowings	(416)	(9)	7	—	n/a
Currency risk					
Financial liabilities –					
borrowings	(416)	n/a	(3)	—	n/a

Hedge of net investment in a foreign operation

A foreign currency exposure arises from the translation of the Group's net investments in its subsidiaries which have USD and euro functional currencies. The hedged risk is the risk of changes in the GBPUSD and GBPEUR spot rates that will result in changes in the value of the group's net investment in its USD and euro assets when translated into GBP. The hedged items are a portion of the Group's assets which are denominated in USD and euro. The hedging instruments are debt and derivative financial instruments, including Cross Currency Swaps, FX Forwards and FX Collars which creates an exposure to USD and euro weakening against GBP.

It is expected that the change in value of each of these items will mirror each other as there is a clear and direct economic relationship between the hedge and the hedged item in the hedge relationship.

Hedge ineffectiveness would arise if the value of the hedged items fell below the value of the hedging instruments however this is unlikely as the value of the group's assets denominated in USD and euro are significantly greater than the proposed net investment programme.

The amounts related to items designated as hedging instruments were as follows.

<u>All figures in £ millions</u>	<u>Carrying amount of hedged instruments</u>	<u>Change in value of hedging instrument used to determine hedge ineffectiveness</u>	<u>Nominal amounts of hedging instruments</u>	<u>Hedging gains/(losses) recognised in OCI</u>	<u>Hedge ineffectiveness recognised in profit or loss</u>
Financial liabilities –					
derivative financial instruments	(59)	(22)	607	(22)	—
Financial liabilities –					
borrowings	(256)	(10)	(256)	(10)	—

In addition to the above, £15m of hedging losses were recognised in OCI in relation to derivative financial instruments that matured during the year.

Notes to the consolidated financial statements

16. Derivative financial instruments and hedge accounting continued

Offsetting arrangements

Derivative financial assets and liabilities subject to offsetting arrangements are as follows

<u>All figures in £ millions</u>	2018			2017		
	Gross derivative assets	Gross derivative liabilities	Net derivative assets/liabilities	Gross derivative assets	Gross derivative liabilities	Net derivative assets/liabilities
Counterparties in an asset position	67	(44)	23	103	(78)	25
Counterparties in a liability position . . .	1	(15)	(14)	37	(62)	(25)
Total as presented in the balance sheet	<u>68</u>	<u>(59)</u>	<u>9</u>	<u>140</u>	<u>(140)</u>	<u>—</u>

All of the Group's derivative financial instruments are subject to enforceable netting arrangements with individual counterparties, allowing net settlement in the event of default of either party. Offset arrangements in respect of cash balances are described in note 17.

Counterparty exposure from all derivatives is managed, together with that from deposits and bank account balances, within credit limits that reflect published credit ratings and by reference to other market measures (e.g. market prices for credit default swaps) to ensure that there is no significant risk to any one counterparty.

The Group has no material embedded derivatives that are required to be separately accounted for in accordance with IFRS 9 'Financial Instruments'.

17. Cash and cash equivalents (excluding overdrafts)

<u>All figures in £ millions</u>	2018	2017
Cash at bank and in hand	533	361
Short-term bank deposits	35	157
	<u>568</u>	<u>518</u>
Cash at bank and in hand – within assets classified as held for sale . . .	—	127
	<u>568</u>	<u>645</u>

Short-term bank deposits are invested with banks and earn interest at the prevailing short-term deposit rates.

At the end of 2018, the currency split of cash and cash equivalents was US dollar 18% (2017: 36%), sterling 30% (2017: 8%), Canadian dollar 14% (2017: 2%), euro 6% (2017: 7%), renminbi 3% (2017: 20%) and other 29% (2017: 27%). At the end of 2017, a significant proportion of the renminbi cash related to assets held for sale.

Cash and cash equivalents have fair values that approximate to their carrying value due to their short-term nature. Cash and cash equivalents include the following for the purpose of the cash flow statement:

<u>All figures in £ millions</u>	2018	2017
Cash and cash equivalents	568	518
Cash and cash equivalents – within assets classified as held for sale . .	—	127
Bank overdrafts	(43)	(15)
	<u>525</u>	<u>630</u>

Notes to the consolidated financial statements

17. Cash and cash equivalents (excluding overdrafts) continued

The Group has certain cash pooling arrangements in US dollars, sterling, euro and Canadian dollars where both the company and the bank have a legal right of offset. Offsetting amounts are presented gross in the balance sheet. Offset arrangements in respect of derivatives are shown in note 16.

18. Financial liabilities – borrowings

The Group's current and non-current borrowings are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Non-current		
1.875% euro notes 2021 (nominal amount €250m; 2017 nominal amount €500m)	233	463
3.75% US dollar notes 2022 (nominal amount \$117m)	92	85
3.25% US dollar notes 2023 (nominal amount \$94m)	74	69
1.375% euro notes 2025 (nominal amount €300m; nominal amount €500m)	273	445
Finance lease liabilities	2	4
	<u>674</u>	<u>1,066</u>
Current		
Due within one year or on-demand:		
Bank loans and overdrafts	43	15
Finance lease liabilities	3	4
	<u>46</u>	<u>19</u>
Total borrowings	<u>720</u>	<u>1,085</u>

Included in the non-current borrowings above is £6m of accrued interest (2017: £10m). Included in the current borrowings above is £nil of accrued interest (2017: £nil).

The maturities of the Group's non-current borrowings are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Between one and two years	1	3
Between two and five years	400	549
Over five years	273	514
	<u>674</u>	<u>1,066</u>

The carrying amounts and market values of borrowings are as follows:

<u>All figures in £ millions</u>	2018			2017		
	<u>Effective interest rate</u>	<u>Carrying value</u>	<u>Market value</u>	<u>Effective interest rate</u>	<u>Carrying value</u>	<u>Market value</u>
Bank loans and overdrafts	n/a	43	43	n/a	15	15
1.875% euro notes 2021	2.04%	233	233	2.04%	463	467
3.75% US dollar notes 2022	3.94%	92	91	3.94%	85	87
3.25% US dollar notes 2023	3.36%	74	71	3.36%	69	67
1.375% euro notes 2025	1.44%	273	266	1.44%	445	445
Finance lease liabilities	n/a	5	5	n/a	8	8
		<u>720</u>	<u>709</u>		<u>1,085</u>	<u>1,089</u>

Notes to the consolidated financial statements

18. Financial liabilities – borrowings continued

The market values stated above are based on clean market prices at the year end or, where these are not available, on the quoted market prices of comparable debt issued by other companies. The effective interest rates above relate to the underlying debt instruments.

The carrying amounts of the Group's borrowings before the effect of derivatives (see notes 16 and 19 for further information on the impact of derivatives) are denominated in the following currencies:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
US dollar	188	172
Sterling	23	1
Euro	506	911
Other	3	1
	<u>720</u>	<u>1,085</u>

The Group has \$1.75bn (£1.4bn) of undrawn capacity on its committed borrowing facilities as at 31 December 2018 (2017: \$1.75bn (£1.3bn) undrawn). In addition, there are a number of short-term facilities that are utilised in the normal course of business. All of the Group's borrowings are unsecured. In respect of finance lease obligations, the rights to the leased asset revert to the lessor in the event of default.

The maturity of the Group's finance lease obligations is as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Finance lease liabilities – minimum lease payments		
Not later than one year	3	4
Later than one year and not later than two years	1	3
Later than two years and not later than three years	1	1
Later than three years and not later than four years	—	—
Later than four years and not later than five years	—	—
Later than five years	—	—
Future finance charges on finance leases	—	—
Present value of finance lease liabilities	<u>5</u>	<u>8</u>

The present value of the Group's finance lease obligations is as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Not later than one year	3	4
Later than one year and not later than five years	2	4
Later than five years	—	—
	<u>5</u>	<u>8</u>

The carrying amounts of the Group's lease obligations approximate their fair value.

Notes to the consolidated financial statements

19. Financial risk management

The Group's approach to the management of financial risks together with sensitivity analyses of its financial instruments is set out below.

Treasury policy

Pearson's treasury policies set out the group's principles for addressing key financial risks including capital risk, liquidity risk, foreign exchange risk and interest rate risk and sets out measurable targets for each. The Audit Committee receive quarterly reports incorporating compliance with these measurable targets and review and approve the treasury policies annually.

The treasury function is permitted to use derivatives where their use reduces a risk or allows a transaction to be undertaken more cost effectively. Derivatives permitted include swaps, forwards and collars to manage foreign exchange and interest rate risk, with foreign exchange swap and forward contracts the most commonly executed. Speculative transactions are not permitted.

Capital risk

The Group's objectives when managing capital are:

- To maintain a strong balance sheet and a solid investment grade rating;
- To continue to invest in the business;
- To have a sustainable and progressive dividend policy, and;
- To return surplus cash to our shareholders where appropriate.

The Group aims to maintain net debt at a level less than 1.5 times EBITDA before the adoption of IFRS 16 and less than 2.2 times EBITDA after the adoption of IFRS16. This is consistent with a solid investment grade rating (assuming no material deterioration in trading performance) and provides comfortable headroom against covenants.

The Group is currently rated BBB (negative outlook) with Standard and Poor's and Baa2 (stable outlook) with Moody's.

Net debt

The Group's net debt position is set out below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Cash and cash equivalents	568	645
Marketable securities	—	8
Derivative financial instruments	9	—
Bank loans and overdrafts	(43)	(15)
Bonds	(672)	(1,062)
Finance lease liabilities	(5)	(8)
Net debt	(143)	(432)

Interest and foreign exchange rate management

The Group's principal currency exposure is to the US dollar which represents more than 60% of the Group's sales.

Notes to the consolidated financial statements

19. Financial risk management continued

Interest and foreign exchange rate management continued

The Group's long-term debt is primarily held in US dollars to provide a natural hedge of this exposure, which is achieved through issued US dollar debt or converting euro debt to US dollars using cross-currency swaps, forwards and collars. As at 31 December 2018, £617m of the Group's debt is held at fixed rates (2017: £674m), with £103m held at floating rates (2017: £411m), partially offset by US dollar cash balances which attract floating rate interest.

See note 16 for details of the Group's hedging programme which addresses interest rate risk and foreign currency risk.

Overseas profits are converted to sterling to satisfy sterling cash outflows such as dividends at the prevailing spot rate at the time of the transaction. To the extent the Group has sufficient sterling, US dollars may be held as dollar cash to provide a natural offset to the Group's debt or to satisfy future US dollar cash outflows.

The Group does not have significant cross border foreign exchange transactional exposures.

As at 31 December 2018, the sensitivity of the carrying value of the Group's financial instruments to fluctuations in interest rates and exchange rates is as follows:

All figures in £ millions	Carrying value	Impact of 1% increase in interest rates	Impact of 1% decrease in interest rates	Impact of 10% strengthening in sterling	Impact of 10% weakening in sterling
Investments in unlisted securities	93	—	—	(7)	9
Cash and cash equivalents	568	—	—	(36)	45
Derivative financial instruments	9	(3)	3	1	(1)
Bonds	(672)	17	(17)	61	(74)
Other borrowings	(48)	—	—	2	(3)
Other net financial assets	620	—	—	(51)	62
Total financial instruments	<u>570</u>	<u>14</u>	<u>(14)</u>	<u>(30)</u>	<u>38</u>

The table shows the sensitivities of the fair values of each class of financial instrument to an isolated change in either interest rates or foreign exchange rates. Other net financial assets comprises trade receivables less trade payables. A significant proportion of the movements shown above would impact equity rather than the income statement due to the location and functional currency of the entities in which they arise and the availability of net investment hedging.

The Group's income statement is reported at average rates for the year while the balance sheet is translated at the year-end closing rate. Differences between these rates can distort ratio calculations such as debt to EBITDA and interest cover. Adjusted operating profit translated at year-end closing rates would be £28m higher than the reported figure of £546m at £574m. EBITDA translated at year-end closing rates would be £32m higher than the reported figure of £698m at £730m.

Liquidity and re-financing risk management

The Group regularly reviews the level of cash and debt facilities required to fund its activities. This involves preparing a prudent cash flow forecast for the next three to five years, determining the level of debt facilities required to fund the business, planning for shareholder returns and repayments of maturing debt, and identifying an appropriate amount of headroom to provide a reserve against unexpected outflows.

Notes to the consolidated financial statements

19. Financial risk management continued

Liquidity and re-financing risk management continued

At 31 December 2018, the Group had cash of £0.5bn and an undrawn US dollar denominated revolving credit facility due 2021 of \$1.75bn (£1.4bn). At 31 December 2017, the Group had cash of £0.6bn and an undrawn US dollar denominated revolving credit facility due 2021 of \$1.75bn (£1.3bn).

The \$1.75bn facility contains interest cover and leverage covenants which the Group has complied with for the year ended 31 December 2018. The maturity of the carrying values of the Group's borrowings and trade payables are set out in notes 18 and 24 respectively.

At the end of 2018, the currency split of the Group's trade payables was US dollar £178m, sterling £57m and other currencies £98m (2017: US dollar £137m, sterling £58m and other currencies £90m). Trade payables are all due within one year (2017: all due within one year).

The following table analyses the Group's bonds and derivative assets and liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. Short dated derivative instruments have not been included in this table. The amounts disclosed in the table are the contractual undiscounted cash flows (including interest) and as such may differ from the amounts disclosed on the balance sheet.

All figures in £ millions	Analysed by maturity			Total	Analysed by currency			
	Greater than one month and less than one year	Later than one year but less than five years	Five years or more		USD	GBP	Other	Total
At 31 December 2018								
Bonds	14	431	277	722	189	—	533	722
Rate derivatives – inflows	(20)	(288)	(343)	(651)	(40)	(167)	(444)	(651)
Rate derivatives – outflows	23	289	341	653	254	390	9	653
FX forwards – inflows	(251)	(35)	—	(286)	—	(286)	—	(286)
FX forwards – outflows	275	37	—	312	312	—	—	312
Total	41	434	275	750	715	(63)	98	750
At 31 December 2017								
Bonds	20	601	533	1,154	184	—	970	1,154
Rate derivatives – inflows	(38)	(975)	(684)	(1,697)	(53)	(751)	(893)	(1,697)
Rate derivatives – outflows	48	1,060	667	1,775	1,003	751	21	1,775
FX forwards – inflows	—	—	—	—	—	—	—	—
FX forwards – outflows	—	—	—	—	—	—	—	—
Total	30	686	516	1,232	1,134	—	98	1,232

Financial counterparty and credit risk management

Financial counterparty and credit risk arises from cash and cash equivalents, favourable derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables.

Counterparty credit limits, which take published credit rating and other factors into account, are set to cover the Group's total aggregate exposure to a single financial institution. The limits applicable to published credit rating bands are approved by the Chief Financial Officer within guidelines approved by the Board. Exposures and limits applicable to each financial institution are reviewed on a regular basis.

Notes to the consolidated financial statements

19. Financial risk management continued

Financial counterparty and credit risk management continued

Cash deposits and derivative transactions are made with approved counterparties up to pre-agreed limits. To manage counterparty risk associated with cash and cash equivalents, the Group uses a mixture of money market funds as well as bank deposits. As at 31 December 2018, 85% of cash and cash equivalents was held with investment grade bank counterparties, 7% with AAA money market funds and 8% held with non-investment grade bank counterparties. As at 31 December 2018, the Group had a net exposure of £33m with investment grade counterparties for derivative transactions.

For trade receivables and contract assets the Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, risk associated with the industry and country in which customers operate may also influence the credit risk. The credit quality of customers is assessed by taking into account financial position, past experience and other relevant factors. Individual credit limits are set for each customer based on internal ratings. The compliance with credit limits is regularly monitored by the Group. A default on a trade receivable is when the counterparty fails to make contractual payments within the stated payment terms. Trade receivables and contract assets are written off when there is no reasonable expectation of recovery. The carrying amounts of financial assets, trade receivables and contract assets represent the maximum credit exposure.

Trade receivables and contract assets are subject to impairment using the expected credit loss model. The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected credit loss allowance for all trade receivables and contract assets. To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. See note 22 for further details about trade receivables and contract assets including movements in provisions for bad and doubtful debts.

20. Intangible assets – pre-publication

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Cost		
At beginning of year	1,854	2,417
Exchange differences	70	(168)
Additions	328	362
Disposal through business disposal	—	(1)
Disposals	(158)	(248)
Transfer from property, plant and equipment	2	—
Transfer to assets classified as held for sale	—	(508)
At end of year	2,096	1,854
Amortisation		
At beginning of year	(1,113)	(1,393)
Exchange differences	(53)	109
Charge for the year	(271)	(338)
Disposals	158	248
Transfer to assets classified as held for sale	—	261
At end of year	(1,279)	(1,113)
Carrying amounts		
At end of year	817	741

Notes to the consolidated financial statements

20. Intangible assets – pre-publication continued

Included in the above are pre-publication assets amounting to £577m (2017: £504m) which will be realised in more than one year.

Amortisation is included in the income statement in cost of goods sold.

In addition to the above £242m (2017: £247m) of pre-publication assets are included in assets classified as held for sale (see note 32) with a charge of £67m and additions of £60m in 2018 relating to assets and liabilities held for sale.

21. Inventories

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Raw materials	5	4
Work in progress	—	2
Finished goods	149	142
Returns asset	10	—
	<u>164</u>	<u>148</u>

The cost of inventories recognised as an expense and included in the income statement in cost of goods sold amounted to £375m (2017: £324m). In 2018 £39m (2017: £38m) of inventory provisions was charged in the income statement. None of the inventory is pledged as security.

Included within the inventory balance is the estimation of the right to receive goods from contracts with customers via returns (see note 1b). The value of the returns asset is measured at the carrying amount of the assets at the time of sale aligned to the Group's normal inventory valuation methodology less any expected costs to recover the asset and any expected reduction in value. Impairment charges against the inventory returns asset are £nil in 2018. The returns asset all relates to finished goods.

22. Trade and other receivables

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Current		
Trade receivables	874	739
Royalty advances	5	8
Prepayments	103	82
Deferred contract costs	1	—
Accrued income	2	1
Other receivables	193	280
	<u>1,178</u>	<u>1,110</u>
Non-current		
Trade receivables	30	21
Royalty advances	21	20
Prepayments	13	15
Deferred contract costs	1	—
Accrued income	10	10
Other receivables	25	37
	<u>100</u>	<u>103</u>

Notes to the consolidated financial statements

22. Trade and other receivables continued

Accrued income represents contract assets which are unbilled amounts generally resulting from assessments and services revenue streams where revenue to be recognised over time has been recognised in excess of customer billings to date. Impairment charges on accrued income assets are £nil in 2018. The carrying value of the Group's trade and other receivables approximates its fair value. Trade receivables are stated net of provisions for bad and doubtful debts. Trade and other receivables includes the impact of adoption of IFRS 15 in 2018 (see note 1b). This impact increased trade and other receivables as a result of the transfer of the sales return liability of £173m to trade and other liabilities that was previously netted in trade receivables. Comparatives have not been restated.

The movements in the provision for bad and doubtful debts are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
At beginning of year	(116)	(112)
Adjustment on initial application of IFRS 9 (see note 1c)	(12)	—
Exchange differences	2	7
Income statement movements	(1)	(38)
Utilised	31	21
Disposal through business disposal	—	1
Transfer to assets classified as held for sale	—	5
At end of year	<u>(96)</u>	<u>(116)</u>

Concentrations of credit risk with respect to trade receivables are limited due to the Group's large number of customers, who are internationally dispersed.

The ageing of the Group's trade receivables is as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Within due date	606	661
Up to three months past due date	172	187
Three to six months past due date	72	48
Six to nine months past due date	16	18
Nine to 12 months past due date	24	13
More than 12 months past due date	14	3
Total trade receivables	904	930
Less: sales return liability	—	(170)
Net trade receivables	<u>904</u>	<u>760</u>

The Group reviews its bad debt provision at least twice a year following a detailed review of receivable balances and historical payment profiles. Management believes all the remaining receivable balances are fully recoverable.

Notes to the consolidated financial statements

23. Provisions for other liabilities and charges

<u>All figures in £ millions</u>	<u>Deferred consideration</u>	<u>Property</u>	<u>Disposals and closures</u>	<u>Legal and other</u>	<u>Total</u>
At 1 January 2018	45	3	11	21	80
Exchange differences	2	—	—	—	2
Charged to income statement	—	103	—	3	106
Released to income statement	—	(2)	—	(5)	(7)
Utilised	(5)	(2)	(5)	(3)	(15)
Disposal through business disposal	—	—	(1)	—	(1)
At 31 December 2018	<u>42</u>	<u>102</u>	<u>5</u>	<u>16</u>	<u>165</u>

Analysis of provisions:

<u>All figures in £ millions</u>	2018				
	<u>Deferred consideration</u>	<u>Property</u>	<u>Disposals and closures</u>	<u>Legal and other</u>	<u>Total</u>
Current	6	2	5	7	20
Non-current	36	100	—	9	145
	<u>42</u>	<u>102</u>	<u>5</u>	<u>16</u>	<u>165</u>
	2017				
Current	5	1	11	8	25
Non-current	40	2	—	13	55
	<u>45</u>	<u>3</u>	<u>11</u>	<u>21</u>	<u>80</u>

Deferred consideration primarily relates to the formation of a venture in North America in 2011. The provision will be utilised over a number of years as payments are based on a royalty rate. The provision above represents management's best estimate of the liability, however, the maximum that could be payable is £84m. Property provisions predominantly relate to restructuring and onerous leases. The main provisions relate to the consolidation of London properties and are expected to be utilised from 2020. Uncertainties around property provisions relate to prevailing market conditions including potential sublet income, lease terms including rent free periods, void periods, lease incentives and running costs. Disposals and closures include liabilities related to recent disposals and are expected to be utilised in 2019. Legal and other includes legal claims, contract disputes and potential contract losses with the provisions utilised as the cases are settled. Also included in legal and other are other restructuring provisions that are generally utilised within one year.

Notes to the consolidated financial statements

24. Trade and other liabilities

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Trade payables	311	265
Sales return liability	173	—
Social security and other taxes	16	21
Accruals	397	447
Deferred income	387	322
Interest payable	46	45
Liability to purchase own shares	—	151
Other liabilities	225	224
	<u>1,555</u>	<u>1,475</u>
Less: non-current portion		
Accruals	15	26
Deferred income	66	35
Other liabilities	74	72
	<u>155</u>	<u>133</u>
Current portion	<u>1,400</u>	<u>1,342</u>

The carrying value of the Group's trade and other liabilities approximates its fair value. The deferred income balance comprises contract liabilities in respect of advance payments in assessment, testing and training businesses; subscription income in school and college businesses; and obligations to deliver digital content in future periods. Trade and other liabilities includes the impact of adoption of IFRS 15 in 2018 (see note 1b). This impact increased trade and other liabilities as a result of the transfer of the sales return liability of £173m that was previously netted in trade receivables and deferred income by £28m at 31 December 2018. Comparatives have not been restated. The liability to purchase own shares in 2017 relates to a buyback agreement for the purchase of the company's own shares (see note 27).

25. Retirement benefit and other post-retirement obligations

Background

The Group operates a number of defined benefit and defined contribution retirement plans throughout the world.

The largest plan is the Pearson Group Pension Plan (UK Group plan) in the UK, which is sectionalised to provide both defined benefit and defined contribution pension benefits. The defined benefit section was closed to new members from 1 November 2006. The defined contribution section, opened in 2003, is open to new and existing employees. Finally, there is a separate section within the UK Group plan set up for auto-enrolment. The defined benefit section of the UK Group plan is a final salary pension plan which provides benefits to members in the form of a guaranteed level of pension payable for life. The level of benefits depends on the length of service and final pensionable pay. The UK Group plan is funded with benefit payments from trustee-administered funds. The UK Group plan is administered in accordance with the Trust Deed and Rules in the interests of its beneficiaries by Pearson Group Pension Trustee Limited.

A ruling in the Lloyds Bank High Court case in October 2018 provided clarity on how pension plans should equalise guaranteed minimum pensions (GMP) between males and females. The case ruling resulted in a past service charge in the income statement of £8m and an additional liability of £8m which has been incorporated into the valuation of the UK Group plan defined benefit obligation. This charge has been excluded from the Group's adjusted earnings as this relates to historical circumstances. The charge is an estimate based on available data and revisions to these estimates in future years will be treated as assumption changes and recorded in other comprehensive income rather than the income statement.

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Background continued

At 31 December 2018, the UK Group plan had approximately 24,000 members, analysed in the following table:

<u>All figures in %</u>	<u>Active</u>	<u>Deferred</u>	<u>Pensioners</u>	<u>Total</u>
Defined benefit	<u>1</u>	<u>25</u>	<u>35</u>	<u>61</u>
Defined contribution	<u>9</u>	<u>30</u>	<u>—</u>	<u>39</u>
Total	<u>10</u>	<u>55</u>	<u>35</u>	<u>100</u>

The other major defined benefit plans are based in the US. These are also final salary pension plans which provide benefits to members in the form of a guaranteed pension payable for life, with the level of benefits dependent on length of service and final pensionable pay. The majority of the US plans are funded.

The Group also has several post-retirement medical benefit plans (PRMBs), principally in the US. PRMBs are unfunded but are accounted for and valued similarly to defined benefit pension plans. In 2018, changes made to the US PRMB have resulted in a curtailment gain of £11m being recognised in the income statement.

The defined benefit schemes expose the Group to actuarial risks, such as life expectancy, inflation risks, and investment risk including asset volatility and changes in bond yields. The Group is not exposed to any unusual, entity-specific or plan-specific risks.

The defined contribution section of the UK Group plan operates a Reference Scheme Test (RST) pension underpin for its members. Where a member's fund value is insufficient to purchase the RST pension upon retirement, the UK Group plan is liable for the shortfall to cover the member's RST pension. In 2017, the UK Group plan revised its approach to securing the RST underpin by converting a member's fund value into a pension in the UK Group plan rather than purchasing an annuity with an insurer. A liability of £23m (2017: £32m) in respect of the underpin is included in the UK Group plan's defined benefit obligation, calculated as the present value of projected payments less the fund value. The UK Group plan's conversion factors are lower than the respective insurer annuity values and this drove a reduction in the underpin liability, resulting in an actuarial gain through other comprehensive income and an increase in the surplus at 31 December 2017. From 1 January 2018, members who have sufficient funds to purchase an RST pension are able to convert their fund value into a pension in the UK Group plan as an alternative to purchasing an annuity with an insurer. The Group does not recognise the assets and liabilities for members of the defined contribution section of the UK Group plan whose fund values are expected to be sufficient to purchase an RST pension without assistance from the UK Group plan. The defined contribution section of the UK Group plan had gross assets of £453m at 31 December 2018.

Assumptions

The principal assumptions used for the UK Group plan and the US PRMB are shown below. Weighted average assumptions have been shown for the other plans, which primarily relate to US pension plans.

<u>All figures in %</u>	<u>2018</u>			<u>2017</u>			<u>2016</u>		
	<u>UK Group plan</u>	<u>Other plans</u>	<u>PRMB</u>	<u>UK Group plan</u>	<u>Other plans</u>	<u>PRMB</u>	<u>UK Group plan</u>	<u>Other plans</u>	<u>PRMB</u>
Inflation	3.3	1.6	1.5	3.2	1.6	1.5	3.3	1.6	1.5
Rate used to discount plan liabilities	2.8	4.0	4.1	2.5	3.0	3.0	2.5	3.8	3.9
Expected rate of increase in salaries	3.8	2.9	3.0	3.7	3.0	3.0	3.8	3.0	3.0
Expected rate of increase for pensions in payment and deferred pensions	2.1 to 5.1	—	—	2.1 to 5.1	—	—	2.2 to 5.1	—	—
Initial rate of increase in healthcare rate	—	—	7.0	—	—	6.5	—	—	6.8
Ultimate rate of increase in healthcare rate	—	—	5.5	—	—	5.0	—	—	5.0

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Assumptions continued

The UK discount rate is based on corporate bond yields adjusted to reflect the duration of liabilities.

The US discount rate is set by reference to a US bond portfolio matching model.

The inflation rate for the UK Group plan of 3.3% reflects the RPI rate. In line with changes to legislation in 2010, certain benefits have been calculated with reference to CPI as the inflationary measure and in these instances a rate of 2.3% has been used.

The expected rate of increase in salaries has been set at 3.8% for 2018.

For the UK Group plan, the mortality base table assumptions have been updated and are derived from the SAPS S2 for males and females, adjusted to reflect the observed experience of the plan, with CMI model improvement factors. A 1.5% long-term rate improvement on the CMI model is applied for both males and females.

For the US plans, the mortality table (RP – 2018) and 2018 improvement scale (MP – 2018) with generational projection for male and female annuitants has been adopted.

Using the above tables, the remaining average life expectancy in years of a pensioner retiring at age 65 on the balance sheet date for the UK Group plan and US plans is as follows:

<u>All figures in years</u>	<u>UK</u>		<u>US</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Male	23.8	23.6	20.7	20.8
Female	24.5	25.7	22.7	22.8

The remaining average life expectancy in years of a pensioner retiring at age 65, 20 years after the balance sheet date, for the UK and US Group plans is as follows:

<u>All figures in years</u>	<u>UK</u>		<u>US</u>	
	<u>2018</u>	<u>2017</u>	<u>2018</u>	<u>2017</u>
Male	25.4	25.7	22.3	22.5
Female	26.3	27.9	24.2	24.4

Although the Group anticipates that plan surpluses will be utilised during the life of the plan to address member benefits, the Group recognises its pension surplus in full in respect of the UK Group plan on the basis that it is management’s judgement that there are no substantive restrictions on the return of residual plan assets in the event of a winding up of the plan after all member obligations have been met.

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information

The amounts recognised in the income statement are as follows:

All figures in £ millions	2018					
	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	7	2	9	56	(1)	64
Past service cost	8	—	8	—	—	8
Curtailments	—	—	—	—	(11)	(11)
Administration expenses	6	—	6	—	—	6
Total operating expense	21	2	23	56	(12)	67
Interest on plan assets	(82)	(5)	(87)	—	—	(87)
Interest on plan liabilities	68	6	74	—	2	76
Net finance (income)/expense	(14)	1	(13)	—	2	(11)
Net income statement charge	7	3	10	56	(10)	56
	2017					
All figures in £ millions	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	8	1	9	57	(1)	65
Administration expenses	9	1	10	—	—	10
Total operating expense	17	2	19	57	(1)	75
Interest on plan assets	(84)	(5)	(89)	—	—	(89)
Interest on plan liabilities	77	7	84	—	2	86
Net finance (income)/expense	(7)	2	(5)	—	2	(3)
Net income statement charge	10	4	14	57	1	72
	2016					
All figures in £ millions	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	8	2	10	67	—	77
Curtailments	—	—	—	—	(2)	(2)
Administration expenses	6	—	6	—	—	6
Total operating expense	14	2	16	67	(2)	81
Interest on plan assets	(104)	(6)	(110)	—	—	(110)
Interest on plan liabilities	89	7	96	—	3	99
Net finance (income)/expense	(15)	1	(14)	—	3	(11)
Net income statement charge	(1)	3	2	67	1	70

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

The amounts recognised in the balance sheet are as follows:

All figures in £ millions	2018				2017			
	UK Group plan	Other funded plans	Other unfunded plans	Total	UK Group plan	Other funded plans	Other unfunded plans	Total
Fair value of plan assets	3,240	141	—	3,381	3,337	155	—	3,492
Present value of defined benefit obligation	(2,671)	(158)	(19)	(2,848)	(2,792)	(161)	(20)	(2,973)
Net pension asset/(liability) . . .	569	(17)	(19)	533	545	(6)	(20)	519
Other post-retirement medical benefit obligation				(49)				(67)
Other pension accruals				(13)				(11)
Net retirement benefit asset . .				471				441
Analysed as:								
Retirement benefit assets				571				545
Retirement benefit obligations				(100)				(104)

The following gains have been recognised in other comprehensive income:

All figures in £ millions	2018	2017	2016
Amounts recognised for defined benefit plans	16	175	(277)
Amounts recognised for post-retirement medical benefit plans	6	—	9
Total recognised in year	22	175	(268)

The fair value of plan assets comprises the following:

All figures in %	2018			2017		
	UK Group plan	Other funded plans	Total	UK Group plan	Other funded plans	Total
Insurance	28	1	29	29	—	29
Equities	1	1	2	1	1	2
Bonds	—	2	2	—	3	3
Property	7	—	7	8	—	8
Pooled asset investment funds	44	—	44	44	—	44
Other	16	—	16	14	—	14

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

The plan assets do not include any of the Group's own financial instruments, or any property occupied by the Group. The table below further disaggregates the plan assets into additional categories and those assets which have a quoted market price in an active market and those that do not:

<u>All figures in %</u>	2018		2017	
	<u>Quoted market price</u>	<u>No quoted market price</u>	<u>Quoted market price</u>	<u>No quoted market price</u>
Insurance	29	—	29	—
Non-UK equities	—	2	—	2
Fixed-interest securities	2	—	3	—
Property	—	7	—	8
Pooled asset investment funds	44	—	44	—
Other	—	16	—	14
Total	<u>75</u>	<u>25</u>	<u>76</u>	<u>24</u>

The liquidity profile of the UK Group plan assets is as follows:

<u>All figures in %</u>	<u>2018</u>	<u>2017</u>
Liquid – call <1 month	51	50
Less liquid – call 1–3 months	—	—
Illiquid – call >3 months	49	50

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

Changes in the values of plan assets and liabilities of the retirement benefit plans are as follows:

All figures in £ millions	2018			2017		
	UK Group plan	Other plans	Total	UK Group plan	Other plans	Total
Fair value of plan assets						
Opening fair value of plan assets	3,337	155	3,492	3,339	158	3,497
Exchange differences	—	4	4	—	(8)	(8)
Interest on plan assets	82	5	87	84	5	89
Return on plan assets excluding interest	(45)	(13)	(58)	(140)	10	(130)
Contributions by employer	6	1	7	234	8	242
Benefits paid	(140)	(11)	(151)	(188)	(18)	(206)
Other	—	—	—	8	—	8
Closing fair value of plan assets	3,240	141	3,381	3,337	155	3,492
Present value of defined benefit obligation						
Opening defined benefit obligation	(2,792)	(181)	(2,973)	(3,181)	(205)	(3,386)
Exchange differences	—	(3)	(3)	—	13	13
Current service cost	(7)	(2)	(9)	(8)	(1)	(9)
Past service cost	(8)	—	(8)	—	—	—
Administration expenses	(6)	—	(6)	(9)	(1)	(10)
Interest on plan liabilities	(68)	(6)	(74)	(77)	(7)	(84)
Actuarial gains/(losses) – experience	(49)	(2)	(51)	126	6	132
Actuarial gains/(losses) – demographic	(12)	—	(12)	133	1	134
Actuarial gains/(losses) – financial	131	6	137	44	(5)	39
Contributions by employee	—	—	—	—	—	—
Other	—	—	—	(8)	—	(8)
Benefits paid	140	11	151	188	18	206
Closing defined benefit obligation	(2,671)	(177)	(2,848)	(2,792)	(181)	(2,973)

The weighted average duration of the defined benefit obligation is 16.1 years for the UK and 7.1 years for the US.

Changes in the value of the US PRMB are as follows:

All figures in £ millions	2018	2017
Opening defined benefit obligation	(67)	(77)
Exchange differences	(2)	5
Current service cost	1	1
Curtailments	11	—
Interest on plan liabilities	(2)	(2)
Actuarial gains/(losses) – experience	4	1
Actuarial gains/(losses) – demographic	—	1
Actuarial gains/(losses) – financial	2	(2)
Benefits paid	4	6
Closing defined benefit obligation	(49)	(67)

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Funding

The UK Group plan is self-administered with the plan's assets being held independently of the Group in trust. The trustee of the plan is required to act in the best interest of the plan's beneficiaries. The most recent triennial actuarial valuation for funding purposes was completed as at 1 January 2018 and this valuation revealed a technical provisions funding surplus of £163m. The plan expects to be able to provide benefits (in accordance with the plan rules) with a very low level of reliance on future funding from the Group.

Assets of the plan are divided into two elements: matching assets, which are assets that produce cash flows that can be expected to match the cash flows for a proportion of the membership, and include a liability-driven investment mandate (UK bonds, interest rate/inflation swaps and other derivative instruments), Pensioner buy-in insurance policies, inflation-linked property and infrastructure; and return seeking assets, which are assets invested with a longer-term horizon to generate the returns needed to provide the remaining expected cash flows for the beneficiaries, and include diversified growth funds, property and alternative asset classes. The plan's long-term investment strategy allocates 85% to matching assets and 15% to return seeking assets.

In February 2019, the UK Group plan purchased a further pensioner buy-in policy valued at approximately £500m with Legal & General. This is in addition to the previous buy-in policies with Aviva and Legal & General totalling £1.2bn which were purchased in 2017. As a result of this latest transaction, 95% of the UK Group plan's pensioner liabilities are now matched with buy-in policies. These transfer significant longevity risk to Aviva and Legal & General, reducing the pension risks being underwritten by the Group and providing additional security for members.

Regular contributions to the plan in respect of the defined benefit sections are estimated to be £3m for 2019.

Sensitivities

The effect of a one percentage point increase and decrease in the discount rate on the defined benefit obligation and the total pension expense is as follows:

<u>All figures in £ millions</u>	2018	
	<u>1% increase</u>	<u>1% decrease</u>
Effect:		
(Decrease)/increase in defined benefit obligation – UK Group plan	(386)	522
(Decrease)/increase in defined benefit obligation – US plan	(11)	13

The effect of members living one year more or one year less on the defined benefit obligation is as follows:

<u>All figures in £ millions</u>	2018	
	<u>One year increase</u>	<u>One year decrease</u>
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	143	(138)
Increase/(decrease) in defined benefit obligation – US plan	7	(8)

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Sensitivities continued

The effect of a half percentage point increase and decrease in the inflation rate is as follows:

<u>All figures in £ millions</u>	2018	
	<u>0.5% increase</u>	<u>0.5% decrease</u>
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	129	(114)
Increase/(decrease) in defined benefit obligation – US plan	—	—

The above sensitivity analyses are based on a change in an assumption while holding all other assumptions constant, although in practice this is unlikely to occur and changes in some assumptions may be correlated. When calculating these sensitivities, the same method has been applied to calculate the defined benefit obligation as has been applied when calculating the liability recognised in the balance sheet. This methodology is the same as prior periods.

26. Share-based payments

The Group recognised the following charges in the income statement in respect of its equity-settled share-based payment plans:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Pearson plans	37	33	22

The Group operates the following equity-settled employee option and share plans:

Worldwide Save for Shares Plan Since 1994, the Group has operated a Save-As-You-Earn plan for UK employees. In 1998, the Group introduced a Worldwide Save for Shares Plan. Under these plans, employees can save a portion of their monthly salary over periods of three or five years. At the end of this period, the employee has the option to purchase ordinary shares with the accumulated funds at a purchase price equal to 80% of the market price prevailing at the time of the commencement of the employee's participation in the plan. Options that are not exercised within six months of the end of the savings period lapse unconditionally.

Employee Stock Purchase Plan In 2000, the Group established an Employee Stock Purchase Plan which allows all employees in the US to save a portion of their monthly salary over six-month periods. At the end of the period, the employee has the option to purchase American Depository Receipts (ADRs) with their accumulated funds at a purchase price equal to 85% of the lower of the market prices prevailing at the beginning or end of the period.

Long-Term Incentive Plan The plan was first introduced in 2001, renewed again in 2006 and again in 2011. The plan consists of restricted shares. The vesting of restricted shares is normally dependent on continuing service over a three-to five-year period, and in the case of executive directors and senior management upon the satisfaction of corporate performance targets over a three-year period. These targets may be based on market and/or non-market performance criteria. Restricted shares awarded to executive directors in May 2018 and September 2017 vest dependent on relative total shareholder return, return on invested capital and adjusted earnings per share growth. Restricted shares awarded to senior management in March 2017 vest dependent on adjusted earnings per share growth. Other restricted shares awarded in 2018 and 2017 vest depending on continuing service over periods of up to three years.

Notes to the consolidated financial statements

26. Share-based payments continued

Management Incentive Plan The plan was introduced in 2017 combining the Group's Annual Incentive Plan and Long-Term Incentive Plan for senior management. The number of shares to be granted to participants is dependent on Group performance in the calendar year preceding the date of grant (on the same basis as the Annual Incentive Plan). Subsequently, the shares vest dependent on continuing service over a three year period, and additionally in the case of Pearson Executive Management upon satisfaction of non-market based performance criteria as determined by the Remuneration Committee. Restricted shares awarded as part of the 2017 Management Incentive Plan were granted in April 2018. Restricted shares awarded as part of the 2018 Management Incentive Plan will be granted in April 2019.

The number and weighted average exercise prices of share options granted under the Group's plans are as follows:

	2018		2017	
	Number of share options 000s	Weighted average exercise price £	Number of share options 000s	Weighted average exercise price £
Outstanding at beginning of year	2,981	6.84	2,978	8.14
Granted during the year	729	5.80	1,619	5.50
Exercised during the year	(70)	6.57	(9)	7.00
Forfeited during the year	(668)	7.58	(1,451)	8.04
Expired during the year	(244)	8.19	(156)	9.09
Outstanding at end of year	2,728	5.76	2,981	6.84
Options exercisable at end of year	169	11.31	350	8.18

Options were exercised regularly throughout the year. The weighted average share price during the year was £8.45 (2017: £6.71). Early exercises arising from redundancy, retirement or death are treated as an acceleration of vesting and the Group therefore recognises in the income statement the amount that otherwise would have been recognised for services received over the remainder of the original vesting period.

The options outstanding at the end of the year have weighted average remaining contractual lives and exercise prices as follows:

Range of exercise prices £	2018		2017	
	Number of share options 000s	Weighted average contractual life Years	Number of share options 000s	Weighted average contractual life Years
5–10	2,553	2.29	2,697	2.52
>10	175	0.29	284	1.24
	2,728	2.16	2,981	2.40

In 2018 and 2017, options were granted under the Worldwide Save for Shares Plan. The weighted average estimated fair value for the options granted was calculated using a Black–Scholes option pricing model.

Notes to the consolidated financial statements

26. Share-based payments continued

The weighted average estimated fair values and the inputs into the Black–Scholes model are as follows:

	2018 Weighted average	2017 Weighted average
Fair value	£ 1.88	£ 1.24
Weighted average share price	£ 7.49	£ 6.83
Weighted average exercise price	£ 5.80	£ 5.50
Expected volatility	35.78%	34.75%
Expected life	3.7 years	3.7 years
Risk-free rate	0.87%	0.20%
Expected dividend yield	5.21%	7.61%
Forfeiture rate	3.2%	3.2%

The expected volatility is based on the historical volatility of the company's share price over the previous three to seven years depending on the vesting term of the options.

The following shares were granted under restricted share arrangements:

	2018		2017	
	Number of shares 000s	Weighted average fair value £	Number of shares 000s	Weighted average fair value £
Long-Term Incentive Plan	2,907	7.55	6,453	6.61
Management Incentive Plan	2,035	7.45	—	—

The fair value of shares granted under the Long-Term Incentive Plan and the Management Incentive Plan that vest unconditionally is determined using the share price at the date of grant. The number of shares expected to vest is adjusted, based on historical experience, to account for potential forfeitures. Participants under the plan are entitled to dividends during the vesting period and therefore the share price is not discounted.

Restricted shares with a market performance condition were valued by an independent actuary using a Monte Carlo model. Restricted shares with a non-market performance condition were fair valued based on the share price at the date of grant. Non-market performance conditions are taken into consideration by adjusting the number of shares expected to vest based on the most likely outcome of the relevant performance criteria.

27. Share capital and share premium

	Number of shares 000s	Share capital £m	Share premium £m
At 1 January 2017	822,127	205	2,597
Issue of ordinary shares – share option schemes	923	—	5
Purchase of own shares	(20,996)	(5)	—
At 31 December 2017	802,054	200	2,602
Issue of ordinary shares – share option schemes	864	1	5
Purchase of own shares	(21,840)	(6)	—
At 31 December 2018	781,078	195	2,607

Notes to the consolidated financial statements

27. Share capital and share premium continued

The ordinary shares have a par value of 25p per share (2017: 25p per share). All issued shares are fully paid. All shares have the same rights.

The £300m share buyback programme announced in October 2017 was completed on 16 February 2018. In 2017, the Group's brokers purchased 21m shares at a value of £153m of which £149m had been cancelled at 31 December 2017. Cash payments of £149m had been made in respect of the purchases with the outstanding £4m settlement made at the beginning of January 2018. This £4m together with the remaining value of the buyback programme of £147m was recorded as a liability at 31 December 2017 (see note 24). A further 22m shares were purchased under the programme in 2018 (see note 37). The shares bought back have been cancelled and the nominal value of these shares transferred to a capital redemption reserve. The nominal value of shares cancelled at 31 December 2018 was £11m (2017: £5m).

The Group manages its capital to ensure that entities in the Group will be able to continue as a going concern while maximising the return to shareholders through the optimisation of the debt and equity balance.

The capital structure of the Group consists of debt (see note 18), cash and cash equivalents (see note 17) and equity attributable to equity holders of the parent, comprising issued capital, reserves and retained earnings.

The Group reviews its capital structure on a regular basis and will balance its overall capital structure through payments of dividends, new share issues as well as the issue of new debt or the redemption of existing debt in line with the financial risk policies outlined in note 19.

28. Treasury shares

	Pearson plc	
	Number of shares 000s	£m
At 1 January 2017	7,719	79
Purchase of treasury shares	—	—
Release of treasury shares	(1,725)	(18)
At 31 December 2017	5,994	61
Purchase of treasury shares	—	—
Release of treasury shares	(2,769)	(28)
At 31 December 2018	3,225	33

The Group holds Pearson plc shares in trust to satisfy its obligations under its restricted share plans (see note 26). These shares, representing 0.4% (2017: 0.8%) of called-up share capital, are treated as treasury shares for accounting purposes and have a par value of 25p per share.

The nominal value of Pearson plc treasury shares amounts to £0.8m (2017: £1.5m). Dividends on treasury shares are waived.

At 31 December 2018, the market value of Pearson plc treasury shares was £30m (2017: £44m).

Notes to the consolidated financial statements

29. Other comprehensive income

All figures in £ millions	2018					
	Attributable to equity holders of the company				Non-controlling interest	Total
	Fair value reserve	Translation reserve	Retained earnings	Total		
Items that may be reclassified to the income statement						
Net exchange differences on translation of foreign operations – Group	—	91	—	91	—	91
Net exchange differences on translation of foreign operations – associates	—	(1)	—	(1)	—	(1)
Currency translation adjustment disposed	—	(4)	—	(4)	—	(4)
Attributable tax	—	—	(4)	(4)	—	(4)
Items that are not reclassified to the income statement						
Fair value gain on other financial assets	8	—	—	8	—	8
Attributable tax	—	—	—	—	—	—
Remeasurement of retirement benefit obligations – Group	—	—	22	22	—	22
Remeasurement of retirement benefit obligations – associates	—	—	3	3	—	3
Attributable tax	—	—	9	9	—	9
Other comprehensive income/(expense) for the year	8	86	30	124	—	124
All figures in £ millions	2017					
	Attributable to equity holders of the company				Non-controlling interest	Total
	Fair value reserve	Translation reserve	Retained earnings	Total		
Items that may be reclassified to the income statement						
Net exchange differences on translation of foreign operations – Group	—	(158)	—	(158)	—	(158)
Net exchange differences on translation of foreign operations – associates	—	(104)	—	(104)	—	(104)
Currency translation adjustment disposed	—	(51)	—	(51)	—	(51)
Attributable tax	—	—	9	9	—	9
Items that are not reclassified to the income statement						
Fair value gain on other financial assets	13	—	—	13	—	13
Attributable tax	—	—	(4)	(4)	—	(4)
Remeasurement of retirement benefit obligations – Group	—	—	175	175	—	175
Remeasurement of retirement benefit obligations – associates	—	—	7	7	—	7
Attributable tax	—	—	(42)	(42)	—	(42)
Other comprehensive income/(expense) for the year	13	(313)	145	(155)	—	(155)

Notes to the consolidated financial statements

29. Other comprehensive income continued

All figures in £ millions	2016					
	Attributable to equity holders of the company				Non-controlling interest	Total
	Fair value reserve	Translation reserve	Retained earnings	Total		
Items that may be reclassified to the income statement						
Net exchange differences on translation of foreign operations – Group	—	909	—	909	1	910
Net exchange differences on translation of foreign operations – associates	—	3	—	3	—	3
Currency translation adjustment disposed	—	—	—	—	—	—
Attributable tax	—	—	(5)	(5)	—	(5)
Items that are not reclassified to the income statement						
Fair value gain on other financial assets	—	—	—	—	—	—
Attributable tax	—	—	—	—	—	—
Remeasurement of retirement benefit obligations – Group	—	—	(268)	(268)	—	(268)
Remeasurement of retirement benefit obligations – associates	—	—	(8)	(8)	—	(8)
Attributable tax	—	—	58	58	—	58
Other comprehensive income/(expense) for the year	<u>—</u>	<u>912</u>	<u>(223)</u>	<u>689</u>	<u>1</u>	<u>690</u>

30. Business combinations

There were no significant acquisitions in 2018 or 2017. There were no material adjustments to prior year acquisitions. The net cash outflow relating to acquisitions in the year is shown below.

All figures in £ millions	2018	2017	2016
Cash flow on acquisitions			
Deferred payments for prior year acquisitions and other items	(5)	(11)	(7)
Cash – current year acquisitions	—	—	(7)
Acquisition costs and other acquisition liabilities paid	—	—	(1)
Net cash outflow	<u>(5)</u>	<u>(11)</u>	<u>(15)</u>

Notes to the consolidated financial statements

31. Disposals

In March 2018, the Group completed the sale of its Wall Street English language teaching business (WSE) resulting in a pre-tax profit on sale of £207m. Tax on the disposal is estimated at £6m. WSE was classified as held for sale on the balance sheet at 31 December 2017 (see note 32). In May 2018 the Group disposed of the equity interest in UTEL, the online University partnership in Mexico realising a gain of £19m before tax of £2m.

All figures in £ millions	Notes	2018			2017	2016
		WSE	UTEL	Other	Total	Total
Disposal of subsidiaries and associates						
Property, plant and equipment		(17)	—	—	(17)	(7)
Intangible assets		(15)	—	(2)	(17)	(9)
Investments in joint ventures and associates		—	(3)	—	(3)	(352)
Net deferred income tax assets		—	—	—	—	(3)
Intangible assets – pre-publication		(8)	—	—	(8)	(1)
Inventories		(1)	—	—	(1)	(2)
Trade and other receivables		(30)	—	—	(30)	(16)
Current income tax receivable		—	—	—	—	(5)
Cash and cash equivalents (excluding overdrafts)		(119)	—	—	(119)	(13)
Net deferred income tax liabilities		16	—	—	16	—
Trade and other liabilities		171	—	1	172	34
Provisions for other liabilities and charges	23	—	—	1	1	—
Cumulative currency translation adjustment	29	4	—	—	4	51
Net (assets)/liabilities disposed		1	(3)	—	(2)	(323)
Cash received		212	22	9	243	468
Deferred proceeds		—	—	2	2	—
Fair value of financial asset acquired		—	—	3	3	—
Costs		(6)	—	(10)	(16)	(17)
Gain on disposal		207	19	4	230	128

All figures in £ millions	2018	2017	2016
Cash flow from disposals			
Cash – current year disposals	243	468	11
Cash and cash equivalents disposed	(119)	(13)	(9)
Costs and other disposal liabilities paid	(23)	(25)	(52)
Net cash inflow	101	430	(50)
Analysed as:			
Cash inflow/ from sale of subsidiaries	83	19	(54)
Cash inflow from sale of joint ventures and associates	18	411	4

Notes to the consolidated financial statements

32. Held for sale

Held for sale assets and liabilities in 2018 relate to the K12 school courseware business in the US (K12). Following the decision in 2017 to sell both the Wall Street English language teaching business (WSE) and the K12 business, the assets and liabilities of those businesses were classified as held for sale on the balance sheet at 31 December 2017. During 2018 WSE was sold and the K12 business remains on the balance sheet as a held for sale asset prior to the disposal announced in February 2019 (see note 37).

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u> <u>Total</u>	<u>2017</u> <u>Total</u>
Non-current assets			
Property, plant and equipment		—	16
Intangible assets		168	181
Deferred income tax assets		98	68
Trade and other receivables		25	27
		291	292
Current assets			
Intangible assets – pre-publication		242	247
Inventories		55	46
Trade and other receivables		60	48
Cash and cash equivalents (excluding overdrafts)	17	—	127
		357	468
Assets classified as held for sale		648	760
Non-current liabilities			
Deferred income tax liabilities		—	(2)
Other liabilities		(371)	(284)
		(371)	(286)
Current liabilities			
Trade and other liabilities		(202)	(302)
		(202)	(302)
Liabilities classified as held for sale		(573)	(588)
Net assets classified as held for sale		75	172

Goodwill is allocated to the held for sale businesses on a relative fair value basis where these businesses form part of a larger cash generating unit (CGU). The goodwill allocated to the K12 business was reassessed at 31 December 2018.

Notes to the consolidated financial statements

33. Cash generated from operations

<u>All figures in £ millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Profit		590	408	(2,335)
Adjustments for:				
Income tax		(92)	13	(222)
Depreciation	10	66	90	95
Amortisation and impairment of acquired intangibles and goodwill	11	99	138	2,733
Amortisation of software	11	88	85	84
Net finance costs	6	55	30	60
Charges relating to GMP equalisation		8	—	—
Share of results of joint ventures and associates	12	(44)	(78)	(97)
Profit on disposal of subsidiaries, associates, investments and fixed assets		(315)	(116)	40
Net foreign exchange adjustment from transactions		28	(26)	43
Share-based payment costs	26	37	33	22
Pre-publication		(37)	(35)	(19)
Inventories		(10)	24	17
Trade and other receivables		(15)	133	156
Trade and other liabilities		35	6	61
Retirement benefit obligations		(9)	(232)	(106)
Provisions for other liabilities and charges		63	(11)	(10)
Net cash generated from operations		547	462	522

Net cash generated from operations is translated at an exchange rate approximating the rate at the date of cash flow. The difference between this rate and the average rate used to translate profit gives rise to a currency adjustment in the reconciliation between net profit and net cash generated from operations. This adjustment reflects the timing difference between recognition of profit and the related cash receipts or payments.

In the cash flow statement, proceeds from sale of property, plant and equipment comprise:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Net book amount	41	12	9
Profit/(loss) on sale of property, plant and equipment	87	(12)	(5)
Proceeds from sale of property, plant and equipment ...	128	—	4

Notes to the consolidated financial statements

33. Cash generated from operations continued

The movements in the Group's current and non-current borrowings are as follows:

<u>All figures in £ millions</u>	<u>2017</u>	<u>Financing cash flows</u>	<u>Foreign exchange movements</u>	<u>Fair value and other movements</u>	<u>2018</u>
Financial liabilities					
Non-current borrowings	1,066	(441)	10	8	643
Current borrowings	4	(1)	22	—	25
Total	<u>1,070</u>	<u>(442)</u>	<u>32</u>	<u>8</u>	<u>668</u>
	<u>2016</u>	<u>Financing cash flows</u>	<u>Foreign exchange movements</u>	<u>Fair value and other movements</u>	<u>2017</u>
Financial liabilities					
Non-current borrowings	2,517	(1,292)	(149)	(10)	1,066
Current borrowings	9	(7)	(1)	3	4
Total	<u>2,526</u>	<u>(1,299)</u>	<u>(150)</u>	<u>(7)</u>	<u>1,070</u>
	<u>2015</u>	<u>Financing cash flows</u>	<u>Foreign exchange movements</u>	<u>Fair value and other movements</u>	<u>2016</u>
Financial liabilities					
Non-current borrowings	2,106	(3)	416	(2)	2,517
Current borrowings	247	(248)	5	5	9
Total	<u>2,353</u>	<u>(251)</u>	<u>421</u>	<u>3</u>	<u>2,526</u>

Non-current borrowings include bonds, derivative financial instruments and finance leases. Current borrowings include loans repayable within one year and finance leases, but exclude overdrafts classified within cash and cash equivalents.

34. Contingencies

There are contingent Group liabilities that arise in the normal course of business in respect of indemnities, warranties and guarantees in relation to former subsidiaries and in respect of guarantees in relation to subsidiaries, joint ventures and associates. In addition, there are contingent liabilities of the Group in respect of unsettled or disputed tax liabilities, legal claims, contract disputes, royalties, copyright fees, permissions and other rights. None of these claims are expected to result in a material gain or loss to the Group.

As previously reported, on 24 November 2017 the European Commission published an opening decision that the United Kingdom controlled foreign company group financing partial exemption ("FCPE") constitutes State Aid. A press release on the final decision was published on 2 April 2019, stating that the FCPE is partly justified. The full decision has not yet been published. The Group has benefited from the FCPE in 2018 and prior years by approximately £116m. The Group is in the process of assessing the impact of the decision. No provision is currently recorded.

35. Commitments

At the balance sheet date there were no commitments for capital expenditure contracted for but not yet incurred.

Notes to the consolidated financial statements

35. Commitments continued

The Group leases various offices and warehouses under non-cancellable operating lease agreements. The leases have varying terms and renewal rights. The Group also leases various plant and equipment under operating lease agreements, also with varying terms. Lease expenditure charged to the income statement was £128m (2017: £178m).

The future aggregate minimum lease payments in respect of operating leases are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Not later than one year	143	156
Later than one year and not later than two years	130	139
Later than two years and not later than three years	115	121
Later than three years and not later than four years	101	100
Later than four years and not later than five years	91	86
Later than five years	595	599
	<u>1,175</u>	<u>1,201</u>

In the event that the Group has excess capacity in its leased offices and warehouses it will enter into sub-lease contracts in order to offset costs. The future aggregate minimum sub-lease payments expected to be received under non-cancellable sub-leases are as follows:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Not later than one year	51	45
Later than one year and not later than two years	44	45
Later than two years and not later than three years	41	40
Later than three years and not later than four years	39	35
Later than four years and not later than five years	35	33
Later than five years	124	138
	<u>334</u>	<u>336</u>

36. Related party transactions

Joint ventures and associates

Amounts advanced to joint ventures and associates during the year and at the balance sheet date are set out in note 12.

Key management personnel

Key management personnel are deemed to be the members of the Pearson executive. It is this Committee which had responsibility for planning, directing and controlling the activities of the Group in 2018. Key management personnel compensation is disclosed below:

<u>All figures in £ millions</u>	<u>2018</u>	<u>2017</u>
Short-term employee benefits	6	12
Retirement benefits	1	1
Share-based payment costs	7	2
Total	<u>14</u>	<u>15</u>

Notes to the consolidated financial statements

36. Related party transactions continued

Key management personnel continued

There were no other material related party transactions. No guarantees have been provided to related parties.

37. Events after the balance sheet date

On 29 March 2019, the Group completed the sale of the US K12 courseware business to Nexus Capital Management LP for headline consideration of \$250m comprising an initial cash payment of \$25m and an unconditional vendor note for \$225m expected to be repaid in three to seven years. Following the repayment of the vendor note, the Group is entitled to 20% of all future cash flows to equity holders and 20% of net proceeds if the business is sold.

In February 2019, the UK Group pension plan purchased a further pensioner buy-in policy valued at approximately £500m with Legal & General. As a result of this latest transaction, 95% of the UK Group plan's pensioner liabilities are now matched with buy-in policies which significantly reduces longevity risk of the Group. The buy-in will be accounted for in 2019 and is expected to reduce the retirement benefit asset on the balance sheet but is not expected to have a material impact on the income statement.

In March 2019, the Group executed market tenders to repurchase €55m of its €500m 1.875% notes due 2021 of which €250m were outstanding at 31 December 2018. In addition, the Group also announced the refinancing of its bank facility, reducing its size to \$1.19bn and extending its maturity date to February 2024.

Penguin Random House Venture Combined Financial Statements

Report of Independent Auditors

To Penguin Random House LLC, Wilmington (USA), and Penguin Random House Ltd, London (UK)

We have audited the accompanying combined financial statements of Penguin Random House Venture as described in note 1 to these combined financial statements which comprise the combined balance sheets as of December 31, 2018, 2017 and 2016, and the related combined income statements, combined statements of comprehensive income, combined statements of cash flows and combined statements of changes in equity and the notes to the combined financial statements for the years then ended.

Management's Responsibility for the Combined Financial Statements

Management of Penguin Random House LLC, New York City (US), and Penguin Random House Ltd, London (UK), is responsible for the preparation and fair presentation of the combined financial statements in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB); this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the combined financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the combined financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combined financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the financial position of Penguin Random House Venture as of December 31, 2018, 2017 and 2016, and the results of its operations and its cash flows for the years then ended in accordance with International Financial Reporting Standards as issued by the International Accounting Standards Board (IASB).

Emphasis of matter

We draw attention to the fact that, as described in note 1 to the combined financial statements, the Penguin Random House Venture included in the combined financial statements has not operated as a separate group of companies. These combined financial statements are, therefore, not necessarily indicative of results that would

have occurred if the Penguin Random House Venture had operated as a separate group of companies during the years presented or of future results of the Penguin Random House Venture. Our opinion is not modified with respect to this matter.

Bielefeld (Germany), March 26, 2019

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

/s/ Christian Landau
Wirtschaftsprüfer
(German Public Auditor)

/s/ ppa. Michael Kleffmann
Wirtschaftsprüfer
(German Public Auditor)

Penguin Random House Venture Combined Financial Statements

COMBINED FINANCIAL STATEMENTS

Combined Income Statement

<u>in € millions</u>	Notes	<u>2018</u>	<u>2017</u>	<u>2016</u>
Revenues	1	3,134	3,075	3,100
Other operating income	2	31	33	56
Cost of materials	3	(616)	(630)	(679)
Royalties	16	(591)	(631)	(626)
Personnel costs	4	(705)	(715)	(723)
Amortization/depreciation, impairment and reversals on intangible assets and property, plant and equipment	5	(71)	(75)	(76)
Other operating expenses	6	(791)	(655)	(648)
Results from investments accounted for using the equity method	12	(2)	—	—
Impairment and reversals on investments accounted for using the equity method	12	—	(10)	—
Results from financial assets		n/a	(1)	—
Results from disposals of investments		6	2	—
EBIT (earnings before interest and taxes)		395	393	404
Interest income	7	1	3	1
Interest expenses	7	(45)	(13)	(4)
Other financial income	8	3	1	2
Other financial expenses	8	(6)	(8)	(3)
Financial result		(47)	(17)	(4)
Earnings before taxes		348	376	400
Income tax expense	9	(34)	(10)	(27)
Group profit or loss		314	366	373
attributable to:				
Penguin Random House shareholders		314	366	373
Non-controlling interests		—	—	—

As of January 1, 2018, the new accounting standards IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers were applied for the first time. In accordance with the transitional provisions of IFRS 9 and IFRS 15, prior year comparatives have not been adjusted. Further details are presented in the section “Impact of New Financial Reporting Standards.”

Penguin Random House Venture Combined Financial Statements

Combined Statement of Comprehensive Income

<u>in € millions</u>	<u>Notes</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Group profit or loss		314	366	373
Items that will not be reclassified subsequently to profit or loss				
Remeasurement component of defined benefit plans		21	20	(21)
Changes in fair value of equity instruments		(2)	n/a	n/a
Share of other comprehensive income of investments accounted for using the equity method		—	—	—
Items that will be reclassified subsequently to profit or loss when specific conditions are met				
Exchange differences				
– changes recognized in other comprehensive income		14	(161)	(19)
– reclassification adjustments to profit or loss		—	—	—
Cash flow hedges				
– changes in fair value recognized in other comprehensive income		1	(1)	(1)
– reclassification adjustments to profit or loss		(1)	—	—
Share of other comprehensive income of investments accounted for using the equity method		(1)	(2)	11
Other comprehensive income net of tax	18	32	(144)	(30)
Group total comprehensive income		346	222	343
attributable to:				
Penguin Random House shareholders		346	222	344
Non-controlling interests		—	—	(1)

As of January 1, 2018, the new accounting standards IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers were applied for the first time. In accordance with the transitional provisions of IFRS 9 and IFRS 15, prior year comparatives have not been adjusted. Further details are presented in the section “Impact of New Financial Reporting Standards.”

Penguin Random House Venture Combined Financial Statements

Combined Balance Sheet

<u>in € millions</u>	<u>Notes</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Assets				
Non-current assets				
Goodwill	10	835	815	859
Other intangible assets	10	351	380	446
Property, plant and equipment	11	152	150	169
Investments accounted for using the equity method	12	9	12	25
Other financial assets	13	9	9	7
Trade and other receivables	15	—	4	5
Other non-financial assets	16	377	282	295
Deferred tax assets	9	37	42	31
		<u>1,770</u>	<u>1,694</u>	<u>1,837</u>
Current assets				
Inventories	14	279	253	263
Trade and other receivables	15	1,113	777	734
Other financial assets	13	4	1	3
Other non-financial assets	16	477	430	452
Current income tax receivables		11	16	13
Cash and cash equivalents	17	195	376	312
		<u>2,079</u>	<u>1,853</u>	<u>1,777</u>
Assets held for sale		—	—	9
		<u>3,849</u>	<u>3,547</u>	<u>3,623</u>
Equity and liabilities				
Equity				
Combined shareholders' equity	18	1,015	979	2,183
Non-controlling interests		3	3	3
		<u>1,018</u>	<u>982</u>	<u>2,186</u>
Non-current liabilities				
Provisions for pensions and similar obligations	19	21	24	47
Other provisions	20	41	29	27
Deferred tax liabilities	9	22	19	17
Financial debt	21	920	666	1
Trade and other payables	22	113	91	114
Other non-financial liabilities	22	15	32	32
		<u>1,132</u>	<u>861</u>	<u>238</u>
Current liabilities				
Other provisions	20	29	20	17
Financial debt	21	289	438	103
Trade and other payables	22	1,222	1,107	916
Other non-financial liabilities	22	140	124	145
Current income tax payables		19	15	16
		<u>1,699</u>	<u>1,704</u>	<u>1,197</u>
Liabilities related to assets held for sale		—	—	2
		<u>3,849</u>	<u>3,547</u>	<u>3,623</u>

As of January 1, 2018, the new accounting standards IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers were applied for the first time. In accordance with the transitional provisions of IFRS 9 and IFRS 15, prior year comparatives have not been adjusted. Further details are presented in the section “Impact of New Financial Reporting Standards.”

Penguin Random House Venture Combined Financial Statements

Combined Statement of Cash Flows

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
EBIT (earnings before interest and taxes)	395	393	404
Taxes paid	(16)	(20)	(20)
Depreciation and write-ups of non-current assets	71	86	76
Results from disposals of investments	(6)	(2)	—
Change in provisions for pensions and similar obligations	10	8	10
Change in other provisions	10	6	21
Contributions to defined benefit plans	(13)	(16)	(17)
Change in net working capital	(85)	(138)	(41)
Other effects	(14)	(11)	(15)
Cash flow from operating activities	<u>352</u>	<u>306</u>	<u>418</u>
Investments in:			
– intangible assets	(10)	(12)	(15)
– property, plant and equipment	(26)	(22)	(15)
– financial assets	—	(4)	(2)
– purchase prices for consolidated investments (net of acquired cash)	(2)	(40)	(1)
Disposals of subsidiaries and other business units	9	4	6
Disposals of other fixed assets	3	1	1
Cash flow from investing activities	<u>(26)</u>	<u>(73)</u>	<u>(26)</u>
Proceeds from other financial debt	497	1,277	188
Redemption of other financial debt	(433)	(207)	(231)
Interest paid	(48)	(8)	(7)
Interest received	3	3	1
Dividends to Penguin Random House shareholders	(536)	(1,206)	(317)
Change in equity	—	9	12
Cash flow from financing activities	<u>(517)</u>	<u>(132)</u>	<u>(354)</u>
Change in cash and cash equivalents	(191)	101	38
Exchange rate effects and other changes in cash and cash equivalents	10	(39)	(18)
Cash and cash equivalents 1/1	<u>376</u>	<u>314</u>	<u>294</u>
Cash and cash equivalents 12/31	<u>195</u>	<u>376</u>	<u>314</u>
Less cash and cash equivalents included within assets held for sale	—	—	(2)
Cash and cash equivalents 12/31 (according to the combined balance sheet)	<u><u>195</u></u>	<u><u>376</u></u>	<u><u>312</u></u>

As of January 1, 2018, the new accounting standards IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers were applied for the first time. In accordance with the transitional provisions of IFRS 9 and IFRS 15, prior year comparatives have not been adjusted. Further details are presented in the section “Impact of New Financial Reporting Standards.”

Details on the cash flow statement are presented in note 25 “Statement of Cash Flows.”

Penguin Random House Venture Combined Financial Statements

Combined Statement of Changes in Equity

in € millions	Combined equity, membership capital and combined retained earnings	Accumulated other comprehensive income ¹⁾				Share of other comprehensive income of investments accounted for using the equity method	Combined shareholders' equity	Non-controlling interests	Total
		Exchange differences	Cash flow hedges	Fair value reserve					
Balance as of 1/1/2016	1,860	287	2	n/a	(6)	2,143	4	2,147	
Group profit or loss	373	—	—	n/a	—	373	—	373	
Other comprehensive income	(21)	(18)	(1)	n/a	11	(29)	(1)	(30)	
Group total comprehensive income	352	(18)	(1)	n/a	11	344	(1)	343	
Dividend distributions	(317)	—	—	n/a	—	(317)	—	(317)	
Contributions by owners ²⁾	12	—	—	n/a	—	12	—	12	
Equity transactions with shareholders	(305)	—	—	n/a	—	(305)	—	(305)	
Other changes	1	—	—	n/a	—	1	—	1	
Balance as of 12/31/2016	1,908	269	1	n/a	5	2,183	3	2,186	
Balance as of 1/1/2017	1,908	269	1	n/a	5	2,183	3	2,186	
Group profit or loss	366	—	—	n/a	—	366	—	366	
Other comprehensive income	20	(161)	(1)	n/a	(2)	(144)	—	(144)	
Group total comprehensive income	386	(161)	(1)	n/a	(2)	222	—	222	
Dividend distributions ³⁾	(1,435)	—	—	n/a	—	(1,435)	—	(1,435)	
Contributions by owners ²⁾	9	—	—	n/a	—	9	—	9	
Equity transactions with shareholders	(1,426)	—	—	n/a	—	(1,426)	—	(1,426)	
Other changes	—	—	—	n/a	—	—	—	—	
Balance as of 12/31/2017	868	108	—	n/a	3	979	3	982	
Balance as of 1/1/2018	868	108	—	—	3	979	3	982	
Group profit or loss	314	—	—	—	—	314	—	314	
Other comprehensive income	21	14	—	(2)	(1)	32	—	32	
Group total comprehensive income	335	14	—	(2)	(1)	346	—	346	
Dividend distributions	(310)	—	—	—	—	(310)	—	(310)	
Contributions by owners	—	—	—	—	—	—	—	—	
Equity transactions with shareholders	(310)	—	—	—	—	(310)	—	(310)	
Other changes	(2)	—	—	2	—	—	—	—	
Balance as of 12/31/2018	891	122	—	—	2	1,015	3	1,018	

As of January 1, 2018, the new financial reporting standards IFRS 9 Financial Instruments and IFRS 15 Revenue from Contracts with Customers were applied for the first time. In accordance with the transitional provisions of IFRS 9 and IFRS 15, prior year comparatives have not been adjusted. Further details are presented in the section “Impact of New Financial Reporting Standards.”

- 1) As of December 31, 2018, and as of December 31, 2017, no assets were classified as held for sale in accordance with IFRS 5. As of December 31, 2016, no significant amounts related to assets classified as held for sale.
- 2) The amount related mainly to capital contributions. Further information is presented in note 26 “Related Party Disclosures.”
- 3) In the financial year 2017, the dividend distributions to Penguin Random House shareholders resulted from special dividend distributions in connection with the acquisition of another 22 percent interest in Penguin Random House by Bertelsmann from Pearson. Further details are presented in the section “Background.”

Penguin Random House Venture Combined Financial Statements

Notes

General Principles

Background

Penguin Random House is a trade book publishing company, which operates in the core business fields of print and digital trade book publishing with nearly 275 imprints across six continents. Each year Penguin Random House publishes about 15,000 new titles and sells around 600 million print books, e-books and audiobooks. Penguin Random House sells directly to bookshops and through wholesalers. Retail bookshops normally maintain relationships with both publishers and wholesalers and use the channel that best serves the specific requirements of an order. Penguin Random House also sells through online retailers such as Amazon.com, through its own websites and direct to the customer via digital sales agents.

The Penguin Random House Venture (hereafter referred to as “Penguin Random House” or “Group”) was established when Bertelsmann SE & Co. KGaA (hereafter referred to as “Bertelsmann” or “Bertelsmann Group”) and Pearson plc (hereafter referred to as “Pearson”) combined their respective trade publishing groups, Random House (with exception of the German-speaking publishing business) and Penguin Books Group. The transaction agreed between Bertelsmann and Pearson in October 2012 for the combination of their trade publishing groups was concluded on July 1, 2013. Initially, controlling shareholder Bertelsmann held a 53 percent interest in this new publishing company Penguin Random House, with non-controlling interests Pearson holding 47 percent. On October 5, 2017, Bertelsmann acquired in addition to its existing interest another 22 percent of Penguin Random House from Pearson. The remaining 25 percent share remains with Pearson. As part of the agreement with Pearson, Bertelsmann executed different loans in US dollars to Penguin Random House, which were mainly intended to finance special dividend distributions of €1,021 million to the shareholders. Thereof, a special dividend distribution of €591 million related to Bertelsmann (of which €419 million was paid in the financial year 2017 and a further €172 million was paid in the financial year 2018) and of €430 million related to Pearson (of which €373 million was paid in the financial year 2017 and a further €57 million was paid in the financial year 2018). As of December 31, 2018, controlling shareholder Bertelsmann holds a 75 percent interest in Penguin Random House, with non-controlling interests Pearson holding 25 percent.

Description of Penguin Random House

Legally Penguin Random House consists of two legal groups: Penguin Random House LLC (hereafter referred to as “PRH LLC”), a Delaware limited liability company registered in Wilmington, Delaware, United States, and headquartered in New York City, New York, United States, and Penguin Random House Limited (hereafter referred to as “PRH Limited”), a company limited by shares, headquartered in London, United Kingdom. PRH LLC bundles all of the book publishing units in the United States, while PRH Limited comprises all other book publishing units (in Canada, Australia, New Zealand, India, South Africa, the United Kingdom, Spain, Latin America and in the Asian region, among others). Despite the separate legal structures of PRH LLC and PRH Limited, Bertelsmann and Pearson regard Penguin Random House as one business unit as it is managed together.

For periods up to and including the financial year ended December 31, 2018, both PRH LLC and PRH Limited prepared special purpose financial information comprising consolidated financial statements for each legal group due to IAS 28 accounting purposes of the minority shareholder. The latter consists of the income statement, statement of comprehensive income, balance sheet, statement of changes in equity and selected explanatory notes that did not represent a complete set of consolidated financial statements in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board. However, it is technically possible to produce Combined Financial Statements for PRH LLC and PRH Limited in accordance with IFRS. The combined statement of changes in equity reflects the LLC and Limited legal structures, respectively.

Penguin Random House Venture Combined Financial Statements

Notes continued

Description of Penguin Random House continued

The ultimate parent company of Penguin Random House preparing consolidated financial statements, Bertelsmann SE & Co. KGaA, includes in its consolidated financial statements those of Penguin Random House. Bertelsmann SE & Co. KGaA is a company incorporated under German law whose registered office is established at Carl-Bertelsmann-Strasse 270, D-33311 Gütersloh, Germany. Consolidated financial statements for Bertelsmann SE & Co. KGaA can be obtained at its registered office.

Basis of Preparation of the Combined Financial Statements

These Combined Financial Statements have been prepared pursuant to Rule 3-09 of SEC Regulation S-X for purposes of a filing on Form 20-F of Pearson plc as Penguin Random House is an equity investee of Pearson plc. Due to the governance structure, the shareholder arrangements between Pearson and Bertelsmann, various operational matters, and the disclosures that Pearson and Bertelsmann provide to their respective shareholders, Penguin Random House has prepared Combined Financial Statements as these are generally appropriate for entities under common management.

The accompanying Penguin Random House Combined Financial Statements are prepared in accordance with International Financial Reporting Standards (IFRS) as issued by the International Accounting Standards Board (IASB) and the related interpretations (IFRIC) of the IFRS Interpretations Committee (IFRS IC). Penguin Random House uses one set of global accounting policies, which are IFRS compliant. The principal accounting policies adopted in the preparation of the Combined Financial Statements are set out in the section "Accounting and Measurement Policies." These policies have been consistently applied to all the years presented, unless otherwise stated. The Combined Financial Statements were authorized for issue by Markus Dohle (CEO Penguin Random House) and James Johnston (CFO Penguin Random House) on March 22, 2019.

The IFRS provide no guidelines for the preparation of combined financial statements, which are therefore subject to the rules given in IAS 8.12. This article requires consideration of the most recent pronouncements of other standard-setting bodies, other financial reporting requirements and recognized industry practices. For the purposes of the Combined Financial Statements, all income, expenses, assets, liabilities and other comprehensive income were directly included in the Combined Financial Statements. As the legal perspective was applied, the taxes related to the transparent entities of the legal group PRH LLC, which are incurred on the level of the shareholders, were not accounted for in the Combined Financial Statements. In addition, it was agreed as a general principle by the shareholders that each shareholder shall assume or retain all liabilities relating to covered employee benefits provided under the covered plans that arise on or prior to closing and that Penguin Random House should assume or retain all liabilities relating to covered employee benefits that arise after the closing and relate to any continuing employee. For processing reasons, parts of the employee matter liabilities that arise prior to closing remain legally within Penguin Random House and payments for these liabilities by Penguin Random House are part of a reimbursement mechanism by the shareholders. Bertelsmann Group supports Penguin Random House with administrative services. Those services have been charged by Bertelsmann Group to Penguin Random House and are therefore included in the Combined Financial Statements and in the related party disclosures (note 26).

Although the functional currencies of PRH LLC and PRH Limited are the US dollar and British pound, respectively, the special purpose financial information of PRH LLC and PRH Limited is always prepared in euros for the minority shareholder. Due to consistency of presentation, Penguin Random House also considers it appropriate to prepare the Combined Financial Statements in euros. Therefore, unless otherwise stated, all amounts in the Combined Financial Statements are presented in millions of euros (€ million).

Penguin Random House Venture Combined Financial Statements

Notes continued

Basis of Preparation of the Combined Financial Statements continued

The Combined Financial Statements have been prepared under the historical cost convention except for the following material items in the combined balance sheet:

- Equity instruments at fair value through other comprehensive income are measured at fair value.
- Derivative financial instruments are measured at fair value.
- Non-derivative financial instruments at fair value through profit or loss are measured at fair value.
- The defined benefit assets and liabilities are measured in accordance with IAS 19.

For the sake of clarity, certain items are aggregated in the combined income statement, combined statement of comprehensive income, combined balance sheet, combined statement of cash flows and combined statement of changes in equity. These items are disclosed and explained in greater detail in the notes.

Impact of New Financial Reporting Standards Effective from January 1, 2018

With the exception of the new financial reporting standards IFRS 9 "Financial Instruments" and IFRS 15 "Revenue from Contracts with Customers," the first-time application of new financial reporting standards and interpretations had no material impact on Penguin Random House.

IFRS 9 "Financial Instruments" replaces the provisions of IAS 39 concerning recognition, classification and measurement of financial assets and financial liabilities, derecognition of financial instruments, impairment of financial assets, and hedge accounting. The new financial reporting standard introduces new rules for classifying and measuring financial assets and includes new rules for impairment of financial instruments. Details on the accounting and measurement policies applied to financial instruments in accordance with IFRS 9 since January 1, 2018, are presented in the section "Accounting and Measurement Policies." Application of the standard is mandatory for financial years beginning on or after January 1, 2018. Penguin Random House makes use of the exception not to adjust prior year comparatives. As a result, only the Consolidated Opening Balance as of January 1, 2018, has been adjusted.

For Penguin Random House, the new requirements of IFRS 9 primarily concern the impairment of financial assets, in particular the impairment of trade receivables. From January 1, 2018, onwards, Penguin Random House uses a risk scoring model based on qualitative and quantitative risk factors for its major customers. For insignificant customers impairment matrices are used to determine the loss allowances on trade receivables on the basis of historic bad debt losses, maturity bands and expected credit losses reflecting the ability of the customers to settle the receivables. The impairment matrices have been created for business-unit-specific groups of receivables, each with similar default patterns. In addition, separate risk assessments are performed. Due to the changed calculation of loss allowances, there was only an immaterial effect, which was recognized in combined retained earnings as of January 1, 2018. Beyond that, there was no material effect on the classification and thus on the measurement of financial instruments. In accordance with the IFRS 9 classification and measurement approach for financial assets, there are three classification categories for financial assets in the Group:

- at amortized cost,
- at fair value with changes in fair value through profit or loss (FVTPL) and
- at fair value with changes in fair value through other comprehensive income (FVOCI).

The analysis of debt instruments, consisting of mainly trade receivables and other receivables, indicated that, in the vast majority of cases, these were held in order to collect the contractual cash flows representing exclusively

Penguin Random House Venture Combined Financial Statements

Notes continued

Impact of New Financial Reporting Standards Effective from January 1, 2018 continued

principal and interest payments. Thus, the majority of the debt instruments continues to be measured at amortized cost except for certain debt instruments where the contractual cash flows do not represent exclusively principal and interest payments, in which case IFRS 9 requires a measurement at fair value. As of December 31, 2017, financial assets totaling €2 million were classified as available for sale and measured at cost. They were individually and in aggregate immaterial for the Group. With application of IFRS 9 as of January 1, 2018, these financial assets are accounted for at fair value through other comprehensive income. As changes in fair value are recognized in other comprehensive income for these instruments, they are no longer recycled to the income statement when these instruments are sold. The first-time application of IFRS 9 had no impact on the classification and measurement of financial liabilities. No material impacts resulted from the new regulations for hedge accounting.

IFRS 15 “Revenue from Contracts with Customers” includes new comprehensive regulations for the recognition of revenue that are independent of a specific industry or transaction. The new standard replaces the risk and reward approach with a contract-based five-step model. In addition to substantially more extensive application guidance for the accounting treatment of revenue from contracts with customers, there are more detailed disclosure requirements in the notes. Application of the standard is mandatory for financial years beginning on or after January 1, 2018. The modified retrospective method was used for the transition to IFRS 15. For its first-time application, Penguin Random House has applied the expedients provided in the standard for the modified retrospective method. The immaterial cumulative effect of the first-time application as of January 1, 2018, was recognized in combined retained earnings. Prior year comparatives were not adjusted. The Group has not restated contracts which have been modified prior to January 1, 2018. Instead, PRH has reflected the aggregate effect of all of the historic modifications for contracts still in force after January 1, 2018 when identifying the satisfied and unsatisfied performance obligations, determining the transaction price and allocating the transaction price to the satisfied and unsatisfied performance obligations. Further Penguin Random House applied this standard only to contracts that were not completed contracts at the date of initial application. Under IFRS 15 expected returns are no longer offset with trade receivables, but a refund liability for the expected refunds to customers is recognized as adjustment to revenue in the balance sheet position “Trade and other payables.”

As a result of the accounting treatment total assets increased by €305 million as of January 1, 2018. Return assets, if any, are presented as non-financial assets rather than in inventory.

With regard to certain digital products presentation of revenue and expenses change as a result of the new standard. Previously, Penguin Random House recognized its revenue at amount to which Penguin Random House expected to be entitled from the intermediary (that is, amount from the end customer less commission retained), as according to the principle set out in IAS 18 the revenue was measured at the fair value of the consideration received or receivable from an intermediary. Based on a more specific concept of the term “customer” or more specific definition of the term “customer,” the control concept underlying IFRS 15 and the application of the enhanced principal-agent approach – revenue is recognized in the amount of the retail price to the end consumer. Further IFRS 15 provides detail requirements for determining the transaction price and estimating variable consideration. Thus in accordance with IFRS 15 Penguin Random House recognizes its revenue at amount charged to end customers by an intermediary by applying judgement und using all information available to it. Any commissions for online retailers are recognized as an expense. Consequently, the increase in the item “Revenues” corresponds directly with an increase in the item “Other operating expenses” with no impact on the item “Group profit and loss.” The introduction of IFRS 15 lead to an increase of both line items “Revenues” and “Other operating expenses” by €147 million. This change in revenue recognition did not have an impact on the opening balances for January 1, 2018.

Penguin Random House Venture Combined Financial Statements

Notes continued

Impact of New Financial Reporting Standards Effective from January 1, 2018 continued

Details on the accounting and measurement policies applied to revenues in accordance with IFRS 15 since January 1, 2018, are presented in the section “Accounting and Measurement Policies.”

Impact of Issued Financial Reporting Standards that Are Not Yet Effective

Penguin Random House has not opted for early adoption of any additional standards, interpretations or amendments that have been issued by the IASB or the IFRS IC but are not yet mandatory. IFRS 16 Leases is a financial reporting standard that is not yet effective and will have a material impact on Penguin Random House.

IFRS 16 Leases, issued in January 2016, sets out principles for recognition, measurement, presentation and disclosure requirements for leases. The changes mainly affect lessee accounting and generally require lessees to recognize contractual rights and obligations on the lessee’s balance sheet. Penguin Random House will apply IFRS 16 to all contracts previously identified as leases under IAS 17 and IFRIC 4. Short-term leases with a lease term of up to one year, and leases covering low-value assets for which Penguin Random House will not recognize a right-of-use asset to use the leased object or a lease liability, constitute an exception. The new standard replaces the straight-line recognition of operating lease expense in accordance with IAS 17 with the recognition of depreciation expenses for the right-of-use asset and interest expenses on the lease liability (included within the financial result). In addition, IFRS 16 includes more extensive disclosures in the notes for lessees.

Application of the standard is mandatory for financial years beginning on or after January 1, 2019. IFRS 16 was introduced in Penguin Random House as part of a Bertelsmann Group-wide transition project. Under this project, initially, Penguin Random House’s material lease agreements were analyzed to determine the approach for the initial application of IFRS 16, among other things. In addition, the analysis focused on separating the lease and non-lease components of a contract, defining guidelines for determining the lease term taking into account renewal or termination options, and setting discount rates for calculating the lease liability. The complete analysis of IFRS 16 took place decentrally in the Group companies by conducting an inventory of leases. The vast majority of leases in Penguin Random House concern rental properties. In addition, leases also exist for technical equipment and machinery, vehicles and other fixtures, furniture, and office equipment. As part of the project, adjustments have been made to the reporting systems, chart of accounts and disclosure templates.

Penguin Random House will apply IFRS 16 retrospectively with the cumulative effect of initially applying this standard as an adjustment to the opening balance of combined retained earnings at the date of initial application. Prior year comparatives will be not adjusted. For individual real estate leases, on the date the standard is applied for the first time, Penguin Random House will recognize the right-of-use asset at an amount as if IFRS 16 had been applied since commencement date of the leases. In all other cases, the right-of-use asset will correspond to the amount of the lease liability on the date of first-time application, adjusted by the amounts for any prepaid or accrued lease payments. According to current calculations, the first-time application of IFRS 16 will result in the recognition of right-of-use assets and lease liabilities in an amount between €350 million and €430 million in the consolidated balance sheet as of January 1, 2019, in addition to the finance leases already existing under IAS 17. First-time application of IFRS 16 will create temporary differences and the corresponding deferred taxes on the right-of-use assets and the lease liability. For first-time application, the right-of-use assets are not tested for impairment. Instead, existing provisions for onerous leases are offset against the corresponding right-of-use assets. Going forward, depreciation on the right-of-use assets and the interest expense for the lease liabilities will be recognized on the combined income statement in place of other operating expenses for operating leases. In the combined statement of cash flows, the application of IFRS 16 will result in an improvement of cash flows from operating activities, while the lease payments will reduce the cash flows from financing activities.

Penguin Random House has not opted for early application of the standard IFRS 16.

Penguin Random House Venture Combined Financial Statements

Consolidation

Principles of Consolidation

The Penguin Random House Combined Financial Statements combine the financial statements of the two legal groups, PRH LLC and PRH Limited, and their subsidiaries, joint ventures and associates. PRH LLC and PRH Limited are parent companies in the respective legal groups.

Subsidiaries are companies controlled by either PRH LLC or PRH Limited in accordance with IFRS 10. Control exists if Penguin Random House has the power over the investee as well as the exposure, or rights, to variable returns from its involvement with the investee and is able to exercise its power over the investee such that it can affect the amount of these returns. Consolidation begins on the date on which the possibility to exercise control exists and ends when Penguin Random House loses the possibility to exercise control. Profit or loss and each component of total comprehensive income are attributed to the shareholders of the parent company and the non-controlling interests, even if this results in the non-controlling interests having a deficit balance.

In accordance with IFRS 3, business combinations are accounted for using the acquisition method. Accordingly, the acquisition date fair value of the consideration transferred is offset against the fair value of equity on the acquisition date. Acquisition-related costs are generally recognized in profit or loss. If applicable, contingent consideration is measured at the fair value that applies on the acquisition date. If the aggregate of the consideration transferred, the amount of any non-controlling interests in the acquiree and the acquisition date fair value of a previously held equity interest in the acquiree exceeds the fair value of the identifiable net assets, the excess is carried as goodwill. Negative differences are reflected in profit or loss in the period in which the acquisition is made. Deferred taxes from assets acquired and liabilities assumed in a business combination are carried and measured in accordance with IAS 12. Subsequent measurement of the acquired assets and the liabilities assumed or entered into is performed in line with the applicable IFRSs. Non-controlling interests are also measured at the proportionate fair value of the assets and liabilities. If the consideration transferred for the business combination or the fair values attributable to the identifiable assets and liabilities of the company acquired can only be provisionally identified on the date of initial accounting, the business combination is accounted for using these provisional values. Initial accounting is completed in accordance with IFRS 3.45, taking into account the one-year measurement period. Comparative information for reporting periods prior to the completion of initial accounting is presented as if it had already been completed on the acquisition date.

Changes in the parent's ownership interest in a subsidiary that do not lead to a loss of control are accounted for as equity transactions. After the loss of control of a subsidiary, it is deconsolidated in accordance with the requirements of IFRS 10. Any investment retained in the former subsidiary and any amounts owed by or to the former subsidiary are accounted for in accordance with the applicable IFRSs from the date when control is lost.

In accordance with IFRS 11, joint ventures are joint arrangements in which the parties that have joint control of the arrangement have rights to the net assets of the joint venture. Joint ventures are accounted for using the equity method in accordance with IAS 28. In addition, associates are included in the Combined Financial Statements using the equity method. Associates are companies over which Penguin Random House exercises a significant influence. This is generally the case for voting rights between 20 percent and 50 percent. Smaller shareholdings are accounted for using the equity method if there is a significant influence in accordance with IAS 28.6.

According to the equity method, interests in a joint venture or an associate are initially recognized at cost. These acquisition costs are then adjusted for changes to the Penguin Random House's interest in the net assets of the joint venture or the associate after the acquisition date. The same method used for fully consolidated subsidiaries is applied when accounting for the difference between the acquisition cost at the acquisition date and the share of net assets acquired. Losses from interests in a joint venture or an associate that exceed their carrying amounts are not recognized unless there is an obligation to make additional contributions. When changing the accounting treatment of investments

Penguin Random House Venture Combined Financial Statements

Consolidation continued

Principles of Consolidation continued

to the equity method, IFRS 3 is applied in analogy so that the fair value of the previously held interest is used in determining the cost of the investment accounted for using the equity method on the transition date. The difference between the fair value and carrying amount of the previously held interest is recognized in profit or loss.

Penguin Random House recognizes immaterial investments in accordance with IFRS 9.

Accounting and measurement policies are applied consistently for all companies consolidated within the Combined Financial Statements. Intercompany assets, liabilities, equity, income and expenses, and cash flows relating to transactions between Group companies are eliminated. Deferred taxes on consolidation transactions recognized in profit or loss are accounted for in accordance with IAS 12. The Penguin Random House share of unrealized gains or losses on intragroup transactions between fully consolidated Group companies and investments accounted for using the equity method is eliminated.

Scope of Consolidation

The scope of consolidation consists of 96 (2017: 88; 2016: 86) companies. This includes 95 (2017: 87; 2016: 85) fully consolidated companies. In addition, one immaterial associate is accounted for using the equity method in the Combined Financial Statements (2017: 1; 2016: 1). Penguin Random House had no joint ventures in the financial years 2018, 2017 and 2016. A total of 17 (2017: 26; 2016: 17) companies without significant business operations were excluded from the scope of consolidation due to their negligible importance for the financial position and financial performance of Penguin Random House.

For the financial year 2018, the detailed list of fully consolidated subsidiaries (FC) and associates accounted for using the equity method (EM) is as follows:

<u>Name</u>	<u>Country</u>	<u>Share</u>	<u>Consolidation Method</u>
Arrow Books Limited	Great Britain	100.00	FC
Barrie & Jenkins Limited	Great Britain	98.00	FC
Bartlett Bliss Productions Limited	Great Britain	100.00	FC
Bellew & Higton Publishers Limited	Great Britain	100.00	FC
Business Books Limited	Great Britain	100.00	FC
Century Benham Limited	Great Britain	100.00	FC
Century Hutchinson Limited	Great Britain	100.00	FC
Century Hutchinson Publishing Limited	Great Britain	100.00	FC
Century Publishing Co. Limited	Great Britain	100.00	FC
Chatto and Windus Limited	Great Britain	100.00	FC
Children's Character Books Limited	Great Britain	75.00	FC
Direct Group Grandes Obras, S.L.	Spain	100.00	FC
Distribuidora Penguin Random House S.A.S.	Colombia	99.97	FC
Dorling Kindersley Limited	Great Britain	100.00	FC
Dorling Kindersley Publishing Private Limited	India	100.00	FC
Dorling Kindersley Verlag GmbH	Germany	100.00	FC
Ediciones B Uruguay S.A.	Uruguay	100.00	FC
Editora Schwarcz S.A.	Brazil	45.00	EM
Flaname 0 Limited	Great Britain	100.00	FC
Flaname 1 Limited	Great Britain	100.00	FC
Flaname 2 Limited	Great Britain	100.00	FC

Penguin Random House Venture Combined Financial Statements

Consolidation continued

Scope of Consolidation continued

<u>Name</u>	<u>Country</u>	<u>Share</u>	<u>Consolidation Method</u>
Flaname 3 Limited	Great Britain	100.00	FC
Flaname 4 Limited	Great Britain	100.00	FC
Flaname 5 Limited	Great Britain	100.00	FC
Flaname 6 Limited	Great Britain	100.00	FC
Flaname 7 Limited	Great Britain	100.00	FC
Flaname 8 Limited	Great Britain	100.00	FC
Frederick Warne & Co Limited	Great Britain	100.00	FC
Frederick Warne & Co. LLC	United States	100.00	FC
Golden Treasures LLC	United States	100.00	FC
Grantham Book Services Limited	Great Britain	100.00	FC
Hammond, Hammond and Company, Limited	Great Britain	100.00	FC
Herbert Jenkins Limited	Great Britain	100.00	FC
Hind Pocket Books Private Limited	India	100.00	FC
Hurst & Blackett Limited	Great Britain	100.00	FC
Hutchinson & Co. (Publishers) Limited	Great Britain	100.00	FC
Hutchinson Books Limited	Great Britain	100.00	FC
Hutchinson Childrens Books Limited	Great Britain	100.00	FC
Jackdaw Publications Limited	Great Britain	100.00	FC
Jonathan Cape Limited	Great Britain	100.00	FC
Ladybird Books Limited	Great Britain	100.00	FC
Mainstream Publishing Company (Edinburgh) Limited	Great Britain	100.00	FC
Market Self Chile SpA	Chile	83.54	FC
Market Self S.A.	Argentina	83.54	FC
Martin Secker and Warburg Limited	Great Britain	100.00	FC
Penguin Australia Pty Ltd	Australia	100.00	FC
Penguin Books Benelux B.V.	Netherlands	100.00	FC
Penguin Books Deutschland GmbH	Germany	100.00	FC
Penguin Books Limited	Great Britain	100.00	FC
Penguin Books, S.A.	Spain	100.00	FC
Penguin Random House (Beijing) Culture Development Co. Ltd.	China	100.00	FC
Penguin Random House (Hong Kong) Limited	China	100.00	FC
Penguin Random House Australia Pty Ltd	Australia	100.00	FC
Penguin Random House Canada Limited	Canada	100.00	FC
Penguin Random House Grupo Editorial (USA) LLC	United States	100.00	FC
Penguin Random House Grupo Editorial S.A.	Argentina	98.28	FC
Penguin Random House Grupo Editorial S.A.	Peru	100.00	FC
Penguin Random House Grupo Editorial S.A.	Uruguay	99.85	FC
Penguin Random House Grupo Editorial S.A.S.	Colombia	99.92	FC
Penguin Random House Grupo Editorial, S.A.	Chile	100.00	FC
Penguin Random House Grupo Editorial, S.A. de C.V.	Mexico	100.00	FC
Penguin Random House Grupo Editorial, S.A.U.	Spain	100.00	FC
Penguin Random House Grupo Editorial, Unipessoal, Lda.	Portugal	100.00	FC
Penguin Random House India Private Limited	India	100.00	FC
Penguin Random House Ireland Limited	Ireland	100.00	FC
Penguin Random House Korea LLC	South Korea	100.00	FC
Penguin Random House Limited	Great Britain	100.00	FC

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Consolidation continued

Scope of Consolidation continued

<u>Name</u>	<u>Country</u>	<u>Share</u>	<u>Consolidation Method</u>
Penguin Random House LLC	United States	100.00	FC
Penguin Random House New Zealand Limited	New Zealand	100.00	FC
Penguin Random House SEA Pte. Ltd.	Singapore	100.00	FC
Penguin Random House South Africa (Pty) Ltd.	South Africa	100.00	FC
Plane Tree Publishers Limited	Great Britain	100.00	FC
Random House Children's Entertainment LLC	United States	100.00	FC
Random House Properties Limited	Great Britain	100.00	FC
Random House Publishing Group Limited	Great Britain	100.00	FC
Random House Struik Proprietary Limited	South Africa	100.00	FC
Random House UK Ventures Limited	Great Britain	100.00	FC
RHA Holdings Pty Ltd	Australia	100.00	FC
Salspot Limited	Great Britain	100.00	FC
Sasquatch Books LLC	United States	100.00	FC
Sinclair – Stevenson Limited	Great Britain	100.00	FC
Snowdog Enterprises Limited	Great Britain	100.00	FC
Snowman Enterprises Limited	Great Britain	100.00	FC
Sputnik 84 LLC	United States	100.00	FC
Stanley Paul & Co Limited	Great Britain	100.00	FC
T. Werner Laurie, Limited	Great Britain	100.00	FC
The Bodley Head Limited	Great Britain	100.00	FC
The Book Service Limited	Great Britain	100.00	FC
The Cresset Press Limited	Great Britain	100.00	FC
The Harvill Press Limited	Great Britain	100.00	FC
The Hogarth Press Limited	Great Britain	100.00	FC
The Random House Group Limited	Great Britain	100.00	FC
Transworld Publishers Limited	Great Britain	100.00	FC
Ventura Publishing Limited	Great Britain	100.00	FC
Virgin Books Limited	Great Britain	100.00	FC
Woodlands Books Limited	Great Britain	85.00	FC

Acquisitions and Disposals

Penguin Random House made only one acquisition of a diminutive size in the financial year 2018. The overall impact of the acquisition on the financial position and financial performance of the Group was minor. The cash flow from acquisition activities totaled €-2 million, of which €-1 million relates to the new acquisitions during the reporting period less cash and cash equivalents acquired, and €-1 million relates to acquisitions in previous years.

In the financial year 2017, the cash flow from acquisition activities totaled €-40 million, which fully related to new acquisitions during the reporting period 2017 less cash and cash equivalents acquired. The consideration transferred in accordance with IFRS 3 amounted to €44 million taking into account contingent consideration of €4 million.

In July 2017, Penguin Random House acquired an interest of 100 percent in the publishing group Ediciones B from Spain's Grupo Zeta media group. Penguin Random House considers the acquisition as a reinforcement of Penguin Random House Grupo Editorial's market position and cultural importance in Spain, Latin America and the entire Spanish-speaking world. The consideration transferred amounted to €37 million and was fully paid in

Penguin Random House Venture Combined Financial Statements

Consolidation continued

Acquisitions and Disposals continued

cash. The purchase price allocation resulted in non-tax-deductible goodwill of €28 million, mainly representing synergy potential to be realized from efficiency optimization in direct and structural expenses. In the financial year 2017, transaction-related costs amounted to €2 million and were recognized in profit or loss.

In addition, Penguin Random House made several acquisitions in the financial year 2017, none of which was material on a stand-alone basis. Payments net of acquired cash and cash equivalents amounted to €-4 million; the consideration transferred in accordance with IFRS 3 for these acquisitions amounted to €7 million taking into account contingent consideration of €3 million. The other acquisitions resulted in goodwill totaling €3 million, which reflects synergy potential and is tax deductible. Due to exercising an optional right in the United States, from a tax perspective the other acquisitions were treated as asset deals. On an individual level, the total consideration transferred in the amount of €7 million is tax deductible over 15 years. In the financial year 2017, transaction-related costs amounted to less than €1 million and have been recognized in profit or loss.

The following table shows the fair values of the assets and liabilities of the acquisitions made in the financial year 2017 on their dates of initial consolidation based on the purchase price allocations:

Effects of Acquisitions in the Financial Year 2017

<u>in € millions</u>	<u>Ediciones B</u>	<u>Other</u>	<u>Total</u>
Non-current assets			
Goodwill	28	3	31
Other intangible assets	8	3	11
Other non-current assets	2	—	2
Current assets			
Inventories	7	2	9
Trade and other receivables	5	1	6
Other current assets	2	1	3
Cash and cash equivalents	1	—	1
Liabilities			
Financial debt	—	1	1
Other financial and non-financial liabilities	16	2	18

In the financial year 2016, Penguin Random House made no acquisitions. The cash flow from acquisition activities in 2016 of €-1 million related to acquisitions in previous years.

The fair values of the identifiable assets, liabilities and contingent liabilities acquired are measured in accordance with IFRS 3, and primarily using the market price-oriented approach. According to this approach, assets and liabilities are measured at the prices observed in active markets. If measurement using the market price-oriented approach is not feasible, the income approach is to be applied. Within the income approach, the following methods are usually applied: multi-period excess earnings method (“MEEM”) and relief from royalty method. According to the multi-period excess earning method the fair value is at first determined as the present value of directly attributable cash flows, generated solely by the asset being valued. According to the relief from royalty method the fair value is determined as the present value of the royalty savings as a result of the acquisition. The income approach is used particularly in the valuation of imprints or backlists.

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Consolidation continued

Effects of Acquisitions in the Financial Year 2017 continued

In June 2018, Penguin Random House sold its Seattle-based company Smashing Ideas to Luxoft Holding, a global IT service provider based in Switzerland. The sale resulted in a gain of €6 million recognized in the item “Results from disposals of investments.”

In November 2017, Penguin Random House sold its travel guidebook and reference publisher The Rough Guides Limited to Media Tune Holding AG, Switzerland. The sale resulted in an immaterial loss recognized in the item “Results from disposals of investments.”

In October 2017, Penguin Random House completed the sale of Penguin Random House Pte. Ltd., Singapore and Penguin Books Malaysia Sdn Bhd, Malaysia to Times Publishing Limited. The sale resulted in a gain of €1 million recognized in the item “Results from disposals of investments.” As of December 31, 2016, Penguin Random House management had seen the sale as highly probable due to the advance-stage negotiations and had therefore classified the assets and related liabilities of PRH Singapore and Malaysia as held for sale at the end of the reporting period 2016.

In June 2016, Penguin Random House sold its American travel content publisher Fodor’s to Internet Brands, a California-based online media and technology company. The sale resulted in a gain of €3 million recognized in the item “Results from disposals of investments.”

After considering the cash and cash equivalents disposed of, Penguin Random House generated cash flows in the amount of €9 million from disposals (2017: €4 million; 2016: €6 million). The disposals resulted in a gain from deconsolidation of €6 million (2017: €1 million; 2016: €3 million), which is recognized in the item “Results from disposals of investments.” The following table shows their impact on the assets and liabilities at the time of deconsolidation:

Effects of Disposals

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Non-current assets			
Goodwill	2	1	1
Other intangible assets	—	2	1
Property, plant and equipment	—	—	—
Other non-current assets	—	1	—
Current assets			
Inventories	—	3	1
Other current assets	2	3	—
Cash and cash equivalents	—	—	—
Liabilities			
Financial debt	—	—	—
Other financial and non-financial liabilities	—	2	—

Assets Held for Sale and Liabilities Related to Assets Held for Sale

As of December 31, 2018, and as of December 31, 2017, no amounts related to assets classified as held for sale and related liabilities in accordance with IFRS 5.

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Consolidation continued

Assets Held for Sale and Liabilities Related to Assets Held for Sale continued

The carrying amounts of the assets classified as held for sale and related liabilities as of December 31, 2016, are presented in the following table:

Assets Held for Sale and Related Liabilities

<u>in € millions</u>	<u>12/31/2016</u>
Assets	
Non-current assets	
Goodwill	1
Other intangible assets	3
Property, plant and equipment	—
Current assets	
Inventories	1
Other current assets	2
Cash and cash equivalents	2
Assets held for sale	9
Equity and liabilities	
Current liabilities	
Trade payables	1
Other current liabilities	1
Liabilities related to assets held for sale	2

The figures as of December 31, 2016, relate to the sale of Random House Pte. Ltd., Singapore, and Penguin Books Malaysia Sdn Bhd, Malaysia, completed in the financial year 2017. Further information is presented above.

The disposal groups mentioned above were measured at fair value less costs to sell. These are to be allocated to level 3 of the hierarchy of non-recurring fair values. Valuations for level 3 are based on information from the contract negotiations. The impairment losses were recognized in profit or loss in the item “Other operating expenses.”

Foreign Currency Translation

Transactions denominated in a currency other than a subsidiary’s functional currency are recognized in the functional currency at the exchange rate applicable on the day of their initial accounting. At the end of the reporting period, monetary assets and liabilities denominated in foreign currency are revalued into the functional currency using the closing rate applicable at that time. Gains and losses from these foreign currency translations are recognized in profit or loss. Non-monetary balance sheet items in foreign currency are carried at the historical exchange rate.

The financial statements of subsidiaries, joint ventures and associates that were prepared in foreign currencies are translated into euros using the functional currency concept set out in IAS 21 before they are included in the Combined Financial Statements. Assets and liabilities are translated into the reporting currency at the closing rate at the end of the reporting period, while income statement items are translated at the average rate for the financial year. Foreign currency translation differences are recognized in other comprehensive income. Such differences arise from translating items in the balance sheet at a closing rate that differs from the previous closing rate and from using the average rate for the period and the closing rate at the end of the reporting period to translate the

Penguin Random House Venture Combined Financial Statements

Consolidation continued

Foreign Currency Translation continued

Group profit or loss. At the time of deconsolidation of Group companies, the respective accumulated exchange differences recognized in other comprehensive income and accumulated in a separate component of equity are reclassified from equity to the income statement. The following euro exchange rates were used for currency translation purposes for the most significant foreign currencies for Penguin Random House.

Euro Exchange Rates for Significant Foreign Currencies

<u>Foreign currency unit per €1</u>		<u>Average rates</u>			<u>Closing rates</u>		
		<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Australian dollar	AUD	1.5799	1.4733	1.4881	1.6220	1.5346	1.4596
Canadian dollar	CAD	1.5301	1.4645	1.4660	1.5605	1.5039	1.4188
British pound	GBP	0.8847	0.8766	0.8196	0.8945	0.8872	0.8562
US dollar	USD	1.1817	1.1295	1.1072	1.1450	1.1993	1.0541

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Accounting and Measurement Policies

Recognition of Income and Expense

Since January 1, 2018, revenues from contracts with customers are recognized in accordance with IFRS 15. Under this standard, a contract-based five-step model is used to first identify and distinguish the relevant contracts with customers. In a next step, the separate performance obligations explicitly or implicitly stipulated in the contract are identified, and the contract is examined for fixed and variable consideration in order to use this as a basis for determining the respective transaction price. In doing so, constraining estimates of variable consideration are taken into account. If more than one separate performance obligation is identified in a contract, the transaction price is then allocated to the identified performance obligations using the method of relative stand-alone selling prices, which are generally determined as prices on the markets relevant for the respective customers. Revenue recognition occurs upon satisfaction of the performance obligation either at a point in time or over time, depending on the underlying business model. If necessary, the extensive principal-agent considerations presented in IFRS 15 are also taken into account in analyzing the contracts.

Based on the underlying revenue sources and on the design of the underlying business model in the Group, the following key aspects are taken into consideration for revenue recognition:

- **Printed products:** As a rule, the revenues resulting from these contracts are recognized at a point in time when control is transferred. Depending on the underlying respective terms of sale, this is generally upon delivery to the customer. Expected returns from sales of products, mainly from physical books, are shown as liabilities in the balance sheet position "Trade and other payables." Return assets, if any, are presented in the balance sheet position "Other non-financial assets".
- **Digital products:** Due to the nature of the underlying business models, contracts with customers have to be analyzed especially to determine whether revenue has to be recognized on a gross or net basis. Therefore, principal-agent considerations of IFRS 15 are taken into account. The most relevant aspects of these analyses are the questions of who is to be regarded as customer and which party is considered to have latitude in setting the end consumer prices. With respect to certain business models, an online retailer has to be regarded as agent of Penguin Random House when selling digital products to end consumers who are the customers. With respect of other digital business models an online retailer is to be regarded as Penguin Random House's customer and therefore acts as principal, if an online retailer obtains control of the goods or services prior to their transfer to an end consumer and has sufficient latitude in setting end consumer prices. Revenues from digital product sales are recognized on the basis of these notifications by the online retailers in the month in which download of the e-book occurred.
- **Other revenues:** These mainly result from the rendering of services and the granting of rights and licenses. Services are generally rendered over a period of time, and the revenue is recognized based on an appropriate output method or input method for measuring progress. If permissible, revenues are recognized in the amount of the invoice if this amount corresponds to the value of the performance provided. The timing of revenue recognition for business models generating revenue from licenses depends on whether the license represents a right to access the intellectual property through the entire licensing period or a right to use when the license is granted. While revenues from licenses granted for a right to use are realized at the date of the transfer of control, revenues from licenses for rights to access are realized over a period of time throughout the term of the contract.

IFRS 15 stipulates some practical expedients of which the following are applied in the Group:

- Costs of obtaining contracts are not capitalized if the underlying asset is amortized in no more than 12 months.
- The value of consideration is not adjusted for the effects of a material financing component if the financing component pertains to a period of no more than 12 months.

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Recognition of Income and Expense continued

- For contracts with an original duration of not more than 12 months and for contracts for which revenue can be recognized according to the amount invoiced for simplification purposes, no disclosure of the aggregated transaction price is provided.

Payments received before satisfaction of the corresponding performance obligation are recognized as contract liability. If contractual provisions make the invoicing of services completed to date causally dependent on the need to provide further goods or services, a contract asset is recognized. As of January 1, 2018, and as of December 31, 2018, no significant contract assets were recognized. Receivables from contracts with customer are generally due in less than 12 months.

Accounting policy for revenues until December 31, 2017:

Revenues were measured at the fair value of the compensation received or receivable and reduced by anticipated reductions in price, trade discounts and similar other deductions. Revenues from the sale of goods were recognized when Penguin Random House had transferred the significant risks and rewards associated with ownership of the goods to the purchaser and the amount of revenue could be reliably measured. Revenues from printed product sales were recognized, net of provision for estimated returns and rebates, accordingly; when a printed product was initially published, revenues were recognized at the official publication date. Revenues from digital product sales (which mainly relate to e-book sales) for which Penguin Random House had sufficient, accurate and reliable data from certain retailers were recognized on the basis of these notifications by the retailers in the month in which download of the e-book occurred. In the absence of such data, revenues from e-book sales were recognized on the estimated basis done by Penguin Random House. Cooperating advertising fees directly linked to sales transactions were recognized as deductions from revenues. Revenues from services including distribution services were recognized based on their percentage of completion.

Interest income and expenses relating to financial assets measured at amortized cost are recognized on an accrual basis using the effective interest method in accordance with IFRS 9. Dividends are only recognized in profit or loss when the right to receive payment of the dividend is established. Other income is recognized when the economic benefits are probable and the amount can be measured reliably. Expenses are deferred on the basis of underlying facts or the period of time to which they relate.

Goodwill

Goodwill resulting from a business combination is recognized in accordance with IFRS 3 at the date of acquisition. Goodwill is subject to impairment testing at least annually by comparing the carrying amount of the cash-generating unit to which goodwill has been allocated, with the recoverable amount of the cash-generating unit. If the carrying amount of a cash-generating unit exceeds its recoverable amount, an impairment loss is immediately recognized in profit or loss. Impairment, including impairment losses recognized during the year, is not reversed. Goodwill is tested for impairment each year as of December 31, as outlined in the section "Impairment Losses," and if a triggering event arises.

Other Intangible Assets

Non-current internally generated intangible assets are capitalized at cost, if the requirements set out in IAS 38 have been met. Intangible assets acquired separately are carried at acquisition cost less accumulated amortization and accumulated impairment losses. Intangible assets acquired as part of a business combination are initially recognized at fair value at the acquisition date in accordance with IFRS 3. Intangible assets with finite useful life are amortized on a straight-line basis over their estimated useful life. Impairment losses and reversal of

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Accounting and Measurement Policies continued

Other Intangible Assets continued

impairment losses are determined by applying the requirements for impairment testing (IAS 36). In general, capitalized software has a useful life of between three and five years. The estimate of useful life and amortization methods is reviewed annually and prospectively adjusted to reflect changes in expectations.

Intangible assets with indefinite useful life are not amortized. Instead, they are subject to at least annual impairment testing and written down to their recoverable amount if applicable. No significant intangibles with indefinitely useful lives exist.

Property, Plant and Equipment

Items of property, plant and equipment are carried at cost less accumulated depreciation and accumulated impairment losses. The cost of items of property, plant and equipment produced internally within Penguin Random House includes direct attributable costs, including, among others, cost of material, labor and other inputs used in the construction of the asset. For qualifying assets in accordance with IAS 23, borrowing costs are capitalized. The amounts involved are insignificant to Penguin Random House. All other borrowing costs are expensed in the period in which they occurred. Maintenance costs are carried as expenses of the period, whereas expenses for activities that lead to a longer useful life or improved use are generally capitalized. Items of property, plant and equipment are depreciated on a straight-line basis over their estimated useful life. Estimates of useful life and the depreciation method are reviewed annually in line with IAS 16 and are adjusted prospectively according to the changed expectations. In the financial years 2018, 2017 and 2016, depreciation is generally based on the following useful lives:

- buildings: 10 to 50 years
- technical equipment and machinery: four to 15 years
- other equipment, fixtures, furniture and office equipment: three to 15 years

Land is not subject to depreciation.

Impairment Losses

Goodwill and intangible assets with indefinite useful life are tested for impairment at least annually. Intangible assets with a finite useful life and property, plant and equipment are tested for impairment at the end of each reporting period in accordance with IAS 36, if there are any indications of impairment.

An impairment loss is recognized when the recoverable amount of a cash-generating unit has fallen below its carrying amount. The recoverable amount is the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal and the value in use are generally determined using the discounted cash flow method, which is based on future cash flow forecasts, which are part of company forecasts. For determining the value in use, estimated future cash inflows or outflows from future restructurings or from improvement or enhancement of the cash-generating units' performance are excluded unless, as of the end of the reporting period, the cash-generating unit is committed to the restructuring and related provisions have been made. For assets held for sale, only fair value less costs to sell is used as a basis for comparison.

As long as an active market exists, the market price or the price in the most recent comparable transaction is used for measuring fair value. If there is no active market, fair value less costs of disposal is generally calculated using the discounted cash flow method. If it is not possible to allocate cash flows to assets, the relevant impairment losses are determined on the basis of cash flows attributable to the cash-generating unit to which the assets belong. Projected cash flows are based on internal estimates for three planning periods. Generally, two further

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Accounting and Measurement Policies continued

Impairment Losses continued

detailed planning periods are applied in addition. Based on historical data, the company's internal forecasts take into account expectations relating to the market development. For periods beyond this detailed horizon, a perpetual annuity is recognized, taking into account individual business-specific growth rates. Discounting is generally based on the weighted average cost of capital (WACC) after tax. Specific WACCs are derived for cash-generating units with different risk profiles. Management estimates of cash flow are based on factors including assumptions of economic trends and the associated risks, the regulatory environment, the competitive environment, market share, investments and growth rates. The growth rates applied are based on long-term real growth figures for the relevant economies, growth expectations for the relevant sectors and long-term inflation forecasts for the countries in which the cash-generating units operate. The values allocated to the key assumptions are in line with external sources of information. The figures obtained using the respective discount rates reflect the recoverable amount of the cash-generating units. Material changes in market or competitive environment may impair the value of cash-generating units. If the reasons for an impairment loss recognized in prior periods no longer exist, the impairment loss is reversed up to a maximum of the carrying amount of the respective asset if the impairment loss had not been recognized. The latter does not apply to goodwill.

Leases

The operating leases entered into by Penguin Random House primarily relate to rental agreements for buildings. Based on the substance of transaction, the leased assets are allocated to the lessor. The lease installments constitute expenses for the period and are carried as "Other operating expenses" using the straight-line method over the term of the lease. If Penguin Random House bears all material rewards and risks as part of leasing agreements and is thus to be regarded as the economic owner (finance lease), the leased item is capitalized at its fair value at the inception of the lease term or the lower net present value of the future minimum lease payments. Payment obligations arising from finance leases are recognized as financial liabilities in the same amount. No material finance lease arrangements exist.

Financial Assets

In accordance with the IFRS 9 classification and measurement approach for financial assets, there are three classification categories for financial assets in the Group:

- at amortized cost,
- at fair value with changes in fair value through profit or loss (FVTPL) and
- at fair value with changes in fair value through other comprehensive income (FVOCI).

The allocation to the respective classification categories is based on the following criteria:

- the entity's business model for managing the financial assets and
- contractual cash flow characteristics of the financial asset.

Financial assets are recognized initially at fair value, taking into account transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets recognized at fair value through profit or loss are expensed in profit or loss.

Subsequent measurement of financial instruments depends on the classification categories:

- At amortized cost: Financial assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest on the principal amount outstanding are measured

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Financial Assets continued

at amortized cost. This category mainly comprises trade receivables and other financial receivables. Any gain or loss arising on derecognition and impairment losses is recognized directly in profit or loss.

- FVOCI: Financial assets that are held for collection of contractual cash flows and for selling, where the assets' cash flows represent solely payments of principal and interest on the principal amount outstanding, are measured at fair value with changes in fair value through other comprehensive income. Penguin Random House held no debt instruments measured at fair value through other comprehensive income. Penguin Random House exercises the option for measurement of equity instruments at fair value through other comprehensive income mainly for individual immaterial investments. With deferred taxes taken into consideration, the gains and losses resulting from fluctuations in the fair value of these equity instruments are recognized through other comprehensive income. Gains and losses from the fair value are not reclassified to the income statement after derecognition of the equity instruments. Dividends from such equity instruments continue to be recognized in profit or loss.
- FVTPL: Financial assets that do not meet the criteria for amortized cost or FVOCI are measured at fair value through profit or loss. With deferred taxes taken into consideration, the gains and losses resulting from fluctuations in the fair value are recognized in profit or loss.

Impairment and measurement of expected credit losses:

Penguin Random House applies for debt instruments at amortized cost and for contract assets the expected credit loss (ECL) model in accordance with IFRS 9. Accordingly, the amount of expected credit losses recognized as a loss allowance depends on the extent to which the default risk has deteriorated since initial recognition. According to the so-called general approach, a distinction is made between the following two measurement bases:

- 12-month ECLs: At initial recognition and if the default risk has not increased significantly from the initial recognition of the debt instrument, a loss allowance is recognized for expected credit losses within the next 12 months.
- Lifetime ECLs: If the default risk has increased significantly, a loss allowance for expected credit losses is recognized for the entire life of the debt instrument.

A default on a financial asset is assumed at the latest when the counterparty fails to make contractual payments within 90 days of when they fall due, unless reasonable and supportable information is available that justifies a different time of overdue payment.

For trade receivables and contract assets, Penguin Random House uses a risk scoring model based on qualitative and quantitative risk factors for its major customers. For insignificant customers Penguin Random House uses a simplified approach to measure expected credit losses on trade receivables and contract assets. According to this, the loss allowance is measured using lifetime expected credit losses. For this purpose, impairment matrices based on historic bad debt losses, maturity bands and expected credit losses reflecting the ability of the customers to settle the receivables were prepared. The impairment matrices were created for business-unit-specific groups of receivables, each with similar default patterns. In addition, separate risk assessments are performed. Contract assets have substantially the same risk characteristics as trade receivables for the same types of contracts so that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for contract assets.

Accounting policy for financial assets until December 31, 2017:

Financial assets were recognized initially at fair value, taking into account transaction costs that were directly attributable to the acquisition of the financial asset. In the case of financial assets that were recognized at fair

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Financial Assets continued

value through profit or loss, transaction costs were recognized directly in the income statement. Regular purchases and sales of financial assets were recognized on the trade date – the day on which Penguin Random House entered into an obligation to buy or sell the asset.

For subsequent measurement, financial assets were classified into the following categories and subcategories:

- *available-for-sale financial assets*
- *financial assets recognized at fair value through profit or loss*
 - *primary and derivative financial assets held for trading*
 - *financial assets initially recognized at fair value through profit or loss*
- *loans and receivables*
 - *originated loans and trade receivables*
 - *cash and cash equivalents*

Available-for-sale financial assets: The available-for-sale category primarily included current and non-current securities and equity investments not classified as held-to-maturity investments, as loans and receivables, or at fair value through profit or loss. In accordance with IAS 39, available-for-sale financial assets were measured at their fair value at the end of the reporting period to the extent that this value could be reliably measured. Otherwise these were measured at cost. With deferred taxes taken into consideration, gains and losses resulting from fluctuations in the fair value were recognized in other comprehensive income. However, if there was objective evidence of impairment, this was recognized in profit or loss. A significant or prolonged decline in the fair value of an equity instrument below its acquisition cost was also to be regarded as objective evidence of impairment. If these assets were sold, the accumulated gains and losses previously recognized in other comprehensive income were reclassified from equity to the income statement.

Primary and derivative financial assets held for trading: In general, this category included derivatives that do not meet the formal requirements of IAS 39 for hedge accounting. They were measured at their fair value. Gains or losses from changes to the fair values were recognized in profit or loss.

Financial assets initially recognized at fair value through profit or loss: This category included financial assets that were designated upon initial recognition at fair value through profit or loss. Changes in fair value were recognized in the other financial result.

Originated loans and trade receivables: Originated loans and trade receivables were non-derivative financial assets with fixed or determinable payments that were not quoted in an active market. They were carried at amortized cost using the effective interest method. Long-term interest-free or low-interest loans and receivables were discounted. Foreign currency items were translated using the closing rate. If there was objective evidence of impairment, the carrying amount was reduced through use of an allowance account and the loss was recognized in profit or loss. No material originated loans existed.

Penguin Random House had no held-to-maturity investments.

Impairment losses and reversals: The carrying amounts of financial assets not recognized at fair value through profit or loss were examined at the end of each reporting period to determine whether there was objective evidence of impairment. Such evidence existed in the following cases: information concerning financial

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Financial Assets continued

difficulties of a customer or a group of customers; default or delinquency in interest or principal payments; the probability of being subject to bankruptcy or other financial restructuring; and recognizable facts that point to a measurable reduction in the estimated future cash flows, such as an unfavorable change in the borrower's payment status or the economic situation that corresponds to the delayed performance. In the case of financial assets carried at amortized cost, the loss in case of impairment corresponded to the difference between the carrying amount and the present value of the anticipated future cash flows – discounted using the original effective interest rate for the financial asset. If it was established that the fair value had increased at a later measurement date, the impairment loss previously recognized was reversed up to a maximum of amortized cost in profit or loss. Impairment losses were not reversed in the case of unlisted equity instruments that were classified as available-for-sale assets and carried at cost. In case of impairment on available-for-sale assets carried at cost, the amount of the impairment loss was measured as the difference between the carrying amount of the financial asset and the present value of the estimated future cash flows discounted using the risk-adjusted interest rate.

Measurement at Fair Value

In the case of financial assets and financial liabilities measured at fair value, the valuation technique applied depends on the respective inputs present in each case. If listed prices can be identified for identical assets on active markets, they are used for valuation (level 1). If this is not possible, the fair values of comparable market transactions are applied, and financial methods that are based on observable market data are used (level 2). If the fair values are not based on observable market data, they are identified using established financial methods or on the basis of observable prices obtained as part of the most recently implemented qualified financing rounds taking into account the life and developmental cycle of the respective entity (level 3).

Inventories

Inventories – consisting principally of physical books – are recognized at the lower of historical cost and net realizable value at the end of the reporting period. Both raw materials and finished goods inventory are accounted for using the FIFO (first-in, first-out) cost-flow assumption. Weighted average costing can be used if it results in approximately the same cost as FIFO. Inventories originating from intragroup suppliers are adjusted to eliminate intragroup earnings and are measured at Penguin Random House's cost.

Inventories are tested for recoverability at the end of each reporting period. For this purpose, net realizable value is determined. Net realizable value is defined as the estimated sales price less expected costs to complete and estimated selling expenses. A write-down is recognized if the net realizable value is lower than its historical cost. Write-downs are reversed if the circumstances causing their recognition no longer exist. The new carrying amount then represents the lower of historical cost and adjusted net realizable value. An inventory obsolescence reserve for finished goods is calculated on a title-by-title basis. The consumption of inventories, changes in inventories of work in progress and finished goods, and own costs capitalized are recognized in the income statement in the position "Cost of materials."

Income Taxes

In accordance with IAS 12, current tax expense and income are determined based on the respective domestic taxable earnings of the year (taxable income). Current and deferred taxes are determined based on applicable regulations and tax laws of the countries in which the companies included in the Combined Financial Statements are domiciled. The presentation is based on the legal approach for own tax liabilities as they arise in the normal

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Income Taxes continued

way. Current and deferred taxes for tax-transparent entities (e.g., partnerships, which are not taxed in their own right) are therefore recognized on the level of the respective owners based on their share of the tax-transparent entity's profits. The income tax relating to tax-transparent entities is therefore not included in the income tax line of the Combined Financial Statements. Deferred tax assets and liabilities are recognized for temporary differences between the tax base and the carrying amounts shown on the IFRS combined balance sheet, and for as yet unused tax loss carryforwards and tax credits.

Deferred tax assets are recognized only to the extent it is probable that taxable income will be available against which the deductible temporary difference can be utilized. Deferred tax assets that are unlikely to be realized within a clearly predictable period are reduced by valuation allowances. Deferred tax liabilities are generally recognized for all taxable temporary differences. Deferred tax assets and liabilities resulting from business combinations are recognized with the exception of temporary differences on goodwill not recognizable for tax purposes. The tax rates applied for computation are based on the country-specific tax rates and tax laws that have been enacted or substantively enacted at the end of the reporting period and whose applicability is expected as of the date of reversal of the temporary differences and the use of tax loss carryforwards and tax credits, respectively. In general, deferred taxes are recognized in profit or loss unless they relate to items recognized in other comprehensive income. In this case, deferred taxes are recognized in other comprehensive income.

Accumulated Other Comprehensive Income

Accumulated other comprehensive income includes net exchange differences and gains and losses from the fair value measurement of equity instruments with changes through other comprehensive income (IFRS 9 classification category FVOCI) and of derivatives used to hedge future cash flows (cash flow hedges) in accordance with IFRS 9.

In addition, in accordance with IAS 28.10, changes in other comprehensive income for entities accounted for using the equity method are recognized. Remeasurement effects of defined benefit pension plans (actuarial gains and losses on the defined benefit obligation, differences between actual investment returns and the return implied by the net interest cost on the plan assets, and effects of the asset ceiling) are recognized in the retained earnings in the year in which these gains and losses have been incurred as part of the reconciliation of total comprehensive income for the period in the statement of changes in equity. Deferred taxes on the aforementioned items are recognized directly in other comprehensive income.

Accounting policy for accumulated other comprehensive income until December 31, 2017:

Accumulated other comprehensive income included foreign exchange gains and losses and unrealized gains and losses from the fair value measurement of available-for-sale financial assets and derivatives used in cash flow hedges in accordance with IAS 39.

Provisions

Provisions for pensions and similar obligations are calculated using the projected unit credit method in accordance with IAS 19. This method involves the use of biometric calculation tables, current long-term market interest rates and current estimates of future increases in salaries and pensions.

The net interest expense included in pension expense is recognized in the financial result. Remeasurement effects of defined benefit pension plans (actuarial gains and losses on the defined benefit obligation, differences between

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Provisions continued

actual investment returns and the return implied by the net interest cost on the plan assets, and effects of the asset ceiling) are recognized immediately in equity under other comprehensive income and are not reclassified to profit or loss in a subsequent period (recycled).

With the exception of the other personnel-related provisions calculated in accordance with IAS 19, all of the other provisions are established on the basis of IAS 37 where there is a legal or constructive obligation to a third party, the outflow of resources is probable and it is possible to reliably determine the amount of the obligation. Provisions are measured in the amount of the most likely outcome.

Long-term provisions are discounted. The discount rates take into account current market expectations and, if necessary, specific risks for the liability. Income from the reversal of provisions is generally included in the income statement line item to which the provision was previously charged.

Financial Liabilities

Trade payables and other primary financial liabilities are initially measured at their fair value less transaction costs. Subsequent measurement is based on amortized cost using the effective interest method, unless the financial liability is classified as initially recognized at fair value through profit or loss. Foreign currency liabilities were translated at the exchange rate at the end of the reporting period. Finance lease liabilities, which were also recognized under financial liabilities, were carried at their net present value in accordance with IAS 17.

Derivative Financial Instruments

As set out in IFRS 9, all derivative financial instruments are recognized at fair value on the balance sheet. Derivative financial instruments are recognized as of the transaction date. When a contract involving a derivative is entered into, it is initially determined whether it serves to hedge future cash flows (cash flow hedge). Some derivatives do not meet the requirements included in IFRS 9 for recognition as hedges despite this being their economic purpose. Changes in the fair values of derivatives are recognized as follows:

1. Cash flow hedge: The effective portion of the changes in the fair value of derivatives used to hedge future cash flows is recognized in other comprehensive income. The amounts carried here are included in the initial measurement when an underlying, non-financial asset or a non-financial liability is received (basis adjustment). In other cases, the reclassification of the previously recognized gains and losses from equity to the income statement is performed when the hedged underlying transaction affects profit or loss. The ineffective portion of the changes in the fair value of the hedging instrument are recognized in profit or loss.
2. Stand alone hedge: Changes in the fair value of derivatives that do not meet the criteria for recognition as hedges is recognized in profit or loss.

In the financial years 2018, 2017 and 2016, no hedge transactions were recognized with fair value hedges or to hedge a net investment in foreign operations.

Non-Current Assets Held for Sale and Related Liabilities

Non-current assets or disposal groups are classified as held for sale if the associated carrying amount will be recovered principally through a sale transaction and not from continued use. These non-current assets and the associated liabilities are presented in separate line items in the balance sheet in accordance with IFRS 5. They are measured at the lower of the carrying amount and fair value less costs to sell. Depreciation/amortization is not recognized if a non-current asset is classified as held for sale or forms part of a disposal group that is classified as held for sale.

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Non-Current Assets Held for Sale and Related Liabilities continued

Components of entities that fulfill the requirements of IFRS 5.32 are classified as discontinued operations and thus are carried separately in the income statement and cash flow statement. All of the changes in amounts made during the reporting period that are directly connected with the sale of a discontinued operation in any preceding period are also stated in this separate category. If a component of an entity is no longer classified as held for sale, the results of this entity component that were previously carried under discontinued operations are reclassified to continuing operations for all of the reporting periods shown.

Significant Accounting Judgements, Estimates and Assumptions

The preparation of Combined Financial Statements requires the use of accounting judgments, estimates and assumptions that may impact the carrying amounts of assets, liabilities, income and expenses recognized. Amounts actually realized may differ from estimated amounts. The following section presents accounting judgements, estimates and assumptions that are material in the Penguin Random House Combined Financial Statements for understanding the uncertainties associated with financial reporting.

- Recognition of income and expense: In the event of return rights, mostly for print products, estimates are made with regard to the anticipated return volume as revenues are recognized taking the anticipated returns into account. Return curves and average return rates are used to identify the anticipated returns. The accounting assessment of advertising grants paid to the customers of Penguin Random House includes different factors and they are therefore deducted from revenue. The transaction prices to be determined using the contract-based five-step model defined in IFRS 15 often include both fixed and variable consideration. The variable components are determined on the basis of estimates, which are made and updated in accordance with constraint conditions. For business models involving other parties, e.g. relating to sales of digital products, qualitative estimates must be made as part of principal-agent considerations as to who is to be regarded as a customer of a Penguin Random House company and whether a Penguin Random House company is to be regarded as principal or agent in a transaction.
- All advanced payments for royalties are recorded as assets and a liability is recorded for all outstanding obligations not yet paid but for which a legal obligation to pay exists. Sales estimates and assumptions on future sales success are made in connection with advances paid to authors to secure exploitation rights in their publications.
- Author royalty earnings are applied against any outstanding advance until the total unearned advance is reduced to zero. Author royalty earnings after that point are recognized as a payable.
- Published and unpublished advances are tested for impairment based on management estimates of future sales volumes and price changes considering the current market conditions and using historical data, if appropriate, like past sales of similar books or books by the same author, and other relevant factors in estimating sales. Penguin Random House has a long history of providing authors with royalty advances, and it tracks each advance earned with respect to the sale of the related publication. Penguin Random House applies this historical experience to its existing outstanding royalty advances to estimate the likelihood of recovery. Additionally, Penguin Random House management regularly reviews its portfolio of royalty advances to determine if individual royalty advances are not recoverable for discrete reasons, such as the death of an author prior to completion of a title or titles, a Penguin Random House decision to not publish a title, poor market demand or other relevant factors that could impact recoverability. Based on this information, the portion of any advance that Penguin Random House believes is not recoverable, is expensed.
- Trade and other receivables: Calculation of loss allowance for accounts receivables is based on historical credit loss rates for groups of financial assets with similar credit risk characteristics and on forward looking information, including customer-specific information and forecasts of future economic conditions.

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Significant Accounting Judgements, Estimates and Assumptions continued

- Impairment losses: Goodwill and intangible assets with indefinite useful life are tested for impairment at least annually. Intangible assets with finite useful life and property, plant and equipment are tested for impairment in accordance with IAS 36 if there are indications that an asset may be impaired. Impairment loss has occurred when the carrying amount of an asset exceeds its recoverable amount. The recoverable amount is the higher of fair value less costs of disposal and value in use. Fair value less costs of disposal and the value in use are generally determined using the discounted cash flow method, which is based on future cash flow forecasts, which are part of company forecasts. The cash flow forecasts are based on the management's best possible estimates with regard to future performance. Penguin Random House has used a combination of long-term trends, industry forecasts and in-house knowledge, with special emphasis on recent experience, in forming the assumptions about the development of the various relevant markets in which Penguin Random House operates. This is an area highly exposed to the general economic conditions. Penguin Random House's business development is still subject to risks. In particular, the unclear conditions of Brexit and the associated uncertainty could adversely impact Penguin Random House's economic environment and thus increase the risk from economic developments. The subdued growth expectations in the United Kingdom reflect the significant uncertainty over the outcome of the Brexit negotiations and future economic relations. Moreover, the devaluation of the local currency after the referendum on EU membership is having an increasingly adverse effect on the consumer climate. The state of the relevant market is just one of the key operational drivers Penguin Random House uses when assessing individual business models. The most important assumptions include estimated growth rates, the weighted average cost of capital and tax rates. All of these different elements are variable, interrelated and difficult to isolate as the main driver of the various business models and respective valuations. Changes to these estimates as a result of more recent information could have a material impact on the amount of the possible impairment. Penguin Random House performs sensitivity analyses on the cash-generating units, especially on those where the headroom between the recoverable amount and the carrying value is low. Detailed information on the assumptions and estimates that are used in impairment testing for intangible assets (including goodwill) in Penguin Random House is presented in note 10 "Intangible Assets."
- Pension obligations: Pension obligations are measured using the projected unit credit method. Using this approach, biometric calculations, the prevailing long-term capital market interest rates and, in particular, assumptions about future salary and pension increases are taken into account.
- Provisions for onerous contracts and warranties are also based to a significant extent on management estimates with regard to their amount and probability of occurrence. Assessments of whether there is a present obligation, whether an outflow of resources is probable and whether it is possible to reliably determine the amount of the obligation are generally based on the expertise of in-house or third-party specialists. More recent information could change the estimates and thus impact the financial position and financial performance of Penguin Random House. With regard to risk provisioning, a provision for potential losses from litigation is recognized when the risks of a loss are considered to be probable and when a reliable estimate of the anticipated financial impact is possible. For significant contingent liabilities for which the possibility of a future loss is more than remote but less than probable, Penguin Random House estimates the possible loss where the Group believes that an estimate can be made. At the end of the reporting period, there were no reportable contingent liabilities from litigation. Management regularly reviews the recognition, measurement and use of provisions and the disclosure requirements for contingent liabilities.

In the case of purchase price allocations, assumptions are also made regarding the measurement of assets and liabilities assumed as part of business combinations. This applies in particular with regard to the acquired intangible assets, as measurements are based on fair value. In general, this is the present value of the future cash

Penguin Random House Venture Combined Financial Statements

Accounting and Measurement Policies continued

Significant Accounting Judgements, Estimates and Assumptions continued

flows after taking into account the present value of the tax amortization benefit. In addition, the definition of uniform useful lives within Penguin Random House is based on management's assumptions. General information on useful lives is presented in the sections "Other Intangible Assets" and "Property, Plant and Equipment."

Assessments of the ability to realize uncertain tax positions and future tax benefits are also based on assumptions and estimates. Recognition of an asset or liability from an uncertain tax position is performed in accordance with IAS 12 if payment or refund of an uncertain tax position is probable. Measurement of the uncertain tax position is at its most likely amount. Deferred tax assets are only carried to the extent that it is probable that they can be utilized against future taxable profits. When assessing the probability of the ability to use deferred tax assets in the future, various factors are taken into account, including past earnings, company forecasts, tax forecast strategies and loss carryforward periods. Information relating to the ability to realize tax benefits is presented in note 9 "Income Taxes."

Assumptions are also made for measuring fair values of financial assets and financial liabilities. In this regard, Penguin Random House uses various financial methods that take into account the market conditions and risks in effect at the end of the respective reporting periods. The inputs to these models are taken from observable markets where possible, but where this is not feasible, measuring fair values is based on assumptions by management. These assumptions relate to input factors such as liquidity risk and default risks.

Estimates and the underlying assumptions are reviewed on an ongoing basis. In general, adjustments to estimates are taken into account in the period in which the change is made and in future periods.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet

1 Revenues

In the financial year 2018, Penguin Random House derives revenue from contracts with customers in the following major revenue sources and geographical areas:

Revenue from Contracts with Customers

<u>in € millions</u>	<u>2018</u>
Revenue Sources	
Revenues from printed products	2,254
Revenues from digital products	736
Other revenues	144
	<u>3,134</u>
Geographical Areas	
North America	2,110
United Kingdom	365
Other countries	659
	<u>3,134</u>

Revenues from printed products mainly include revenues from physical book sales, whereas revenues from digital products mainly relate to revenues from e-books sales. The revenues comprise in the reporting period performance obligations fulfilled at a certain point in time of €3,039 million and performance obligations fulfilled over a certain period of time of €95 million. No revenues result from performance obligations that were already satisfied in previous periods. If revenue is recognized at a point in time, the timing of revenue recognition is determined by the contractually agreed terms of sale. For performance obligations satisfied over time, a sufficient measure of progress is determined generally based on output methods to recognize revenue accordingly. Input methods are used to determine revenue recognition in business models for which they more accurately measure progress. Penguin Random House makes use of practical expedients set out in IFRS 15 and does not disclose any unsatisfied performance obligations for contracts with an original duration of no more than 12 months and for contracts for which revenue can be recognized according to the amount invoiced for simplification purposes.

The following table shows the comparatives in the financial years 2017 and 2016:

<u>in € millions</u>	<u>2017</u>	<u>2016</u>
Revenues from printed products	2,354	2,358
Revenues from digital products	572	615
Other revenues	149	127
	<u>3,075</u>	<u>3,100</u>

Also in prior years, revenues from printed products mainly included revenues from physical book sales, whereas revenues from digital products mainly related to revenues from e-books sales.

The item "Other revenues" mainly comprises revenues from third party distribution activities in the amount of €88 million (2017: €86 million; 2016: €86 million) and subrights income in the amount of €53 million (2017: €55 million; 2016: €41 million).

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

2 Other Operating Income

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Income from sideline operations	22	24	46
Income from reimbursements	3	2	1
Gains from disposals of non-current assets	2	—	—
Foreign exchange gains	2	—	3
Sundry operating income	2	7	6
	<u>31</u>	<u>33</u>	<u>56</u>

3 Cost of Materials

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Consumption of finished goods and merchandise	601	616	665
Consumption of raw materials and supplies	15	14	14
	<u>616</u>	<u>630</u>	<u>679</u>

4 Personnel Costs

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Wages and salaries	571	581	583
Statutory social security contributions	42	50	49
Expenses for pensions and similar obligations	35	33	37
Other employee benefits	57	51	54
	<u>705</u>	<u>715</u>	<u>723</u>

5 Amortization, Depreciation, Impairment and Reversals on Intangible Assets and Property, Plant and Equipment

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Amortization/depreciation, impairment and reversals on			
– intangible assets	46	47	48
– property, plant and equipment	25	28	28
	<u>71</u>	<u>75</u>	<u>76</u>

Further details on amortization, depreciation, impairment and reversals are presented in note 10 “Intangible Assets” and note 11 “Property, Plant and Equipment.”

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

6 Other Operating Expenses

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Selling expenses	246	101	108
Administrative expenses	236	235	253
Loss allowances on receivables, loans and non-financial assets	154	149	148
Advertising costs	97	112	101
Consulting and audit fees	17	24	19
Operating taxes	11	10	10
Losses on disposals of non-current assets	2	—	—
Foreign exchange losses	—	5	—
Sundry operating expenses	28	19	9
	<u>791</u>	<u>655</u>	<u>648</u>

In accordance with IFRS 15, the item “Selling expenses” comprises, among others, €147 million commissions for online retailers. The item “Administrative expenses” includes, among others, payments recognized as expenses from operating leases of €51 million (2017: €60 million; 2016: €63 million) and associated services and incidental costs of €4 million (2017: €3 million; 2016: €3 million). In addition, an immaterial amount of contingent lease payments is included in this item (2017: €0 million; 2016: €0 million).

7 Interest Income and Interest Expenses

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Interest income			
Interest income on cash and cash equivalents	1	1	1
Other interest income	—	2	—
	<u>1</u>	<u>3</u>	<u>1</u>
Interest expenses			
Interest expenses on financial debt	(44)	(10)	(1)
Other interest expenses	(1)	(3)	(3)
	<u>(45)</u>	<u>(13)</u>	<u>(4)</u>

The increase of the item “Interest expenses on financial debt” is mainly due to the financing of Penguin Random House by Bertelsmann PRH Finance, Inc. Further information is presented in note 21 “Financial Debt” and note 26 “Related Party Disclosures.”

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

8 Other Financial Income and Expenses

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Other financial income			
Non-operating foreign exchange gains	—	—	2
Other	<u>3</u>	<u>1</u>	<u>—</u>
	<u>3</u>	<u>1</u>	<u>2</u>
Other financial expenses			
Net interest on defined benefit plans	—	(1)	—
Other	<u>(6)</u>	<u>(7)</u>	<u>(3)</u>
	<u>(6)</u>	<u>(8)</u>	<u>(3)</u>

To better reflect the economic content, income and expenses from non-operating foreign currency hedging transactions are offset against the results from the measurement of the economically hedged items in foreign currency, and are recognized as non-operating foreign exchange gains or losses. In the financial year 2018, losses from these non-operating hedged items in foreign currency of €-6 million (2017: €0 million; 2016: €0 million) were offset by income from foreign currency hedging transactions amounting to €13 million (2017: €7 million; 2016: €10 million). Gains from these hedged items in foreign currency of €1 million (2017: €2 million; 2016: €8 million) were offset by expenses from foreign currency hedging transactions amounting to €-8 million (2017: €-9 million; 2016: €-16 million).

9 Income Taxes

Income taxes, broken down into current and deferred income taxes, are as follows:

Income Taxes

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Earnings before income taxes	<u>348</u>	<u>376</u>	<u>400</u>
Current income taxes	<u>(33)</u>	<u>(24)</u>	<u>(26)</u>
Deferred income taxes	<u>(1)</u>	<u>14</u>	<u>(1)</u>
Income taxes	<u>(34)</u>	<u>(10)</u>	<u>(27)</u>
Net income after income taxes	<u>314</u>	<u>366</u>	<u>373</u>

Tax loss carryforwards of €9 million (2017: €10 million; 2016: €5 million) were utilized in the financial year 2018, reducing current tax expenses by €2 million (2017: €3 million; 2016: €1 million). Of the tax loss carryforwards utilized, no amounts relate to US corporate income tax, an immaterial amount (2017: €1 million; 2016: €2 million) was due to UK corporate income tax and €9 million (2017: €9 million; 2016: €3 million) was due to other foreign income taxes. These amounts include no amounts (2017: €6 million; 2016: €1 million) for tax loss carryforwards for which no deferred tax assets were recognized in the past. These amounts related to other foreign income taxes in the past (2017: €6 million; 2016: €1 million) and to UK corporate income tax in the past (2017: €0 million; 2016: €0 million). This led to a reduction in current tax expense in the past (2017: €2 million; 2016: €0 million).

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

9 Income Taxes continued

Income Taxes continued

Deferred tax assets and liabilities resulted from the following items and factors.

Deferred Taxes

in € millions	12/31/2018		thereof recognized in profit or loss in the financial year	12/31/2017		thereof recognized in profit or loss in the financial year	12/31/2016		thereof recognized in profit or loss in the financial year
	Assets	Liabilities		Assets	Liabilities		Assets	Liabilities	
Intangible assets	2	22	1	5	25	5	6	30	3
Property, plant and equipment	4	3	1	4	3	—	3	3	(1)
Financial assets	1	3	2	1	5	2	—	6	—
Inventories	4	1	—	4	1	—	4	1	1
Receivables	8	2	1	8	1	(1)	9	1	1
Advance payments and other assets	6	—	—	7	—	2	5	1	3
Provisions	15	13	(2)	20	12	—	23	11	(3)
Liabilities	—	3	(1)	—	3	—	—	2	(3)
Advance payments and other liabilities	5	1	(1)	7	3	—	7	2	(2)
Loss carryforwards/tax credits	18	—	(2)	20	—	6	14	—	—
Total	63	48	(1)	76	53	14	71	57	(1)
Offset	(26)	(26)		(34)	(34)		(40)	(40)	
Carrying amount	37	22		42	19		31	17	

No deferred tax liabilities were recognized for temporary differences in connection with investments in subsidiaries in the amount of €6 million (2017: €7 million; 2016: €7 million) as their reversal can be controlled, and it is probable that these temporary differences will not be reversed in the foreseeable future.

Current and deferred tax assets and liabilities are offset against each other if they relate to the same tax authority and meet the criteria for offsetting. The term of the deferred taxes on temporary differences is mostly long term.

Information on amounts of income tax relating to other comprehensive income is presented in note 18 “Equity.”

Deferred tax assets are recognized on temporary differences, tax loss carryforwards and tax credits when it is likely that they can be utilized in the foreseeable future. The recognizable amount is assessed primarily based on existing deferred tax liabilities from temporary differences and projected taxable income within a planning period.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

9 Income Taxes continued

Deferred Taxes continued

Temporary differences, tax loss carryforwards and tax credits for which no deferred taxes have been recognized can be carried forward as follows:

Expiration

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Tax loss carryforwards			
To be carried forward for more than 5 years	3	3	24
To be carried forward for up to 5 years	2	1	1
Temporary differences	4	2	8
Tax credits			
To be carried forward for more than 5 years	—	—	2
To be carried forward for up to 5 years	1	—	1

A reconciliation of expected tax result to actual tax result is shown in the following table:

Reconciliation to Actual Tax Expense

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Earnings before income taxes	<u>348</u>	<u>376</u>	<u>400</u>
Income tax rate applicable to Penguin Random House (UK corporate income tax rate) . .	<u>19.00%</u>	<u>19.25%</u>	<u>20.00%</u>
Expected tax expense	<u>(66)</u>	<u>(72)</u>	<u>(80)</u>
The tax effects of the following items led to differences between the expected and actual tax expense:			
Adjustment to different national tax rates	(21)	(59)	(58)
Effect of changes in tax rate and tax law	—	3	(1)
Current income taxes for previous years	(3)	(2)	—
Deferred income taxes for previous years	—	3	1
Effects of measurements of deferred tax assets	(1)	12	4
Permanent differences	1	(7)	(5)
Taxes incurred on the level of shareholders in the United States	60	114	115
Other adjustments	(4)	(2)	(3)
Total of adjustments	<u>32</u>	<u>62</u>	<u>53</u>
Actual tax expense	<u>(34)</u>	<u>(10)</u>	<u>(27)</u>

The actual tax expense differs from the expected tax expense mainly due to differences between the applicable national tax rates to the tax rate applicable to the Combined Financial Statements (UK corporate income tax rate) and due to income taxes related to the tax-transparent entities of the legal group PRH LLC, United States, which are incurred on the level of the shareholders and are therefore not accounted for in the Combined Financial Statements. Included in the “Adjustment to different national tax rates” is mainly the tax differential to the United States nominal tax rate (2018: 26.20 percent; 2017: 38.10 percent; 2016: 38.80 percent).

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

9 Income Taxes continued

Applicable Income Tax Rate

The applicable tax rate corresponds to the applicable tax rate of the Penguin Random House Limited, United Kingdom, as parent company of the legal group PRH Limited, because the main parts of the reported tax relate to this legal group. The applicable tax rate in the financial year 2018 was 19.00 percent (2017: 19.25 percent; 2016: 20.00 percent) and corresponds to the enacted country-specific tax rate in the United Kingdom.

The income tax relating to the legal group PRH LLC, United States, is not material for the Combined Financial Statements as only state income taxes are included in the income tax line in profit or loss. Any other income tax, which derives from the profits of the legal group PRH LLC, is not shown as part of the Combined Financial Statements, as it is accounted for in the partner's financial statements.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

10 Intangible Assets

in € millions	Goodwill	Other intangible assets		Total	Total
		Other rights and licenses	Internally generated intangible assets		
Cost					
Balance as of 1/1/2016	879	730	3	733	1,612
Exchange differences	(14)	(10)	—	(10)	(24)
Acquisitions through business combinations	—	—	—	—	—
Other additions	—	15	—	15	15
Reductions through disposal of investments	(1)	(1)	—	(1)	(2)
Other disposals	—	(1)	—	(1)	(1)
Reclassifications in accordance with IFRS 5	(1)	(4)	—	(4)	(5)
Reclassifications and other changes	—	2	—	2	2
Balance as of 12/31/2016	863	731	3	734	1,597
Exchange differences	(76)	(70)	(1)	(71)	(147)
Acquisitions through business combinations	31	11	—	11	42
Other additions	—	12	—	12	12
Reductions through disposal of investments	—	—	—	—	—
Other disposals	—	—	—	—	—
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	—	—	—	—
Balance as of 12/31/2017	818	684	2	686	1,504
Exchange differences	21	16	—	16	37
Acquisitions through business combinations	1	—	—	—	1
Other additions	—	10	—	10	10
Reductions through disposal of investments	(2)	(3)	—	(3)	(5)
Other disposals	—	(11)	—	(11)	(11)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	7	—	7	7
Balance as of 12/31/2018	838	703	2	705	1,543
Accumulated amortization					
Balance as of 1/1/2016	4	242	3	245	249
Exchange differences	—	(3)	—	(3)	(3)
Amortization	—	48	—	48	48
Impairment losses	—	—	—	—	—
Reversals of impairment losses	—	—	—	—	—

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

10 Intangible Assets continued

in € millions	Goodwill	Other intangible assets		Total	Total
		Other rights and licenses	Internally generated intangible assets		
Reductions through disposal of investments	—	(1)	—	(1)	(1)
Other disposals	—	(1)	—	(1)	(1)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	—	—	—	—
Balance as of 12/31/2016	<u>4</u>	<u>285</u>	<u>3</u>	<u>288</u>	<u>292</u>
Exchange differences	—	(28)	(1)	(29)	(29)
Amortization	—	46	—	46	46
Impairment losses	—	—	—	—	—
Reversals of impairment losses	—	—	—	—	—
Reductions through disposal of investments	—	—	—	—	—
Other disposals	—	—	—	—	—
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	(1)	1	—	1	—
Balance as of 12/31/2017	<u>3</u>	<u>304</u>	<u>2</u>	<u>306</u>	<u>309</u>
Exchange differences	—	7	—	7	7
Amortization	—	46	—	46	46
Impairment losses	—	—	—	—	—
Reversals of impairment losses	—	—	—	—	—
Reductions through disposal of investments	—	(2)	—	(2)	(2)
Other disposals	—	(11)	—	(11)	(11)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	8	—	8	8
Balance as of 12/31/2018	<u>3</u>	<u>352</u>	<u>2</u>	<u>354</u>	<u>357</u>
Carrying amount as of 12/31/2018	<u>835</u>	<u>351</u>	<u>—</u>	<u>351</u>	<u>1,186</u>
Carrying amount as of 12/31/2017	<u>815</u>	<u>380</u>	<u>—</u>	<u>380</u>	<u>1,195</u>
Carrying amount as of 12/31/2016	<u>859</u>	<u>446</u>	<u>—</u>	<u>446</u>	<u>1,305</u>

The carrying amount of the “Other rights and licenses” includes backlists and frontlists in the amount of €247 million (2017: €270 million; 2016: €326 million) and imprints in the amount of €75 million (2017: €79 million; 2016: €92 million).

As in the previous years, no intangible assets have been provided as collateral for liabilities as of the end of the reporting period 2018.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

10 Intangible Assets continued

Goodwill is attributable to the following cash-generating units:

Goodwill by Cash-Generating Units

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Penguin Random House North America	516	494	559
Penguin Random House United Kingdom	168	170	176
Dorling Kindersley	14	14	14
Spanish Speaking	114	115	87
Rest of the World	23	22	23
	<u>835</u>	<u>815</u>	<u>859</u>

For the purpose of impairment testing (IAS 36), goodwill from a business combination is allocated to the cash-generating units that are expected to benefit from the synergies of the business combination. Goodwill is tested for impairment at least annually and whenever there is an indication that it may be impaired, as outlined in the section “Accounting and Measurement Policies” and under the following assumptions. The recoverable amount is the higher of fair value less costs of disposal and value in use. For the cash-generating units, the recoverable amount equals the fair value, which is derived from discounted cash flows less costs of disposal, and which is based on level 3 of the fair value hierarchy. Projected cash flows were based on internal estimates for three detailed planning periods and, as a rule, two further detailed planning periods were applied. For periods after this detailed horizon, a perpetual annuity was applied, taking into account individual business-specific growth rates.

Management estimates of cash flow are based on factors including assumptions of economic trends and the associated risks, the regulatory environment, the competitive environment, market share, investments, EBITDA margins and growth rates. With regard to the individual cash-generating units bearing material goodwill, relating to the market development for the beginning of the detailed planning period, a stable development for the physical book markets in the United States, the United Kingdom, Spain and Germany has been assumed for financial year 2019. Regarding e-book sales, it is expected for the financial year 2019 that publishers’ e-book sales in the United States and the United Kingdom will decline moderately. For audio download sales, a strong growth is expected for the financial year 2019 in the United States and the United Kingdom. The five-year sales forecasts use average nominal growth rates for Dorling Kindersley of 2.2 percent and for Spanish Speaking (including Latin American countries) of 2.7 percent.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

10 Intangible Assets continued

Goodwill by Cash-Generating Units continued

In addition, fair values, based on discounted cash flows, were measured using the following individual business-specific discount rates and growth rates for periods after the detailed planning period:

Overview of Growth and Discount Rates

	Growth rate in % for the year 12/31/2018	Discount rate in % for the year 12/31/2018	Growth rate in % for the year 12/31/2017	Discount rate in % for the year 12/31/2017	Growth rate in % for the year 12/31/2016	Discount rate in % for the year 12/31/2016
Penguin Random House						
North America	0.5	9.2	0.5	8.5	0.5	8.3
Penguin Random House						
United Kingdom	0.5	8.0	0.5	7.6	0.5	7.6
Dorling Kindersley	0.7	9.1	0.6	8.4	0.6	8.2
Spanish Speaking	3.0	12.1	4.6	13.0	5.0	12.8
Rest of the World	3.1	11.0	2.6	10.1	2.5	9.3

In the financial years 2018, 2017 and 2016, no impairment losses were recognized for goodwill.

As of December 31, 2018, the recoverable amount for the cash-generating unit Spanish Speaking exceeded the carrying amount by €1 million (2017: €3 million; 2016: €4 million). In the event of an increase in the discount rate by 0.1 percentage points, a reduction in the long-term growth rate by 0.1 percentage points or a reduction in the average nominal sales growth rate for the five-year detailed planning period by 0.2 percentage points, the recoverable amount is lower than the carrying amount for the first time.

As of December 31, 2018, the recoverable amount for the cash-generating unit Dorling Kindersley exceeded the carrying amount by €4 million (2017: €4 million; 2016: €3 million). In the event of an increase in the discount rate by 0.4 percentage points, a reduction in the long-term growth rate by 0.8 percentage points or a reduction in the average nominal sales growth rate for the five-year detailed planning period by 2.1 percentage points, the recoverable amount is lower than the carrying amount for the first time.

As of December 31, 2018, the goodwill of the cash-generating units Penguin Random House North America, Penguin Random House United Kingdom and Rest of the World was not subject to impairment even given a change by one of the two most important factors: discount rate (increase of 1.0 percentage point) and long-term growth rate (reduction of 1.0 percentage point).

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

11 Property, Plant and Equipment

in € millions	<u>Land, rights equivalent to land and buildings</u>	<u>Technical equipment and machinery</u>	<u>Other equipment, fixtures, furniture and office equipment</u>	<u>Advance payments and construction in progress</u>	<u>Total</u>
Cost					
Balance as of 1/1/2016	111	94	213	4	422
Exchange differences	(5)	(6)	1	—	(10)
Acquisitions through business combinations	—	—	—	—	—
Other additions	4	2	5	4	15
Reductions through disposal of investments	—	—	—	—	—
Other disposals	(1)	(1)	(7)	—	(9)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	(1)	5	(6)	(2)
Balance as of 12/31/2016	<u>109</u>	<u>88</u>	<u>217</u>	<u>2</u>	<u>416</u>
Exchange differences	(9)	(7)	(22)	(1)	(39)
Acquisitions through business combinations	—	—	—	—	—
Other additions	1	1	8	11	21
Reductions through disposal of investments	—	—	—	—	—
Other disposals	—	—	(5)	—	(5)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	4	1	(3)	2
Balance as of 12/31/2017	<u>101</u>	<u>86</u>	<u>199</u>	<u>9</u>	<u>395</u>
Exchange differences	2	1	3	1	7
Acquisitions through business combinations	—	—	—	—	—
Other additions	3	2	4	18	27
Reductions through disposal of investments	—	—	(1)	—	(1)
Other disposals	—	(9)	(47)	—	(56)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	7	8	1	(11)	5
Balance as of 12/31/2018	<u>113</u>	<u>88</u>	<u>159</u>	<u>17</u>	<u>377</u>
Accumulated depreciation					
Balance as of 1/1/2016	43	57	132	—	232
Exchange differences	(1)	(5)	2	—	(4)
Depreciation	3	7	18	—	28
Impairment losses	—	—	—	—	—
Reversals of impairment losses	—	—	—	—	—
Reductions through disposal of investments	—	—	—	—	—
Other disposals	(1)	(1)	(7)	—	(9)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	(1)	1	—	—
Balance as of 12/31/2016	<u>44</u>	<u>57</u>	<u>146</u>	<u>—</u>	<u>247</u>
Exchange differences	(4)	(4)	(16)	—	(24)
Depreciation	3	6	19	—	28
Impairment losses	—	—	—	—	—

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

11 Property, Plant and Equipment continued

<u>in € millions</u>	<u>Land, rights equivalent to land and buildings</u>	<u>Technical equipment and machinery</u>	<u>Other equipment, fixtures, furniture and office equipment</u>	<u>Advance payments and construction in progress</u>	<u>Total</u>
Reversals of impairment losses	—	—	—	—	—
Reductions through disposal of investments	—	—	—	—	—
Other disposals	—	—	(6)	—	(6)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	—	—	—	—
Balance as of 12/31/2017	<u>43</u>	<u>59</u>	<u>143</u>	<u>—</u>	<u>245</u>
Exchange differences	1	1	3	—	5
Depreciation	3	6	16	—	25
Impairment losses	—	—	—	—	—
Reversals of impairment losses	—	—	—	—	—
Reductions through disposal of investments	—	—	(1)	—	(1)
Other disposals	—	(9)	(45)	—	(54)
Reclassifications in accordance with IFRS 5	—	—	—	—	—
Reclassifications and other changes	—	5	—	—	5
Balance as of 12/31/2018	<u>47</u>	<u>62</u>	<u>116</u>	<u>—</u>	<u>225</u>
Carrying amount as of 12/31/2018	<u>66</u>	<u>26</u>	<u>43</u>	<u>17</u>	<u>152</u>
Carrying amount as of 12/31/2017	58	27	56	9	150
Carrying amount as of 12/31/2016	<u>65</u>	<u>31</u>	<u>71</u>	<u>2</u>	<u>169</u>

At the end of the financial years 2018, 2017 and 2016, no property, plant and equipment was pledged as collateral for liabilities. No impairment losses were recognized for property, plant and equipment in the financial years 2018, 2017 and 2016.

12 Interests in Associates

At the end of the financial years 2018, 2017 and 2016, Penguin Random House holds an investment in one associate.

The following table shows summarized financial information on this associate, which management considers immaterial. The information given represents Penguin Random House's interest.

Summarized Financial Information on the Immaterial Associate

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Earnings after taxes from continuing operations	(2)	—	—
Other comprehensive income	(1)	(2)	5
Total comprehensive income	(3)	(2)	5

In the financial year 2017, an impairment loss of €10 million was recognized for the associate due to the ongoing difficult economic situation in Brazil. The recoverable amount was determined using the fair value less costs of disposal on the basis of the discounted cash flow method with a long-term growth rate of 6.0 percent and a discount rate of 13.8 percent due to the business activities in the Brazilian market.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

13 Other Financial Assets

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Current			
Derivative financial instruments	<u>4</u>	<u>1</u>	<u>3</u>
	<u>4</u>	<u>1</u>	<u>3</u>
Non-current			
Other debt instruments	9	n/a	n/a
Other investments	n/a	2	2
Securities and financial assets	<u>n/a</u>	<u>7</u>	<u>5</u>
	<u>9</u>	<u>9</u>	<u>7</u>

Information on credit risk, including impairment, is presented in note 24 “Additional Disclosures on Financial Instruments.”

At the end of the financial years 2018, 2017 and 2016, financial assets in the amount of €2 million (2017: €0 million; 2016: €0 million) have been provided as collateral for liabilities. At the end of the financial years 2018, 2017 and 2016, no material financial assets were pledged with restrictions on disposal and no financial assets were provided as security for contingent liabilities to third parties.

14 Inventories

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Raw materials and supplies	28	13	15
Work in progress	56	55	52
Finished goods and merchandise	194	184	195
Advance payments	<u>1</u>	<u>1</u>	<u>1</u>
	<u>279</u>	<u>253</u>	<u>263</u>

In the financial year 2018, write-downs on inventories were recognized in the amount of €-6 million (2017: €-15 million; 2016: €-13 million). At the end of the financial years 2018, 2017 and 2016, no inventories have been pledged as collateral for liabilities.

15 Trade and Other Receivables

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Non-current			
Other receivables	—	4	5
Current			
Trade receivables	1,100	752	718
Other receivables	13	25	16

Trade receivables are due for payment generally within 12 months. The amount of trade receivables in previous years was offset by a provision for expected returns. Under IFRS 15 a refund liability for the expected refunds to customers is recognized as adjustment to revenue in the balance sheet position “Trade and other payables.”

Information on credit risk, including impairment, is presented in note 24 “Additional Disclosures on Financial Instruments.”

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

16 Other Non-Financial Assets

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Non-current			
Other non-financial assets	377	282	295
Current			
Other non-financial assets	477	430	452
– advance payments	432	387	412
– other tax receivables	12	12	10
– deferred items	31	30	29
– sundry non-financial assets	2	1	1

The non-current other non-financial assets in the amount of €329 million (2017: €259 million; 2016: €283 million) relate to advance payments for published or unpublished book titles. If a book title is expected to be published within the next 12 months, advance payments on it are considered current. Advances on book titles are initially capitalized within other non-financial assets when the advance is paid and subsequently expensed in the income statement position “Royalties” as related revenues are earned or when future recovery is not probable to adjust the advance to its net realizable value. The realizable value of royalty advances relies on a degree of management judgement in determining the profitability of individual author contracts. If the carrying amount is higher than the estimated realizable value of author contracts, these excess amounts will be written-off in the income statement position “Allowances on receivables, loans and non-financial assets.” The recoverability of royalty advances is based upon a detailed management review of the age of the advance, the future sales projections for new authors and prior sales history of repeat authors. Costs for obtaining and fulfilling contracts with customers are immaterial, both individually and in total. The same applies to amount of amortization and impairment losses recognized for these costs in the reporting period.

17 Cash and Cash Equivalents

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Cash	193	375	310
Other securities < 3 months	2	1	2
	<u>195</u>	<u>376</u>	<u>312</u>

Cash includes bank balances and cash on hand. Cash equivalents include short-term, highly liquid securities with a term to maturity on acquisition of a maximum of three months. Foreign currency items are translated using the closing rate.

As of December 31, 2018, cash and cash equivalents in the amount of €1 million were used as collateral for liabilities (2017: €0 million; 2016: €0 million). At the end of the financial years 2018, 2017 and 2016, no cash and cash equivalents existed with restrictions on disposal.

18 Equity

The equity includes the combined equity, membership capital and combined retained earnings including share capital and share premiums attributable to the Penguin Random House Limited, in London, United Kingdom, LLC membership capital attributable to Penguin Random House LLC in the United States and the undistributed prior year net profits of those companies included in the Combined Financial Statements. Accumulated other

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

18 Equity continued

comprehensive income includes remeasurement effects of defined benefit pension plans (actuarial gains and losses on the defined benefit obligation, differences between actual investment returns and the return implied by the net interest cost on the plan assets, and effects of the asset ceiling) and accumulated other comprehensive income.

The change in other comprehensive income after taxes is derived as follows:

Changes to Components of Other Comprehensive Income after Taxes

<u>in € millions</u>	<u>2018</u>				
	<u>Before-tax amount</u>	<u>Taxes</u>	<u>Net-of-tax amount</u>	<u>Attributable to Penguin Random House shareholders</u>	<u>Attributable to non-controlling interests</u>
Items that will not be reclassified subsequently to profit or loss					
Remeasurement effects on defined benefit plans	26	(5)	21	21	—
Changes in fair value of equity instruments	(2)	—	(2)	(2)	—
Share of other comprehensive income of investments accounted for using the equity method	—	—	—	—	—
Items that will be reclassified subsequently to profit or loss when specific conditions are met					
Exchange differences	14	—	14	14	—
Cash flow hedges	—	—	—	—	—
Share of other comprehensive income of investments accounted for using the equity method	(1)	—	(1)	(1)	—
Other comprehensive income net of tax	<u>37</u>	<u>(5)</u>	<u>32</u>	<u>32</u>	<u>—</u>
<u>in € millions</u>	<u>2017</u>				
	<u>Before-tax amount</u>	<u>Taxes</u>	<u>Net-of-tax amount</u>	<u>Attributable to Penguin Random House shareholders</u>	<u>Attributable to non-controlling interests</u>
Items that will not be reclassified subsequently to profit or loss					
Remeasurement effects on defined benefit plans	25	(5)	20	20	—
Share of other comprehensive income of investments accounted for using the equity method	—	—	—	—	—
Items that will be reclassified subsequently to profit or loss when specific conditions are met					
Exchange differences	(161)	—	(161)	(161)	—
Cash flow hedges	(1)	—	(1)	(1)	—
Share of other comprehensive income of investments accounted for using the equity method	(2)	—	(2)	(2)	—
Other comprehensive income net of tax	<u>(139)</u>	<u>(5)</u>	<u>(144)</u>	<u>(144)</u>	<u>—</u>

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

18 Equity continued

Changes to Components of Other Comprehensive Income after Taxes continued

<u>in € millions</u>	2016				
	Before-tax amount	Taxes	Net-of-tax amount	Attributable to Penguin Random House shareholders	Attributable to non-controlling interests
Items that will not be reclassified subsequently to profit or loss					
Remeasurement effects on defined benefit plans	(26)	5	(21)	(21)	—
Share of other comprehensive income of investments accounted for using the equity method	—	—	—	—	—
Items that will be reclassified subsequently to profit or loss when specific conditions are met					
Exchange differences	(19)	—	(19)	(18)	(1)
Cash flow hedges	(1)	—	(1)	(1)	—
Share of other comprehensive income of investments accounted for using the equity method	<u>11</u>	<u>—</u>	<u>11</u>	<u>11</u>	<u>—</u>
Other comprehensive income net of tax	<u>(35)</u>	<u>5</u>	<u>(30)</u>	<u>(29)</u>	<u>(1)</u>

In the financial year 2018, €-1 million cash flow hedge effects recognized in other comprehensive income were reclassified to the income statement (2017: €0 million; 2016: €0 million). These are amounts before tax.

19 Provisions for Pensions and Similar Obligations

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Defined benefit obligation	<u>19</u>	23	46
Obligations similar to pensions	<u>2</u>	<u>1</u>	<u>1</u>
	<u>21</u>	<u>24</u>	<u>47</u>

Penguin Random House operates various pension plans for current and former employees and their surviving dependents mainly in the United Kingdom, the United States and Canada. The model of such plans varies according to the legal, fiscal and economic environment of the country concerned. These company pension plans include both defined contribution and defined benefit plans.

In the case of defined contribution plans, the company makes payments into an external pension fund or another welfare fund through a statutory, contractual or voluntary model. The company has no obligation to provide further benefits once it has made these payments, so no provisions are recognized. Expenses for defined contribution plans in the amount of €23 million were recognized in the financial year 2018 (2017: €21 million; 2016: €26 million). The contributions paid by employer to state pension plans in the financial year 2018 amount to €36 million (2017: €36 million; 2016: €36 million).

All other pension plans are defined benefit plans. The US and Canadian companies' obligations for healthcare costs for employees after they retire (medical care plans) are also defined benefit obligations and are included in the provisions on the balance sheet. For all of the retirement benefit plans, a distinction must be made as to whether or not these are financed through an external investment fund.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

19 Provisions for Pensions and Similar Obligations continued

Net Defined Benefit Liability Recognized in the Balance Sheet

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Present value of defined benefit obligation of unfunded plans	17	21	21
Present value of defined benefit obligation of funded plans	400	434	440
Total present value of defined benefit obligation	417	455	461
Fair value of plan assets	(446)	(455)	(426)
Net defined benefit liability /(asset) recognized in the balance sheet	(29)	—	35
thereof provisions for pensions	19	23	46
thereof other assets	(48)	(23)	(11)

As in the previous years, in the financial year 2018, the asset ceiling prescribed by IAS 19.64 did not impact other comprehensive income. The other assets are disclosed under non-current non-financial assets.

Provisions are recognized for these defined benefit plans. These are mostly final salary plans.

Defined Benefit Plans

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Final salary plans	337	366	378
Career average plans	15	15	15
Other commitments given	50	56	50
Medical care plans United States	7	7	8
Medical care plans Canada	8	11	10
Present value of defined benefit obligation	417	455	461
– thereof capital commitments	—	—	—

The obligations and plan assets available for the existing pension plans are, in some cases, exposed to demographic, economic and legal risks. The demographic risks are primarily the longevity risk for pensioners. Economic risks include, in this respect, mostly unforeseeable developments on the capital markets and the associated impacts on plan assets and pension obligations. Legal risks can result from restrictions to investments and minimum funding requirements.

The plans in the United Kingdom are subject to the “Pensions Act 2004,” which includes reviewing the full financing of the pension plan from an actuarial perspective every three years with annual monitoring and, if necessary, eliminating any deficits that may have arisen by means of further additions to plan assets. There are no other material regulatory conditions over and above the minimum funding regulations in the United States and United Kingdom.

The provisions are determined using actuarial formulas in accordance with IAS 19. The amount of provisions depends on employees’ length of service with the company and their pensionable salary. Provisions are computed using the projected unit credit method, in which the benefit entitlement earned is allocated to each year of service, thus assuming an increasing cost of service in comparison to the entry age normal method. When identifying the present value of the pension obligation, the underlying interest rate is of material importance. For Penguin Random House, this is based on the “Mercer Yield Curve Approach.” With this approach, separate spot

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

19 Provisions for Pensions and Similar Obligations continued

Defined Benefit Plans continued

rate yield curves are created for the United Kingdom, the United States and Canada on the basis of high-quality corporate bonds. To appropriately present the time value of money in accordance with IAS 19.84, the basis does not consider either spikes for which the risk estimate may be substantially higher or lower or bonds with embedded options that distort interest rates.

Further significant actuarial assumptions are assumed as follows:

Actuarial Assumptions

	12/31/2018		
	United States	United Kingdom	Other
Discount rate	4.30%	2.90%	3.64%
Rate of salary increase	n/a	2.74%	2.85%
Rate of pension increase	n/a	2.86%	1.50%

	12/31/2017		
	United States	United Kingdom	Other
Discount rate	3.90%	2.50%	3.50%
Rate of salary increase	n/a	2.86%	3.00%
Rate of pension increase	n/a	2.94%	n/a

	12/31/2016		
	United States	United Kingdom	Other
Discount rate	4.51%	2.60%	4.01%
Rate of salary increase	n/a	2.97%	3.02%
Rate of pension increase	n/a	3.12%	n/a

An increase or decrease in the assumptions set out above compared to the assumptions actually applied would have had the following effects on the defined benefit obligation as of December 31, 2018:

Effect of Actuarial Assumptions

<u>in € millions</u>	<u>Increase</u>	<u>Decrease</u>
Effect of 0.5 percentage point change in discount rate	(33)	38
Effect of 0.5 percentage point change in rate of salary increase	7	(6)
Effect of 0.5 percentage point change in rate of pension increase	11	(10)
Effect of change in average life expectancy by one year	14	(12)

To determine the sensitivity of the longevity, the mortality rates for all beneficiaries were reduced or increased evenly, so that the life expectancy of a person of a country-specific retirement age increases or decreases by one year.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

19 Provisions for Pensions and Similar Obligations continued

Effect of Actuarial Assumptions continued

Changes in the present value of defined benefit obligations and plan assets in the reporting period were as follows:

Development of the Defined Benefit Plans

in € millions	Defined benefit obligation (I)			Fair value of plan assets (II)			Net defined benefit balance (I)-(II)		
	2018	2017	2016	2018	2017	2016	2018	2017	2016
Balance as of 1/1	455	461	425	455	426	411	—	35	14
Current service cost	10	11	10	—	—	—	10	11	10
Interest expenses	12	12	15	—	—	—	12	12	15
Interest income	—	—	—	12	11	15	(12)	(11)	(15)
Past service cost	—	(3)	—	—	—	—	—	(3)	—
Income and expenses for defined benefit plans recognized in the combined income statement	22	20	25	12	11	15	10	9	10
Income/expense on plan assets excluding amounts included in net interest income and net interest expenses	—	—	—	(21)	26	54	21	(26)	(54)
Actuarial gains (-) and losses (+)									
– changes in financial assumptions	(35)	5	98	—	—	—	(35)	5	98
– changes in demographic assumptions	(4)	(11)	(11)	—	—	—	(4)	(11)	(11)
– experience adjustments	(7)	7	(6)	—	—	—	(7)	7	(6)
Remeasurements for defined benefit plans recognized in the combined statement of comprehensive income	(46)	1	81	(21)	26	54	(25)	(25)	27
Contributions to plan assets by employer	—	—	—	13	16	17	(13)	(16)	(17)
Contributions to plan assets by employees	2	2	2	2	3	3	—	(1)	(1)
Pension payments	(14)	(11)	(14)	(14)	(11)	(14)	—	—	—
Changes in foreign exchange rates	(4)	(18)	(58)	(4)	(16)	(60)	—	(2)	2
Other changes	2	—	—	3	—	—	(1)	—	—
Other reconciling items	(14)	(27)	(70)	—	(8)	(54)	(14)	(19)	(16)
Balance as of 12/31	417	455	461	446	455	426	(29)	—	35
thereof									
United Kingdom	383	420	427	432	443	414	(49)	(23)	13
Canada	24	28	26	11	12	12	13	16	14
United States	7	7	8	—	—	—	7	7	8
Ireland	3	—	—	3	—	—	—	—	—

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

19 Provisions for Pensions and Similar Obligations continued

Development of the Defined Benefit Plans continued

Employer contributions to plan assets are expected to amount to €12 million in the next financial year. Of the expenses for defined benefit plans in the amount of €10 million (2017: €9 million; 2016: €10 million), €10 million (2017: €8 million; 2016: €10 million) was recognized under the item “Personnel costs” and an immaterial amount under “Other financial expenses” and “Other financial income” (2017: €1 million; 2016: €0 million). The past service cost and losses from settlements recognized under “Personnel costs” were also immaterial (2017: €-3 million; 2016: €0 million).

The expenses are broken down as follows:

Expenses for Defined Benefit Plans

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Current service cost	10	11	10
Past service cost and impact from settlement	—	(3)	—
Net interest expenses	—	<u>1</u>	—
Net pension expenses	<u>10</u>	<u>9</u>	<u>10</u>

The portfolio structure of plan assets is composed as follows:

Portfolio Structure of Plan Assets

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Equity instruments ¹⁾	120	154	181
Debt instruments ¹⁾	228	210	161
Other funds	76	68	67
Qualifying insurance policies	6	3	4
Cash and cash equivalents	5	12	7
Real estate	11	8	6
Derivatives	—	—	—
Other	—	—	—
Fair value of plan assets	<u>446</u>	<u>455</u>	<u>426</u>

1) For almost all equity and debt instruments, market prices are listed on an active market.

All plan assets are used exclusively for the fulfillment of benefit obligations. In order to avoid a concentration of risk, plan assets are invested in various classes of investments.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

19 Provisions for Pensions and Similar Obligations continued

Portfolio Structure of Plan Assets continued

The weighted average duration of the pension obligations as of December 31, 2018, was 20 years (2017: 19 years; 2016: €20 years). The maturity profile of the anticipated non-discounted pension payments is presented in the following table:

Maturity Profile of Pension Payments

<u>Year</u>	<u>Expected pension payments in € millions</u>
2019	11
2020	11
2021	11
2022	13
2023	12
2024-2028	75

Obligations similar to pensions relate to severance payments at retirement in the amount of €2 million (2017: €1 million; 2016: €1 million). Provisions for severance payments at retirement are recognized in the same way as defined benefit plans, but with actuarial gains and losses recognized in profit or loss.

20 Other Provisions

<u>in € millions</u>	<u>1/1/2018</u>		<u>Additions</u>	<u>Reversal</u>	<u>Usage</u>	<u>Other effects</u>	<u>Change of consolidation scope</u>	<u>Accrued interest</u>	<u>12/31/2018</u>	
	<u>of which > 1 year</u>								<u>of which > 1 year</u>	
Restructuring	1	—	5	—	(2)	—	—	—	4	—
Onerous contracts	33	27	19	(2)	(5)	7	—	1	53	39
Litigation	3	—	—	(1)	—	(1)	—	—	1	—
Sales and distribution	1	—	1	—	—	—	—	—	2	—
Other employee benefits	5	—	2	—	(1)	—	—	—	6	—
Other	6	2	1	(2)	(4)	3	—	—	4	2
	<u>49</u>	<u>29</u>	<u>28</u>	<u>(5)</u>	<u>(12)</u>	<u>9</u>	<u>—</u>	<u>1</u>	<u>70</u>	<u>41</u>

<u>in € millions</u>	<u>1/1/2017</u>		<u>Additions</u>	<u>Reversal</u>	<u>Usage</u>	<u>Other effects</u>	<u>Change of consolidation scope</u>	<u>Accrued interest</u>	<u>12/31/2017</u>	
	<u>of which > 1 year</u>								<u>of which > 1 year</u>	
Restructuring	—	—	3	—	(2)	—	—	—	1	—
Onerous contracts	28	26	9	(1)	—	(4)	—	1	33	27
Litigation	3	—	1	(1)	—	—	—	—	3	—
Sales and distribution	4	—	1	(3)	(1)	—	—	—	1	—
Other employee benefits	7	—	2	(1)	(2)	(1)	—	—	5	—
Other	2	1	3	(1)	—	1	1	—	6	2
	<u>44</u>	<u>27</u>	<u>19</u>	<u>(7)</u>	<u>(5)</u>	<u>(4)</u>	<u>1</u>	<u>1</u>	<u>49</u>	<u>29</u>

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

20 Other Provisions continued

in € millions	1/1/2016		Additions	Reversal	Usage	Other effects	Change of consolidation scope	Accrued interest	12/31/2016	
		of which > 1 year								of which > 1 year
Restructuring	4	2	1	—	(5)	—	—	—	—	—
Onerous contracts	2	—	25	—	—	1	—	—	28	26
Litigation	3	—	1	(1)	—	—	—	—	3	—
Sales and distribution	4	—	1	—	(1)	—	—	—	4	—
Other employee benefits	6	—	2	—	(1)	—	—	—	7	—
Other	4	1	1	(1)	—	(2)	—	—	2	1
	<u>23</u>	<u>3</u>	<u>31</u>	<u>(2)</u>	<u>(7)</u>	<u>(1)</u>	<u>—</u>	<u>—</u>	<u>44</u>	<u>27</u>

The onerous provision mainly relates to the onerous lease contracts and onerous royalty arrangements. In August 2016, Penguin Random House signed a new lease contract for its offices at 1745 Broadway, New York, United States. The new lease started on July 1, 2018, with an eight-month rent-free period, and the lease term lasts until June 2033. The new contracts comprise additional floors and therefore give the opportunity to consolidate originally from three locations into one. Under consideration of possible subleases, an onerous lease provision of €38 million (2017: €25 million, 2016: €26 million) was recognized at the end of the reporting period. The increase of the onerous provision in 2018 is attributable mainly to two effects: the adjusted sublease estimations downwards the onerous lease calculation and to a provision for negative contribution on unpublished titles.

21 Financial Debt

Carrying amounts of financial debt are calculated as follows:

Current and Non-Current Financial Debt

in € millions	Current			Non-current				
	12/31/2018	12/31/2017	12/31/2016	Remaining term in years		12/31/2018	12/31/2017	12/31/2016
				1 to 5 years	> 5 years			
Liabilities to banks	15	21	21	—	—	—	—	—
Lease liabilities	—	—	—	2	—	2	3	1
Other financial debt	274	417	82	918	—	918	663	—
	<u>289</u>	<u>438</u>	<u>103</u>	<u>920</u>	<u>—</u>	<u>920</u>	<u>666</u>	<u>1</u>

At initial recognition within the scope of IFRS 9, the financial debt is recognized at fair value including transaction costs, and the subsequent measurement is based on amortized cost using the effective interest method. Foreign currency liabilities are translated using the exchange rate at the end of the reporting period. In the financial year 2013, Penguin Random House entered into a Revolving Credit Agreement with Bertelsmann SE & Co. KGaA and Pearson plc. Under this shareholder loan agreement, the Group has access to a revolving facility of up to US\$250 million. This facility was amended in October 2017 and in May 2018 and is valid until October 2022. In the second amendment, it was agreed that the facility is not available until the later of June 1, 2019, or full repayment of all outstanding amounts under the Revolving Credit Agreements with Bertelsmann PRH Finance, Inc. and Bertelsmann SE & Co. KGaA from 2018. The interest rates for loans under the revolving facility are applicable LIBOR plus a margin of 2.00 percent per year. The loan drawdown is in either US dollars or British pounds. As of December 31, 2018, the loan which was recognized in the position “Other financial debt” amounted to €0 million (2017: €208 million; 2016: €82 million).

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Notes to the Income Statement and the Balance Sheet continued

21 Financial Debt continued

Current and Non-Current Financial Debt continued

In October 2017, Penguin Random House entered with Bertelsmann PRH Finance, Inc., a subsidiary of Bertelsmann SE & Co. KGaA, into a Term Loan Agreement of US\$795 million, valid until October 2022. The term loan bears interest at 4.25 percent per year. As of December 31, 2018, the term loan balance amounted to €694 million (2017: €663 million), which was included in the position “Other financial debt.”

In October 2017, Penguin Random House entered with Bertelsmann UK Limited, a subsidiary of Bertelsmann SE & Co. KGaA, into a Term Loan Agreement of GBP200 million, valid until April 2023. The term loan bears interest at 3.20 percent per year. In March 2018, the Term Loan Agreement was transferred from Bertelsmann UK Limited to Bertelsmann Business Support S.à r.l., a subsidiary of Bertelsmann SE & Co. KGaA. As of December 31, 2018, the term loan balance amounted to €224 million, which was included in the position “Other financial debt.”

Penguin Random House entered with Bertelsmann PRH Finance, Inc. into a Term Loan Agreement of US\$250 million in December 2017. This agreement was valid until March 30, 2018. The interest rate for the loan was applicable LIBOR plus a margin of 2.00 percent per year. As of December 31, 2018, the term loan was completely repaid (2017: €208 million).

In May 2018, Penguin Random House entered with Bertelsmann PRH Finance, Inc., a subsidiary of Bertelsmann SE & Co. KGaA, into a Revolving Credit Agreement of US\$175 million, valid until May 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year. As of December 31, 2018, the loan amounted to €21 million, which was also included in the position “Other financial debt.”

In addition, in May 2018, Penguin Random House entered with Bertelsmann SE & Co. KGaA into a Revolving Credit Agreement of US\$200 million, valid until May 2019. This facility was amended in December 2018 for an additional loan commitment of US\$90 million. The additional commitment is valid until February 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year. As of December 31, 2018, the loan amounted to €253 million, which was also included in the position “Other financial debt.”

In the position “Liabilities to banks,” the amount of €2 million (2017: €2 million; 2016: €2 million) relates to the supply-chain financing arrangements (reverse factoring). The substance and nature of such arrangements, involving the provision of finance linked to the supply of goods or services, lead to the reclassification of the original liability presented as a trade payable to the debt liability.

Financial debt is generally unsecured.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

22 Liabilities

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Non-current			
Trade payables	13	—	—
Payables from royalties	98	88	114
Other financial payables	2	2	—
Other non-financial liabilities	15	32	32
Current			
Trade payables	376	364	378
Payables from royalties	468	433	458
Refund liabilities	324	n/a	n/a
Derivative financial instruments	1	5	3
Other financial payables	53	305	77
Contract liabilities	11	n/a	n/a
Other non-financial liabilities	129	124	145
– tax liabilities	3	2	2
– social security liabilities	7	6	6
– personnel-related liabilities	110	93	111
– deferred items	4	17	21
– other	5	6	5

With the first-time application of IFRS 15, reclassifications were mainly made from “Deferred items” to “Contract liabilities” in the amount of €2 million. In accordance with IFRS 15, the item “Refund liabilities” mainly comprises liabilities for expected returns of €255 million. The item “Contract liabilities” includes payments received by Penguin Random House in advance; that is, prior to satisfaction of the contractual obligations in accordance with IFRS 15. They are recognized as revenue as soon as the contractual obligation has been rendered. Accordingly, revenues were recognized in insignificant amounts in the financial year 2018, which were included in the balance of contract liabilities at the beginning of the financial year.

As of December 31, 2017, the current other financial payables included a dividend liability to the Penguin Random House shareholders of €226 million, which was paid in the financial year 2018. Further details are presented in the section “Background.”

23 Off-Balance-Sheet Liabilities

Contingent Liabilities and Other Commitments

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Rental and lease commitments for already used real estate and movables	532	565	685
Commitments from assets under construction	62	39	—
Other commitments	791	702	738
	<u>1,385</u>	<u>1,306</u>	<u>1,423</u>

Commitments from assets under construction result from lease contracts for assets, which were not completed at the end of the reporting period. The right of use will begin in future periods. The commitments relate in the amount of €21 million to periods between one and five years (2017: €8 million; 2016: €0 million) and in the amount of €41 million to periods of more than five years (2017: €31 million; 2016: €0 million). The amount primarily relates to one contract entered into during the financial year 2017. The increase in 2018 is due to the

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

23 Off-Balance-Sheet Liabilities continued

Contingent Liabilities and Other Commitments continued

leasing of additional office space under this lease. It essentially consists of obligations to lease a building in London, United Kingdom, which is expected to be completed in the second half of 2019.

The total amount of other commitments represents the portion of obligations to authors for which no payments have yet been made, where future payments are contingent upon other events (such as delivery and acceptance of manuscripts). At the end of the financial years 2018, 2017 and 2016, Penguin Random House had no commitments for the acquisition of property, plant and equipment.

The following minimum lease payments exist from all long-term rental commitments classified as operating leases:

Minimum Lease Payments for Operating Leases

<u>in € millions</u>	<u>12/31/2018</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Nominal amount			
Up to 1 year	57	59	65
1 to 5 years	192	200	228
Over 5 years	283	306	392
	<u>532</u>	<u>565</u>	<u>685</u>
Present value	<u>402</u>	<u>447</u>	<u>548</u>

These commitments mainly concern tenancy. They were partially offset by expected minimum lease payments from subleases with a nominal value €5 million in 2017 and €18 million in 2016. There was no offsetting in the financial year 2018. The net present values calculated considering country-specific interest rates show all of the net payments required to settle the obligation. The existing leases have varying terms and include renewal options in some cases.

In August 2016, Penguin Random House has signed a new lease contract for its offices at 1745 Broadway, New York, United States. The new contracts comprise additional floors and therefore give the opportunity to consolidate originally from three locations into one. The new lease started July 1, 2018, with an eight-month rent-free period, and the lease term lasts until June 2033.

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Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments

Both of the following tables show the carrying amounts and measurement categories of financial assets and financial liabilities in accordance with IFRS 9 as of December 31, 2018:

Carrying Amounts and Measurement Categories of Financial Assets

<u>in € millions</u>	<u>12/31/2018</u>
Financial assets measured at amortized cost	
– trade receivables	1,100
– sundry financial receivables	13
– cash	193
– other securities < 3 months	2
Primary financial assets measured at fair value through profit or loss	9
Derivative financial instruments	4
	<u>1,321</u>

Carrying Amounts and Measurement Categories of Financial Liabilities

<u>in € millions</u>	<u>12/31/2018</u>
Financial liabilities measured at amortized cost	
– liabilities to banks	15
– other financial debt	1,192
– trade payables	389
– payables from royalties	566
– sundry financial payables	376
Primary financial liabilities measured at fair value through profit or loss	3
Derivative financial instruments	1
	<u>2,542</u>

The carrying amounts of the financial assets and liabilities measured at amortized cost represent a reasonable approximation of fair value.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Carrying Amounts and Measurement Categories of Financial Liabilities continued

Both of the following tables show the carrying amounts and measurement categories of financial instruments in accordance with IAS 39 measurement categories as of December 31, 2017:

<u>in € millions</u>	<u>Category according to IAS 39 and measurement</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Other investments	Available-for-sale; at cost	2	2
Securities and financial assets	Financial assets initially recognized at fair value through profit or loss	7	5
Derivative financial instruments	Financial assets held for trading; fair value recognized in profit or loss	1	2
Derivative financial instruments	Derivatives with hedge relation	—	1
Trade receivables	Loans and receivables; at amortized cost	752	718
Other receivables	Loans and receivables; at amortized cost	29	21
Cash	Loans and receivables; at amortized cost	375	310
Other securities < 3 months . .	Loans and receivables; at amortized cost	1	2
		<u>1,167</u>	<u>1,061</u>

As of December 31, 2017, and December 31, 2016, other investments that were classified as available-for-sale within financial assets were measured at cost as they do not have a quoted price on an active market and a reliable estimate of the fair value is not possible. No plan had been made to sell holdings of the other available-for-sale investments in the near future. For all other financial assets and financial liabilities, their carrying amount represented a reasonable approximation of fair value.

<u>in € millions</u>	<u>Category according to IAS 39 and measurement</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Liabilities to banks	Financial liabilities; at amortized cost	21	21
Lease liabilities	Payables out of scope of IAS 39	3	1
Other financial debt	Financial liabilities; at amortized cost	1,080	82
Trade payables	Financial liabilities; at amortized cost	364	378
Payables from royalties	Financial liabilities; at amortized cost	521	572
Derivative financial instruments	Financial liabilities held for trading; fair value recognized in profit or loss	5	3
Other financial payables	Financial liabilities; at amortized cost	303	77
Other financial payables	Financial liabilities initially recognized at fair value through profit or loss	4	—
		<u>2,301</u>	<u>1,134</u>

The fair value measurements of the Group's financial assets are categorized within level 1 and level 2 of the fair value hierarchy. The different levels have been defined as follows:

Level 1: quoted prices (unadjusted) in active markets for identical assets

Level 2: inputs other than quoted prices included within level 1 that are observable for the asset, either directly (i.e., prices) or indirectly (i.e., derived from prices)

Level 3: inputs for the asset that are not based on observable market dates (unobservable inputs.)

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Carrying Amounts and Measurement Categories of Financial Liabilities continued

Fair value of investments in mutual funds measured at fair value through profit or loss is based on quoted market prices for actively traded investments similar to those held by the Group and thus these instruments are included in the level 1 of the fair value hierarchy.

For measuring the fair value of unlisted derivatives, Penguin Random House uses various financial methods reflecting the prevailing market conditions and risks at the respective balance sheet dates. These valuation techniques maximize the use of observable market data where it is available and rely as little as possible on entity-specific estimates. As all significant inputs required to estimate fair value of derivatives are observable, the instruments are included in level 2 of the fair value hierarchy. Irrespective of the type of financial instrument, future cash flows are discounted at the end of the reporting period based on the respective market interest rates and yield curves at the end of the reporting period. The fair value of forward exchange transactions is calculated using the average spot prices at the end of the reporting period and taking into account forward markdowns and markups for the remaining term of the transactions.

For contingent consideration financial liabilities presented in the item “Sundry financial payables” (2017 and 2016: “Other financial payables”), no observable market data is available, therefore measuring fair values is based primarily on cash flow-based valuation techniques and on the significant unobservable inputs (e.g., forecast revenue growth rates or market multiples). Due to the significant unobservable inputs, these financial liabilities are classified within level 3 of the fair value hierarchy.

The measurement of financial assets and financial liabilities according to level 2 and level 3 requires management to make certain assumptions about the model inputs including cash flows, discount rate and credit risk. In the financial year 2018, no reclassifications were performed between levels 2 and 3.

In the financial year 2018, net losses on financial instruments recognized at fair value through profit or loss amount to €8 million (2017: €-5 million; 2016: €-12 million).

The requirements for offsetting the financial instruments reported on the balance sheet are not met so that no material offsetting was carried out as of December 31, 2018, 2017 and 2016.

Credit Risk

For trade receivables and contract assets, Penguin Random House uses a risk scoring model based on qualitative and quantitative risk factors for its major customers. For insignificant customers Penguin Random House uses a simplified approach to measure expected credit losses on trade receivables and contract assets. According to this, the loss allowance is measured using lifetime expected credit losses. For this purpose, impairment matrices based on historic bad debt losses, maturity bands and expected credit losses reflecting the ability of the customers to settle the receivables were prepared. The impairment matrices were created for business-unit-specific groups of receivables, each with similar default patterns. In addition, separate risk assessments are performed. Contract assets have substantially the same risk characteristics as trade receivables for the same types of contracts so that the expected loss rates for trade receivables are a reasonable approximation of the loss rates for contract assets. As of December 31, 2018, no significant contract assets were recognized.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Credit Risk continued

Based on this, loss allowance as of December 31, 2018, was determined as follows for both trade receivables and contract assets:

Credit Risk for Trade Receivables and Contract Assets

<u>in € millions</u>	Not overdue	Collective impairment				Individual impairment
		Overdue				
		≤ 1 month	2 to 3 months	3 to 6 months	> 6 months	
Expected loss rate	0.89%	3.70%	9.09%	14.29%	16.67%	n/a
Trade receivables and contract assets	337	27	11	7	6	750
Loss allowance for expected credit losses	(3)	(1)	(1)	(1)	(1)	(31)
Balance as of 12/31/2018	334	26	10	6	5	719

The expected loss rates correspond to the average rates for the respective for business-unit-specific groups of receivables.

In the financial year 2018, impairment losses and reversals of €-6 million were recognized on trade receivables and contract assets. The following table shows a reconciliation from the opening balance to the closing balance of loss allowances for trade receivables and contract assets in the financial year 2018:

Reconciliation of Loss Allowance for Trade Receivables and Contract Assets

<u>in € millions</u>	Trade receivables and contract assets
Balance as of 1/1	(36)
Additions	(15)
Usage	4
Reversal	9
Balance as of 12/31	(38)

Penguin Random House applies the general approach for all other financial assets that are subject to the expected credit loss model. The loss allowances for the respective financial instruments for the financial year 2018 was immaterial. The impairment loss identified in the financial year 2018 for cash and cash equivalents was also immaterial.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Reconciliation of Loss Allowance for Trade Receivables and Contract Assets continued

The following table shows a maturity analysis of trade receivables as of December 31, 2017, and December 31, 2016:

<u>in € millions</u>	Neither impaired nor past due on the reporting date	Not individually impaired as of the reporting date and past due by:					Gross value of accounts receivable individually impaired
		< 1 month	1 to 3 months	3 to 6 months	6 to 12 months	> 12 months	
Trade receivables							
12/31/2017	669	34	15	6	1	4	59
Trade receivables							
12/31/2016	681	24	7	4	1	2	70

In the financial years 2017 and 2016, impairment reversals on trade receivables amounted to €27 million and €30 million, respectively. No loss allowance was recognized for unsettled receivables not yet due as of the end of the prior reporting periods, as there was no indication of default.

Reconciliation of changes in impairment in accordance with IFRS 7 as of December 31, 2017, and December 31, 2016, is shown in the following table:

<u>in € millions</u>	Balance as of 1/1	Additions	Usage	Reversal	Change of consolidation scope	Exchange rate effect	Balance as of 12/31
Trade receivables 12/31/2017 . .	(71)	(8)	6	36	(4)	5	(36)
Trade receivables 12/31/2016 . .	(109)	(17)	6	47	—	2	(71)

Default risks arising from trade receivables from major customers are partially mitigated through credit collateralization. In the financial year 2018, Penguin Random House has obtained credit collateralization in the amount of €540 million (2017: €484 million; 2016: €441 million) for these receivables. The carrying amount of all receivables, loans and securities constitutes Penguin Random House's maximum default risk.

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Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Reconciliation of Loss Allowance for Trade Receivables and Contract Assets continued

The following table presents the remaining contractual maturity of the financial liabilities. The figures are based on undiscounted cash flows at the earliest date at which Penguin Random House can be held liable for payment.

Maturity Analysis for Financial Liabilities

in € millions	Carrying amount	Undiscounted cash flows			Total
		Up to 1 year	1 to 5 years	Over 5 years	
Liabilities to banks	15	15	—	—	15
Lease liabilities	2	—	2	—	2
Other financial debt	1,192	274	918	—	1,192
Trade payables	389	376	7	6	389
Payables from royalties	566	468	97	1	566
Derivative financial instruments	1	1	—	—	1
Other financial payables	379	377	2	—	379
Balance as of 12/31/2018	<u>2,544</u>	<u>1,511</u>	<u>1,026</u>	<u>7</u>	<u>2,544</u>
Liabilities to banks	21	21	—	—	21
Lease liabilities	3	—	3	—	3
Other financial debt	1,080	417	663	—	1,080
Trade payables	364	364	—	—	364
Payables from royalties	521	433	82	6	521
Derivative financial instruments	5	5	—	—	5
Other financial payables	307	305	2	—	307
Balance as of 12/31/2017	<u>2,301</u>	<u>1,545</u>	<u>750</u>	<u>6</u>	<u>2,301</u>
Liabilities to banks	21	21	—	—	21
Lease liabilities	1	—	1	—	1
Other financial debt	82	82	—	—	82
Trade payables	378	378	—	—	378
Payables from royalties	572	458	106	8	572
Derivative financial instruments	3	3	—	—	3
Other financial payables	77	77	—	—	77
Balance as of 12/31/2016	<u>1,134</u>	<u>1,019</u>	<u>107</u>	<u>8</u>	<u>1,134</u>

Cash outflows from financial obligations include payments of principal and interest. Current cash outflows from financial obligations are offset by planned cash inflows from receivables and other financial assets. To cover current cash outflows, Penguin Random House also has adequate financial reserves in the amount of cash and cash equivalents in place at the end of the reporting period.

Risk Management of Financial Instruments

Penguin Random House is part of the Bertelsmann Group. Therefore, Penguin Random House is generally included in the financial risk policy and procedures of Bertelsmann. The principles of these financial risk policy are described below.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Financial Risk Management

Penguin Random House is exposed to various forms of financial risk through its international business operations. Above all, this includes the effects of changes in foreign exchange rates and interest rates. Penguin Random House's risk management activities are designed to effectively mitigate these risks. The Executive Board of Penguin Random House establishes basic risk management policy, outlining general procedures for hedging currency and interest rate risk and the utilization of derivative financial instruments. The Bertelsmann Group Treasury advises subsidiaries on operating risk and hedges risks using derivative financial instruments as necessary. However, subsidiaries are not obliged to use the services provided by this department for their operating risks.

Currency Risk

Penguin Random House is exposed to an exchange rate risk in various foreign currencies. The exchange rate effects on loans and receivables as well as financial liabilities at amortized cost amount to €-6 million in the financial year 2018 (2017: €0 million; 2016: €16 million). Its subsidiaries are advised, but not obliged, to hedge themselves against foreign currency risks in the local reporting currency by signing forward agreements with banks that have a high credit rating. Loans within Penguin Random House that are subject to currency risk are hedged using derivatives. If foreign currency transactions designated as hedged items adequately meet effectiveness requirements, hedge accounting as defined by IFRS 9 is applied under the cash flow hedge model.

Interest Rate Risk

In case of any external financing and of significant interest-bearing assets, interest rate risk in the Penguin Random House Group is analyzed centrally and managed on the basis of the Group's planned net financial debt. A key factor in this management is the Groups's interest result over time and its sensitivity to interest rate changes. The Group aims for a balanced relationship between floating rates and long-term fixed interest rates, depending on the absolute amount, forecast performance of the interest-bearing liability and interest level. This is implemented using underlying and derivative financial instruments for control.

Penguin Random House's interest rate risk arises primarily from loans payable, financing agreements with Bertelsmann SE & Co. KGaA, Pearson plc and Bertelsmann PRH Finance, Inc., a subsidiary of Bertelsmann SE & Co. KGaA, and from cash and cash equivalents. In the financial year 2013, Penguin Random House entered into a Revolving Credit Agreement with Bertelsmann SE & Co. KGaA and Pearson plc. Under this shareholder loan agreement, the Group has access to a revolving facility of up to US\$250 million. This facility was amended in October 2017 and May 2018 and is valid until October 2022. In the second amendment it was agreed, that the facility is not available until the later of June 1, 2019, or full repayment of all outstanding amounts under the Revolving Credit Agreements with Bertelsmann PRH Finance, Inc. and Bertelsmann SE & Co. KGaA from 2018. The interest rates for loans under the revolving facility are applicable LIBOR plus a margin of 2.00 percent per year. In May 2018, Penguin Random House entered with Bertelsmann PRH Finance, Inc. into a Revolving Credit Agreement of US\$175 million, valid until May 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year. In addition, in May 2018, Penguin Random House entered with Bertelsmann SE & Co. KGaA into a Revolving Credit Agreement of US\$200 million, valid until May 2019. This facility was amended in December 2018 for an additional loan commitment of US\$90 million. The additional commitment is valid until February 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Liquidity Risk

Liquidity risks may arise through a lack of rollover financing (liquidity risk in a narrower sense), delayed receipt of payment and unforeseen expenditure (budgeting risk). Budgeting risk is determined by comparing deviations in actual spending with budget and reserve amounts. In a narrower sense, liquidity risk depends on the volume of debt due within a given period.

Counterparty Risk

Penguin Random House is exposed to default risks in the amount of the invested cash and cash equivalents and the positive fair value of the derivatives in its portfolio. Cash transactions and transactions involving other financial instruments are exclusively conducted with Bertelsmann Group Treasury or a defined group of banks with a high credit rating. Penguin Random House has obtained credit collateralization in the amount of €540 million (2017: €484 million; 2016: €441 million) for trade receivables from major customers.

Capital Management

The capital management of Penguin Random House is embedded in the financial management of the Bertelsmann Group, considering the shareholder agreements between Bertelsmann SE & Co. KGaA and Pearson plc. Within this framework, Penguin Random House considers the legal requirements regarding equity and liquidity needs.

Interest Rate and Currency Sensitivity

For the analysis of interest rate risk, a distinction is made between cash flow and present value risks. Financial debt, cash and cash equivalents are subject to a greater degree of cash flow risk, as changes in market interest rates impact the Group's interest result almost immediately. In contrast, medium- and long-term interest rate agreements are subject to a greater degree of present value risk. The accounting treatment of present value risks depends on the respective financial instrument or a hedging relationship documented in conjunction with a derivative (micro-hedge).

Upon initial recognition, originated financial debt is measured at fair value less transaction costs. Subsequent measurement is based on amortized cost. Changes in fair value are limited to opportunity effects, as changes in interest rates have no effect on the balance sheet or the income statement. The recognition of originated financial debt at fair value is only permitted for transactions for which a micro-hedge is documented in accordance with IFRS 9 in conjunction with the conclusion of an interest rate or exchange rate hedge transaction involving derivatives. In this case, changes in the fair value of the respective items are recognized in the income statement in order to substantially balance out the offsetting effects of the fair value measurement of the related derivatives.

For derivative financial instruments, the effects of changes in interest rates are recognized in the income statement. In the case of documented hedging relationships (cash flow hedges), however, these effects are taken directly to equity.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

The cash flow or present value risks existing at the end of the reporting periods are analyzed using a sensitivity calculation as an after-tax observation. A parallel shift in the interest rate curve of +/-1 percent is assumed for all significant currencies. The analysis is performed on the basis of financial debt, cash and cash equivalents and derivatives at the end of the reporting period. The results are shown in the following table:

Sensitivity Analysis of Cash Flow and Present Value Risks

in € millions	12/31/2018		12/31/2017		12/31/2016	
	Shift +1%	Shift -1%	Shift +1%	Shift -1%	Shift +1%	Shift -1%
Cash flow risks (income statement)	(1)	1	—	—	1	(1)
Present value risks (income statement)	—	—	—	—	—	—
Present value risks (equity)	—	—	—	—	—	—

The analysis of foreign currency sensitivity includes the Group's financial debt and operating transactions at the end of the reporting period and the hedging relationships entered into. The calculation is performed for the unsecured net exposure on the basis of an assumed 10 percent appreciation of the euro versus all foreign currencies and is presented after tax. A uniform devaluation of foreign currencies would have resulted in a change in the carrying amount recognized in profit or loss of less than €1 million (2017: €2 million; 2016: €2 million). Thereof, more than €-1 million (2017: less than €1 million; 2016: less than €1 million) relates to fluctuations in the US dollar exchange rate with a net exposure of US\$6 million (2017: US\$-4 million; 2016: US\$-2 million). Shareholders' equity would have experienced no decline (2017: €-5 million; 2016: €-6 million) as a result of fluctuations in the fair values of documented cash flow hedges. Thereof in previous years (2017: €-4 million; 2016: €-4 million) related to fluctuations in the US dollar exchange rate on the basis of a documented cash flow hedge volume (2017: US\$64 million; 2016: US\$65 million). If there had been a uniform increase in the value of foreign currencies, this would have led to opposite changes in these amounts for Penguin Random House.

Accounting of Derivative Financial Instruments and Hedges

All derivatives are recognized at their fair value. When a contract involving a derivative is entered into, it is determined whether that contract is intended to serve as a fair value hedge or as a cash flow hedge. Some derivatives, however, do not meet the requirements for recognition as hedges, even though they function as such in financial terms.

Penguin Random House documents all relationships between hedging instruments and hedged items and its risk management objectives and strategies in connection with the various hedges. This method includes linking all derivatives used for hedging purposes to the underlying assets, liabilities, firm commitments and forecasted transactions. Furthermore, Penguin Random House assesses and documents the degree to which changes in the fair values or cash flows of hedged items are effectively offset by changes in the corresponding hedging instruments, both when the hedges are initiated and on an ongoing basis.

Financial Derivatives

Penguin Random House uses standard market financial derivatives, unlisted (OTC) instruments. These include, in particular, forward agreements and currency swaps. Transactions are entered into solely with Bertelsmann Group Treasury or banks with a high credit rating. In general, the transactions with banks are only performed with banks approved by the Chief Financial Officer. The nominal volume is the total of all underlying buying and selling amounts of the respective transactions.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Financial Derivatives continued

The majority of the financial derivatives at the end of the reporting period are used to hedge currency rate risks from intercompany financing activities (2018: 80 percent; 2017: 62 percent; 2016: 33 percent). A total of €40 million (2017: €129 million; 2016: €133 million) (2018: 20 percent; 2017: 38 percent; 2016: 67 percent) is due to financial derivatives used to hedge currency rate risks from operating business as of the end of the reporting period. Financial derivatives are used exclusively for hedging purposes. The maturity bands correspond to the remaining maturities of the financial derivatives.

Nominal Amounts and Fair Values of Financial Derivatives

		12/31/2018				
<u>in € millions</u>		Nominal volume			Fair value	
		<u>< 1 year</u>	<u>1 to 5 years</u>	<u>> 5 years</u>	<u>Total</u>	
Currency derivatives						
Forward contracts and currency swaps	.....	205	—	—	205	3
		<u>205</u>	<u>—</u>	<u>—</u>	<u>205</u>	<u>3</u>
		12/31/2017				
<u>in € millions</u>		Nominal volume			Fair value	
		<u>< 1 year</u>	<u>1 to 5 years</u>	<u>> 5 years</u>	<u>Total</u>	
Currency derivatives						
Forward contracts and currency swaps	.....	319	21	—	340	(4)
		<u>319</u>	<u>21</u>	<u>—</u>	<u>340</u>	<u>(4)</u>
		12/31/2016				
<u>in € millions</u>		Nominal volume			Fair value	
		<u>< 1 year</u>	<u>1 to 5 years</u>	<u>> 5 years</u>	<u>Total</u>	
Currency derivatives						
Forward contracts and currency swaps	.....	176	23	—	199	—
		<u>176</u>	<u>23</u>	<u>—</u>	<u>199</u>	<u>—</u>

Fair values are netted. Further details are presented in the following table "Derivative Financial Instruments."

Some of the derivatives were recognized in previous years as hedging instruments in connection with cash flow hedges. The effective portion of changes in the fair value of cash flow hedges was recognized in other comprehensive income until the effects of the hedged underlying transaction affect profit or loss.

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

24 Additional Disclosures on Financial Instruments continued

Nominal Amounts and Fair Values of Financial Derivatives continued

The following table provides an overview of carrying amounts of Penguin Random House's derivative financial instruments, which correspond to their fair values. A distinction is made between derivatives that are included in an effective hedging relationship in accordance with IFRS 9 (2017, 2016: in accordance with IAS 39) and those that are not.

Derivative Financial Instruments

<u>in € millions</u>	<u>Carrying amount as of 12/31/2018</u>	<u>Carrying amount as of 12/31/2017</u>	<u>Carrying amount as of 12/31/2016</u>
Assets			
Forward contracts and currency swaps	4	1	3
Without hedge relation	4	1	2
In connection with cash flow hedges	—	—	1
Equity and liabilities			
Forward contracts and currency swaps	1	5	3
Without hedge relation	1	5	3
In connection with cash flow hedges	—	—	—

The following table presents the remaining terms of the contractual amounts to be exchanged in a derivative financial instrument for which gross cash flows are exchanged:

Liabilities from Derivatives with Gross Settlement

<u>in € millions</u>	<u>Remaining term of liabilities</u>		
	<u>Up to 1 year</u>	<u>1 to 5 years</u>	<u>Over 5 years</u>
Cash outflow	(155)	—	—
Cash inflow	154	—	—
Balance as of 12/31/2018	(1)	—	—
Cash outflow	(309)	(22)	—
Cash inflow	304	22	—
Balance as of 12/31/2017	(5)	—	—
Cash outflow	(69)	—	—
Cash inflow	66	—	—
Balance as of 12/31/2016	(3)	—	—

25 Statement of Cash Flows

Penguin Random House's combined statement of cash flows has been prepared in accordance with IAS 7 and is used to evaluate its ability to generate cash and cash equivalents. Cash flows are divided into those relating to operating activities, investing activities and financing activities. Cash flows from operating activities are presented using the indirect method, whereby EBIT is adjusted for the effects of a non-cash nature, any deferrals or accruals of past or future operating receipts or payments as well as items of income or expenses associated with investing cash flows. In addition, cash flows arising from income taxes are classified as cash flows from operating activities as well as other cash flows that are neither investing nor financing. Contributions to pension plans are a cash outflow reported as a separate item in the cash flow from operating activities. The change in

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

25 Statement of Cash Flows continued

provisions for pensions and similar obligations represents the balance of personal expenses for pensions and similar obligations and company payments for these obligations (further explanations are presented in note 19 “Provisions for Pensions and Similar Obligations”). The management of Penguin Random House utilizes indicators that include operating EBITDA and is thus before interest and taxes as well as depreciation, amortization and impairment and special items. Operating results and the resulting cash flow from operating activities should therefore be consistent and comparable. Accordingly, the net balance of interest paid and interest received in the financial year is shown in the cash flow statement as part of financing activities.

Cash flows from investing activities are determined directly in accordance with IAS 7. Investing activities include payments for fixed assets and purchase price payments for consolidated investments acquired as well as proceeds from the disposal of non-current assets and participations. Further explanations concerning acquisitions made in the financial year are presented in the section “Acquisitions and Disposals.” Disposals in the financial year are also presented separately in that section. No financial debt was assumed in the financial years 2018 and 2016 (2017: €1 million).

Cash flow from financing activities includes changes in equity, financial debt and dividend payments affecting cash, as well as interest paid and interest received. In the financial year 2018, the item “Proceeds from other financial debt” relates to receipts in the amount of €492 million from the shareholder Bertelsmann and its related subsidiaries Bertelsmann PRH Finance, Inc. and Bertelsmann Business Support S.a.r.l. During the financial year, shareholders’ loans of €424 million were paid back. The repayments are included in the item “Redemption of other financial debt.” In the financial year 2017, the item “Proceeds from other financial debt” related to receipts in the amount of €1,266 million from the shareholder Bertelsmann and its related subsidiary as well as from the shareholder Pearson. During the financial year 2017 shareholders’ loans of €199 million were paid back. The repayments were included in the item “Redemption of other financial debt.” In the financial year 2017, the item “Dividends to Penguin Random House shareholders” included cash outflows of €792 million from special dividend distributions in connection with the acquisition of another 22 percent interest in Penguin Random House by Bertelsmann from Pearson. Further details are presented in the section “Background.” In the financial year 2017, the item “Change in equity” mainly included capital contributions to Penguin Random House as presented in note 26 “Related Party Disclosures.”

The combined statement of cash flows includes the effects of changes in foreign currencies and changes in the scope of consolidation. Items in the combined statement of cash flows thus cannot be compared to changes in items disclosed on the combined balance sheet.

The following table shows the cash changes and non-cash changes of financial debt.

Changes in Financial Debt

in € millions	12/31/2016	12/31/2017	Cash changes	Non-cash changes		12/31/2018
				Acquisitions through business combinations	Exchange rate effect	
Liabilities to banks	21	21	(5)	—	(1)	15
Lease liabilities	1	3	(1)	—	—	2
Other financial debt	82	1,080	68	—	44	1,192
Total financial debt	104	1,104	62	—	43	1,209

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Notes to the Income Statement and the Balance Sheet continued

26 Related Party Disclosures

For Penguin Random House, related parties as defined in IAS 24 are those persons and entities that control or exercise a significant influence over Penguin Random House, as well as those persons and entities controlled or jointly controlled by Penguin Random House, or over which it exercises a significant influence. Accordingly, all legal entities controlled or jointly controlled by the ultimate parent company of Penguin Random House preparing consolidated financial statements for public use Bertelsmann SE & Co. KGaA, or over which it exercises a significant influence, all legal entities controlled or jointly controlled by Pearson plc and key management personnel of Penguin Random House and all its parents including close members of their families and the companies that are controlled or jointly managed by them, are defined as related parties.

The ultimate parent company of Penguin Random House preparing consolidated financial statements, Bertelsmann SE & Co. KGaA, includes in its consolidated financial statements those of Penguin Random House. Bertelsmann SE & Co. KGaA is a company incorporated under German law whose registered office is established at Carl-Bertelsmann-Strasse 270, D-33311 Gütersloh, Germany. Consolidated financial statements for Bertelsmann SE & Co. KGaA can be obtained at its registered office.

Remuneration for key management personnel includes:

Remuneration for Key Management Personnel

<u>in € millions</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>
Short-term employee benefits	5	6	7
Termination benefits	—	1	—
Post-employment benefits	—	—	—
Other long-term benefits	2	2	2

The remuneration shown includes remuneration for activities by the members of the management who have responsibility for planning, directing and controlling and by the members of the Board of Directors of both PRH LLC and PRH Limited. Companies of the Bertelsmann Group and the Pearson Group have granted post-employment benefits to the key management personnel of Penguin Random House. There were no associated expenses in the financial year 2018 (2017: €0 million; 2016: €4 million). At the end of the reporting period, the related defined benefit obligation amounts to €7 million (2017: €7 million; 2016: €7 million).

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

26 Related Party Disclosures continued

Remuneration for Key Management Personnel continued

Transactions with subsidiaries included in the scope of consolidation are eliminated and are not further disclosed. In addition to transactions with consolidated subsidiaries, the following transactions with related parties and entities were conducted in the reporting period:

Transactions with Related Parties

<u>in € millions</u>	<u>Parents</u>	<u>Entities with significant influence</u>	<u>Key members of management</u>	<u>Joint ventures</u>	<u>Associates</u>	<u>Other related parties</u>
2018						
Goods delivered and services provided . . .	—	—	—	—	—	13
Goods and services received	—	—	—	—	—	(146)
Receivables against	—	—	—	—	—	6
Amounts owed to	<u>12</u>	—	<u>6</u>	—	—	<u>1,235</u>
2017						
Goods delivered and services provided . . .	—	—	—	—	—	15
Goods and services received	—	—	—	—	—	(119)
Receivables against	—	—	—	—	—	7
Amounts owed to	<u>173</u>	—	<u>7</u>	—	—	<u>1,125</u>
2016						
Goods delivered and services provided . . .	—	—	—	—	—	17
Goods and services received	—	—	—	—	—	(121)
Receivables against	—	—	—	—	—	6
Amounts owed to	<u>3</u>	—	<u>6</u>	—	—	<u>124</u>

Transactions with parent companies contain transactions with PRH Holdings, Inc. as well as Bertelsmann UK Limited as these entities are the direct parent companies of Penguin Random House. PRH Publication, Inc. and Pearson PRH Holdings Limited are entities that have significant influence over Penguin Random House. In the financial years 2018, 2017 and 2016, no transactions with the latter two companies have occurred. Transactions with all other entities of the Bertelsmann Group including its subsidiaries, joint ventures and associates as well as transactions with all other entities of the Pearson Group including its subsidiaries and joint ventures have been presented as transactions with other related parties.

Goods delivered and services provided to related parties mainly include income from rental services and revenues from selling goods and providing diverse services. Received goods and services from related parties primarily contain expenses for print services, rental and lease expenses and expenses for acquiring goods and receiving sundry services. The outstanding receivables against related parties mainly obtain trade receivables. Trade payables and loans payable from a revolving credit agreement and from a term loan agreement are the main content of the amounts owed as well as dividends payable to related parties at each balance sheet date.

In 2013 Penguin Random House entered into a revolving credit agreement with Bertelsmann SE & Co. KGaA and Pearson plc. The credit facility was amended in October 2017 and in May 2018 and limits amounts to a dollar equivalent of US\$250 million. Committed borrowings may be denominated in US dollars, British pounds or euros. This facility is valid until October 5, 2022. In the second amendment, it was agreed that the facility will not be available until the later of June 1, 2019 or full repayment of all outstanding amounts under the Revolving Credit Agreements with Bertelsmann PRH Finance, Inc. and Bertelsmann SE & Co. KGaA from 2018. The interest rate is defined depending on the used currency. In case of US dollar or British pound denominated loans

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

26 Related Party Disclosures continued

Transactions with Related Parties continued

made or outstanding during any interest period will have applied the LIBOR per annum equal to the applicable Screen Rate for three months on the date of this agreement and each interest payment date thereafter. In the case of euro-denominated loans made or outstanding during any interest period, they will have applied the EURIBOR per annum equal to the applicable Screen Rate for three months on the date of this agreement and each interest payment date thereafter. All loans subject to the above respective interest rate for the interest period in effect plus 2.00 percent are to be calculated on the basis of a year of 360 days and actual days elapsed. Within this revolving credit agreement, Penguin Random House received loans payable in the amount of €218 million (2017: €383 million; 2016: €179 million) from Bertelsmann SE & Co. KGaA and Pearson plc during the financial year 2018. As of December 31, 2018, the total of revolving loans amounted to €0 million (2017: €208 million; 2016: €82 million). The outstanding liability is part of the table concerning the transactions with related parties.

In October 2017, Penguin Random House entered with Bertelsmann PRH Finance, Inc., a subsidiary of Bertelsmann SE & Co. KGaA, into a Term Loan Agreement of US\$795 million, valid until October 2022. The term loan bears interest at 4.25 percent per year. As of December 31, 2018, the term loan balance amounts to €694 million (2017: €663 million). The outstanding liability is also part of the table concerning the transactions with related parties.

In October 2017, Penguin Random House entered with Bertelsmann UK Limited, a subsidiary of Bertelsmann SE & Co. KGaA, into a Term Loan Agreement of GBP200 million, valid until April 2023. The term loan bears interest at 3.20 percent per year. In March 2018 the Term Loan Agreement was transferred from Bertelsmann UK Limited to Bertelsmann Business Support S.à r.l., a subsidiary of Bertelsmann SE & Co. KGaA. At December 31, 2018, the term loan balance amounted to €224 million. The outstanding liability is also part of the table concerning the transactions with related parties.

In May 2018, Penguin Random House entered with Bertelsmann PRH Finance, Inc., a subsidiary of Bertelsmann SE & Co. KGaA, into a Revolving Credit Agreement of US\$175 million, valid until May 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year. At December 31, 2018, the loan amounted to €21 million. The outstanding liability is also part of the table concerning the transactions with related parties.

In addition, in May 2018, Penguin Random House entered with Bertelsmann SE & Co. KGaA, into a Revolving Credit Agreement of US\$200 million, valid until May 2019. This facility was amended in December 2018 for an additional loan commitment of US\$90 million. The additional commitment is valid until February 2019. The interest rates for loans are applicable LIBOR plus a margin of 2.00 percent per year. At December 31, 2018, the loan amounted to €253 million. The outstanding liability is also part of the table concerning the transactions with related parties.

The shareholders made capital contributions for reimbursement of payments made by Penguin Random House for liabilities relating to periods before Penguin Random House's formation in the financial years 2017 and 2016. In the financial year 2017, Bertelsmann UK Limited made a capital contribution in the amount of €9 million (2016: €12 million) and Pearson PRH Holdings Limited paid less than €1 million (2016: less than €1 million). The amount of the capital contribution in 2017 included the reimbursement for deficit pension contributions of €11 million (2016: €6 million). No capital contributions were made in the financial year 2018.

Bertelsmann SE & Co. KGaA and Pearson plc entered into a revolving deposit agreement with Penguin Random House in 2014. This agreement was amended in October 2017 and May 2018 and is valid until October 5, 2022. In the second amendment, it was agreed, that no deposits will be made under the agreement until the later of

Penguin Random House Venture Combined Financial Statements

Notes to the Income Statement and the Balance Sheet continued

26 Related Party Disclosures continued

Transactions with Related Parties continued

June 1, 2019 or full repayment of all outstanding amounts under the Revolving Credit Agreements with Bertelsmann PRH Finance, Inc. and Bertelsmann SE & Co. KGaA from 2018. The currency of the deposit is in US dollars from Penguin Random House LLC and British pounds from Penguin Random House Ltd. and shall be in a principal amount of 10,000,000 units of the relevant currency or multiples thereof. US dollar denominated deposits shall bear interest at a per-annum rate equal to the Fed Funds Rate (Federal Reserve Bank of New York) in effect for the interest period of the deposit plus 0.10 percent on a basis year of 360 days. British pound denominated deposits shall bear interest at a per annum rate equal to the Base Rate as administered by the Bank of England for the interest period in effect for the deposit minus 0.10 percent on a basis year of 365 days. Within this revolving deposit agreement. Penguin Random House granted no loans receivable to Bertelsmann SE & Co. KGaA and Pearson plc in the financial year 2018 (2017: €106 million; 2016: €81 million).

In the financial years 2018, 2017 and 2016, no expenses were recognized for bad or doubtful debts due from related parties. Dividends amounting to €180 million were distributed to Bertelsmann parent companies (2017: €822 million; 2016: €168 million). Pearson entities that have significant influence over Penguin Random House received dividends in the amount of €130 million (2017: €613 million; 2016: €149 million). Penguin Random House has obligations to other related parties from operating leases in the amount of €13 million (2017: €24 million; 2016: €37 million). These commitments toward Pearson are related to the lease of a building of Penguin Random House in London. They were partially offset by expected minimum lease payments from sublease with other Bertelsmann companies with a nominal value of €1 million in 2017 and €3 million in 2016. There was no offsetting in the financial year 2018.

In the financial year 2016, Bertelsmann SE & Co. KGaA issued an additional lease guarantee for Penguin Random House, as Penguin Random House entered into a new lease for its offices in 1745 Broadway, New York, United States. The new contracts comprise an extension of the lease term of the existing floors for 10 years and include additional floors and therefore give the opportunity to consolidate from three locations into one. The new lease for the additional floors started July 1, 2018, with an eight-month rent-free period, and the lease term lasts until June 2033. The lease guarantee totals €715 million (2017: €704 million; 2016: €824 million). In the financial year 2018, a guarantee commission of €4 million was paid (2017: €4 million; 2016: €3 million). No guarantees were entered into for other related parties during the financial years 2018, 2017 and 2016.

As of December 31, 2018, no provisions for onerous contracts were made for other related parties. As of the end of the financial years 2017 and 2016, provisions for onerous contracts for other related parties amounted to less than €1 million.

27 Events after the Reporting Period

Sequent to the balance sheet date, no events of special importance occurred that could have a material impact on the financial position and financial performance of Penguin Random House.

SIGNATURES

The registrant hereby certifies that it meets the requirements for filing a Form 20-F and that it has caused and authorized the undersigned for sign this annual report on its behalf.

Pearson plc

/s/ Coram Williams

Coram Williams
Chief Financial Officer

Date: April 4, 2019