Financial statements

In this section

Independent auditor's report to the members of Pearson plc

Report on the financial statements

Our opinion

In our opinion:

- Pearson plc's consolidated financial statements and company financial statements (the financial statements) give a true and fair view of the state of the Group's and of the company's affairs as at 31 December 2016 and of the Group's loss and the Group's and the company's cash flows for the year then ended
- The consolidated financial statements have been properly prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union
- The company financial statements have been properly prepared in accordance with IFRSs as adopted by the European Union and as applied in accordance with the provisions of the Companies Act 2006
- The financial statements have been prepared in accordance with the requirements of the Companies Act 2006 and, as regards the consolidated financial statements, Article 4 of the IAS Regulation.

Separate opinion in relation to IFRSs as issued by the IASB

As explained in note 1 to the consolidated financial statements, the Group, in addition to applying IFRSs as adopted by the European Union, has also applied IFRSs as issued by the International Accounting Standards Board (IASB).

In our opinion, the consolidated financial statements comply with IFRSs as issued by the IASB.

What we have audited

The financial statements, included within the annual report and accounts (the annual report), comprise:

- The consolidated and company balance sheets as at 31 December 2016
- The consolidated income statement and statement of comprehensive income for the year then ended
- The consolidated and company cash flow statement for the year then ended
- The consolidated and company statement of changes in equity for the year then ended
- The notes to the financial statements, which include a summary of significant accounting policies and other explanatory information.

Certain required disclosures have been presented elsewhere in the annual report, rather than in the notes to the financial statements. These are cross-referenced from the financial statements and are identified as audited.

The financial reporting framework that has been applied in the preparation of the financial statements is IFRSs as adopted by the European Union and, as regards the company financial statements, as applied in accordance with the provisions of the Companies Act 2006, and applicable law.

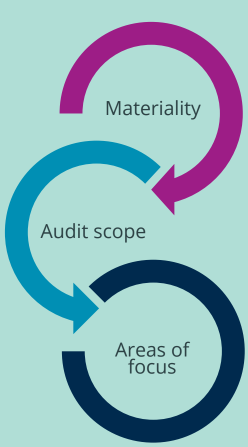
The scope of our audit and our areas of focus

We conducted our audit in accordance with International Standards on Auditing (UK and Ireland) (ISAs (UK & Ireland)).

We designed our audit by determining materiality and assessing the risks of material misstatement in the consolidated and company financial statements. In particular, we looked at where management made subjective judgements, for example in respect of significant accounting estimates that involved making assumptions and considering future events that are inherently uncertain. As in all of our audits, we also addressed the risk of management override of internal controls, including evaluating whether there was evidence of bias by management that represented a risk of material misstatement due to fraud.

The risks of material misstatement that had the greatest effect on our audit, including the allocation of our resources and effort, are identified as areas of focus in the table below. We have also set out how we tailored our audit to address these specific areas in order to provide an opinion on the consolidated and company financial statements as a whole, and any comments we make on the results of our procedures should be read in this context. For each area of focus below, to the extent relevant, we evaluated the design and tested the operating effectiveness of key internal controls over financial reporting set in place by management, including testing the operation of IT systems from which financial information is generated. Each of the areas of focus below are also referred to in the audit committee report on p71 and p75 and in the accounting policies on p28 to p134. This is not a complete list of all risks identified by our audit.

Our audit approach



Overview

- Overall Group materiality: £23m, which represents 4% of adjusted profit before tax as disclosed in note 8 to the consolidated financial statements. Refer to p118 for further details.
- We conducted work in four key territories: US, UK, Brazil and China. In addition, we obtained an audit opinion on the financial information reported by the associate Penguin Random House (PRH).
- The territories where we conducted audit procedures, together with work performed at corporate functions and consolidated Group level, accounted for approximately: 67% of the Group's revenue; 84% of the Group's loss before tax; and 60% of the Group's adjusted profit before tax.
- We focused on:
  - Revenue recognition including risk of fraud
  - Carrying value of goodwill and intangible assets
  - Returns provision
  - Major restructuring programme
  - Provision for uncertain tax liabilities
  - Recoverability of pre-publication assets
  - Major finance transformation programme

Area of focus	How our audit addressed the area of focus
Revenue recognition including risk of fraud	
Refer to note 1 to the consolidated financial statements There are two types of complex contracts that require significant judgements and estimates, which could be subject to either accidental errors or deliberate fraud: › Multiple element arrangements, such as the sale of physical textbooks accompanied by digital content or supplementary workbooks, where revenue is recognised for each element as if it were an individual contractual arrangement requiring the estimation of its relative fair value › Certain long-term contracts that span year end, where revenue is recognised using estimated percentage of completion based on costs. These include contracts to design, develop and deliver testing and accreditation, and contracts to secure students and support the online delivery of their teaching. These complex contracts generate material deferred revenue and accrued income balances and are areas where misstatements in the underlying assumptions or estimation calculations could have a material effect on the financial statements. In addition, there are material shipments towards the period end from major distribution locations giving rise to the potential risk of a cut-off error.	Where books are sold together with workbooks delivered later or companion digital materials available online, we assessed the basis for allocation of the purchase price between each element based on individual contractual arrangements, and then tested the detailed calculations supporting these revenue deferrals. We found the revenue deferrals to be based on reasonable estimates of the relative fair value of each element and the methods used to calculate the deferrals properly calculated and consistently applied. For a selection of the larger, more judgemental and more recent long-term contracts, covering both testing activities and online delivery of teaching, we read the contracts and assessed the accounting methodologies being applied to calculate the proportion of revenue being recognised. We also tested costs incurred to date and management's estimates of forecast costs and revenues by reference to historical experience and current contract status. Our testing showed that revenue recognition practices are in accordance with Group policies and related accounting standards with appropriate methods for calculating the revenue recognised. Refer to the returns provision areas of focus for our work over the risk of cut-off.
Carrying values of goodwill and intangible assets	
Refer to note 11 to the consolidated financial statements After recording an impairment charge of £2,548m at 31 December 2016, the Group had £2,341m of goodwill and £1,101m of other intangible assets including software, acquired customer lists, contracts and relationships, acquired trademarks and brands and acquired publishing rights. In 2016, the Group's North America business experienced a material decline in sales, most significantly in higher education courseware. As a result, in January 2017, management revised its 2017 operating and strategic plan from which are derived inputs into the Group's fair value less costs of disposal impairment model. This resulted in a £2,548m impairment to the North America aggregated cash-generating unit (CGU). The carrying values of goodwill and intangible assets are dependent on future cash flows of the underlying CGUs and there is a risk that if management does not achieve these cash flows it could give rise to further impairment. This risk increases in periods when the Group's trading performance and projections do not meet prior expectations, such as in 2016. The impairment reviews performed by management contain a number of significant judgements and estimates of which the most significant were forecast sales growth rate (including US enrolment rates, assessment growth rates and the success of new product launches), operating profit forecasts, perpetuity growth rates and discount rates. Changes in these assumptions can result in materially different impairment charges or available headroom.	We obtained management's fair value less costs of disposal impairment model and tested and evaluated the reasonableness of key assumptions, including CGU identification, operating profit forecasts and key inputs to these forecasts, perpetuity growth rates and discount rates. We tested the mathematical integrity of the forecasts and carrying values in management's impairment model and confirmed that management's estimate of each CGU's recoverable amount is appropriately based on the higher of fair value less cost of disposal and value-in-use. Our procedures have been focused on the North America and Core CGUs. We agreed the forecast cash flows to board-approved budgets, assessed how these budgets are compiled and understood key judgements and estimates within them, including short-term growth rates and cost allocations. Specifically for the US higher education courseware business, we understood management's assumptions for the drivers of future sales, including the effect of enrolment levels, and the impact of rental models and second-hand books on sales of new books, and compared these with external data and recent historical trends. We used valuations specialists to assess the perpetuity growth rate and discount rate for each CGU by comparison with third-party information, past performance and relevant risk factors. We also considered management's estimate of disposal costs for reasonableness. As a result of our work, we determined that the quantum of impairment recognised in 2016 was within a reasonable range and supported based on the uncertainties arising in the US higher education courseware business over the strategic plan period. We performed our own sensitivity analyses to understand the impact of reasonable changes in the key assumptions. We agree with management's decision to provide additional disclosures in note 11 of the financial statements given that reasonably possible changes in the assumptions could materially impact the impairment charges or available headroom.

Independent auditor's report to the members of Pearson plc

Area of focus	How our audit addressed the area of focus
Returns provisions	
Refer to note 22 to the consolidated financial statements The Group has provided £159m for sales returns at 31 December 2016. The most significant exposure to potential returns within Pearson arises in the US higher education courseware business. In 2016, Pearson received materially greater book returns from retailers than had been anticipated and provided at 31 December 2015, which management attributed primarily to a correction of inventory levels in the college bookstore channel reflecting lower enrolment, and the impact of rental models eroding sales over time. Management reassessed its approach to providing for returns in response to this experience, adopting a method to assess returns by customer and channel rather than academic discipline. The revised method and assumptions used to calculate returns provisions at 31 December 2016 reflect discussions with retailers, a change in sales force incentives to a 'net sales' basis and materially lower sales into these retailers in the final months of 2016 compared with 2015.	We performed testing over returns provisions in a number of locations, with our focus on the US higher education courseware business due to a high level of returns during 2016. We assessed management's evaluation of the factors giving rise to higher returns in 2016 than had been anticipated at 31 December 2015. We corroborated management's analysis by reviewing 2016 returns history to underlying records, reviewed correspondence and meeting minutes with key retailers and held discussions directly with these retailers in early 2017. We found that management's explanations of the causes and timing of the higher returns were supported. We tested the returns provision calculations at 31 December 2016 and agreed inputs such as historical sales and returns experience to underlying records. We assessed the change in method was likely to be more representative of future returns and reflects the retailer's recent buying trends. We performed detailed testing over shipment and returns levels. This included checking cut-off at year end and evaluating whether any changes in shipping volumes around year end might increase the risk of returns. We corroborated that sales volumes in the final months of 2016 were materially lower than in prior years, and confirmed a change in sales incentive arrangements to a 'net sale' basis. In drawing our conclusions, we considered whether there were indicators of management bias. We concluded that management had adopted methods and reached estimates for future returns that were supportable and appropriate.
Major restructuring programme	
Refer to notes 2, 4 and 8 to the consolidated financial statements In January 2016, management announced a restructuring plan to simplify the business and focus further on their global education strategy. As a result, management recorded a restructuring charge of £338m during 2016. Given the significance of this programme, management has also excluded these costs from their adjusted profit measure.	We have identified no material adjustments in relation to the recording of these costs and we have noted that for the majority of these items there is clear evidence to support the fact that they have arisen as a direct consequence of the Group's restructuring plans. There are certain costs where the classification as restructuring is subjective due to the circumstances in which they have arisen. Based on the audit evidence obtained, we have been able to conclude that, although subjective, there are valid arguments for associating these costs with the restructuring activities undertaken and therefore the classification is reasonable.
Provisions for uncertain tax liabilities	
Refer to notes 7 and 13 to the consolidated financial statements The Group is subject to several tax regimes due to the geographical diversity of its businesses. Management is required to exercise significant judgement in determining the appropriate amount to provide in respect of potential tax exposures and uncertain tax provisions. The most significant of these relate to US tax. Changes in assumptions about the views that might be taken by tax authorities can materially impact the level of provisions recorded in the financial statements.	We engaged with our tax experts and obtained an understanding of the Group's tax strategy to identify tax risks relating to business and legislative developments. To assess the adequacy of the Group's tax provisions, we first recalculated the valuation of tax provisions and determined whether the treatments adopted were in line with the Group's tax policies and had been applied consistently. We then evaluated the key underlying assumptions, particularly in the US and UK. In doing this, we considered the status of recent and current tax authority audits and enquiries, the outturn of previous claims, judgemental positions taken in tax returns and current year estimates and developments in the tax environment. We also evaluated the consistency of management's approach to establishing or changing provision estimates. We were satisfied that management's provision estimates for uncertain tax positions were prepared on a consistent basis with the prior year and were adequately supported.

Area of focus	How our audit addressed the area of focus
Recoverability of pre-publication assets	
Refer to note 20 to the consolidated financial statements The Group has £1,024m of pre-publication assets at 31 December 2016. Pre-publication assets represent direct costs incurred in the development of education platforms, programmes and titles prior to their public release. Judgement is required to assess the recoverability of the carrying value of these assets; this is further complicated by the transition to digital as the Group invests in new, less proven, inter-linked digital content and platforms.	We have assessed the appropriateness of capitalisation policies and selected a sample of costs deferred to the balance sheet as pre-publication assets to test their magnitude and appropriateness for capitalisation. We have assessed the amortisation profiles of pre-publication assets against cash flows to test that the existing amortisation profiles remained appropriate in light of the transition towards digital products. We challenged the carrying value of certain pre-publication assets where products are yet to be launched, are less proven, or where sales are lower than originally anticipated. We assessed forecast cash flows against historical experience and obtained supporting evidence for management's explanations. We compared short and long-term growth rates to historical trends and expectations. We challenged the life of the assets compared with similar Pearson products and found the Group's policies to be appropriate and consistently applied. While the carrying value of some assets depends on future sales growth, overall we considered the year end carrying values to be supported and in line with the Group's policy.
Major finance transformation programme	
During the year, the Group launched a major finance transformation programme, which will ultimately move to a single Enterprise Resource Planning (ERP) system across the Group. The UK represented the first territory to go live on this platform in 2016. Following go-live, the ERP and associated transaction level controls have taken a period to stabilise, such that some of these controls were not fully effective for the period following go-live.	Given the pervasive impact of this ERP implementation to the UK component audit, we have worked closely with management throughout the go-live process and have performed procedures as follows: › Evaluated management's assessment of risks and design of control activities, and tested the configuration of the new ERP environment › Validated the effectiveness of management's data migration and programme development procedures › Tested the new business processes and operating effectiveness of the controls. Given some of these controls were not fully effective in the period following go-live, we conducted additional substantive procedures, specifically over the occurrence and accuracy of sales and the existence and valuation of debtors. We noted no material adjustments as a result of this testing.

Independent auditor's report to the members of Pearson plc

How we tailored our audit scope

We tailored the scope of our audit to ensure that we performed enough work to be able to give an opinion on the financial statements as a whole, taking into account the geographic structure of the Group, the accounting processes and controls, and the industry in which the Group operates.

The Group is organised into three reportable segments, being North America, Core and Growth, plus the associate investment in Penguin Random House. Each segment comprises a number of reporting units. The consolidated financial statements comprise these reporting units plus the Group's centralised functions.

In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed at the reporting units by us, as the Group engagement team, or component auditors within PwC UK and from other PwC network firms operating under our instruction. Where the work was performed by component auditors, we determined the level of involvement we needed to have in the audit work at those reporting units to be able to conclude whether sufficient appropriate audit evidence had been obtained as a basis for our opinion on the consolidated financial statements as a whole.

During the year, senior members of the Group engagement team visited each of the US, Brazilian and Chinese component audit teams and local client teams; we held a planning meeting attended by partners from the Group engagement team and our UK and US component teams; and have had regular dialogue with component teams throughout the year, including holding clearance meetings with each respective team. We have also performed a review of working papers for all full scope entities and some specified procedure entities.

We identified two reporting units in the US and UK that required an audit of their complete financial information due to their financial significance, plus a further eight reporting units in the US, UK, Brazil and China that required either an audit or specified procedures on certain transactions and balances. We also obtained a full scope audit opinion from PwC Germany on the financial information of the US Penguin Random House associate. The Group consolidation, financial statement disclosures and corporate functions were audited by the Group engagement team. This included our work over derivative financial instruments, hedge accounting, goodwill and intangible assets impairment reviews, litigation, pensions, share-based payments and tax balances.

The reporting units where we performed audit work, together with work performed at corporate functions and consolidated Group level, accounted for approximately 67% of the Group's revenue, 84% of the Group's loss before tax and 60% of the Group's adjusted profit before tax. This is before considering the impact of Group-level monitoring controls and disaggregated analytical review procedures, which covers a number of the Group's smaller and lower risk components that were not directly included in our Group audit scope. Taken together, this approach provided the evidence we needed for our opinion on the consolidated financial statements taken as a whole.

Materiality

The scope of our audit was influenced by our application of materiality. We set certain quantitative thresholds for materiality. These, together with qualitative considerations, helped us to determine the scope of our audit and the nature, timing and extent of our audit procedures on the individual financial statement line items and disclosures and in evaluating the effect of misstatements, both individually and on the financial statements as a whole.

Based on our professional judgement, we determined materiality for the financial statements as a whole as follows:

Overall Group materiality	£23m (2015: £27m)
How we determined it	4% of adjusted profit before tax of £576m
Rationale for benchmark applied	Note 8 of the consolidated financial statements explains that the Group's principal measure of performance is adjusted operating profit (£635m), which excludes costs of major restructuring, other net gains and losses and intangible charges (impairment and acquired intangible asset amortisation), in order to present results from operating activities on a consistent basis. From adjusted operating profit, we deducted net finance costs of £59m (see note 8) because these mainly reflect recurring finance charges. To the resulting adjusted profit before tax, we then applied 4% (rather than the usual 5%) as our materiality calculation was based on an adjusted measure.
Component materiality	For each component in our audit scope, we allocated a materiality that is less than our overall Group materiality. The range of materiality allocated across components was between £3m and £19m.

We agreed with the audit committee that we would report to them misstatements identified during our audit above £2m (2015: £2m), as well as misstatements below that amount that, in our view, warranted reporting for qualitative reasons.

Going concern

Under the Listing Rules we are required to review the directors' statement, set out on p107, in relation to going concern. We have nothing to report having performed our review.

Under ISAs (UK & Ireland) we are required to report to you if we have anything material to add or to draw attention to in relation to the directors' statement about whether they considered it appropriate to adopt the going concern basis in preparing the financial statements. We have nothing material to add or to draw attention to.

As noted in the directors' statement, the directors have concluded that it is appropriate to adopt the going concern basis in preparing the financial statements. The going concern basis presumes that the Group and company have adequate resources to remain in operation, and that the directors intend them to do so, for at least one year from the date the financial statements were signed. As part of our audit we have concluded that the directors' use of the going concern basis is appropriate. However, because not all future events or conditions can be predicted, these statements are not a guarantee as to the Group's and company's ability to continue as a going concern.

Other required reporting

Consistency of other information and compliance with applicable requirements

Companies Act 2006 opinions

In our opinion, based on the work undertaken in the course of the audit:

- The information given in the strategic report and the governance report for the financial year for which the financial statements are prepared is consistent with the financial statements
- The strategic report and the governance report have been prepared in accordance with applicable legal requirements.

In addition, in light of the knowledge and understanding of the Group, the company and their environment obtained in the course of the audit, we are required to report if we have identified any material misstatements in the strategic report and the governance report. We have nothing to report in this respect.

ISAs (UK & Ireland) reporting

Under ISAs (UK & Ireland) we are required to report to you if, in our opinion:

› Information in the annual report is: – materially inconsistent with the information in the audited financial statements; – apparently materially incorrect based on, or materially inconsistent with, our knowledge of the Group and company acquired in the course of performing our audit; or – otherwise misleading.	We have no exceptions to report.
› The statement given by the directors on p110, in accordance with provision C.1.1 of the UK Corporate Governance Code (the Code), that they consider the annual report taken as a whole to be fair, balanced and understandable and provides the information necessary for members to assess the Group's and company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and company acquired in the course of performing our audit.	We have no exceptions to report.
› The section of the annual report on p70 to p75, as required by provision C.3.8 of the Code, describing the work of the Audit Committee does not appropriately address matters communicated by us to the audit committee.	We have no exceptions to report.

Independent auditor's report to the members of Pearson plc

The directors' assessment of the prospects of the Group and of the principal risks that would threaten the solvency or liquidity of the Group

Under ISAs (UK & Ireland) we are required to report to you if we have anything material to add or to draw attention to in relation to:

› The directors' confirmation on p55 and p107 of the annual report, in accordance with provision C.2.1 of the Code, that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity.	We have nothing material to add or to draw attention to.
› The disclosures in the annual report that describe those risks and explain how they are being managed or mitigated.	We have nothing material to add or to draw attention to.
› The directors' explanation on p55 and p107 of the annual report, in accordance with provision C.2.2 of the Code, as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate, and their statement as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.	We have nothing material to add or to draw attention to.

Under the Listing Rules we are required to review the directors' statement that they have carried out a robust assessment of the principal risks facing the Group and the directors' statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of: making inquiries and considering the directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the Code; and considering whether the statements are consistent with the knowledge acquired by us in the course of performing our audit. We have nothing to report having performed our review.

Adequacy of accounting records and information and explanations received

Under the Companies Act 2006 we are required to report to you if, in our opinion:

- We have not received all the information and explanations we require for our audit; or
- Adequate accounting records have not been kept by the company, or returns adequate for our audit have not been received from branches not visited by us; or
- The company financial statements and the part of the directors' remuneration report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Directors' remuneration

Directors' remuneration report – Companies Act 2006 opinion

In our opinion, the part of the directors' remuneration report to be audited has been properly prepared in accordance with the Companies Act 2006.

Other Companies Act 2006 reporting Under the Companies Act 2006 we are required to report to you if, in our opinion, certain disclosures of directors' remuneration specified by law are not made. We have no exceptions to report arising from this responsibility.

Corporate governance statement

Under the Companies Act 2006 we are required to report to you if, in our opinion, a corporate governance statement has not been prepared by the company. We have no exceptions to report arising from this responsibility.

Under the Listing Rules we are required to review the part of the corporate governance statement relating to ten further provisions of the Code. We have nothing to report having performed our review.

Responsibilities for the financial statements and the audit

Our responsibilities and those of the directors

As explained more fully in the statement of directors' responsibilities set out on p111, the directors are responsible for the preparation of the financial statements and for being satisfied that they give a true and fair view.

Our responsibility is to audit and express an opinion on the financial statements in accordance with applicable law and ISAs (UK & Ireland). Those standards require us to comply with the Auditing Practices Board's Ethical Standards for Auditors.

This report, including the opinions, has been prepared for and only for the company's members as a body in accordance with Chapter 3 of Part 16 of the Companies Act 2006 and for no other purpose. We do not, in giving these opinions, accept or assume responsibility for any other purpose or to any other person to whom this report is shown or into whose hands it may come save where expressly agreed by our prior consent in writing.

What an audit of financial statements involves

An audit involves obtaining evidence about the amounts and disclosures in the financial statements sufficient to give reasonable assurance that the financial statements are free from material misstatement, whether caused by fraud or error. This includes an assessment of:

- Whether the accounting policies are appropriate to the Group's and the company's circumstances and have been consistently applied and adequately disclosed
- The reasonableness of significant accounting estimates made by the directors
- The overall presentation of the financial statements.

We primarily focus our work in these areas by assessing the directors' judgements against available evidence, forming our own judgements, and evaluating the disclosures in the financial statements.

We test and examine information, using sampling and other auditing techniques, to the extent we consider necessary to provide a reasonable basis for us to draw conclusions. We obtain audit evidence through testing the effectiveness of controls, substantive procedures or a combination of both.

In addition, we read all the financial and non-financial information in the annual report to identify material inconsistencies with the audited financial statements and to identify any information that is apparently materially incorrect based on, or materially inconsistent with, the knowledge acquired by us in the course of performing the audit. If we become aware of any apparent material misstatements or inconsistencies we consider the implications for our report. With respect to the strategic report and governance report, we consider whether those reports include the disclosures required by applicable legal requirements.

Stuart Newman
(Senior Statutory Auditor)
for and on behalf of PricewaterhouseCoopers LLP
Chartered Accountants and Statutory Auditors
London

14 March 2017

Consolidated income statement

Year ended 31 December 2016

All figures in £ millions	Notes	2016	2015
Sales	2	**4,552**	4,468
Cost of goods sold	4	**(2,093)**	(1,981)
Gross profit		**2,459**	2,487
Operating expenses	4	**(2,505)**	(2,094)
Impairment of intangible assets	11	**(2,548)**	(849)
Share of results of joint ventures and associates	12	**97**	52
Operating loss	2	**(2,497)**	(404)
Finance costs	6	**(97)**	(100)
Finance income	6	**37**	71
Loss before tax		**(2,557)**	(433)
Income tax	7	**222**	81
Loss for the year from continuing operations		**(2,335)**	(352)
Profit for the year from discontinued operations	3	**–**	1,175
(Loss)/profit for the year		**(2,335)**	823
Attributable to:			
Equity holders of the company		**(2,337)**	823
Non-controlling interest		**2**	–
(Loss)/earnings per share from continuing and discontinued operations attributable to equity holders of the company during the year (expressed in pence per share)			
– basic	8	**(286.8)p**	101.2p
– diluted	8	**(286.8)p**	101.2p
Loss per share from continuing operations attributable to equity holders of the company during the year (expressed in pence per share)			
– basic	8	**(286.8)p**	(43.3)p
– diluted	8	**(286.8)p**	(43.3)p

Consolidated statement of comprehensive income

Year ended 31 December 2016

All figures in £ millions	Notes	2016	2015
(Loss)/profit for the year		**(2,335)**	823
Items that may be reclassified to the income statement			
Net exchange differences on translation of foreign operations – Group		**910**	(85)
Net exchange differences on translation of foreign operations – associates		**3**	16
Currency translation adjustment disposed – Group		**–**	(10)
Attributable tax	7	**(5)**	5
Items that are not reclassified to the income statement			
Remeasurement of retirement benefit obligations – Group	25	**(268)**	110
Remeasurement of retirement benefit obligations – associates		**(8)**	8
Attributable tax	7	**58**	(24)
Other comprehensive income for the year		**690**	20
Total comprehensive (expense)/income for the year		**(1,645)**	843
Attributable to:			
Equity holders of the company		**(1,648)**	845
Non-controlling interest		**3**	(2)

Consolidated balance sheet

As at 31 December 2016

All figures in £ millions	Notes	2016	2015
Assets			
Non-current assets			
Property, plant and equipment	10	**343**	320
Intangible assets	11	**3,442**	5,164
Investments in joint ventures and associates	12	**1,247**	1,103
Deferred income tax assets	13	**451**	276
Financial assets – derivative financial instruments	16	**171**	78
Retirement benefit assets	25	**158**	337
Other financial assets	15	**65**	143
Trade and other receivables	22	**104**	115
		5,981	7,536
Current assets			
Intangible assets – pre-publication	20	**1,024**	841
Inventories	21	**235**	211
Trade and other receivables	22	**1,357**	1,284
Financial assets – derivative financial instruments	16	**–**	32
Financial assets – marketable securities	14	**10**	28
Cash and cash equivalents (excluding overdrafts)	17	**1,459**	1,703
		4,085	4,099
Total assets		**10,066**	11,635
Liabilities			
Non-current liabilities			
Financial liabilities – borrowings	18	**(2,424)**	(2,048)
Financial liabilities – derivative financial instruments	16	**(264)**	(136)
Deferred income tax liabilities	13	**(466)**	(560)
Retirement benefit obligations	25	**(139)**	(139)
Provisions for other liabilities and charges	23	**(79)**	(71)
Other liabilities	24	**(422)**	(356)
		(3,794)	(3,310)

Consolidated balance sheet continued

As at 31 December 2016

All figures in £ millions	Notes	2016	2015
Current liabilities			
Trade and other liabilities	24	**(1,629)**	(1,390)
Financial liabilities – borrowings	18	**(44)**	(282)
Financial liabilities – derivative financial instruments	16	**–**	(29)
Current income tax liabilities		**(224)**	(164)
Provisions for other liabilities and charges	23	**(27)**	(42)
		(1,924)	(1,907)
Total liabilities		**(5,718)**	(5,217)
Net assets		**4,348**	6,418
Equity			
Share capital	27	**205**	205
Share premium	27	**2,597**	2,590
Treasury shares	28	**(79)**	(72)
Translation reserve		**905**	(7)
Retained earnings		**716**	3,698
Total equity attributable to equity holders of the company		**4,344**	6,414
Non-controlling interest		**4**	4
Total equity		**4,348**	6,418

These financial statements have been approved for issue by the board of directors on 14 March 2017 and signed on its behalf by

Coram Williams
Chief financial officer

Consolidated statement of changes in equity

Year ended 31 December 2016

All figures in £ millions	Share capital	Share premium	Treasury shares	Translation reserve	Retained earnings	Total	Non-controlling interest	Total equity
	Equity attributable to equity holders of the company							
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	–	–	–	912	(223)	689	1	690
Total comprehensive income	–	–	–	912	(2,560)	(1,648)	3	(1,645)
Equity-settled transactions	–	–	–	–	22	22	–	22
Tax on equity-settled transactions	–	–	–	–	–	–	–	–
Issue of ordinary shares under share option schemes	–	7	–	–	–	7	–	7
Purchase of treasury shares	–	–	(27)	–	–	(27)	–	(27)
Release of treasury shares	–	–	20	–	(20)	–	–	–
Changes in non-controlling interest	–	–	–	–	–	–	(3)	(3)
Dividends	–	–	–	–	(424)	(424)	–	(424)
At 31 December 2016	205	2,597	(79)	905	716	4,344	4	4,348

All figures in £ millions	Share capital	Share premium	Treasury shares	Translation reserve	Retained earnings	Total	Non-controlling interest	Total equity
	Equity attributable to equity holders of the company							
At 1 January 2015	205	2,579	(75)	70	3,200	5,979	6	5,985
Profit for the year	–	–	–	–	823	823	–	823
Other comprehensive income	–	–	–	(77)	99	22	(2)	20
Total comprehensive income	–	–	–	(77)	922	845	(2)	843
Equity-settled transactions	–	–	–	–	26	26	–	26
Tax on equity-settled transactions	–	–	–	–	(1)	(1)	–	(1)
Issue of ordinary shares under share option schemes	–	11	–	–	–	11	–	11
Purchase of treasury shares	–	–	(23)	–	–	(23)	–	(23)
Release of treasury shares	–	–	26	–	(26)	–	–	–
Changes in non-controlling interest	–	–	–	–	–	–	–	–
Dividends	–	–	–	–	(423)	(423)	–	(423)
At 31 December 2015	205	2,590	(72)	(7)	3,698	6,414	4	6,418

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. Changes in non-controlling interest in 2016 relate to the buy-back of a non-controlling interest in our South African business.

Consolidated cash flow statement

Year ended 31 December 2016

All figures in £ millions	Notes	2016	2015
Cash flows from operating activities			
Net cash generated from operations	32	**522**	518
Interest paid		**(67)**	(75)
Tax paid		**(45)**	(232)
Net cash generated from operating activities		**410**	211
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired	30	**(15)**	(9)
Acquisition of joint ventures and associates		**–**	(11)
Purchase of investments		**(6)**	(7)
Purchase of property, plant and equipment		**(88)**	(86)
Purchase of intangible assets		**(157)**	(161)
Disposal of subsidiaries, net of cash disposed	31	**(54)**	1,030
Proceeds from sale of associates		**4**	379
Proceeds from sale of investments		**92**	13
Proceeds from sale of property, plant and equipment	32	**4**	2
Proceeds from sale of intangible assets		**–**	1
Proceeds from sale of liquid resources		**42**	17
Loans repaid by related parties		**14**	7
Investment in liquid resources		**(24)**	(29)
Interest received		**16**	24
Dividends received from joint ventures and associates		**131**	162
Net cash (used in)/received from investing activities		**(41)**	1,332
Cash flows from financing activities			
Proceeds from issue of ordinary shares	27	**7**	11
Purchase of treasury shares	28	**(27)**	(23)
Proceeds from borrowings		**4**	372
Repayment of borrowings		**(249)**	(300)
Finance lease principal payments		**(6)**	(1)
Transactions with non-controlling interest		**(2)**	–
Dividends paid to company's shareholders	9	**(424)**	(423)
Net cash used in financing activities		**(697)**	(364)
Effects of exchange rate changes on cash and cash equivalents		**81**	(19)
Net (decrease)/increase in cash and cash equivalents		**(247)**	1,160
Cash and cash equivalents at beginning of year		**1,671**	511
Cash and cash equivalents at end of year	17	**1,424**	1,671

The consolidated cash flow statement includes discontinued operations (see note 3).

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 14 March 2017.

1. Accounting policies

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

a. 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 adopted by the European Union (EU) and with those parts of the Companies Act 2006 applicable to companies reporting under IFRS. In respect of the accounting standards applicable to the Group; there is no difference between EU-adopted and IASB-adopted IFRS.

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) to fair value through profit or loss.

1. Interpretations and amendments to published standards effective 2016 The following amendments and interpretations were adopted in 2016:

- Amendments to IAS 19 Employee Benefits – Annual Improvements 2012-2014 cycle
- Amendments to IAS 16 Property Plant and Equipment and IAS 38 Intangible Assets – Clarification of Acceptable Methods of Depreciation and Amortisation
- Amendments to IAS 1 Presentation of Financial Statements – Disclosure Initiative.

In April 2016, IFRS IC rejected a request to add to its agenda an item concerning cash pooling arrangements, specifically addressing when and whether particular cash pooling arrangements would meet the requirements for offsetting in accordance with IAS 32 'Financial Instruments: Presentation'. After consideration of the IFRS IC rejection notice, Pearson has settled many of the balances within its cash pooling arrangements during the first half of 2016 and has chosen to show any residual balances within these arrangements gross in the balance sheet at 31 December 2016.

Pearson has considered the prior year comparatives in light of this guidance, and has concluded that those balances at 31 December 2015 that would not meet these requirements for net treatment are immaterial for restatement in the context of the overall presentation of the Group's balance sheet at this date.

The adoption of these new pronouncements from 1 January 2016 does not have a material impact on the consolidated financial statements.

2. Standards, interpretations and amendments to published standards that are not yet effective The Group has not early adopted the following new pronouncements that are not yet effective:

IFRS 9 'Financial Instruments', effective for annual reporting periods beginning on or after 1 January 2018. The new standard details the requirements for the classification, measurement and recognition of financial assets and liabilities, and makes changes to the current disclosure framework. Management is in the process of assessing the impact of IFRS 9 on the Group, in particular the new guidelines around hedging and the impairment of financial assets.

IFRS 15 'Revenue from Contracts with Customers', effective for annual reporting periods beginning on or after 1 January 2018. The new standard specifies how and when an entity will recognise revenue and requires more detailed disclosures. Management continues to assess the impact of IFRS 15 on the Group. The implementation of IFRS 15 is complex due to the number of different revenue streams that the Group has and due to the fact that the Group's business model is continuing to evolve from print-based products to digital-based products and services. Based on work completed to date, management does not expect IFRS 15 to have a material impact on the amount of revenue to be recognised; however, there could be an impact on the timing of revenue recognition due to enhanced guidance around what constitutes a performance obligation. This may impact the split of revenue between periods within any given year and also between years.

Some of the key impacts of IFRS 15 on current revenue streams are as follows:

- Courseware – revenue from contracts related to the delivery of online content, to which customers have access for a period of time, is currently recognised evenly over that period of time. Under IFRS 15 the definition of a performance obligation may result in that same revenue being recognised at a point in time at the start of the contract, although this would depend on the related hosting obligations
- Assessments – revenue from certain assessments contracts is currently recognised over the period of time between a student signing up for the qualification and the point at which they complete and receive that qualification. Under IFRS 15 the definition of a performance obligation may result in that same revenue being recognised at points in time when certain activities are completed, with the main focus being on the receipt of the final qualification

1. Accounting policies continued

a. Basis of preparation continued

› Services – revenue from certain direct delivery contracts is currently recognised over the period of service delivery. The current revenue recognition methodology may involve the use of assumptions around items such as average usage of online content, the average length of time to complete course modules and the average student drop-out rate. Under IFRS 15 there is enhanced guidance which may impact on how these types of assumptions are calculated.

Management is currently favouring the modified retrospective transition method (sometimes called the cumulative catch-up transition method). Using this method would mean that the cumulative effect of initially applying IFRS 15 would be recognised as an adjustment to the opening balance sheet in the period of initial application. Comparative prior periods would not be adjusted. Additional disclosures would also be presented in the year of initial application to explain the impact of IFRS 15. If the modified retrospective transition method is used then management is also likely to elect to apply the practical expedient for completed contracts. Using this method would not prevent the Group from disclosing the impact on comparative years in narrative format.

IFRS 16 'Leases', effective for annual reporting periods beginning on or after 1 January 2019. The new standard details the requirements for the classification, measurement and recognition of lease arrangements. Adoption of the new standard is likely to have an impact on the Group and management is currently assessing the impact.

IAS 7 'Statement of Cash Flows', effective for annual reporting periods beginning on or after 1 January 2017. The amendments to disclosure requirements aim to assist users of financial statements to evaluate changes in an entity's liabilities arising from financing activities. The Group is currently confirming the impacts of the new requirements which are not expected to be material.

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)'. Management is currently evaluating these proposals and although the proposals have not yet been finalised, it should be noted that the current draft, if adopted, may restrict the Group's ability to recognise a pension asset in respect of pension surpluses in its UK defined benefit pension plan. In addition, the current draft may require certain elements of committed minimum funding contributions to be recognised as a liability on the balance sheet.

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:

Consolidation: Business combinations – classification of investments
Intangible assets: Goodwill
Intangible assets: Pre-publication assets
Taxation
Revenue recognition including provisions for returns
Employee benefits: Pensions
Consolidation: Business combinations – determination of fair values (where relevant)

b. 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 1e(1) 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.

Notes to the consolidated financial statements

1. Accounting policies continued

b. Consolidation continued

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.

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.

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.

c. 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 $1.33 (2015: $1.53) and the year-end rate was $1.23 (2015: $1.47).

d. 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.

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1. Accounting policies continued

e. 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 and significant management judgement. 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.

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 investment in pre-publication assets has been disclosed as part of cash generated from operations in the cash flow statement (see note 32).

The assessment of the recoverability of pre-publication assets involve 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.

f. Other financial assets

Other financial assets, designated as available for sale investments, are non-derivative financial assets measured at estimated fair value. Changes in the fair value are recorded in equity in the fair value reserve. On the subsequent disposal of the asset, the net fair value gains or losses are taken to the income statement.

g. Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the first in first out (FIFO) method. The cost of finished goods and 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.

h. 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 judgement 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.

Notes to the consolidated financial statements

1. Accounting policies continued

h. Royalty advances continued

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.

i. 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.

j. 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.

k. 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.

l. 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.

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 below:

Typical reason for designation	Reporting of gains and losses on effective portion of the hedge	Reporting of gains and losses on disposal
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. The Group's debt is all swapped to floating rates and 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.
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.	

1. Accounting policies continued

m. 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 liabilities for anticipated tax audit issues based on management's judgement of the application of tax legislation and best estimates of future settlement amounts. 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 in determining the amounts to be recognised. In particular, significant judgement is used when assessing the extent to which deferred tax assets should be recognised with consideration given to the timing and level of future taxable income together with any future tax planning strategies.

n. 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.

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.

o. 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.

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 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.

Notes to the consolidated financial statements

1. Accounting policies continued

p. 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 and English language teaching centres around the world as well as the provision of online learning services in partnership with universities and other academic institutions.

Revenue comprises the fair value of the consideration received or receivable for the sale of goods and services net of sales taxes, rebates and discounts, and after eliminating sales within the Group.

Revenue from the sale of books is recognised when title passes. A provision for anticipated returns is made based primarily on historical return rates, customer buying patterns and retailer behaviours including stock levels. If these estimates do not reflect actual returns in future periods then revenues could be understated or overstated for a particular period.

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. Where software is provided under a term licence, revenue is recognised on a straight-line basis over the period of the license.

Revenue from the provision of services to academic institutions, such as programme development, student acquisition, education technology and student support services, is recognised as performance occurs. Revenue from multi-year contractual arrangements, such as contracts to process qualifying tests for individual professions and government departments, is recognised as performance occurs. The assumptions, risks and uncertainties inherent to long-term contract accounting can affect the amounts and timing of revenue and related expenses reported. Certain of these arrangements, either as a result of a single service spanning more than one reporting period or where the contract requires the provision of a number of services that together constitute a single project, are treated as long-term contracts with revenue recognised on a percentage of completion basis. Percentage of completion is calculated on a cost basis using the proportion of the total estimated costs incurred to date. 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.

Where a contractual arrangement consists of two or more separate elements that can be provided to customers either on a stand-alone basis or as an optional extra, such as the provision of supplementary materials or online access with textbooks and multiple deliverables within testing or service contracts, revenue is recognised for each element as if it were an individual contractual arrangement requiring the estimation of its relative fair value.

On certain contracts, where the Group acts as 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.

q. 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.

r. 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.

s. 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.

t. 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 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.

u. Trade receivables

Trade receivables are stated at fair value after provision for bad and doubtful debts and anticipated future sales returns (see also note 1p).

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 (PRH) associate.

The chief operating decision-maker is the Pearson executive.

Continuing operations:

North America Courseware, Assessments and Services businesses in US and Canada.

Core Courseware, Assessments and Services businesses in more mature markets including UK, Australia and Italy.

Growth Courseware, Assessments and Services businesses in emerging markets including Brazil, China, India and South Africa.

The results of the FT Group segment (to 30 November 2015) are shown as discontinued in 2015.

The results for 2015 have been restated to reflect minor changes in management responsibilities between the geographies which were effective from 1 January 2016.

For more detail on the services and products included in each business segment refer to the strategic report.

		2016						
All figures in £ millions	Notes	North America	Core	Growth	PRH	Corporate	Discontinued operations	Group
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**

Notes to the consolidated financial statements

2. Segment information continued

All figures in £ millions	Notes	North America	Core	Growth	PRH	Corporate	Discontinued operations	2015 Restated Group
Continuing operations								
Sales		2,940	815	713	–	–		4,468
Adjusted operating profit/(loss)		480	105	(3)	90	–		672
Intangible charges		(386)	(79)	(583)	(41)	–		(1,089)
Other net gains and losses		19	(5)	–	(1)	–		13
Operating (loss)/profit		113	21	(586)	48	–		(404)
Finance costs	6							(100)
Finance income	6							71
Loss before tax								(433)
Income tax	7							81
Loss for the year from continuing operations								(352)
Segment assets		6,399	1,573	719	–	1,841		10,532
Joint ventures	12	1	–	3	–	–		4
Associates	12	–	6	–	1,093	–		1,099
Total assets		6,400	1,579	722	1,093	1,841		11,635
Other segment items								
Share of results of joint ventures and associates	12	(9)	–	(3)	64	–	16	68
Capital expenditure	10, 11	136	42	50	–	–	15	243
Pre-publication investment	20	218	63	66	–	–	–	347
Depreciation	10	42	9	18	–	–	6	75
Amortisation	11, 20	338	95	109	–	–	15	557
Impairment	11	282	37	530	–	–	–	849

For further information on adjusted measures above, see note 8.

There were no material inter-segment sales in either 2015 or 2016.

Adjusted operating profit is a non-GAAP financial measure and is included as it is a key financial measure used by management to evaluate performance and allocate resources to business segments. The measure also enables our investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments by separating out those items of income and expenditure relating to acquisition and disposal transactions.

In 2016, the definition of adjusted operating profit has been amended to exclude the costs of major restructuring activity. In January 2016, Pearson announced that it was embarking on a restructuring programme to simplify the business, reduce costs and position the company for growth in its major markets. The costs of this programme in 2016 are significant enough to exclude from our adjusted operating profit measure so as to better highlight the underlying performance. Total restructuring in 2016 amounted to £338m and includes costs associated with headcount reductions, property rationalisation and closure or exit from certain systems, platforms, products and supplier and customer relationships. There was no major restructuring in 2015 and accordingly the change has no effect on the comparative 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 excluded from adjusted operating profit as they distort the performance of the Group. In 2016, the losses in the Core segment mainly relate to the closure of English language schools in Germany and in the North America segment to the sale of the Pearson English Business Solutions business. In 2015, other gains and losses included in discontinued operations relate to the sale of the FT Group including the 50% share of the Economist. Included in other net gains and losses within continuing operations in 2015 in the North America segment is the profit on disposal of PowerSchool net of small losses on other investments.

2. Segment information continued

Charges relating to acquired intangibles, acquisition costs and movements in contingent acquisition consideration are also excluded from adjusted operating profit when relevant as these items reflect past acquisition activity and don't necessarily reflect the current year performance of the Group. In 2016, intangible charges include the impairment of goodwill in the North American business of £2,548m (see note 11).

In 2015, intangible charges included an impairment of goodwill and intangibles in our North American business of £282m, our core business of £37m and our Growth business of £530m.

Corporate costs are allocated to business segments including discontinued operations 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 combination were £10m (2015: £1m) (see note 30).

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 and English language teaching centres around the world as well as the provision of online learning services in partnership with universities and other academic institutions. School Systems includes PowerSchool and Family Education Network, both of which were disposed of during 2015.

	2016			
All figures in £ millions	North America	Core	Growth	Group
Courseware				
School Courseware	418	173	127	718
Higher Education Courseware	1,147	92	60	1,299
English Courseware	21	65	97	183
	1,586	330	284	2,200
Assessments				
School and Higher Education Assessments	378	268	21	667
Clinical Assessments	143	40	–	183
Professional and English Certification	333	112	49	494
	854	420	70	1,344
Services				
School Services	259	6	54	319
Higher Education Services	269	29	46	344
English Services	13	18	314	345
School Systems	–	–	–	–
	541	53	414	1,008
Total	2,981	803	768	4,552

Notes to the consolidated financial statements

2. Segment information continued

All figures in £ millions	North America	Core	Growth	2015 restated Group
Courseware				
School Courseware	406	178	112	696
Higher Education Courseware	1,207	94	57	1,358
English Courseware	22	65	84	171
	1,635	337	253	2,225
Assessments				
School and Higher Education Assessments	420	296	20	736
Clinical Assessments	126	32	–	158
Professional and English Certification	269	95	37	401
	815	423	57	1,295
Services				
School Services	209	1	47	257
Higher Education Services	223	26	70	319
English Services	18	28	286	332
School Systems	40	–	–	40
	490	55	403	948
Total	2,940	815	713	4,468

The Group operates in the following main geographic areas:

All figures in £ millions	Sales 2016	Sales 2015	Non-current assets 2016	Non-current assets 2015
Continuing operations				
UK	**393**	421	**946**	991
Other European countries	**255**	246	**134**	121
US	**2,829**	2,800	**3,351**	5,000
Canada	**118**	107	**268**	235
Asia Pacific	**632**	590	**205**	211
Other countries	**325**	304	**232**	144
Total continuing	**4,552**	4,468	**5,136**	6,702
Discontinued operations				
UK	**–**	134	**–**	–
Other European countries	**–**	64	**–**	–
US	**–**	72	**–**	–
Canada	**–**	2	**–**	–
Asia Pacific	**–**	35	**–**	–
Other countries	**–**	5	**–**	–
Total discontinued	**–**	312	**–**	–
Total	**4,552**	4,780	**5,136**	6,702

2. Segment information continued

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. Discontinued operations

There are no discontinued operations in 2016. All discontinued operations in 2015 relate to the FT Group including the Group's 50% share in the Economist. An analysis of the results and cash flows of discontinued operations is as follows:

All figures in £ millions	2016 Total	2015 Total
Sales	–	312
Operating profit	–	48
Profit before tax	–	48
Income tax	–	(8)
Profit after tax	–	40
Profit on disposal of The Economist	–	473
Profit on disposal of Financial Times	–	711
Attributable tax expense	–	(49)
Profit for the year from discontinued operations	–	1,175
Operating cash flows	–	31
Investing cash flows	–	3
Total cash flows	–	34

4. Operating expenses

All figures in £ millions	2016	2015
By function:		
Cost of goods sold	**2,093**	1,981
Operating expenses		
Distribution costs	**88**	80
Selling, marketing and product development costs	**908**	895
Administrative and other expenses	**1,240**	1,195
Restructuring costs	**329**	35
Other net gains and losses	**25**	(13)
Other income	**(85)**	(98)
Total net operating expenses	**2,505**	2,094
Impairment of intangible assets	**2,548**	849
Total	**7,146**	4,924

Included in other income is service fee income from Penguin Random House of £4m (2015: £16m). Included in administrative and other expenses are research and efficacy costs of £23m (2015: £33m). In addition to the restructuring costs shown above, there were restructuring costs in Penguin Random House of £9m (2015: £12m).

Notes to the consolidated financial statements

4. Operating expenses continued

All figures in £ millions	Notes	2016	2015
By nature:			
Royalties expensed		**264**	249
Other product costs		**616**	566
Employee benefit expense	5	**1,888**	1,742
Contract labour		**206**	182
Employee related expense		**122**	127
Promotional costs		**217**	163
Depreciation of property, plant and equipment	10	**95**	69
Amortisation of intangible assets – pre-publication	20	**350**	281
Amortisation of intangible assets – software	11	**84**	61
Amortisation of intangible assets – other	11	**185**	199
Impairment of intangible assets	11	**2,548**	849
Property and facilities		**243**	219
Technology and communications		**188**	153
Professional and outsourced services		**378**	262
Other general and administrative costs		**140**	132
Costs capitalised to intangible assets		**(318)**	(219)
Other net gains and losses		**25**	(13)
Other income		**(85)**	(98)
Total		**7,146**	4,924

During the year the Group obtained the following services from the Group's auditors:

All figures in £ millions	2016	2015
The audit of parent company and consolidated financial statements	**5**	4
The audit of the company's subsidiaries	**2**	2
Total audit fees	**7**	6
Other assurance services	**1**	2
Other non-audit services	**1**	1
Total other services	**2**	3
Tax compliance services	**–**	1
Total tax services	**–**	1
Total non-audit services	**2**	4
Total	**9**	10

Reconciliation between audit and non-audit service fees is shown below:

All figures in £ millions	2016	2015
Group audit fees including fees for attestation under section 404 of the Sarbanes-Oxley Act	**7**	6
Non-audit fees	**2**	4
Total	**9**	10

Fees for attestation under section 404 of the Sarbanes-Oxley Act are allocated between fees payable for the audits of consolidated and subsidiary accounts.

Included in non-audit fees are amounts related to carve out audits for disposals of £1m (2015: £1m).

5. Employee information

All figures in £ millions	Notes	2016	2015
Employee benefit expense			
Wages and salaries (including termination benefits)		**1,661**	1,507
Social security costs		**124**	124
Share-based payment costs	26	**22**	26
Retirement benefits – defined contribution plans	25	**67**	66
Retirement benefits – defined benefit plans	25	**16**	19
Other post-retirement medical benefits	25	**(2)**	–
Total		**1,888**	1,742

The details of the emoluments of the directors of Pearson plc are shown in the report on directors' remuneration.

Average number employed	2016	2015
Employee numbers		
North America	**16,841**	19,951
Core	**5,664**	5,936
Growth	**9,868**	11,114
Other	**346**	264
Continuing operations	**32,719**	37,265

The employee benefit expense relating to discontinued operations was £nil (2015: £132m) and the average number employed was nil (2015: 2,282).

6. Net finance costs

All figures in £ millions	Notes	2016	2015
Interest payable		**(74)**	(61)
Net foreign exchange losses		**(21)**	(36)
Derivatives not in hedging relationships		**(2)**	(3)
Finance costs		**(97)**	(100)
Interest receivable		**15**	15
Net finance income in respect of retirement benefits	25	**11**	4
Net foreign exchange gains		**1**	43
Derivatives not in hedging relationships		**10**	9
Finance income		**37**	71
Net finance costs		**(60)**	(29)
Analysed as:			
Net interest payable reflected in adjusted earnings		**(59)**	(46)
Other net finance (costs)/income		**(1)**	17
Total net finance costs		**(60)**	(29)

Included in interest receivable is £1m (2015: £1m) of interest receivable from related parties. There was a net movement of £nil on fair value hedges in 2016 (2015: £nil), comprising a loss of £4m (2015: gain of £22m) on the underlying bonds, offset by a gain of £4m (2015: loss of £22m) on the related derivative financial instruments.

For further information on adjusted measures above, see note 8.

Notes to the consolidated financial statements

7. Income tax

All figures in £ millions	Notes	2016	2015
Current tax			
Charge in respect of current year		**(71)**	(155)
Adjustments in respect of prior years		**32**	42
Total current tax charge		**(39)**	(113)
Deferred tax			
In respect of temporary differences		**277**	185
Other adjustments in respect of prior years		**(16)**	9
Total deferred tax credit	13	**261**	194
Total tax credit		**222**	81

The adjustments in respect of prior years in 2016 primarily arise from revising the previous year's reporting 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. In addition, there is a benefit from changes in estimates of uncertain tax positions. In 2015, the adjustments mainly related to changes in estimates of uncertain tax positions following the agreement of historical tax positions.

The tax on the Group's loss before tax differs from the theoretical amount that would arise using the UK tax rate as follows:

All figures in £ millions	2016	2015
Loss before tax	**(2,557)**	(433)
Tax calculated at UK rate (2016: 20%, 2015: 20.25%)	**511**	88
Effect of overseas tax rates	**424**	52
Joint venture and associate income reported net of tax	**19**	10
Intangible impairment not subject to tax	**(722)**	(60)
Net expense not subject to tax	**(16)**	(6)
Gains and losses on sale of businesses not subject to tax	**15**	(32)
Unutilised tax losses	**(25)**	(22)
Adjustments in respect of prior years	**16**	51
Total tax credit	**222**	81
UK	**46**	(25)
Overseas	**176**	106
Total tax credit	**222**	81
Tax rate reflected in earnings	**8.7%**	18.7%

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.

In 2016 the Group impaired US goodwill (see note 11). The majority of this impairment charge is not deductible for tax purposes. In 2015, the impairment of goodwill and intangibles was deductible for tax purposes in the majority of territories.

7. Income tax continued

The tax rate reflected in adjusted earnings is calculated as follows:

All figures in £ millions	2016	2015
Loss before tax	**(2,557)**	(433)
Adjustments:		
Cost of major restructuring	**338**	–
Other net gains and losses	**25**	(13)
Intangible charges	**2,769**	1,089
Other net finance costs/(income)	**1**	(17)
Adjusted profit before tax – continuing operations	**576**	626
Adjusted profit before tax – discontinued operations	**–**	51
Total adjusted profit before tax	**576**	677
Total tax credit	**222**	81
Adjustments:		
Tax benefit on cost of major restructuring	**(84)**	–
Tax (benefit)/charge on other net gains and losses	**(14)**	40
Tax benefit on intangible charges	**(255)**	(257)
Tax charge on other net finance costs	**–**	7
Tax amortisation benefit on goodwill and intangibles	**36**	33
Adjusted income tax charge – continuing operations	**(95)**	(96)
Adjusted income tax charge – discontinued operations	**–**	(9)
Total adjusted income tax charge	**(95)**	(105)
Tax rate reflected in adjusted earnings	**16.5%**	15.5%

For further information on adjusted measures above, see note 8.

The tax benefit/(charge) recognised in other comprehensive income is as follows:

All figures in £ millions	2016	2015
Net exchange differences on translation of foreign operations	**(5)**	5
Remeasurement of retirement benefit obligations	**58**	(24)
	53	(19)

A tax charge of £nil (2015: tax charge £1m) 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. In 2016, the Group has outstanding share options which are anti-dilutive but which could potentially dilute basic earnings per share in the future.

Notes to the consolidated financial statements

8. Earnings per share continued

All figures in £ millions	Notes	2016	2015
Loss for the year from continuing operations		**(2,335)**	(352)
Non-controlling interest		**(2)**	–
Loss from continuing operations		**(2,337)**	(352)
Profit for the year from discontinued operations	3	**–**	1,175
(Loss)/earnings		**(2,337)**	823
Weighted average number of shares (millions)		**814.8**	813.3
Effect of dilutive share options (millions)		**–**	–
Weighted average number of shares (millions) for diluted earnings		**814.8**	813.3
(Loss)/earnings per share from continuing and discontinued operations			
Basic		**(286.8)p**	101.2p
Diluted		**(286.8)p**	101.2p
Loss per share from continuing operations			
Basic		**(286.8)p**	(43.3)p
Diluted		**(286.8)p**	(43.3)p
Earnings per share from discontinued operations			
Basic		**–**	144.5p
Diluted		**–**	144.5p

Adjusted

In order to show results from operating activities on a consistent basis, an adjusted earnings per share is presented. The company's definition of adjusted earnings per share may not be comparable with other similarly titled measures reported by other companies.

Adjusted earnings is a non-GAAP financial measure and is included as it is a key financial measure used by management to evaluate performance and allocate resources to business segments. The measure also enables our investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments by separating out those items of income and expenditure relating to acquisition and disposal transactions, and major restructuring programmes.

The adjusted earnings per share includes both continuing and discontinued businesses on an undiluted basis. The following items are excluded from adjusted earnings:

Cost of major restructuring – In 2016, the definition of adjusted earnings has been amended to exclude the cost of major restructuring activity. In January 2016, Pearson announced that it was embarking on a restructuring programme to simplify the business, reduce costs and position the company for growth in its major markets. The costs of this programme in 2016 are significant enough to exclude from our adjusted earnings measure so as to better highlight the underlying performance. There was no major restructuring in 2015 and accordingly the change has no effect on the comparative adjusted earnings.

Other net gains and losses that represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets and are excluded from adjusted earnings as it is important to highlight their impact on the 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.

Intangible charges and acquisition costs relate only to goodwill and intangible assets acquired through business combinations and the direct costs of acquiring those businesses. We do not believe these charges are relevant to an understanding of the underlying performance of the Group. 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 our adjusted operating profit measure. There were no material acquisition costs in 2016 or 2015.

Other net finance income/costs include finance costs in respect of retirement benefits, finance costs of deferred consideration and foreign exchange and other gains and losses. Finance costs relating to retirement benefits are excluded as management does not believe that the consolidated income statement presentation under IAS 19 reflects the economic substance of the underlying assets and liabilities. Foreign exchange and other gains and losses are excluded as they represent short-term fluctuations in market value and are subject to significant volatility. Other gains and losses may not be realised in due course as it is normally the intention to hold the related instruments to maturity. Other net finance costs of Group companies are included in finance costs or finance income as appropriate. Other net finance costs of joint ventures and associates are included within the share of results of joint ventures and associates within operating profit.

8. Earnings per share continued

Adjusted continued

Tax on the above items is excluded from adjusted earnings. Where relevant the Group also excludes the benefit from recognising previously unrecognised pre-acquisition and capital losses. The tax benefit from tax deductible goodwill and intangibles is added to the adjusted income tax charge as this benefit more accurately aligns the adjusted tax charge with the expected rate of cash tax payments.

Non-controlling interest for the above items is excluded from adjusted earnings. The following tables reconcile statutory earnings to adjusted earnings.

All figures in £ millions	Statutory income statement	Discontinued operations	Cost of major restructuring	Other net gains and losses	Intangible charges	Other net finance income/ costs	Tax amortisation benefit	Adjusted income statement
								2016
Operating (loss)/profit	**(2,497)**	**–**	**338**	**25**	**2,769**	**–**	**–**	**635**
Net finance costs	**(60)**	**–**	**–**	**–**	**–**	**1**	**–**	**(59)**
(Loss)/profit before tax	**(2,557)**	**–**	**338**	**25**	**2,769**	**1**	**–**	**576**
Income tax	**222**	**–**	**(84)**	**(14)**	**(255)**	**–**	**36**	**(95)**
(Loss)/profit for the year from continuing operations	**(2,335)**	**–**	**254**	**11**	**2,514**	**1**	**36**	**481**
(Loss)/Profit for the year from discontinued operations	**–**	**–**	**–**	**–**	**–**	**–**	**–**	**–**
(Loss)/profit for the year	**(2,335)**	**–**	**254**	**11**	**2,514**	**1**	**36**	**481**
Non-controlling interest	**(2)**	**–**	**–**	**–**	**–**	**–**	**–**	**(2)**
(Loss)/earnings	**(2,337)**	**–**	**254**	**11**	**2,514**	**1**	**36**	**479**
Weighted average number of shares (millions)	**814.8**							**814.8**
Weighted average number of shares (millions) for diluted earnings	**814.8**							**814.8**
(Loss)/earnings per share (basic)	**(286.8)p**							**58.8p**
(Loss)/earnings per share (diluted)	**(286.8)p**							**58.8p**

All figures in £ millions	Statutory income statement	Discontinued operations	Costs of major restructuring	Other net gains and losses	Intangible charges	Other net finance income/ costs	Tax amortisation benefit	Adjusted income statement
								2015
Operating (loss)/profit	(404)	51	–	(13)	1,089	–	–	723
Net finance costs	(29)	–	–	–	–	(17)	–	(46)
(Loss)/profit before tax	(433)	51	–	(13)	1,089	(17)	–	677
Income tax	81	(9)	–	40	(257)	7	33	(105)
(Loss)/profit for the year from continuing operations	(352)	42	–	27	832	(10)	33	572
Profit for the year from discontinued operations	1,175	(42)	–	(1,135)	2	–	–	–
Profit for the year	823	–	–	(1,108)	834	(10)	33	572
Non-controlling interest	–	–	–	–	–	–	–	–
Earnings	823	–	–	(1,108)	834	(10)	33	572
Weighted average number of shares (millions)	813.3							813.3
Weighted average number of shares (millions) for diluted earnings	813.3							813.3
Earnings per share (basic)	101.2p							70.3p
Earnings per share (diluted)	101.2p							70.3p

Notes to the consolidated financial statements

9. Dividends

All figures in £ millions	2016	2015
Final paid in respect of prior year 34.0p (2015: 34.0p)	**277**	277
Interim paid in respect of current year 18.0p (2015: 18.0p)	**147**	146
	424	423

The directors are proposing a final dividend in respect of the financial year ended 31 December 2016 of 34.0p per share which will absorb an estimated £278m of shareholders' funds. It will be paid on 12 May 2017 to shareholders who are on the register of members on 7 April 2017. These financial statements do not reflect this dividend.

10. Property, plant and equipment

All figures in £ millions	Land and buildings	Plant and equipment	Assets in course of construction	Total
Cost				
At 1 January 2015	388	601	29	1,018
Exchange differences	8	10	1	19
Additions	15	42	25	82
Disposals	(20)	(86)	–	(106)
Disposal through business disposal	(48)	(76)	–	(124)
Reclassifications	16	17	(33)	–
At 31 December 2015	359	508	22	889
Exchange differences	**44**	**83**	**2**	**129**
Additions	**26**	**59**	**4**	**89**
Disposals	**(26)**	**(100)**	**–**	**(126)**
Disposal through business disposal	**(1)**	**(2)**	**–**	**(3)**
Reclassifications	**(4)**	**12**	**(8)**	**–**
At 31 December 2016	**398**	**560**	**20**	**978**

All figures in £ millions	Land and buildings	Plant and equipment	Assets in course of construction	Total
Depreciation				
At 1 January 2015	(231)	(453)	–	(684)
Exchange differences	(5)	(12)	–	(17)
Charge for the year	(22)	(53)	–	(75)
Disposals	18	82	–	100
Disposal through business disposal	48	59	–	107
At 31 December 2015	(192)	(377)	–	(569)
Exchange differences	**(26)**	**(62)**	**–**	**(88)**
Charge for the year	**(34)**	**(61)**	**–**	**(95)**
Disposals	**22**	**95**	**–**	**117**
Reclassifications	**1**	**(1)**	**–**	**–**
At 31 December 2016	**(229)**	**(406)**	**–**	**(635)**
Carrying amounts				
At 1 January 2015	157	148	29	334
At 31 December 2015	167	131	22	320
At 31 December 2016	**169**	**154**	**20**	**343**

10. Property, plant and equipment continued

Depreciation expense of £21m (2015: £19m) has been included in the income statement in cost of goods sold and £74m (2015: £50m) in operating expenses. In 2016, £nil (2015: £6m) relates to discontinued operations.

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 £10m (2015: £8m).

11. Intangible assets

All figures in £ millions	Goodwill	Software	Acquired customer lists, contracts and relationships	Acquired trademarks and brands	Acquired publishing rights	Other intangibles acquired	Total
Cost							
At 1 January 2015	5,030	597	894	308	197	598	7,624
Exchange differences	105	17	25	(17)	(7)	(40)	83
Impairment	(826)	–	–	–	–	–	(826)
Additions – internal development	–	125	–	–	–	–	125
Additions – purchased	–	36	–	–	–	–	36
Disposals	–	(18)	–	(4)	(10)	(29)	(61)
Acquisition through business combination	–	–	–	–	–	1	1
Disposal through business disposal	(175)	(138)	(59)	(6)	–	(21)	(399)
At 31 December 2015	4,134	619	860	281	180	509	6,583
Exchange differences	**752**	**85**	**157**	**65**	**31**	**135**	**1,225**
Impairment	**(2,548)**	**–**	**–**	**–**	**–**	**–**	**(2,548)**
Additions – internal development	**–**	**132**	**–**	**–**	**–**	**–**	**132**
Additions – purchased	**–**	**25**	**–**	**–**	**–**	**–**	**25**
Disposals	**–**	**(49)**	**(37)**	**–**	**–**	**–**	**(86)**
Acquisition through business combination	**3**	**–**		**7**	**–**	**3**	**13**
Disposal through business disposal	**–**	**–**	**(6)**	**–**	**–**	**(47)**	**(53)**
Transfer to intangible assets – pre-publication	**–**	**(14)**	**–**	**–**	**–**	**–**	**(14)**
At 31 December 2016	**2,341**	**798**	**974**	**353**	**211**	**600**	**5,277**

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 2015	–	(386)	(349)	(122)	(160)	(297)	(1,314)
Exchange differences	–	(14)	(8)	1	6	(6)	(21)
Impairment	–	–	(13)	(1)	(9)	–	(23)
Charge for the year	–	(74)	(99)	(40)	(10)	(53)	(276)
Disposals		18	–	4	10	29	61
Disposal through business disposal	–	99	39	3	–	13	154
At 31 December 2015	–	(357)	(430)	(155)	(163)	(314)	(1,419)
Exchange differences	**–**	**(60)**	**(83)**	**(32)**	**(27)**	**(75)**	**(277)**
Impairment	**–**	**–**	**–**	**–**	**–**	**–**	**–**
Charge for the year	**–**	**(84)**	**(85)**	**(22)**	**(8)**	**(70)**	**(269)**
Disposals	**–**	**38**	**37**	**–**	**–**	**–**	**75**
Disposal through business disposal	**–**	**–**	**6**	**–**	**–**	**47**	**53**
Transfer to intangible assets – pre-publication	**–**	**2**	**–**	**–**	**–**	**–**	**2**
At 31 December 2016	**–**	**(461)**	**(555)**	**(209)**	**(198)**	**(412)**	**(1,835)**
Carrying amounts							
At 1 January 2015	5,030	211	545	186	37	301	6,310
At 31 December 2015	4,134	262	430	126	17	195	5,164
At 31 December 2016	**2,341**	**337**	**419**	**144**	**13**	**188**	**3,442**

Goodwill

The goodwill carrying value of £2,341m 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 and the goodwill on each acquisition 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 £17m (2015: £13m) is included in the income statement in cost of goods sold and £252m (2015: £247m) in operating expenses. In 2016, £nil (2015: £16m) of amortisation relates to discontinued operations.

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:

Class of intangible asset	2016 Useful economic life
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:

All figures in £ millions	2016 One to five years	Six to ten years	More than ten years	Total
Class of intangible asset				
Acquired customer lists, contracts and relationships	**282**	**102**	**35**	**419**
Acquired trademarks and brands	**69**	**48**	**27**	**144**
Acquired publishing rights	**11**	**2**	**–**	**13**
Other intangibles acquired	**139**	**45**	**4**	**188**

Impairment tests for cash-generating units (CGUs) containing goodwill

Impairment tests have been carried out where appropriate as described below.

Following a reorganisation of the business effective 1 January 2014 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. The carrying value of the goodwill in each of the CGUs, after the impact of impairments, is summarised below:

All figures in £ millions	2016	2015
North America	**1,295**	3,155
Core	**633**	635
Growth (includes Brazil, China, India and South Africa)	**–**	–
Pearson VUE	**413**	344
Financial Times Group	**–**	–
Total	**2,341**	4,134

The recoverable amount of each aggregated CGU is based on fair value less costs of disposal or value in use calculations as appropriate. 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.

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 cash generating unit (CGU) no longer supported the carrying value of this goodwill and as a consequence impaired goodwill by £2,548m. Fair value less cost of disposal was determined using post-tax discount rate of 9.2% for North America. Following the impairment, the recoverable amount of the North America CGU is £2,650m.

Notes to the consolidated financial statements

11. Intangible assets continued

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 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 15.5%. 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% (2015: 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 4.4% and 7.0% 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 factors include US and UK college enrolment rates, assessment growth rates, the success of new product launches, growth rates and economic conditions in emerging markets and the rate of growth in new services businesses. The five-year sales forecasts use average nominal growth rates between 2.0% and 8.6% for mature markets and between 7.0% and 19.8% 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 global restructuring programme benefits from 2016.

Cash conversion Cash conversion is the ratio of operating cash flow to operating profit. Management forecasts cash conversion rates based on historical experience, adjusted for the impact of product investment priorities and the shift to digital and service-based business.

Sensitivities

The Group's impairment review is sensitive to a change in assumptions used, most notably the discount rates and the perpetuity growth rates. The carrying value of goodwill in the Growth market CGUs was written down to £nil in 2015. In the North America CGU, goodwill has been written down to fair value less costs of disposal, and any further increase in discount rates or reduction in perpetuity growth rates would give rise to further impairment. A 0.1% increase in discount rates would cause the fair value less costs of disposal of the North America CGU to reduce by £35m and the Core GGU by £16m. A 0.1% reduction in perpetuity growth rates would cause the fair value less costs of disposal of the North America CGU to reduce by £30m and the Core CGU by £14m. The North America CGU which has been written down to fair value less costs of disposal and the Core CGU are highly sensitive to any reductions in short-term cash flows, whether driven by lower sales growth, lower operating profits or lower cash conversion. A 5% reduction in total annual operating profits, spread evenly across all CGUs, would give rise to an impairment of £209m in the North America CGU and £43m in the Core CGU.

2015 impairment tests

In 2015, following significant economic and market deterioration in the Group's operations in emerging markets and ongoing cyclical and policy related pressures in the Group's mature market operations, an impairment of £507m was booked in respect of the Group's Growth operations, representing impairments of £269m in the Brazil CGU, £181m in the China CGU, £48m in the South Africa CGU and £9m in the Other Growth CGU, thereby bringing the carrying value of goodwill in those CGUs down to £nil. Impairments of £10m and £13m were also booked in respect of other acquired intangibles in the South Africa and Other Growth CGUs respectively, bringing their carrying value down to £nil. Impairments of £282m and £37m were also booked in respect of the North America and Core CGUs respectively, bringing the carrying value of the goodwill in those CGUs down to fair value less costs of disposal.

12. Investments in joint ventures and associates

The amounts recognised in the balance sheet are as follows:

All figures in £ millions	2016	2015
Associates	**1,245**	1,099
Joint ventures	**2**	4
Total	**1,247**	1,103

The amounts recognised in the income statement are as follows:

All figures in £ millions	2016	2015
Associates	**98**	72
Joint ventures	**(1)**	(4)
Total	**97**	68

There are no discontinued operations in 2016. Included within the 2015 results are discontinued operations consisting of £17m profit from associates and £1m loss from joint ventures. For further information on discontinued operations and the profit on sale of associates and joint ventures, see notes 3 and 31.

Investment in associates

On 16 October 2015, the Group sold a 39% stake, out of its 50% stake, in The Economist (see note 31 for further information).

The Group has the following material associates:

	Principal place of business	Ownership interest	Nature of relationship	Measurement method
Penguin Random House Ltd	UK/Global	47%	See below	Equity
Penguin Random House LLC	US	47%	See below	Equity

On 1 July 2013, Penguin Random House (PRH) 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. Pearson owns its 47% interest in PRH via 47% interests in each of the two entities listed in the table above. Despite the separate legal structures of the two PRH entities, Pearson regards PRH as one combined global business. Consequently, Pearson discloses PRH as one single operating segment and presents disclosures related to its interests in PRH 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, and exercises judgement to determine that Pearson has significant influence over PRH and Bertelsmann has the power to direct the relevant activities and therefore control. PRH does not have a quoted market price.

Notes to the consolidated financial statements

12. Investments in joint ventures and associates continued

Investment in associates continued

The summarised financial information of the material associates is detailed below:

All figures in £ millions	2016 Penguin Random House	2015 Penguin Random House	2015 The Economist
Assets			
Current assets	**1,587**	1,354	–
Non-current assets	**1,267**	1,244	–
Liabilities			
Current liabilities	**(1,074)**	(1,034)	–
Non-current liabilities	**(394)**	(358)	–
Net assets	**1,386**	1,206	–
Sales	**2,620**	2,453	276
Profit from continuing operations	**209**	136	–
Profit from discontinued operations	**–**	–	34
Other comprehensive (expense)/income	**(14)**	51	–
Total comprehensive income	**195**	187	34
Dividends received from associate	**131**	142	20

The information above reflects the amounts presented in the financial statements of the associates, adjusted for fair value and similar adjustments. Amounts presented in 2015 for The Economist cover the period up until the date of the partial disposal. 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 associates is shown below:

All figures in £ millions	2016 Penguin Random House	2015 Penguin Random House	2015 The Economist
Opening net assets	**1,206**	1,247	–
Exchange differences	**179**	(1)	–
Profit for the period	**209**	136	34
Other comprehensive (expense)/income	**(14)**	51	–
Dividends, net of tax paid	**(194)**	(229)	(40)
Additions	**–**	2	–
Reversal of distribution from associate in excess of carrying value	**–**	–	(3)
Disposal	**–**	–	9
Closing net assets	**1,386**	1,206	–
Share of net assets	**651**	567	–
Goodwill	**589**	526	–
Carrying value of associate	**1,240**	1,093	–

12. Investments in joint ventures and associates continued

Investment in associates continued

Information on other individually immaterial associates is detailed below:

All figures in £ millions	2016	2015
Loss from continuing operations	**–**	(9)
Total comprehensive expense	**–**	(9)

Transactions with material associates

The Group has loans to Penguin Random House which are unsecured and interest is calculated based on market rates. The amount outstanding at 31 December 2016 was £33m (2015: £47m). The loans are provided under a working capital facility and fluctuate during the year. The loan outstanding at 31 December 2016 was repaid in its entirety in January 2017.

The Group also has a current asset receivable of £21m (2015: £27m) from Penguin Random House arising from the provision of services. Included in other income (note 4) is £4m (2015: £16m) of service fees.

Investment in joint ventures

Information on joint ventures, all of which are individually immaterial, is detailed below:

All figures in £ millions	2016	2015
Loss from continuing operations	**(1)**	(3)
Loss from discontinued operations	**–**	(1)
Total comprehensive expense	**(1)**	(4)

13. Deferred income tax

All figures in £ millions	2016	2015
Deferred income tax assets	**451**	276
Deferred income tax liabilities	**(466)**	(560)
Net deferred income tax	**(15)**	(284)

Substantially all of the deferred income tax assets are expected to be recovered after more than one year.

Deferred income tax assets and liabilities may be offset when there is a legally enforceable right to offset current income tax assets against current income tax liabilities and when the deferred income taxes relate to the same fiscal authority. At 31 December 2016, the Group has unrecognised deferred income tax assets of £32m (2015: £32m) in respect of UK losses, £18m (2015: £11m) in respect of US losses and approximately £95m (2015: £70m) in respect of losses in other territories. The US losses relate to state taxes and therefore have expiry periods of between five and 20 years.

The recognition of the deferred income tax assets is supported by management's forecasts of the future profitability of the relevant business units.

The movement on the net deferred income tax account is as follows:

All figures in £ millions	Notes	2016	2015
At beginning of year		**(284)**	(419)
Exchange differences		**(22)**	(26)
Income statement benefit	7	**261**	196
Disposal through business disposal	31	**(10)**	1
Tax benefit/(charge) to other comprehensive income or equity		**40**	(36)
At end of year		**(15)**	(284)

Included in the income statement above for 2016 is £nil (2015: £2m benefit) relating to discontinued operations.

Notes to the consolidated financial statements

13. Deferred income tax continued

The movement in deferred income tax assets and liabilities during the year is as follows:

All figures in £ millions	Trading losses	Returns provisions	Retirement benefit obligations	Deferred revenue	Other	Total
Deferred income tax assets						
At 1 January 2015	28	44	62	2	159	295
Exchange differences	5	3	4	1	8	21
Income statement charge	(14)	(4)	(3)	52	(67)	(36)
Tax charge to other comprehensive income or equity	–	–	(4)	–	–	(4)
At 31 December 2015	19	43	59	55	100	276
Exchange differences	**3**	**7**	**10**	**15**	**35**	**70**
Income statement (charge)/benefit	**–**	**(15)**	**(1)**	**50**	**75**	**109**
Disposal through business disposal	**–**	**–**	**–**	**(3)**	**(1)**	**(4)**
At 31 December 2016	**22**	**35**	**68**	**117**	**209**	**451**

Deferred tax assets on deferred revenue are net of liabilities in the US which arose on a change in tax treatment agreed in 2015 and which will unwind over 4 years. Other deferred income tax assets include temporary differences on goodwill, share-based payments, inventory and other provisions.

All figures in £ millions	Goodwill and intangibles	Retirement benefit obligations	Other	Total
Deferred income tax liabilities				
At 1 January 2015	(598)	(39)	(77)	(714)
Exchange differences	(41)	–	(6)	(47)
Income statement benefit	180	2	50	232
Disposal through business disposal	1	–	–	1
Tax charge to other comprehensive income or equity	–	(31)	(1)	(32)
At 31 December 2015	(458)	(68)	(34)	(560)
Exchange differences	**(85)**	**–**	**(7)**	**(92)**
Income statement benefit	**144**	**(3)**	**11**	**152**
Disposal through business disposal	**(7)**	**–**	**1**	**(6)**
Tax benefit to other comprehensive income or equity	**–**	**40**	**–**	**40**
At 31 December 2016	**(406)**	**(31)**	**(29)**	**(466)**

Other deferred income tax liabilities include temporary differences in respect of depreciation and royalty advances.

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14. Classification of financial instruments

The accounting classification of each class of the Group's financial assets and their carrying values, is as follows:

		2016					2015				
		Fair value			Amortised cost		Fair value			Amortised cost	
All figures in £ millions	Notes	Available for sale	Derivatives held for trading	Derivatives in hedging relationships	Loans and receivables	Total carrying value	Available for sale	Derivatives held for trading	Derivatives in hedging relationships	Loans and receivables	Total carrying value
Investments in unlisted securities	15	**65**	**–**	**–**	**–**	**65**	143	–	–	–	143
Cash and cash equivalents	17	**–**	**–**	**–**	**1,459**	**1,459**	–	–	–	1,703	1,703
Marketable securities		**10**	**–**	**–**	**–**	**10**	28	–	–	–	28
Derivative financial instruments	16	**–**	**3**	**168**	**–**	**171**	–	29	81	–	110
Trade receivables	22	**–**	**–**	**–**	**982**	**982**	–	–	–	963	963
Total financial assets		**75**	**3**	**168**	**2,441**	**2,687**	171	29	81	2,666	2,947

The carrying value of the Group's financial assets is equal to the market value.

The accounting classification of each class of the Group's financial liabilities, together with their carrying values and market values, is as follows:

		2016					2015				
		Fair value		Amortised cost			Fair value		Amortised cost		
All figures in £ millions	Notes	Derivatives held for trading	Derivatives in hedging relationships	Other liabilities	Total carrying value	Total market value	Derivatives held for trading	Derivatives in hedging relationships	Other liabilities	Total carrying value	Total market value
Derivative financial liabilities	16	**(7)**	**(257)**	**–**	**(264)**	**(264)**	(36)	(129)	–	(165)	(165)
Trade payables	24	**–**	**–**	**(333)**	**(333)**	**(333)**	–	–	(319)	(319)	(319)
Bank loans and overdrafts	18	**–**	**–**	**(39)**	**(39)**	**(39)**	–	–	(38)	(38)	(38)
Borrowings due within one year	18	**–**	**–**	**(5)**	**(5)**	**(5)**	–	–	(244)	(244)	(244)
Borrowings due after more than one year	18	**–**	**–**	**(2,424)**	**(2,424)**	**(2,385)**	–	–	(2,048)	(2,048)	(2,009)
Total financial liabilities		**(7)**	**(257)**	**(2,801)**	**(3,065)**	**(3,026)**	(36)	(129)	(2,649)	(2,814)	(2,775)

Fair value measurement

As shown above, the Group's derivative assets and liabilities 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 £171m (2015: £110m) and derivative liabilities valued at £264m (2015: £165m) are classified as level 2. The Group's marketable securities assets valued at £10m (2015: £28m) are classified as level 2. The Group's investments in unlisted securities are valued at £65m (2015: £143m) and are classified as level 3.

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14. Classification of financial instruments continued

Fair value measurement continued

The following table analyses the movements in level 3 fair value remeasurements:

All figures in £ millions	2016 Investments in unlisted securities	2015 Investments in unlisted securities
At beginning of year	**143**	45
Exchange differences	**8**	3
Acquisition of investments	**6**	101
Fair value movements	**–**	–
Disposal of investments	**(92)**	(6)
At end of year	**65**	143

The fair value of the investments in unlisted securities is determined by reference to the financial performance of the underlying asset and amounts realised on the sale of similar assets. In 2015, the fair value of the 11% stake in The Economist was valued by reference to the disposal transaction terms.

15. Other financial assets

All figures in £ millions	2016	2015
At beginning of year	**143**	54
Exchange differences	**8**	3
Acquisition of investments	**6**	101
Fair value movements	**–**	–
Disposal of investments	**(92)**	(15)
At end of year	**65**	143

Other financial assets comprise unlisted securities of £65m (2015: £143m). In 2015, acquisition of investments includes the remaining 11% stake in The Economist (see note 31 for further information), this investment was disposed in 2016 with no further gain or loss.

16. Derivative financial instruments

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:

	2016			2015		
All figures in £ millions	Gross notional amounts	Assets	Liabilities	Gross notional amounts	Assets	Liabilities
Interest rate derivatives – in a fair value hedge relationship	**2,157**	**68**	**(4)**	1,952	70	(10)
Interest rate derivatives – not in a hedge relationship	**1,187**	**3**	**(7)**	848	–	(6)
Cross-currency rate derivatives – in a hedge relationship	**1,622**	**100**	**(253)**	1,879	10	(119)
Cross-currency rate derivatives – not in a hedge relationship	**–**	**–**	**–**	120	30	(30)
Total	**4,966**	**171**	**(264)**	4,799	110	(165)
Analysed as expiring:						
In less than one year	**162**	**–**	**–**	324	32	(29)
Later than one year and not later than five years	**2,776**	**86**	**(157)**	1,255	44	(4)
Later than five years	**2,028**	**85**	**(107)**	3,220	34	(132)
Total	**4,966**	**171**	**(264)**	4,799	110	(165)

The carrying value of the above derivative financial instruments equals their fair value. Fair values are determined by using market data and the use of established estimation techniques such as discounted cash flow and option valuation models.

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16. Derivative financial instruments continued

The Group has issued fixed rate euro debt, which is converted to floating rates using interest rate swaps and subsequently converted to floating rate US dollar debt using cross-currency swaps. The Group's fixed rate US dollar debt is converted to floating rates using interest rate swaps. The Group receives interest under its debt-related swap contracts to match the interest on the bonds (ranging from a receipt of 1.375% on its euro 2025 notes to 6.25% on its Global dollar bonds 2018) and, in turn, ultimately pays US dollar interest at rates ranging between US Libor + 0.51% to US Libor + 1.82%. In line with the Group's hedging policy, short-term contracts have been used to fix the Libor element for 2017 on $800m at rates between 1.10% and 2.03%.

At the end of 2016, 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 £(1,051)m, sterling £19m and euro £939m (2015: US dollar £(917)m, sterling £102m and euro £759m).

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.

Derivative financial assets and liabilities subject to offsetting arrangements are as follows:

	2016			2015		
All figures in £ millions	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	**30**	**(11)**	**19**	50	(22)	28
Counterparties in a liability position	**141**	**(253)**	**(112)**	60	(143)	(83)
Total as presented in the balance sheet	**171**	**(264)**	**(93)**	110	(165)	(55)

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.

In accordance with IAS 39 'Financial Instruments: Recognition and Measurement', the Group has reviewed all of its material contracts for embedded derivatives that are required to be separately accounted for if they do not meet certain requirements, and has concluded that there are no material embedded derivatives.

17. Cash and cash equivalents (excluding overdrafts)

All figures in £ millions	2016	2015
Cash at bank and in hand	**570**	627
Short-term bank deposits	**889**	1,076
	1,459	1,703

Short-term bank deposits are invested with banks and earn interest at the prevailing short-term deposit rates.

At the end of 2016, the currency split of cash and cash equivalents was US dollar 34% (2015: 23%), sterling 40% (2015: 57%), euro 3% (2015: 2%), renminbi 10% (2015: 8%) and other 13% (2015: 10%).

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17. Cash and cash equivalents (excluding overdrafts) continued

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:

All figures in £ millions	2016	2015
Cash and cash equivalents – continuing operations	**1,459**	1,703
Bank overdrafts – continuing operations	**(35)**	(32)
	1,424	1,671

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. At 31 December 2016 the 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:

All figures in £ millions	2016	2015
Non-current		
6.25% Global dollar bonds 2018 (nominal amount $550m)	**469**	403
4.625% US dollar notes 2018 (nominal amount $300m)	**254**	218
1.875% Euro notes 2021 (nominal amount €500m)	**453**	386
3.75% US dollar notes 2022 (nominal amount $500m)	**407**	342
3.25% US dollar notes 2023 (nominal amount $500m)	**402**	336
1.375% Euro notes 2025 (nominal amount €500m)	**435**	359
Finance lease liabilities	**4**	4
	2,424	2,048
Current		
Due within one year or on-demand:		
4.0% US dollar notes 2016 (nominal amount $350m)	**–**	240
Bank loans and overdrafts	**39**	38
Finance lease liabilities	**5**	4
	44	282
Total borrowings	**2,468**	2,330

Included in the non-current borrowings above is £18m of accrued interest (2015: £15m). Included in the current borrowings above is £nil of accrued interest (2015: £1m).

The maturity of the Group's non-current borrowing is as follows:

All figures in £ millions	2016	2015
Between one and two years	**726**	3
Between two and five years	**454**	622
Over five years	**1,244**	1,423
	2,424	2,048

18. Financial liabilities – borrowings continued

The carrying amounts and market values of borrowings are as follows:

All figures in £ millions	2016 Effective interest rate	2016 Carrying value	2016 Market value	2015 Effective interest rate	2015 Carrying value	2015 Market value
Bank loans and overdrafts	**n/a**	**39**	**39**	n/a	38	38
4.0% US dollar notes 2016	**4.26%**	**–**	**–**	4.26%	240	240
6.25% Global dollar bonds 2018	**6.46%**	**469**	**468**	6.46%	403	405
4.625% US dollar notes 2018	**4.69%**	**254**	**250**	4.69%	218	213
1.875% euro notes 2021	**2.04%**	**453**	**454**	2.04%	386	380
3.75% US dollar notes 2022	**3.94%**	**407**	**396**	3.94%	342	335
3.25% US dollar notes 2023	**3.36%**	**402**	**381**	3.36%	336	322
1.375% euro notes 2025	**1.44%**	**435**	**432**	1.44%	359	350
Finance lease liabilities	**n/a**	**9**	**9**	n/a	8	8
		2,468	**2,429**		2,330	2,291

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:

All figures in £ millions	2016	2015
US dollar	**1,559**	1,563
Sterling	**13**	1
Euro	**892**	759
Other	**4**	7
	2,468	2,330

The Group has $1.75bn (£1.4bn) of undrawn capacity on its committed borrowing facilities as at 31 December 2016 (2015: $1.75bn (£1.2bn) 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.

Notes to the consolidated financial statements

18. Financial liabilities – borrowings continued

The maturity of the Group's finance lease obligations is as follows:

All figures in £ millions	2016	2015
Finance lease liabilities – minimum lease payments		
Not later than one year	5	4
Later than one year and not later than two years	3	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	9	8

The present value of finance lease liabilities is as follows:

All figures in £ millions	2016	2015
Not later than one year	5	4
Later than one year and not later than five years	4	4
Later than five years	–	–
	9	8

The carrying amounts of the Group's lease obligations approximate their fair value.

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 function has primary responsibility for managing certain financial risks to which the Group is exposed. The Group's treasury policies are approved by the board of Directors annually and the audit committee receives regular reports on the Group's treasury activities, policies and procedures. Pearson's treasury function is not run as a profit centre and does not enter into any transactions for speculative purposes.

The treasury function is permitted to use derivatives for risk management purposes which may include interest rate swaps, rate caps and collars, currency rate swaps and forward foreign exchange contracts, of which interest rate swaps and forward foreign exchange swaps are the most commonly used.

Capital risk

The Group's objectives when managing capital are to:

- Safeguard the Group's ability to continue as a going concern and retain financial flexibility by maintaining a well-managed balance sheet
- Provide returns for shareholders and benefits for other stakeholders
- Maintain a solid investment grade credit rating.

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

19. Financial risk management continued

Net debt

The Group's net debt position is set out below:

All figures in £ millions	2016	2015
Cash and cash equivalents	**1,459**	1,703
Marketable securities	**10**	28
Derivative financial instruments	**(93)**	(55)
Bank loans and overdrafts	**(39)**	(38)
Bonds	**(2,420)**	(2,284)
Finance lease liabilities	**(9)**	(8)
Net debt	**(1,092)**	(654)

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.

The Group's long-term bond debt is held in US dollars to provide a natural hedge of this exposure and is primarily held at floating rates, which is achieved in two ways:

- Issuing fixed rate US dollar bonds which are swapped to floating rates using interest rate swaps
- Issuing fixed rate euro bonds which are swapped to US dollars and floating rates using cross-currency interest rate swaps.

Interest rate swaps are then used to fix an element of the interest charge for the next 12–24 months, in line with the Group's interest rate hedging policy, which requires a proportion of the Group's gross debt to be fixed. At 31 December 2016, the Group had contracts to fix $800m of debt for the next 12 months (2015: $850m).

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 2016, 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	**65**	**–**	**–**	**(5)**	**6**
Cash and cash equivalents	**1,459**	**–**	**–**	**(79)**	**97**
Marketable securities	**10**	**–**	**–**	**–**	**–**
Derivative financial instruments	**(93)**	**(88)**	**104**	**10**	**(12)**
Bonds	**(2,420)**	**92**	**(100)**	**220**	**(269)**
Other borrowings	**(48)**	**–**	**–**	**3**	**(4)**
Other net financial assets	**649**	**–**	**–**	**(55)**	**67**
Total financial instruments	**(378)**	**4**	**4**	**94**	**(115)**

The table shows the sensitivities of the fair values of each class of financial instruments to an isolated change in either interest rates or foreign exchange rates. Other net financial assets comprises trade receivables less trade payables.

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19. Financial risk management continued

Interest and foreign exchange rate management continued

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 £55m higher than the reported figure of £635m at £690m (2015: £16m higher if translated at the year-end 2015 rate instead of the 2015 average rate at £739m compared to a reported figure of £723m). EBITDA translated at year-end closing rates would be £63m higher than the reported figure of £785m at £848m (2015: £19m higher if translated at the year-end 2015 rate instead of the 2015 average rate, at £891m, compared with a reported figure of £872m).

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 31 December 2016, the Group had cash of £1.5bn and an undrawn US dollar denominated revolving credit facility due 2021 of $1.75bn (£1.4bn). At 31 December 2015, the Group had cash of over £1.7bn and an undrawn revolving credit facility due 2020 of $1.75bn (£1.2bn).

The $1.75bn facility contains interest cover and leverage covenants which the Group has complied with for the year ended 31 December 2016.

At the end of 2016, the currency split of the Group's trade payables was US dollar £164m, sterling £67m and other currencies £102m (2015: US dollar £188m, sterling £58m and other currencies £73m) . Trade payables are all due within one year (2015: 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. 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.

	Analysed by maturity				Analysed by currency			
All figures in £ millions	Less than one year	Later than one year but less than five years	five years or more	Total	USD	GBP	Other	Total
At 31 December 2016								
Bonds	**82**	**1,308**	**1,292**	**2,682**	**1,732**	**–**	**950**	**2,682**
Rate derivatives – inflows	**(103)**	**(1,086)**	**(867)**	**(2,056)**	**(239)**	**(838)**	**(979)**	**(2,056)**
Rate derivatives – outflows	**82**	**1,202**	**891**	**2,175**	**1,308**	**838**	**29**	**2,175**
Total	**61**	**1,424**	**1,316**	**2,801**	**2,801**	**–**	**–**	**2,801**
At 31 December 2015								
Bonds	311	769	1,494	2,574	1,745	–	829	2,574
Rate derivatives – inflows	(218)	(266)	(1,628)	(2,112)	(335)	(858)	(919)	(2,112)
Rate derivatives – outflows	189	202	1,712	2,103	1,155	858	90	2,103
Total	**282**	**705**	**1,578**	**2,565**	**2,565**	**–**	**–**	**2,565**

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.

20. Intangible assets – pre-publication

All figures in £ millions	2016	2015
Cost		
At beginning of year	**2,201**	2,138
Exchange differences	**380**	66
Additions	**395**	347
Disposal through business disposal	**(8)**	(90)
Disposals	**(565)**	(260)
Transfer from intangible assets	**14**	–
At end of year	**2,417**	2,201
Amortisation		
At beginning of year	**(1,360)**	(1,318)
Exchange differences	**(250)**	(47)
Charge for the year	**(350)**	(281)
Disposal through business disposal	**4**	26
Disposals	**565**	260
Transfer from intangible assets	**(2)**	–
At end of year	**(1,393)**	(1,360)
Carrying amounts		
At end of year	**1,024**	841

Included in the above are pre-publication assets amounting to £694m (2015: £580m) which will be realised in more than one year.

Amortisation is included in the income statement in cost of goods sold. There was no amortisation within discontinued operations in either year.

Disposal through business disposal amounts in 2016 relate to the disposal of Pearson English Business Solutions and in 2015 to the disposal of PowerSchool. See note 31 for further information.

21. Inventories

All figures in £ millions	2016	2015
Raw materials	**5**	8
Work in progress	**6**	8
Finished goods	**224**	195
	235	211

The cost of inventories relating to continuing operations recognised as an expense and included in the income statement in cost of goods sold amounted to £340m (2015: £331m). In 2016, £48m (2015: £33m) of inventory provisions was charged in the income statement. None of the inventory is pledged as security.

Notes to the consolidated financial statements

22. Trade and other receivables

All figures in £ millions	2016	2015
Current		
Trade receivables	**961**	938
Royalty advances	**22**	20
Prepayments	**124**	97
Accrued income	**15**	21
Other receivables	**235**	208
	1,357	1,284
Non-current		
Trade receivables	**21**	25
Royalty advances	**10**	13
Prepayments	**13**	20
Accrued income	**31**	23
Other receivables	**29**	34
	104	115

Trade receivables are stated at fair value, net of provisions for bad and doubtful debts and anticipated future sales returns. The movements on the provision for bad and doubtful debts are as follows:

All figures in £ millions	2016	2015
At beginning of year	**(64)**	(73)
Exchange differences	**(17)**	3
Income statement movements	**(53)**	(31)
Utilised	**22**	32
Disposal through business disposal	**–**	5
At end of year	**(112)**	(64)

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:

All figures in £ millions	2016	2015
Within due date	**812**	754
Up to three months past due date	**232**	253
Three to six months past due date	**55**	58
Six to nine months past due date	**21**	19
Nine to 12 months past due date	**14**	13
More than 12 months past due date	**7**	16
Total trade receivables	**1,141**	1,113
Less: provision for sales returns	**(159)**	(150)
Net trade receivables	**982**	963

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.

23. Provisions for other liabilities and charges

All figures in £ millions	Deferred consideration	Property	Disposals and closures	Legal and other	Total
At 1 January 2016	53	6	20	34	113
Exchange differences	**10**	**(2)**	**–**	**11**	**19**
Charged to income statement	**–**	**1**	**–**	**9**	**10**
Released to income statement	**–**	**–**	**–**	**(9)**	**(9)**
Utilised	**(7)**	**(1)**	**(10)**	**(9)**	**(27)**
At 31 December 2016	**56**	**4**	**10**	**36**	**106**

Analysis of provisions:

					2016
All figures in £ millions	Deferred consideration	Property	Disposals and closures	Legal and other	Total
Current	**6**	**1**	**8**	**12**	**27**
Non-current	**50**	**3**	**2**	**24**	**79**
	56	**4**	**10**	**36**	**106**
					2015
Current	5	3	15	19	42
Non-current	48	3	5	15	71
	53	6	20	34	113

Deferred consideration primarily relates to the formation of a venture in a North America business in 2011. Disposals and closures include liabilities related to the disposal of Penguin. Legal and other includes legal claims, contract disputes and potential contract losses.

24. Trade and other liabilities

All figures in £ millions	2016	2015
Trade payables	**333**	319
Social security and other taxes	**25**	22
Accruals	**507**	371
Deferred income	**883**	766
Interest payable	**31**	19
Other liabilities	**272**	249
	2,051	1,746
Less: non-current portion		
Accruals	**17**	20
Deferred income	**319**	262
Other liabilities	**86**	74
	422	356
Current portion	**1,629**	1,390

The carrying value of the Group's trade and other liabilities approximates its fair value.

The deferred income balance principally comprises multi-year obligations to deliver workbooks to adoption customers in school businesses; advance payments in assessment, testing and training businesses; subscription income in school and college businesses; and obligations to deliver digital content in future periods.

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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.

At 31 December 2016, the UK Group plan had approximately 25,000 members, analysed in the following table:

All figures in %	Active	Deferred	Pensioners	Total
Defined benefit	**1**	**27**	**34**	**62**
Defined contribution	**9**	**29**	**–**	**38**
Total	**10**	**56**	**34**	**100**

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.

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.

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.

			2016			2015
All figures in %	UK Group plan	Other plans	PRMB	UK Group plan	Other plans	PRMB
Inflation	**3.3**	**1.6**	**1.5**	3.1	2.5	2.5
Rate used to discount plan liabilities	**2.5**	**3.8**	**3.9**	3.7	4.0	4.0
Expected rate of increase in salaries	**3.8**	**3.0**	**3.0**	3.6	3.0	3.0
Expected rate of increase for pensions in payment and deferred pensions	**2.2 to 5.1**	**–**	**–**	1.9 to 5.1	–	–
Initial rate of increase in healthcare rate	**–**	**–**	**6.8**	–	–	7.0
Ultimate rate of increase in healthcare rate	**–**	**–**	**5.0**	–	–	5.0

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 2016 with a short-term assumption of 2.0% for three years.

For the UK plan, the mortality base table assumptions have been derived from the SAPS 'all pensioners' tables for males and the SAPS 'normal health pensioners' tables for 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 – 2014) and 2014 improvement scale (MP – 2014) with no adjustments have been adopted, reflecting the mortality assumption most prevalent in the US.

25. Retirement benefit and other post-retirement obligations continued

Assumptions continued

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:

	UK		US	
All figures in years	2016	2015	2016	2015
Male	**23.5**	23.5	**21.2**	21.2
Female	**25.6**	25.6	**23.2**	23.2

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:

	UK		US	
All figures in years	2016	2015	2016	2015
Male	**25.5**	25.5	**22.9**	22.9
Female	**27.8**	27.8	**24.9**	24.9

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.

Financial statement information

The amounts recognised in the income statement are as follows:

						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**

						2015
All figures in £ millions	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	20	2	22	74	–	96
Curtailments	(3)	–	(3)	–	–	(3)
Administration expenses	5	–	5	–	–	5
Total operating expense	22	2	24	74	–	98
Interest on plan assets	(98)	(5)	(103)	–	–	(103)
Interest on plan liabilities	90	7	97	–	2	99
Net finance (income)/expense	(8)	2	(6)	–	2	(4)
Net income statement charge	14	4	18	74	2	94

Included within the 2016 operating expenses are discontinued operations consisting of £nil (2015: £5m charge) relating to defined benefit schemes and a £nil charge (2015: £8m charge) relating to defined contribution schemes.

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	2016 UK Group plan	2016 Other funded plans	2016 Other unfunded plans	2016 Total	2015 UK Group plan	2015 Other funded plans	2015 Other unfunded plans	2015 Total
Fair value of plan assets	3,339	158	–	3,497	2,803	135	–	2,938
Present value of defined benefit obligation	(3,181)	(183)	(22)	(3,386)	(2,466)	(157)	(18)	(2,641)
Net pension asset/(liability)	158	(25)	(22)	111	337	(22)	(18)	297
Other post-retirement medical benefit obligation				(77)				(76)
Other pension accruals				(15)				(23)
Net retirement benefit asset				19				198
Analysed as:								
Retirement benefit assets				158				337
Retirement benefit obligations				(139)				(139)

The following (losses)/gains have been recognised in other comprehensive income:

All figures in £ millions	2016	2015
Amounts recognised for defined benefit plans	(277)	104
Amounts recognised for post-retirement medical benefit plans	9	6
Total recognised in year	(268)	110

The fair value of plan assets comprises the following:

All figures in %	2016 UK Group plan	2016 Other funded plans	2016 Total	2015 UK Group plan	2015 Other funded plans	2015 Total
Equities	2	1	3	12	2	14
Bonds	9	1	10	8	2	10
Property	8	–	8	9	–	9
Pooled asset investment funds	67	–	67	50	–	50
Other	12	–	12	17	–	17

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 UK Group plan assets into additional categories and those assets which have a quoted market price in an active market and those that do not:

All figures in %	2016 Quoted market price	2016 No quoted market price	2015 Quoted market price	2015 No quoted market price
UK equities	–	–	–	1
Non-UK equities	–	3	11	2
Fixed-interest securities	10	–	6	–
Index-linked securities	–	–	4	–
Property	–	8	–	9
Pooled asset investment funds	67	–	50	–
Other	–	12	–	17
Total	77	23	71	29

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

The liquidity profile of the UK Group plan assets is as follows:

All figures in %	2016	2015
Liquid – call <1 month	75	73
Less liquid – call 1–3 months	–	2
Liquid – call >3 months	25	25

Changes in the values of plan assets and liabilities of the retirement benefit plans are as follows:

	2016			2015		
All figures in £ millions	UK Group plan	Other plans	Total	UK Group plan	Other plans	Total
Fair value of plan assets						
Opening fair value of plan assets	2,803	135	2,938	2,714	164	2,878
Exchange differences	–	24	24	–	2	2
Interest on plan assets	104	6	110	98	5	103
Return on plan assets excluding interest	445	8	453	(8)	(4)	(12)
Contributions by employer	99	2	101	72	5	77
Contributions by employee	–	–	–	2	–	2
Benefits paid	(112)	(17)	(129)	(95)	(17)	(112)
Transfer	–	–	–	20	(20)	–
Closing fair value of plan assets	3,339	158	3,497	2,803	135	2,938
Present value of defined benefit obligation						
Opening defined benefit obligation	(2466)	(175)	(2,641)	(2,524)	(219)	(2,743)
Exchange differences	–	(32)	(32)	–	(3)	(3)
Current service cost	(8)	(2)	(10)	(20)	(2)	(22)
Administration expenses	(6)	–	(6)	(5)	–	(5)
Curtailments	–	–	–	3	–	3
Interest on plan liabilities	(89)	(7)	(96)	(90)	(7)	(97)
Actuarial gains/(losses) – experience	12	–	12	107	2	109
Actuarial gains/(losses) – demographic	(47)	2	(45)	(33)	1	(32)
Actuarial gains/(losses) – financial	(689)	(8)	(697)	33	6	39
Contributions by employee	–	–	–	(2)	–	(2)
Transfer	–	–	–	(30)	30	–
Benefits paid	112	17	129	95	17	112
Closing defined benefit obligation	(3,181)	(205)	(3,386)	(2,466)	(175)	(2,641)

The weighted average duration of the defined benefit obligation is 19.2 years for the UK and 8.1 years for the US.

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

Changes in the value of the US PRMB are as follows:

All figures in £ millions	2016	2015
Opening defined benefit obligation	**(76)**	(81)
Exchange differences	**(14)**	(3)
Curtailments	**2**	–
Interest on plan liabilities	**(3)**	(2)
Actuarial gains/(losses) – experience	**8**	2
Actuarial gains/(losses) – demographic	**2**	2
Actuarial gains/(losses) – financial	**(1)**	2
Benefits paid	**5**	4
Closing defined benefit obligation	**(77)**	(76)

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 2015 and this valuation revealed a technical provisions funding shortfall of £27m which was eliminated by contributions paid during 2015.

As a consequence of the disposal of the FT Group, an agreement has been made between Pearson and the plan trustee to accelerate the funding of the plan. As a result, the plan is expected to be fully funded on a 'self-sufficiency' basis by 2019, inclusive of payments in 2017 in relation to the Penguin Random House merger in 2013, currently estimated at £225m. This is a much higher level of funding than technical provisions. As a result, 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 Pearson. A commitment has also been made to maintain that level of funding in future years.

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), 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.

Regular contributions to the plan in respect of the defined benefit sections are estimated to be £8m for 2017.

The Group expects to contribute $9m in 2017 and $10m in 2018 to its US defined benefit pension plans.

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:

	2016	
All figures in £ millions	1% increase	1% decrease
Effect:		
(Decrease)/increase in defined benefit obligation – UK Group plan	**(541)**	**727**
(Decrease)/increase in defined benefit obligation – US plan	**(16)**	**19**

25. Retirement benefit and other post-retirement obligations continued

Sensitivities continued

The effect of members living one year more or one year less on the defined benefit obligation is as follows:

All figures in £ millions	2016 One year increase	2016 One year decrease
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	**149**	**(152)**
Increase/(decrease) in defined benefit obligation – US plan	**9**	**(9)**

The effect of a half percentage point increase and decrease in the inflation rate is as follows:

All figures in £ millions	2016 0.5% increase	2016 0.5% decrease
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	**165**	**166**
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:

All figures in £ millions	2016	2015
Pearson plans	**22**	26

Share-based payment charges included in discontinued operations amounted to £nil (2015: £3m). 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 This plan was first introduced in 2001, renewed 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 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 senior management in May 2015 and May 2016 vest dependent on relative total shareholder return, return on invested capital and earnings per share growth. Restricted shares awarded to senior management in March 2016 vest dependent on earnings per share growth. Other restricted shares awarded in 2015 and 2016 vest depending on continuing service over a three-year period.

Notes to the consolidated financial statements

26. Share-based payments continued

The number and weighted average exercise prices of share options granted under the Group's plans are as follows:

	2016 Number of share options 000s	2016 Weighted average exercise price £	2015 Number of share options 000s	2015 Weighted average exercise price £
Outstanding at beginning of year	**3,250**	**9.24**	3,507	8.48
Granted during the year	**1,544**	**6.94**	1,024	11.49
Exercised during the year	**(49)**	**7.07**	(578)	8.78
Forfeited during the year	**(1,695)**	**9.14**	(696)	9.12
Expired during the year	**(72)**	**8.95**	(7)	8.85
Outstanding at end of year	**2,978**	**8.14**	3,250	9.24
Options exercisable at end of year	**247**	**9.06**	138	8.89

Options were exercised regularly throughout the year. The weighted average share price during the year was £8.23 (2015: £11.86). 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 £	2016 Number of share options 000s	2016 Weighted average contractual life Years	2015 Number of share options 000s	2015 Weighted average contractual life Years
0–5	**–**	**–**	–	–
5–10	**2,548**	**2.31**	2,361	2.08
>10	**430**	**2.25**	889	3.26
	2,978	**2.31**	3,250	2.40

In 2016 and 2015, 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.

The weighted average estimated fair values and the inputs into the Black–Scholes model are as follows:

	2016 Weighted average	2015 Weighted average
Fair value	**£1.01**	£1.99
Weighted average share price	**£7.85**	£13.37
Weighted average exercise price	**£6.94**	£11.49
Expected volatility	**27.38%**	23.00%
Expected life	**3.7 years**	3.7 years
Risk-free rate	**0.58%**	0.90%
Expected dividend yield	**7.49%**	4.44%
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.

26. Share-based payments continued

The following shares were granted under restricted share arrangements:

	2016		2015	
	Number of shares 000s	Weighted average fair value £	Number of shares 000s	Weighted average fair value £
Long-Term Incentive Plan	**6,833**	**8.24**	1,942	12.27

The fair value of shares granted under the Long-Term 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	Ordinary shares £m	Share premium £m
At 1 January 2015	819,883	205	2,579
Issue of ordinary shares – share option schemes	1,185	–	11
At 31 December 2015	821,068	205	2,590
Issue of ordinary shares – share option schemes	**1,059**	**–**	**7**
At 31 December 2016	**822,127**	**205**	**2,597**

The ordinary shares have a par value of 25p per share (2015: 25p per share). All issued shares are fully paid. All shares have the same rights.

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 2015	7,192	75
Purchase of treasury shares	1,987	23
Release of treasury shares	(2,474)	(26)
At 31 December 2015	6,705	72
Purchase of treasury shares	**3,000**	**27**
Release of treasury shares	**(1,986)**	**(20)**
At 31 December 2016	**7,719**	**79**

The Group holds Pearson plc shares in trust to satisfy its obligations under its restricted share plans (see note 26). These shares, representing 0.9% (2015: 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 £1.9m (2015: £1.7m).

At 31 December 2016, the market value of Pearson plc treasury shares was £63.2m (2015: £49.3m).

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29. Other comprehensive income

All figures in £ millions	Attributable to equity holders of the company				2016
	Translation reserve	Retained earnings	Total	Non-controlling interest	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 – associate	**3**	**–**	**3**	**–**	**3**
Currency translation adjustment disposed – subsidiaries	**–**	**–**	**–**	**–**	**–**
Attributable tax	**–**	**(5)**	**(5)**	**–**	**(5)**
Items that are not reclassified to the income statement					
Remeasurement of retirement benefit obligations – Group	**–**	**(268)**	**(268)**	**–**	**(268)**
Remeasurement of retirement benefit obligations – associate	**–**	**(8)**	**(8)**	**–**	**(8)**
Attributable tax	**–**	**58**	**58**	**–**	**58**
Other comprehensive income/(expense) for the year	**912**	**(223)**	**689**	**1**	**690**

All figures in £ millions	Attributable to equity holders of the company				2015
	Translation reserve	Retained earnings	Total	Non-controlling interest	Total
Items that may be reclassified to the income statement					
Net exchange differences on translation of foreign operations – Group	(83)	–	(83)	(2)	(85)
Net exchange differences on translation of foreign operations – associate	16	–	16	–	16
Currency translation adjustment disposed – subsidiaries	(10)	–	(10)	–	(10)
Attributable tax	–	5	5	–	5
Items that are not reclassified to the income statement					
Remeasurement of retirement benefit obligations – Group	–	110	110	–	110
Remeasurement of retirement benefit obligations – associate	–	8	8	–	8
Attributable tax	–	(24)	(24)	–	(24)
Other comprehensive income/(expense) for the year	(77)	99	22	(2)	20

30. Business combinations

There were no significant acquisitions in 2016 or 2015.

Fair values for the assets and liabilities arising from acquisitions completed in the year are as follows:

All figures in £ millions	Notes	2016 Total fair value	2015 Total fair value
Intangible assets acquired at fair value	11	**10**	1
Net assets acquired at fair value		**10**	1
Goodwill	11	**3**	–
Total		**13**	1
Satisfied by:			
Cash		**(7)**	(1)
Other liabilities		**(6)**	–
Total consideration		**(13)**	(1)

The goodwill arising on these acquisitions results from cost and revenue synergies and from assets and benefits that cannot be separately recognised.

Goodwill of £3m arising on 2016 acquisitions is expected to be deductible for tax purposes. There is no goodwill on 2015 acquisitions.

Intangible assets acquired in 2016 have the following useful economic lives: trademarks and brands 15 years, and other acquired intangibles six years.

All figures in £ millions	2016	2015
Cash flow on acquisitions		
Cash – current year acquisitions	**(7)**	(1)
Deferred payments for prior year acquisitions and other items	**(7)**	(6)
Acquisition costs and other acquisition liabilities paid	**(1)**	(2)
Net cash outflow	**(15)**	(9)

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31. Disposals including business closures

All figures in £ millions	2016 Total	2015 FT Group	2015 PowerSchool	2015 Other	2015 Total
Disposal of subsidiaries					
Property, plant and equipment	**(3)**	(15)	(2)	–	(17)
Intangible assets	**–**	(46)	(19)	(5)	(70)
Investments in joint ventures and associates	**–**	(8)	–	–	(8)
Intangible assets – pre-publication	**(4)**	–	(64)	–	(64)
Inventories	**–**	(1)	–	–	(1)
Trade and other receivables	**(6)**	(72)	(16)	(3)	(91)
Cash and cash equivalents (excluding overdrafts)	**(9)**	(29)	–	(4)	(33)
Net deferred income tax (assets)/liabilities	**(10)**	(2)	–	3	1
Retirement benefit obligations	**–**	7	–	–	7
Provisions for other liabilities and charges	**–**	2	–	–	2
Trade and other liabilities	**21**	109	35	6	150
Current income tax liabilities	**–**	1	–	–	1
Attributable goodwill	**–**	(50)	(119)	(6)	(175)
Cumulative translation adjustment	**–**	4	6		10
Net assets disposed	**(11)**	(100)	(179)	(9)	(288)
Cash received	**7**	858	222	9	1,089
Costs	**(16)**	(47)	(13)	(9)	(69)
(Loss)/gain on disposal	**(20)**	711	30	(9)	732

All figures in £ millions	2016	2015
Cash flow from disposals		
Cash – current year disposals	**7**	1,089
Cash and cash equivalents disposed	**(9)**	(33)
Costs and other disposal liabilities paid	**(52)**	(26)
Net cash (outflow)/inflow	**(54)**	1,030

In 2016, losses on disposal primarily relate to the disposal of Pearson English Business Solutions and the closure of English language schools in Germany.

Included in the gain on sale of PowerSchool in 2015 is the write down of related software assets of £70m. The write down of the software assets reflects the reduced market opportunity for software which was to be integrated with PowerSchool and the recognition that adoption of such software in US schools is now unlikely to occur at the rate originally envisaged.

In 2016, cost and other disposal liabilities paid of £52m primarily relate to the disposal of the FT Group in 2015.

Disposal of associates

On 16 October 2015, the Group sold a 39% stake, out of its 50% stake, in The Economist resulting in a gain on disposal of £473m. The gain comprises proceeds of £377m, gain on revaluation of remaining 11% investment to fair value of £92m and liabilities disposed of £4m. The remaining investment was fully disposed in 2016 with no further gain or loss.

32. Cash generated from operations

All figures in £ millions	Notes	2016	2015
(Loss)/profit		**(2,335)**	823
Adjustments for:			
Income tax		**(222)**	(24)
Depreciation	10	**95**	75
Amortisation and impairment of acquired intangibles and goodwill	11	**2,733**	1,051
Amortisation of software	11	**84**	74
Net finance costs	6	**60**	29
Share of results of joint ventures and associates	12	**(97)**	(68)
Profit on disposal of subsidiaries, associates, investments and fixed assets		**40**	(1,194)
Net foreign exchange adjustment from transactions		**43**	22
Share-based payment costs	26	**22**	26
Pre-publication		**(19)**	(57)
Inventories		**17**	10
Trade and other receivables		**156**	(99)
Trade and other liabilities		**61**	(80)
Retirement benefit obligations		**(106)**	(57)
Provisions for other liabilities and charges		**(10)**	(13)
Net cash generated from operations		**522**	518
Dividends from joint ventures and associates		**131**	162
Purchase of property, plant and equipment		**(88)**	(86)
Purchase of intangible assets		**(157)**	(161)
Proceeds from sale of property, plant and equipment and intangible assets		**4**	3
Finance lease principal payments		**(6)**	(1)
Special pension contribution		**90**	–
Cost of major restructuring paid		**167**	–
Operating cash flow		**663**	435
Operating tax paid		**(63)**	(129)
Net operating finance costs paid		**(51)**	(51)
Operating free cash flow		**549**	255
Special pension contribution		**(90)**	–
Cost of major restructuring paid		**(167)**	–
Non operating tax received/(paid)		**18**	(103)
Free cash flow		**310**	152
Dividends paid (including to non-controlling interests)		**(424)**	(423)
Net movement of funds from operations		**(114)**	(271)
Acquisitions and disposals		**19**	1,395
Loans repaid/(advanced) (including to related parties)		**14**	7
Purchase of treasury shares	28	**(27)**	(23)
New equity		**7**	11
Other movements on financial instruments		**4**	(1)
Net movement of funds		**(97)**	1,118
Exchange movements on net debt		**(341)**	(133)
Total movement in net debt		**(438)**	985

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32. Cash generated from operations continued

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.

Operating cash flow, operating free cash flow and total free cash flow are non-GAAP measures and have been disclosed as they are part of Pearson's corporate and operating measures. These measures are presented in order to align the cash flows with corresponding adjusted profit measures.

In the cash flow statement, proceeds from sale of property, plant and equipment comprise:

All figures in £ millions	2016	2015
Net book amount	**9**	6
Loss on sale of property, plant and equipment	**(5)**	(4)
Proceeds from sale of property, plant and equipment	**4**	2

33. 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 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.

34. Commitments

At the balance sheet date there were no commitments for capital expenditure contracted for but not yet incurred.

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 £186m (2015: £156m).

The future aggregate minimum lease payments in respect of operating leases are as follows:

All figures in £ millions	2016	2015
Not later than one year	**174**	164
Later than one year and not later than two years	**147**	146
Later than two years and not later than three years	**129**	143
Later than three years and not later than four years	**115**	130
Later than four years and not later than five years	**96**	123
Later than five years	**661**	685
	1,322	1,391

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 the resulting costs. The future aggregate minimum sub-lease payments expected to be received under non-cancellable sub-leases are as follows:

All figures in £ millions	2016
Not later than one year	**44**
Later than one year and not later than two years	**46**
Later than two years and not later than three years	**44**
Later than three years and not later than four years	**39**
Later than four years and not later than five years	**34**
Later than five years	**155**
	362

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35. 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 (see p8). It is this committee which had responsibility for planning, directing and controlling the activities of the Group in 2016. Key management personnel compensation is disclosed below:

All figures in £millions	2016	2015
Short-term employee benefits	**6**	7
Retirement benefits	**1**	1
Share-based payment costs	**1**	1
Total	**8**	9

There were no other material related party transactions. No guarantees have been provided to related parties.

36. Events after the balance sheet date

On 18 January 2017, Pearson announced the intention to issue an exit notice to Bertelsmann regarding the 47% associate investment in PRH with a view to selling the stake or recapitalising the business and extracting a dividend.

On 24 February 2017, Pearson announced the intention to trigger the early repayment option on its $550m 6.25% Global dollar bonds 2018.

There were no other significant post balance sheet events.

37. Accounts and audit exemptions

The Pearson plc subsidiary companies listed below are exempt from the requirements of the Companies Act 2006 relating to the audit of individual accounts by virtue of section 479A.

	Company number
Aldwych Finance Limited	04720439
Blue Wharf Limited	04344573
Edexcel Limited	04496750
Education Development International plc	03914767
Embankment Finance Limited	04460625
Green Wharf Limited	07009228
Icodeon Limited	05068195
Longman Group (Overseas Holdings) Limited	00690236
Major123 Limited	05333023
Pearson Affordable Learning Fund Limited	08038068
Pearson Australia Finance Unlimited	05578463
Pearson Books Limited	02512075
Pearson Brazil Finance Limited	08848874
Pearson Canada Finance Unlimited	05578491
Pearson Dollar Finance plc	05111013
Pearson Dollar Finance Two plc	06507766
Pearson Education Holdings Limited	00210859
Pearson Education Investments Limited	08444933
Pearson Education Limited	00872828
Pearson Funding Four plc	07970304

	Company number
Pearson Funding Two plc	07210654
Pearson in Practice Holdings Limited	06337129
Pearson in Practice Skills Based Learning Limited	03755464
Pearson in Practice Technology Limited	03786989
Pearson International Finance Limited	02496206
Pearson Loan Finance No.2 Unlimited	05632021
Pearson Loan Finance No. 3 Limited	05052661
Pearson Loan Finance No. 4 Limited	02635107
Pearson Loan Finance Unlimited	05144467
Pearson Management Services Limited	00096263
Pearson Overseas Holdings Limited	00145205
Pearson PRH Holdings Limited	08561316
Pearson Real Estate Holdings Limited	09768242
Pearson Services Limited	01341060
Pearson Shared Services Limited	04623186
Testchange Limited	02496240
TQ Catalis Limited	07307943
TQ Clapham Limited	07307925
TQ Global Limited	07802458

Company balance sheet

As at 31 December 2016

All figures in £ millions	Notes	2016	2015
Assets			
Non-current assets			
Investments in subsidiaries	2	**7,441**	7,744
Amounts due from subsidiaries		**133**	3,953
Financial assets – derivative financial instruments	6	**171**	78
Other financial assets	7	**–**	92
		7,745	11,867
Current assets			
Amounts due from subsidiaries		**4,190**	446
Amounts due from related parties		**33**	47
Financial assets – derivative financial instruments	6	**–**	3
Cash and cash equivalents (excluding overdrafts)	4	**867**	1,168
		5,090	1,664
Total assets		**12,835**	13,531
Liabilities			
Non-current liabilities			
Amounts due to subsidiaries		**(3,253)**	(3,760)
Financial liabilities – borrowings	5	**(254)**	(218)
Financial liabilities – derivative financial instruments	6	**(264)**	(136)
		(3,771)	(4,114)
Current liabilities			
Amounts due to subsidiaries		**(3,470)**	(1,431)
Current income tax liabilities		**(52)**	(108)
Financial liabilities – borrowings	5	**(13)**	(580)
Financial liabilities – derivative financial instruments	6	**–**	(29)
Other liabilities		**(4)**	(12)
		(3,539)	(2,160)
Total liabilities		**(7,310)**	(6,274)
Net assets		**5,525**	7,257
Equity			
Share capital	8	**205**	205
Share premium	8	**2,597**	2,590
Treasury shares	9	**(34)**	(27)
Special reserve		**447**	447
Retained earnings – including loss for the year of £1,288m (2015: profit of £1,206m)		**2,310**	4,042
Total equity attributable to equity holders of the company		**5,525**	7,257

These financial statements have been approved for issue by the board of directors on 14 March 2017 and signed on its behalf by

Coram Williams
Chief financial officer

Company statement of changes in equity

Year ended 31 December 2016

All figures in £ millions	Share capital	Share premium	Treasury shares	Special reserve	Retained earnings	Total
	Equity attributable to equity holders of the company					
At 1 January 2016	**205**	**2,590**	**(27)**	**447**	**4,042**	**7,257**
Loss for the year	**–**	**–**	**–**	**–**	**(1,288)**	**(1,288)**
Issue of ordinary shares under share option schemes*	**–**	**7**	**–**	**–**	**–**	**7**
Purchase of treasury shares	**–**	**–**	**(27)**	**–**	**–**	**(27)**
Release of treasury shares	**–**	**–**	**20**	**–**	**(20)**	**–**
Dividends	**–**	**–**	**–**	**–**	**(424)**	**(424)**
At 31 December 2016	**205**	**2,597**	**(34)**	**447**	**2,310**	**5,525**

All figures in £ millions	Share capital	Share premium	Treasury shares	Special reserve	Retained earnings	Total
	Equity attributable to equity holders of the company					
At 1 January 2015	205	2,579	1	447	3,285	6,517
Profit for the year	–	–	–	–	1,206	1,206
Issue of ordinary shares under share option schemes*	–	11	–	–	–	11
Purchase of treasury shares	–	–	(23)	–	–	(23)
Contribution refund to subsidiaries	–	–	(31)	–	–	(31)
Release of treasury shares	–	–	26	–	(26)	–
Dividends	–	–	–	–	(423)	(423)
At 31 December 2015	205	2,590	(27)	447	4,042	7,257

The special reserve represents the cumulative effect of cancellation of the company's share premium account.

Included within retained earnings is an amount of £162m (2015: £162m) relating to profit on intra-Group disposals that is not distributable.

* Full details of the share-based payment plans are disclosed in note 26 to the consolidated financial statements.

Company cash flow statement

Year ended 31 December 2016

All figures in £ millions	Notes	2016	2015
Cash flows from operating activities			
Net (loss)/profit		**(1,288)**	1,206
Adjustments for:			
Income tax		**(80)**	(154)
Net finance costs		**7**	68
Impairment charges		**1,337**	736
Profit on disposals		**–**	(279)
Amounts due from/(to) subsidiaries		**748**	(909)
Net cash generated from operations		**724**	668
Interest paid		**(15)**	(56)
Tax received		**24**	289
Net cash generated from operating activities		**733**	901
Cash flows from investing activities			
Disposal of subsidiaries, net of cash disposed		**–**	747
Loans repaid by related parties		**14**	7
Interest received		**11**	11
Net cash received from investing activities		**25**	765
Cash flows from financing activities			
Proceeds from issue of ordinary shares	8	**7**	11
Net purchase of treasury shares		**(27)**	(53)
(Repayment of)/proceeds from borrowings		**(30)**	17
Dividends paid to company's shareholders		**(424)**	(423)
Net cash used in financing activities		**(474)**	(448)
Effects of exchange rate changes on cash and cash equivalents		**(18)**	(14)
Net increase in cash and cash equivalents		**266**	1,204
Cash and cash equivalents at beginning of year		**588**	(616)
Cash and cash equivalents at end of year	4	**854**	588

Notes to the company financial statements

1. Accounting policies

The financial statements on p180-191 comprise the separate financial statements of Pearson plc.

As permitted by section 408 of the Companies Act 2006, only the consolidated income statement and statement of comprehensive income have been presented.

The company has no employees.

The accounting policies applied in the preparation of these company financial statements are the same as those set out in note 1 to the consolidated financial statements with the addition of the following:

Investments

Investments in subsidiaries are stated at cost less provision for impairment, with the exception of certain hedged investments that are held in a foreign currency and revalued at each balance sheet date.

2. Investments in subsidiaries

All figures in £ millions	2016	2015
At beginning of year	**7,744**	8,740
Subscription for share capital in subsidiaries	**800**	120
Disposals/liquidations	**–**	(444)
Impairments	**(1,337)**	(736)
Currency revaluations	**234**	64
At end of year	**7,441**	7,744

In 2016 and 2015, impairments relate to the carrying value of intermediate holding company investments following impairment reviews and the subsequent impairment of assets in the Pearson plc Group (see note 11 in the Group Financial Statements for further details).

3. Financial risk management

The company's financial instruments comprise amounts due to/from subsidiary undertakings, cash and cash equivalents, derivative financial instruments and current and non-current borrowings. Derivative financial instruments are held at fair value, with all other financial instruments held at amortised cost. The company's approach to the management of financial risks is consistent with the Group's treasury policy, as discussed in note 19 to the consolidated financial statements. The company believes the value of its financial assets to be fully recoverable.

The company designates certain qualifying derivative financial instruments as hedges of the fair value of its bonds (fair value hedges). Changes in the fair value of these derivative financial instruments are recorded in the income statement, together with any change in the fair value of the hedged liability attributable to the hedged risk.

The carrying value of the company's financial instruments is exposed to movements in interest rates and foreign currency exchange rates (primarily US dollars). The company estimates that a 1% increase in interest rates would result in an £88m decrease in the carrying value of its financial instruments, with a 1% decrease in interest rates resulting in a £104m increase in their carrying value. The company also estimates that a 10% strengthening in sterling would decrease the carrying value of its financial instruments by £206m, while a 10% weakening in the value of sterling would increase the carrying value by £139m. These increases and decreases in carrying value would be recorded through the income statement. Sensitivities are calculated using estimation techniques such as discounted cash flow and option valuation models. Where modelling an interest rate decrease of 1% led to negative interest rates, these points on the yield curve were adjusted to 0%.

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3. Financial risk management continued

The following table analyses the Company'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. 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.

	Analysed by maturity				Analysed by currency			
All figures in £ millions	Less than one year	Later than one year but less than five years	Five years or more	Total	USD	GBP	Other	Total
At 31 December 2016								
Bonds	**12**	**249**	**–**	**261**	**261**	**–**	**–**	**261**
Rate derivatives – inflows	**(103)**	**(1,086)**	**(867)**	**(2,056)**	**(239)**	**(838)**	**(979)**	**(2,056)**
Rate derivatives – outflows	**82**	**1,202**	**891**	**2,175**	**1,308**	**838**	**29**	**2,175**
Total	**(9)**	**365**	**24**	**380**	**1,330**	**–**	**(950)**	**380**
At 31 December 2015								
Bonds	9	218	–	227	227	–	–	227
Rate derivatives – inflows	(140)	(266)	(1,628)	(2,034)	(257)	(858)	(919)	(2,034)
Rate derivatives – outflows	141	202	1,712	2,055	1,155	858	42	2,055
Total	**10**	**154**	**84**	**248**	**1,125**	**–**	**(877)**	**248**

All cash flow projections shown above are on an undiscounted basis. Any cash flows based on a floating rate are calculated using interest rates as set at the date of the last rate reset. Where this is not possible, floating rates are based on interest rates prevailing at 31 December in the relevant year. All derivative amounts are shown gross, although the company net settles these amounts wherever possible.

Any amounts drawn under revolving credit facilities and commercial paper are assumed to mature at the maturity date of the relevant facility, with interest calculated as payable in each calendar year up to and including the date of maturity of the facility.

4. Cash and cash equivalents (excluding overdrafts)

All figures in £ millions	2016	2015
Cash at bank and in hand	**4**	98
Short-term bank deposits	**863**	1,070
	867	1,168

Short-term bank deposits are invested with banks and earn interest at the prevailing short-term deposit rates.

At the end of 2016, the currency split of cash and cash equivalents was US dollar 38% (2015: 10%) and sterling 62% (2015: 90%).

Cash and cash equivalents have fair values that approximate their carrying amounts due to their short-term nature.

Cash and cash equivalents include the following for the purpose of the cash flow statement:

All figures in £ millions	2016	2015
Cash and cash equivalents	**867**	1,168
Bank overdrafts	**(13)**	(580)
	854	588

5. Financial liabilities – borrowings

All figures in £ millions	2016	2015
Non-current		
4.625% US dollar notes 2018 (nominal amount $300m)	**254**	218
	254	218
Current		
Due within one year or on demand:		
Bank loans and overdrafts	**13**	580
	13	580
Total borrowings	**267**	798

The maturity of the company's non-current borrowings is as follows:

All figures in £ millions	2016	2015
Between one and two years	**254**	–
Between two and five years	**–**	218
Over five years	**–**	–
	254	218

The carrying amounts and market values of borrowings are as follows:

	2016			2015		
All figures in £ millions	Effective interest rate	Carrying amount	Market value	Effective interest rate	Carrying amount	Market value
Bank loans and overdrafts	**n/a**	**13**	**13**	n/a	580	580
4.625% US dollar notes 2018	**4.69%**	**254**	**250**	4.69%	218	213
		267	**263**		798	793

The market values 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 company's borrowings are denominated in the following currencies:

All figures in £ millions	2016	2015
US dollar	**254**	660
Sterling	**8**	136
Euro	**5**	2
	267	798

Notes to the company financial statements

6. Derivative financial instruments

The company's outstanding derivative financial instruments are as follows:

All figures in £ millions	2016 Gross notional amounts	2016 Assets	2016 Liabilities	2015 Gross notional amounts	2015 Assets	2015 Liabilities
Interest rate derivatives – in a fair value hedge relationship	**244**	**10**	**–**	203	70	(10)
Interest rate derivatives – not in a hedge relationship	**3,100**	**61**	**(11)**	2,597	–	(6)
Cross-currency derivatives	**1,622**	**100**	**(253)**	1,924	11	(149)
Total	**4,966**	**171**	**(264)**	4,724	81	(165)
Analysed as expiring:						
In less than one year	**162**	**–**	**–**	249	3	(29)
Later than one year and not later than five years	**2,776**	**86**	**(157)**	1,255	44	(4)
Later than five years	**2,028**	**85**	**(107)**	3,220	34	(132)
Total	**4,966**	**171**	**(264)**	4,724	81	(165)

The carrying value of the above derivative financial instruments equals their fair value. Fair values are determined by using market data and the use of established estimation techniques such as discounted cash flow and option valuation models.

7. Other financial assets

Other financial assets comprise unlisted securities of £nil (2015: £92m).

8. Share capital and share premium

	Number of shares 000s	Ordinary shares £m	Share premium £m
At 1 January 2015	819,883	205	2,579
Issue of ordinary shares – share option schemes	1,185	–	11
At 31 December 2015	821,068	205	2,590
Issue of ordinary shares – share option schemes	**1,059**	**–**	**7**
At 31 December 2016	**822,127**	**205**	**2,597**

The ordinary shares have a par value of 25p per share (2015: 25p per share). All issued shares are fully paid. All shares have the same rights.

9. Treasury shares

	Number of shares 000s	£m
At 1 January 2015	7,192	(1)
Purchase of treasury shares	1,987	23
Refund of contribution to subsidiaries	–	31
Release of treasury shares	(2,474)	(26)
At 31 December 2015	6,705	27
Purchase of treasury shares	**3,000**	**27**
Release of treasury shares	**(1,986)**	**(20)**
At 31 December 2016	**7,719**	**34**

The company holds its own shares in trust to satisfy its obligations under its restricted share plans. These shares are treated as treasury shares for accounting purposes and have a par value of 25p per share. The nominal value of the company's treasury shares amounts to £1.9m (2015: £1.7m). At 31 December 2016, the market value of the company's treasury shares was £63.2m (2015: £49.3m). The gross book value of the shares at 31 December 2016 amounts to £79m. This value has been netted off with contributions received from operating companies of £45m, resulting in a net debit value of £34m.

10. Contingencies

There are contingent 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. In addition, there are contingent liabilities in respect of legal claims. None of these claims are expected to result in a material gain or loss to the company.

11. Audit fees

Statutory audit fees relating to the company were £35,000 (2015: £35,000).

12. Related party transactions

Subsidiaries

The company transacts and has outstanding balances with its subsidiaries. Amounts due from subsidiaries and amounts due to subsidiaries are disclosed on the face of the company balance sheet.

These loans are generally unsecured and interest is calculated based on market rates. The company has interest payable to subsidiaries for the year of £138m (2015: £150m) and interest receivable from subsidiaries for the year of £109m (2015: £82m). Management fees payable to subsidiaries in respect of centrally provided services amounted to £118m (2015: £80m). Management fees receivable from subsidiaries in respect of centrally provided services amounted to £76m (2015: £70m). Dividends received from subsidiaries were £87m (2015: £1,555m).

Associates

Amounts due from related parties, disclosed on the face of the company balance sheet, relate to loans to Penguin Random House, an associate of the Group. These loans are unsecured and interest is calculated based on market rates. The amount outstanding at 31 December 2016 was £33m (2015: £47m). The loans are provided under a working capital facility and fluctuate during the year. The loan outstanding at 31 December 2016 was repaid in its entirety in January 2017.

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 company in 2016. Key management personnel compensation is disclosed in note 35 to the consolidated financial statements.

There were no other material related party transactions. No guarantees have been provided to related parties.

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13. Group companies

In accordance with section 409 of the Companies Act 2006 a full list of subsidiaries, partnerships, associates, joint ventures and joint arrangements, the country of incorporation, the registered address and the effective percentage of equity owned, as at 31 December 2016 is disclosed below. Unless otherwise stated, the shares are all indirectly held by Pearson plc. Unless otherwise stated, all wholly-owned and party owned subsidiaries are included in the consolidation and all associated undertakings are included in the Group's financial statements using the equity method of accounting. Principal Group companies are identified in **bold**.

Wholly-owned subsidiaries

Registered company name	Country of Incorp.	Reg office
A Plus Education Solutions Private Limited	IN	2
Addison Wesley Longman, Inc.	US	3
Addison-Wesley Educational Publishers Inc.	US	4
AEL (S) PTE Limited	SG	5
Aldwych Finance Limited	UK	1
America's Choice, Inc.	US	4
ASET Group Limited*	UK	6
ASET Limited*	UK	6
ASET Management Limited*	UK	6
ASET Solutions Limited*	UK	6
ATI Professional Development LLC	US	4
Atkey Finance Limited	IE	7
Axis Finance Inc.	US	4
Beijing Global Education & Technology Co., Ltd.	CN	8
Beijing Wall Street English Training Centre Company Limited	CN	9
Berrisford Finance Limited*	IE	7
Blue Wharf Limited	UK	1
Burmedia Investments Limited*†	UK	6
CA of Michigan, LLC	US	10
Camsaw College Publishing Company, Inc.	US	4
Camsaw, Inc.	US	4
CAMSAWUSA, Inc.	US	11
Casapsi Livraria e Editora Ltda	BR	12
Centro Cultural Americano Franquias e Comércio Ltda.	BR	13
Century Consultants Ltd.	US	14
Certiport China Holding, LLC	US	4
Certiport, Inc.	US	4
Cogmed Systems AB	SE	15
Connections Academy of Alaska, LLC	US	16
Connections Academy of Arizona, LLC	US	17
Connections Academy of Arkansas, LLC	US	18
Connections Academy of California, LLC	US	19
Connections Academy of Colorado, LLC	US	20
Connections Academy of DC, LLC	US	21
Connections Academy of Florida, LLC	US	22
Connections Academy of Georgia, LLC	US	23
Connections Academy of Idaho, LLC	US	24
Connections Academy of Indiana, LLC	US	25
Connections Academy of Iowa, LLC	US	26
Connections Academy of Kansas, LLC	US	27
Connections Academy of Kentucky, LLC	US	28
Connections Academy of Louisiana, LLC	US	29
Connections Academy of Maine, LLC	US	30
Connections Academy of Maryland, LLC	US	31
Connections Academy of Massachusetts LLC	US	3
Connections Academy of Minnesota, LLC	US	32
Connections Academy of Missouri, LLC	US	33
Connections Academy of Nevada, LLC	US	34
Connections Academy of New Jersey, LLC	US	14
Connections Academy of New Mexico, LLC	US	35
Connections Academy of New York, LLC	US	36
Connections Academy of North Carolina, LLC	US	37
Connections Academy of Ohio, LLC	US	38
Connections Academy of Oklahoma, LLC	US	39
Connections Academy of Oregon, LLC	US	40
Connections Academy of Pennsylvania LLC	US	41
Connections Academy of South Carolina, LLC	US	42
Connections Academy of Tennessee, LLC	US	43
Connections Academy of Texas, LLC	US	44
Connections Academy of Utah, L.L.C.	US	45
Connections Academy of Virginia, LLC	US	46
Connections Academy of Washington, LLC	US	47
Connections Academy of Wisconsin LLC	US	48
Connections Academy of Wyoming, LLC	US	49
Connections Education LLC	US	4
Connections Education, Inc.	US	4
CTI Education Group (Pty) Limited	ZA	50
Dale Seymour Publications, Inc.	US	19
Dominie Press, Inc.	US	19
Dorian Finance Limited	IE	7
Dorling Kindersley Australasia Pty Limited	AU	51
E Q L Assessment Limited*	UK	6
EBNT Canada Holdings ULC	CA	127
EBNT Holdings Limited	CA	128
EBNT USA Holdings Inc.	US	4
eCollege.com	US	4
Edexcel Limited†	UK	52
Edexcel South Africa Pty Ltd	ZA	50
Éditions Du Renouveau Pédagogique Inc.	CA	53
Education Development International Plc†	UK	1
Education Resources (Cyprus) Limited	CY	54
Educational Management Group, Inc.	US	55
Educational Resources (HK) Limited	HK	56
Embanet ULC	CA	134
Embanet-Compass Knowledge Group Inc.	US	22
Embankment Finance Limited	UK	1
English Language Learning and Instruction System, Inc.	US	57
eNVQ Limited*	UK	6
Escape Studios Limited	UK	1
Falstaff Holdco Inc.	US	4
Falstaff Inc.	US	58
FastExpress Centro de Idiomas Ltda	BR	59
FBH, Inc.	US	4
Florida Connections Academy, L.L.C.	US	22
Franchise Support & Services, SL	ES	60
Gamma Master China, Limited	HK	61
Global Education & Technology (HK) Limited	HK	56
Global Education & Technology Group Limited	KY	62
Global Elite Education & Technology (Shanghai) Co. Limited	CN	63
Globe Fearon Inc.	US	19
GOAL Limited*	UK	6
Green Wharf Limited	UK	1
Guangzhou Crescent Software Co., Ltd	CN	64
Heinemann Education Botswana (Publishers) (Proprietary) Limited	BW	65
Heinemann Lesotho (Pty) Ltd	LS	66
Icodeon Limited	UK	1
IndiaCan Education Private Limited	IN	2
Integral 7, Inc.	US	4
INTELLIPRO, INC.	US	14
J M Soluções Exportação e Importação Ltda	BR	67
Joint Examining Board Limited*	UK	6
Kagiso Education Pty Ltd	ZA	50
Knowledge Analysis Technologies, LLC	US	20
LCCI International Qualifications (Malaysia) Sdn. Bhd.	MY	68
LCCIEB Training Consultancy., Ltd	CN	69
LessonLab, Inc.	US	19
Lignum Oil Company	US	4
Linx Brasil Distribuidora Ltda.	BR	13
Longman (Malawi) Limited	MW	70
Longman Australasia Pty Ltd	AU	71
Longman Group(Overseas Holdings) Limited	UK	1
Longman Indochina Acquisition, L.L.C.	US	4
Longman Kenya Limited	KE	72
Longman Mocambique Ltda	MZ	135
Longman Swaziland (Pty) Limited	SZ	73
Longman Tanzania Limited	TZ	74
Longman Zambia Educational Publishers Pty Ltd	ZM	75
Longman Zambia Limited	ZM	75
Longman Zimbabwe (Private) Ltd	ZW	76
Longmaned Ecuador S.A.	EC	77
Major123 Limited	UK	78
MeasureUp, LLC	US	4
Midlands Educational Technology Limited*	UK	6
Modern Curriculum Inc.	US	19
Multi Treinamento e Editora Ltda	BR	79
Multilingua Limited*	UK	6
National Computer Systems Japan Co. Ltd	JP	80
NCS Information Services Technology (Beijing) Co Ltd	CN	81
NCS Pearson Pty Ltd	AU	51
NCS Pearson Puerto Rico, Inc.	PR	82
NCS Pearson, Inc.	US	32
Ordinate Corporation	US	19
Pearson (Beijing) Management Consulting Co., Ltd.	CN	83
Pearson (Guizhou) Education Technology Co., Ltd.	CN	84
Pearson Affordable Learning Fund Limited	UK	1
Pearson America LLC	US	4
Pearson Amsterdam B.V.	NL	85
Pearson Amsterdam Finance Limited*†	UK	1
Pearson Australia Finance Unlimited	UK	1
Pearson Australia Group Pty Ltd	AU	51
Pearson Australia Holdings Pty Ltd	AU	51
Pearson Australia Pty Ltd	AU	51
Pearson Benelux B.V.	NL	85
Pearson Books Limited†	UK	1
Pearson Brazil Finance Limited	UK	1
Pearson Business (Asia Pacific) Pte. Ltd.	SG	5

Registered company name	Country of Incorp.	Reg office
Pearson Business Services Inc.	US	4
Pearson Canada Assessment Inc	CA	86
Pearson Canada Finance Unlimited	UK	1
Pearson Canada Holdings Inc	CA	86
Pearson Canada Inc.	CA	86
Pearson Central Europe Spółka z ograniczoną odpowiedzialnością	PL	126
Pearson Charitable Foundation	US	57
Pearson College Limited	UK	1
Pearson DBC Holdings Inc.	US	4
Pearson Desarrollo y Capacitación Profesional Chile Limitada	CL	87
Pearson Deutschland GmbH	DE	88
Pearson Digital Learning Puerto Rico, Inc.	PR	82
Pearson Dollar Finance plc†	UK	1
Pearson Dollar Finance Two plc	UK	1
Pearson Educacion de Chile Limitada	CL	89
Pearson Educacion de Colombia S A S	CO	90
Pearson Educacion de Mexico, S.A. de C.V.	MX	91
Pearson Educacion de Panama SA	PA	92
Pearson Educacion de Peru S.A.	PE	93
Pearson Educacion SA	ES	94
Pearson Education (Singapore) Pte Ltd	SG	5
Pearson Education Africa (Pty) Ltd	ZA	50
Pearson Education and Assessment, Inc.	US	4
Pearson Education Asia Limited	HK	56
Pearson Education Botswana (Proprietary) Limited	BW	65
Pearson Education do Brasil S.A	BR	129
Pearson Education Hellas SA	GR	130
Pearson Education Holdings Inc.	US	4
Pearson Education Holdings Limited†	UK	1
Pearson Education Indochina Limited	TH	95
Pearson Education Investments Limited	UK	1
Pearson Education Korea Limited	KR	96
Pearson Education Limited	UK	1
Pearson Education Namibia (Pty) Limited	NA	97
Pearson Education Publishing Limited	NG	98
Pearson Education S.A.	UY	99
Pearson Education SA	AR	100
Pearson Education South Africa (Pty) Ltd	ZA	50
Pearson Education South Asia Pte. Ltd.	SG	5
Pearson Education Taiwan Ltd	TW	101
Pearson Education, Inc.	US	4
Pearson Educational Measurement Canada, Inc.	CA	136
Pearson Educational Publishers, LLC	US	4
Pearson Egitim Cozumleri Tikaret Limited Sirketi	TR	102
Pearson Falstaff (Holdings) Inc.	US	4
Pearson Falstaff Holdco LLC	US	4
Pearson France	FR	103
Pearson Funding Five plc†	UK	1
Pearson Funding Four plc†	UK	1
Pearson Funding One Limited*†	UK	6
Pearson Funding Two plc†	UK	1
Pearson Group FURBS Trustee Limited*†	UK	6
Pearson Group Pension Trustee Limited	UK	1
Pearson Heinemann Limited*	UK	6
Pearson Holdings Inc.	US	4
Pearson Holdings Southern Africa (Pty) Limited	ZA	50
Pearson in Practice ATA Limited*	UK	6
Pearson in Practice Holdings Limited	UK	1

Registered company name	Country of Incorp.	Reg office
Pearson in Practice Skills Based Learning Limited	UK	1
Pearson in Practice Technology Limited	UK	1
Pearson Inc.	US	4
Pearson India Education Services Private Limited	IN	2
Pearson Institute of Higher Education	ZA	50
Pearson International Finance Limited†	UK	1
Pearson Investment Holdings, Inc.	US	4
Pearson IOKI Spółka z ograniczoną odpowiedzialnością	PL	104
Pearson Italia S.p.A	IT	105
Pearson Japan KK	JP	106
Pearson Lanka (Private) Limited	LK	107
Pearson Learning China (HK) Limited	HK	56
Pearson Lesotho (Pty) Ltd	LS	66
Pearson Loan Finance No. 3 Limited	UK	1
Pearson Loan Finance No. 4 Limited	UK	1
Pearson Loan Finance No.2 Unlimited	UK	1
Pearson Loan Finance Unlimited	UK	1
Pearson Longman LLC	US	4
Pearson Longman Uganda Limited	UG	108
Pearson Malaysia Sdn. Bhd.	MY	68
Pearson Management Services Limited†	UK	1
Pearson Management Services Philippines Inc.	PH	109
Pearson Netherlands B.V.	NL	85
Pearson Netherlands Holdings B.V.	NL	85
Pearson Nominees Limited†	UK	1
Pearson Online Tutoring LLC	US	4
Pearson Overseas Holdings Limited†	UK	1
Pearson PEM P.R., Inc.	PR	82
Pearson Pension Property Fund Limited	UK	1
Pearson PRH Holdings Limited	UK	1
Pearson Professional Assessments Limited	UK	1
Pearson Publications Inc.	US	4
Pearson Real Estate Holdings Inc.	US	4
Pearson Real Estate Holdings Limited†	UK	1
Pearson Schweiz AG	CH	110
Pearson Services Limited†	UK	1
Pearson Shared Services Limited†	UK	1
Pearson Sweden AB	SE	15
Pearson VUE Philippines, Inc.	PH	111
Peisheng Yucai (Beijing) Technology Development Limited	CN	112
Penguin Capital, LLC	US	4
Peter Honey Publications Ltd*	UK	6
Phumelela Publishers (Pty) Ltd	ZA	50
PN Holdings Inc.	US	4
Prentice-Hall Hispanoamericana SA de CV	MX	91
ProctorCam, Inc.	US	113
PT Efficient English Services	ID	114
Reading Property Holdings LLC	US	115
Rebus Planning Associates, Inc.	US	10
Regents Publishing Co., Inc.	US	58
Reston Publishing Company, Inc.	US	4
Rycade Capital Corporation	US	4
Sector Training Limited*	UK	6
Servicios Administrativos Pearson Educacion S.A. de C.V.	MX	91
Shanghai AWL Education Software Ltd	CN	116
Silver Burdett Ginn Inc.	US	4
Skylight Training and Publishing Inc.	US	55
Smarthinking, Inc.	US	4
Sound Holdings Inc.	US	4

Registered company name	Country of Incorp.	Reg office
Spear Insurance Company Limited†	BM	133
Stark Verlag GmbH	DE	88
Sunnykey International Holdings Limited (BVI)	VG	117
Tecquipment Services Limited*	UK	6
Testchange Limited†	UK	1
The Assessment Company Limited*	UK	6
The Learning Edge International pty Ltd	AU	71
The SIOP Institute LLC	US	118
The Waite Group Inc	US	19
TQ Catalis Limited	UK	78
TQ Clapham Limited	UK	78
TQ Education and Training Limited	UK	78
TQ Education and Training Limited	SA	131
TQ Global Limited	UK	1
TQ Group Limited	UK	78
TQ Holdings Limited	UK	1
TQ Training Limited*	UK	6
TQ Training Services Limited*	UK	6
TQ Trustees Limited*	UK	6
Training for Advancement Holdings Limited*	UK	6
Training for Advancement Limited*	UK	6
Vue Testing Services Israel Ltd	IL	132
Wall Street English Training Centre (Shanghai) Company Limited	CN	119
Wall Street Institute Kft.	HU	120
Wall Street Institute Master Italia Srl	IT	121
WP Group Pension Trustees Limited*	UK	6
WSE Education Brazil Licenciamentos e Cursos de Idiomas Ltda.	BR	122
WSE Training Centre (Guangdong) Co., Ltd.	CN	123
WSI Education GmbH	DE	124
WSI International, Inc.	US	125

* In liquidation

† Directly owned by Pearson plc

Notes to the company financial statements

Subsidiary addresses

The following list includes all Pearson registered offices worldwide. Please see wholly owned subsidiaries list opposite for each subsidiary's registered office code.

	Registered office address
1	80 Strand, London, WC2R 0RL, England
2	4th Floor Software Block, Elnet Software City, TS 140 Block 2 & 9, Rajiv Gandhi Salai, Taramani, Chennai, TN, 600113, India
3	C T Corporation System, 155 Federal St., Suite 700, Boston, MA, 02110, United States
4	The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle, DE, 19801, United States
5	9, #13-01, North Buona Vista Drive, The Metropolis Tower One, 138588, Singapore
6	Acre House, 11-15 William Road, London, NW1 3ER, England
7	1st Floor Riverview House, 21/23 City Quay, Dublin, D02FP21, Ireland
8	Room 02 and 09 Office, 1-4 building D block, Zhongguancun South Street No. 18, Haidian District, Beijing, China
9	3F, Building R2 China Merchants Tower, No.118 Jianguo Road, Chaoyang District, Beijing, China
10	The Corporation Company, 40600 Ann Arbor Rd E Suite 201, Plymouth, MI, 48170, United States
11	The Prentice-Hall Corporation System, MA, 7 St. Paul Street, Suite 1660, Baltimore, MD, 21202, United States
12	No 1010, Rua Santo Antonio, Jardim Mexico, City of Itatiba, Sao Paulo, 13253-4000, Brazil
13	Rua Francisco Otaviano 77B, Jardim Chapadao, Campinas, SP, 13070-056, Brazil
14	820, Bear Tavern Road, West Trenton, Mercer, NJ, 08628, United States
15	Gustavslundsvägen 137, 167 51 Bromma, Stockholm, Sweden
16	C T Corporation System, 9360 Glacier Hwy Suite 202, Juneau, AK, 99801, United States
17	C T Corporation System, 3800 N Central Ave Suite 460, Phoenix, AZ, 85012, United States
18	The Corporation Company, 124 West Capitol Avenue, Suite 1900, Little Rock, AR, 72201, United States
19	C T Corporation System, 818 West Seventh Street, Suite 930, Los Angeles, CA, 90017, United States
20	The Corporation Company, 7700 E Arapahoe Rd Suite 220, Centennial, CO, 80112-1268, United States
21	C T Corporation System, 1015 15th Street 10th Floor, Washington, DC, 20005, United States
22	1200, South Pine Island Road, Plantation, FL, 33324, United States
23	1201, Peachtree Street, NE, Atlanta, GA, 30361, United States
24	C T Corporation System, 921 S Orchard Street – Suite G, Boise, Ada County, ID, 83705, United States
25	CT Corporation System, 150 West Market Street, Suite 800, Indianapolis, IN, 46204, United States
26	C T Corporation System, 400 E Court Ave, Des Moines, IA, 50309, United States
27	The Corporation Company, Inc., 112 SW 7th Street, Suite 3C, Topeka, KS, 66603, United States
28	CT Corporation System, 306 W. Main Street, Suite 512, Frankfort, KY, 40601, United States
29	3867, Plaza Tower, 1st Floor, Baton Rouge, LA, 70816, United States
30	C T Corporation System, 128 State St #3, Augusta, ME, 04330, United States
31	7 St. Paul Street, Suite 1660, Baltimore, MD, 21202
32	C T Corporation System Inc., 1010 Dale St N, St Paul, MN, 55117-5603, United States
33	120, 400, South Central Avenue, Clayton, MO, 63105, United States
34	The Corporation Trust Company of Nevada, 701 S Carson St, Suite 200, Carson City, NV, 89701, United States
35	C T Corporation System, 206 S Coronado Ave, Espanola, NM, 87532-2792, United States
36	CT Corporation, 111 Eighth Avenue, New York, NY 10011, United States
37	CT Corporation System, 160 Mine Lake Ct Suite 200, Raleigh, NC, 27615, United States
38	1300, 1010, East Ninth Street, Cleveland, OH, 44114, United States
39	The Corporation Company, 1833 S Morgan Rd, Oklahoma City, OK, 73128, United States
40	C T Corporation System, 388 State St Suite 420, Salem, OR, 97301, United States
41	C T Corporation System, 116 Pine Street, Suite 320, Harrisburg, Dauphin, PA, 17101, United States
42	C T Corporation System, 2 Office Park Court, Suite 103, Columbia, SC, 29223, United States
43	C T Corporation System, 800 S Gay St, Suite 2021, Knoxville, TN, 37929-9710, United States
44	CT Corporation System, 1999 Bryan Street, Suite 900, Dallas, TX, 75201, United States
45	1108, E. South Union Ave., Midvale, UT, 84047, United States
46	C T Corporation System, 4701 Cox Road, Suite 285, Glen Allen, Henrico, VA, 23060-0000, United States
47	C T Corporation System, 505 Union Ave SE Suite 120, Olympia, WA, 985010000, United States
48	C T Corporation System, 8020 Excelsior Dr, Suite 200, Madison, WI, 53717, United States
49	C T Corporation System, 1908 Thomas Ave, Cheyenne, WY, 82001, United States
50	Auto Atlantic, 4th Floor, Corner Hertzog Boulevard and Heerengracht, Cape Town, 8001, South Africa
51	707 Collins Street, Docklands, Melbourne, VIC, 3008, Australia
52	190, High Holborn, London, WC1V 7BH, England
53	1611, Boul. Cremazie Est, 10th Floor, Montréal, PQ, H2M 2P2, Canada
54	195, Archbishop Makarios III Avenue, Neocleous House, Limassol, 3030, Cyprus
55	Illinois Corporation Service Company, 700 S 2nd Street, Springfield, IL, 62703, United States
56	28/F, 1063 King's Road, Quarry Bay, Hong Kong
57	C/o Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware, 19808, United States
58	111, 13th Floor, Eighth Avenue, New York, NY, 10011, United States
59	Avenida Nacoes Unidas 12901, Brooklin Novo, Loja 146-A, SP, 04578-000, Brazil
60	Tuset 20-24, No. 5, Barcelona, 08006, Spain
61	Level 54, Hopewell Centre, 183 Queen's Road East, Hong Kong
62	Maples Corporate Services Limited P. O. Box 309, Ugland House, South Church Street, George Town, Grand Cayman, KY1-1104, Cayman Islands
63	Room 2001-2, Ambassador Road 18, Yangpu District, Shanghai City, China
64	Suite 1503, 1504, 1505, No. 376 Xingang Middle Road, Haizhu District, Guangzhou, China
65	Plot 50371, Fairground Office Park, Gaborone, Botswana
66	C/o Du Preez, Llebetrau & Co, 252 Kingsway, Next to USA Embassy, Maseru, Lesotho
67	Avenida Doutor Cardoso De Melo 1450, Vila Olimpia, 6 Andar Conju, Sao Paulo, SP, 04548-004, Brazil
68	Level 1, Tower 2A, Avenue 5, Bangsar South No 8, Jalan Kerinchi, Kuala Lumpur, 59200, Malaysia
69	Room 305, Building 2, 65555 Shangchuan Road, Pudong District, Shanghai, China
70	Parkway House, Hannover Avenue, Blantyre, Malawi
71	707 Collins Street, Docklands, Melbourne, VIC, 3008, Australia
72	Queensway House, Kaunda Street, Nairobi, Kenya
73	Robinson Bertram, 3rd Floor, Sokhzmlilio Bldg, Mbabane, Swaziland
74	P O Box 45, IPS Building, Maktaba Street, Dar es Salaam, Tanzania
75	Mlungushi Conference Centre, Centre Annex, Great East Road, Lusaka, Zambia
76	Stand 1515, Cnr Tourle Road/Harare Drive, Ardbennie, Harare, Zimbabwe
77	Andalucía y cordero E12-35. Edificio CYEDE piso 1. Oficina 11.- Sector "La Floresta". -Quito, Prov. Pichincha, Ecuador
78	The Pearson Academy of Vocational Training, Bangrave Road, Corby, Northamptonshire, NN17 1NN, England
79	Rodovia Anhanguera, Jardim Salgado Filho, Km 317 + 400M, Ribeirao Preto, SP, 14079-000, Brazil
80	Teikoku Hotel Tower 18F, 1-1-1 Uchi Saiwai-Cho, Chiyoda-ku, Tokyo, Japan
81	Suite 1201, Tower 2, No. 36 North Third Rign East Road, Dongcheng District, Beijing, China
82	268 Munoz Rivera Avenue, Suite 1400, San Juan, 00918, Puerto Rico
83	Suite 1212, 12/F, Tower 2, No. 36 North Third Rign East Road, Dongcheng District, Beijing, China
84	Zone B, 1/F, Digital Content Industrial Park, High Technical & Industrial Development District, Guiyang City, Guizhou Province, China
85	Gatwickstraat 1, Amsterdam, 1043 GK, Netherlands
86	26 Prince Andrew Place, Don Mills, Toronto, ON, M3C 2T8, Canada
87	Vitacura 5950 Comuna de vitacura, Santiago, Chile
88	2, Lilienthalstrasse, Hallbergmoos, 85399, Germany
89	Jose Ananias #505, Macul, Santiago, Chile
90	Carrera 7 Nro 156 – 68, Piso 26, Bogota, Colombia
91	Calle Antonio Dovalijaime #70, Torre B, Piso 6, Col. Zedec ed Plaza Santa Fe, del. Álvaro Obregon, Ciudad de Mexico, CP 01210, Mexico
92	Punta Pacifica, Torres de las Americas, Torre A Piso 15 Ofic. 1517, 0832-0588 Panama, Panama
93	Calle Río de la Plata N° 152. Piso 5. San Isidro. Lima – Perú
94	28, Ribera del Loira, Madrid, 28042, Spain
95	87/1 Capital Tower Building, All Seasons Place unit 1604 – 6 16th floor, Wireless Road, Lumpini, Pathumwan, Bangkok, Thailand
96	7 F AIA Tower, 16 Tongil-ro 2-gil, Jung-gu, Seoul, 04511, Republic of Korea
97	19 Joule Street, Southern Industrial Area, Windhoek, Namibia
98	8, Secretariat Road, Obafemi Awolowo Way, Alausa, Ikeja, Lagos State, Nigeria
99	Juan Benito Blanco 780 – Plaza Business Center Montevideo, Uruguay
100	Ingeniero Butty 240 Piso 5, Buenos Aires, Argentina
101	No 219, Room D, 11F, Sec 3, Beixin Road, New Taipei City, Xindian District, 23143, Taiwan
102	Barbaros Bulvarı. No:149, Dr. Orhan Birman İş Merkezi Kat:3, Gayrettepe Beşiktaş, Istanbul, 34349, Turkey
103	3-15, Immeuble Terra Nova II, Rue Henri Rol Tanguy, Montreuil, 93100, France
104	Ulica Jana Henryka Dąbrowskiego 77A 60-529, Poznań, Poland
105	16, Corso Trapani, Turin, 10100, Italy
106	1-6-1, Roppongi, Minato-ku, Tokyo, Japan
107	Orion City, Irgel Building #752, Colombo, 09, Sri Lanka
108	Plot 8, Berkley Road, Old Kampala, Uganda
109	5th floor The Spark Place, P. Tuazon Street, 10th Ave, Araneta Center, Cubao, Quezon City, Philippines
110	Chollerstrasse 37, 6300 Zug, Switzerland

Registered office address
111 27/F Trident Tower, 312 Sen. Gil Puyat Avenue, Makati City, Metro Manila, Philippines
112 Suite 15A11,Tian Xing Jian Commercial Plaza, No. 47 Fuxing Road, Haidian District, Beijing, China
113 National Registered Agents, inc., 160 Greentree Dr Ste 101, Dover, Kent, DE, 19904, United States
114 30th Floor, Ratu Plaza Office Tower, Jl. Jend. Sudirman Kav 9, Jakarta, 10270, Indonesia
115 C/O Pearson Education, 501 Bolyston St, Boston, MA, 02116, United States
116 Suite 3H, No. 6, Block 2, 365 Nong Xin Hua Road, Changning District, Shanghai City, China
117 Commerce House, Wickhams Cay 1, P.O. Box 3140, Road Town, Tortola, British Virgin Islands
118 P O BOX 905, Carnelian Bay, CA, 96140, United States
119 Zone 1 3F, Jin Mao Tower, No.88 Century Avenue, Pilot Free Trade Zone, Shanghai City, China
120 Hermina út 17. 8th floor, Budapest, 1146, Hungary
121 79, Corso Buenos Aires, Milan, 20124, Italy
122 Rua Alexandre Dumas 1610, Ch Santo Antonio, 1 Subsolo, San Paulo, SP, 04717-004, Brazil
123 2F, No.118 East Ti Yu Road, Tianhe District, Guangzhou, China
124 5, Rosental, Munich, 80331, Germany
125 The Corporation Trust Incorporated, 351 West Camden Street, Baltimore, MD, 21201, United States
126 Ulica Szamocka 8 01-748, Warszawa, Poland
127 Suite 2600, Three Bentall Centre, P.O. Box 49314, 595 Burrard Street, Vancouver, BC, V7X 1L3, Canada
128 44 Chipman Hill, Suite 1000, Saint Jon, NB, E2L 4S6, Canada
129 Rodovia Anhanguera, km 317, 4, Bloco B, módulo 27., Jardim Salgado Filho, Ribeirão, Preto, Zip Code 14.079-000, City of São Paulo, State of São Paulo, Brazil
130 21, Amfitheas Avenue, Paleo Faliro Athens, 17564, Greece
131 King Fahad Road, Olaya, Riyadh, 58774, 11515, Saudi Arabia
132 Derech Ben Gurion 2, BSR Building 9th Floor, Ramat Gan, 52573, Israel
133 Thistle House, 4 Burnaby Street, Hamilton, HM11, Bermuda
134 3500, 855 – 2nd Street, S.W., Calgary, AB, T2P 4K7, Canada
135 Avenida 24 de Julho, Numero 776, Maputo, Mozambique
136 199 Bay Street, Commerce Court West, Suite 2800, Toronto, ON, M5L1A9, Canada

Partly owned subsidiaries

Registered Company Name	Country of Incorp.	% Owned	Reg office
Certiport China Co Ltd	CN	50.69	1
CG Manipal Schools Private Limited	NE	51	2
Chongqing WSE Training Centre Co Ltd	CN	95	3
Educational Publishers LLP	UK	85	4
GED Domains LLC	US	70	5
GED Testing Service LLC	US	70	6
Heilongjiang WSE Training Centre Co Ltd	CN	95	7
Heinemann Publishers (Pty) Ltd	SA	75	8
Maskew Miller Longman (Pty) Limited	SA	75	8
Pearson Education Achievement Solutions (RF) (Pty) Limited	SA	97.3	8
Pearson South Africa (Pty) Ltd	SA	75	8

Associated undertakings

Registered Company Name	Country of Incorp.	% Owned	Reg office
ACT Aspire LLC	US	50	9
Affordable Private Education Center Inc‡	PH	40	10
Avanti Learning Centres Private Limited‡	IN	20.9	11
eAdvance Proprietary Limited‡	ZA	39.57	12
HE Distributions, LLC	US	35.3	13
Institute for Private Education & Training KSCC*	KU	49.02	14
Intellus Learning, Inc.†	US	14.5	15
Karadi Path Education Company Private Limited‡	IN	26.25	16
Learn Capital Special Opportunities Fund I, L.P.‡	US	99.59	22
Learn Capital Venture Partners II, L.P.‡	US	72.93	22
Learn Capital Venture Partners IIIA, L.P.‡	KY	99.00	23
Learn Capital Venture Partners, L.P.‡	US	99.15	22
Omega Schools Franchise Limited	GH	49.05	17
Peking University Pearson (Beijing) Cultural Development Co., Ltd	CN	45	18
Penguin Random House Limited	UK	47	4
Penguin Random House LLC	US	47	9
Scala Higher Education , S.C.	ME	45	19
Scala Latin America S.A.P.I. de C.V.	ME	45	19
Scala Student, S.A. de C.V.	ME	45	19
The Egyptian International Publishing Company-Longman	EG	49	20
Zaya Learning Labs Private Limited‡	IN	20	21

* In liquidation
† Significant influence is based on management's assessment
‡ Accounted for as an 'Other financial asset' within non-current assets

Partly owned subsidiaries & associated undertakings company addresses

Registered office address
1 Suite 1804, No.99 Huichuan Road, Changning District, Shanghai City, China
2 Lalitpur, Sub-Metropolitan City,-2, Bagmati, Nepal
3 9-4#, Unit 4, 24 Jintang Street, Yuzhong District, Chongqing, China
4 80 Strand, London, WC2R 0RL, England
5 C T Corporation System, 4701 Cox Road, Suite 285, Glen Allen, Henrico, VA, 23060-0000, United States
6 The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle, DE, 19801, United States
7 Room 503, 5F, Xin'an Building, No.238 Xinyang Road, Dao Li District, Harbin, China
8 Auto Atlantic, 4th Floor, Corner Hertzog Boulevard and Heerengracht, Cape Town, 8001, South Africa
9 C/o Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware, 19808, United States
10 33rd Floor, Tower One & Exchange Plaza, Ayala Triangle, Ayala Avenue, Makati City, Philippines
11 16 Paschimi Marg, Vasant Vihar, New Delhi, DL, India
12 Office 201, Parktown Quarter, Corner 3rd & 7th Avenue, Parktown North, Johannesburg 2193. South Africa
13 United Corporate Services, Inc., 874 Walker Road Suite C, Dover, Kent, DE, 19904, United States
14 P.O. Box No. 6320, 32038 Hawalli, Kuwait City, Kuwait,
15 United States Corporation Agents, Inc., 300 Delaware Ave Site 210-A, Wilmington, New Castle, DE, 19801, United States
16 3A Dev Regency II, First Main Road, Gandhinagar, Adyar, Chennai, TN, India
17 2nd Floor OTS Building, off Accra-Winneba Road, Kasoa second, Kasoa P.O. Box WJ973, Weija, Accra. Ghana
18 Suite 216, No. 127-1 Zhongguancun North Street, Haidian District, Beijing, China
19 Calz. de la Naranja # 159, Col. Fracc. Industrial Alice Blanco, Naucalpan de Juarez, Edo. De Mex., 53370, Mexico
20 10a Hussein Wassef St, Midan Missaha, Dokki Giza, 12311, Egypt
21 Unit No. 404, New Udyog Mandir 2, Mogul Lane, Mahim(West), Mumbai, MH, 400016, India
22 Incorporating Services, Ltd. 3500 S Dupont Way, Dover, Kent DE, 19901 United States
23 Campbells Corporate Services Limited, Floor 4, Willow House, Cricket Square, Grand Cayman, KY1-9010, Cayman Islands

Overview
Our strategy in action
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Five-year summary

All figures in £ millions	2012	2013	2014	2015 Restated	2016
Sales: By geography*					
North America		3,008	2,906	2,940	**2,981**
Core		1,008	910	815	**803**
Growth		712	724	713	**768**
Continuing	4,615	4,728	4,540	4,468	**4,552**
Discontinued	1,497	962	343	312	**–**
Total sales	6,112	5,690	4,883	4,780	**4,552**
Adjusted operating profit: By geography*					
North America		464	444	480	**420**
Core		103	122	105	**57**
Growth		35	32	(3)	**29**
Penguin Random House		50	69	90	**129**
Continuing	785	652	667	672	**635**
Discontinued	147	84	55	51	**–**
Total adjusted operating profit	932	736	722	723	**635**

* Periods prior to 2013 have not been restated to reflect the new organisation structure as there is no appropriate basis for restatement of those periods.

All figures in £ millions	2012	2013	2014	2015	2016
Operating margin – continuing	17.0%	13.8%	14.7%	15.0%	**13.9%**
Adjusted earnings					
Total adjusted operating profit	932	736	722	723	**635**
Net finance costs	(65)	(72)	(64)	(46)	**(59)**
Income tax	(200)	(97)	(118)	(105)	**(95)**
Non-controlling interest	(3)	(1)	1	–	**(2)**
Adjusted earnings	664	566	541	572	**479**
Weighted average number of shares (millions)	804.3	807.8	810.9	813.3	**814.8**
Adjusted earnings per share	82.6p	70.1p	66.7p	70.3p	**58.8p**

All figures in £ millions	2012	2013	2014	2015	2016
Cash flow					
Operating cash flow	788	588	649	435	**663**
Operating cash conversion	85%	80%	90%	60%	**104%**
Operating free cash flow	657	324	413	255	**549**
Operating free cash flow per share	81.7p	40.1p	50.9p	31.4p	**67.4p**
Free cash flow	657	269	413	152	**310**
Free cash flow per share	81.7p	33.3p	50.9p	18.7p	**38.0p**
Net assets	5,710	5,706	5,985	6,418	**4,348**
Net debt	918	1,379	1,639	654	**1,092**
Return on invested capital (gross basis)					
Total adjusted operating profit	932	736	722	723	**635**
Operating tax paid	(65)	(191)	(163)	(129)	**(63)**
Return	867	545	559	594	**572**
Average invested capital	9,578	10,130	9,900	10,317	**11,464**
Return on invested capital	9.1%	5.4%	5.6%	5.8%	**5.0%**
Dividend per share	45.0p	48.0p	51.0p	52.0p	**52.0p**

Corporate and operating measures

The tables below set out the Group's non-GAAP measures and reconcile them to the statutory results. Non-GAAP measures are included as they are key financial measures used by management to evaluate performance and also for investors to track the underlying operational performance of the Group.

Sales – underlying and constant exchange rate

Underlying sales movements exclude the impact of acquisitions and disposals (portfolio changes) and are stated at constant exchange rates. Portfolio changes are calculated by taking account of the additional contribution (at constant exchange rates) from acquisitions made in both the current year and the prior year. For acquisitions made in the prior year we calculate the additional contribution as the sales made in the period of the current year that corresponds to the pre-acquisition period in the prior year. We also exclude sales made by businesses disposed in either the current year or the prior year. Constant exchange rates are calculated by assuming the average exchange rates in the prior year prevailed throughout the current year. These measures enable management and investors to track more easily, and consistently, the underlying sales performance of the Group.

All figures in £ millions	2016
Underlying decrease	**(339)**
Portfolio changes	**(63)**
Exchange differences	**486**
Total statutory sales increase	**84**
Underlying decrease	**(8)%**
Constant exchange rate decrease	**(9)%**

Adjusted income statement

A reconciliation of the statutory income statement to the adjusted income statement is shown in note 8 to the Group financial statements. Note 8 also includes a description of all items included in the reconciliation and an explanation of why each item has been excluded from the adjusted income statement. Continuing adjusted income statement measures can be calculated by excluding the 'discontinued operations' column from the table of adjusted income statements measures in note 8 to the Group financial statements. In 2016 continuing adjusted operating profit is £635m (2015: £672m).

The key adjusted measures used by management and investors are adjusted operating profit and adjusted earnings. These measures are used by management to evaluate performance and allocate resources to business segments. The measures also enable our investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments by separating out those items of income and expenditure relating to acquisition and disposal transactions and major restructuring programmes.

Adjusted operating profit – underlying and constant exchange rate

Underlying adjusted operating profit movements exclude the impact of acquisitions and disposals (portfolio changes) and are stated at constant exchange rates. Portfolio changes and constant exchange rates for profits are calculated in the same way as for sales, as described above. These measures enable management and investors to track more easily, and consistently, the underlying profit performance of the Group.

All figures in £ millions	2016
Underlying decrease	**(141)**
Portfolio changes	**(53)**
Exchange differences	**106**
Total adjusted operating profit decrease	**(88)**
Underlying decrease	**(21)%**
Constant exchange rate decrease	**(27)%**

Cash flow measures

The Group uses 3 key cash flow measures – operating cash flow, operating free cash flow and free cash flow.

Operating cash flow is calculated as net cash generated from operations before the cash flow impact of items excluded from the adjusted income statement plus dividends from joint ventures and associates; capital expenditure on property, plant and equipment and intangible software assets; proceeds from the sale of property, plant and equipment and intangible software assets; and less finance lease principal payments. Operating cash flow is reconciled in note 32 of the Group financial statements. Operating cash flow is included as a non-GAAP measure in order to align the cash flows with the corresponding adjusted profit measures.

Cash flow measures continued

In addition to operating cash flow the Group also presents operating free cash flow and free cash flow as non-GAAP measures as they are commonly used by investors to measure the cash performance of the Group.

Operating free cash flow is calculated as operating cash flow less operating tax paid and less operating finance costs paid. Operating free cash flow is reconciled in note 32 of the Group financial statements.

Free cash flow is calculated as operating free cash flow including the cash flow impact of items excluded from the adjusted income statement plus non operating tax received and paid. Free cash flow is reconciled in note 32 of the Group financial statements.

In addition to the 3 key cash flow measures the Group also uses a cash conversion ratio and a free cash flow per share ratio, both of which are reconciled in the table below. These ratios are included as non-GAAP measures as they are used by management and investors to measure underlying cash generation by the Group.

All figures in £ millions	2016	2015
Adjusted operating profit	**635**	723
Operating cash flow	**663**	435
Cash conversion (operating cash flow ÷ adjusted operating profit)	**104%**	60%
Free cash flow	**310**	152
Weighted average number of shares in issue (millions)	**814.8**	813.3
Operating free cash flow per share	**67.4p**	31.4p
Free cash flow per share	**38.0p**	18.7p

Net debt and EBITDA

Net debt is reconciled in Note 19 of the Group financial statements. Earnings before interest, tax, depreciation and amortisation (EBITDA) is calculated as total adjusted operating profit less depreciation on property, plant and equipment and less software amortisation – it is reconciled in the table below. The net debt / EBITDA ratio is included as a non-GAAP measure as it is commonly used by investors to measure balance sheet strength.

All figures in £ millions	2016	2015
Adjusted operating profit	**635**	723
Depreciation (excluding items included in 'major cost of restructuring')	**80**	75
Software amortisation (excluding items included in 'major cost of restructuring')	**70**	74
EBITDA	**785**	872
Net debt	**1,092**	654
Net debt / EBITDA ratio	**1.4x**	0.8x

Return on invested capital

Return on invested capital (ROIC) is calculated as adjusted operating profit less operating cash tax paid expressed as a percentage of average invested capital. Invested capital includes the original unamortised goodwill and intangibles. Average values for total invested capital are calculated as the average monthly balance for the year. ROIC is included as a non-GAAP measure as it is used by management and investors to track investment returns and by management to help inform capital allocation decisions within the business.

All figures in £ millions	2016	2015
Adjusted operating profit	**635**	723
Operating tax paid	**(63)**	(129)
Return	**572**	594
Average goodwill and other intangibles	**9,468**	8,715
Average net operating assets	**1,996**	1,602
Average invested capital	**11,464**	10,317
Return on invested capital	**5.0%**	5.8%

Shareholder information

Pearson ordinary shares are listed on the London Stock Exchange and on the New York Stock Exchange in the form of American Depositary Receipts.

Corporate website

The investors' section of our corporate website www.pearson.com/investors.html provides a wealth of information for shareholders. It is also possible to sign up to receive e-mail alerts for reports and press releases relating to Pearson at www.pearson.com/news/media/email-alert-signup.html

Shareholder information online

Shareholder information can be found on our website www.pearson.com/investors/investor-information.html

Our registrar, Equiniti, also provides a range of shareholder information online. You can check your holding and find practical help on transferring shares or updating your details at www.shareview.co.uk. For more information, please contact our registrar, Equiniti, Aspect House, Spencer Road, Lancing, West Sussex, BN99 6DA. Telephone 0371 384 2233* or, for those shareholders with hearing difficulties, textphone number 0371 384 2255*.

Information about the Pearson share price

The company's share price can be found on our website at www.pearson.com. It also appears in the financial columns of the national press.

2016 dividends

	Payment date	Amount per share
Interim	16 September 2016	18 pence
Final	12 May 2017	34 pence

Payment of dividends to mandated accounts

Should you elect to have your dividends paid through BACS, this can be done directly into a bank or building society account, with the tax voucher sent to the shareholder's registered address. Equiniti can be contacted for information on 0371 384 2043*.

Dividend reinvestment plan (DRIP)

The DRIP gives shareholders the right to buy the company's shares on the London stock market with their cash dividend. For further information, please contact Equiniti on 0371 384 2268*.

Individual Savings Accounts (ISAs)

Equiniti offers ISAs in Pearson shares. For more information, please go to www.shareview.co.uk/dealing or call customer services on 0345 300 0430*.

Share dealing facilities

Equiniti offers telephone and internet services for dealing in Pearson shares. For further information, please contact their telephone dealing helpline on 03456 037 037* or, for online dealing, log on to www.shareview.co.uk/dealing. You will need your shareholder reference number as shown on your share certificate.

A postal dealing service is also available through Equiniti. Please telephone 0371 384 2248* for details or log on to www.shareview.co.uk to download a form.

ShareGift

Shareholders with small holdings of shares, whose value makes them uneconomic to sell, may wish to donate them to ShareGift, the share donation charity (registered charity number 1052686). Further information about ShareGift and the charities it has supported may be obtained from their website, www.ShareGift.org or by contacting them at ShareGift, PO Box 72253, London, SW1P 9LQ.

American Depositary Receipts (ADRs)

Pearson's ADRs are listed on the New York Stock Exchange and traded under the symbol PSO. Each ADR represents one ordinary share. For enquiries regarding registered ADR holder accounts and dividends, please contact Bank of New York Mellon, Shareholder Correspondence (ADR), PO Box 30170, College Station, TX 77842-3170, telephone 1 (866) 259 2289 (toll free within the US) or 001 201 680 6825 (outside the US). Alternatively, you may e-mail shrrelations@cpushareownerservices.com

Voting rights for registered ADR holders can be exercised through Bank of New York Mellon, and for beneficial ADR holders (and/or nominee accounts) through your US brokerage institution. Pearson will file with the Securities and Exchange Commission a Form 20-F.

* Lines open 8.30 am to 5.30 pm Monday to Friday (excluding UK public holidays).

Share register fraud: protecting your investment

Pearson does not contact its shareholders directly to provide recommendation advice and neither does it appoint third parties to do so. As required by law, our shareholder register is available for public inspection but we cannot control the use of information obtained by persons inspecting the register. Please treat any approaches purporting to originate from Pearson with caution.

For more information, please log on to our website at www.pearson.com/investors/managing-your-shares/share-register-fraud.html

Tips on protecting your shares

- Keep any documentation that contains your shareholder reference number in a safe place and shred any unwanted documentation
- Inform our registrar, Equiniti, promptly when you change address
- Be aware of dividend payment dates and contact the registrar if you do not receive your dividend cheque or better still, make arrangements to have the dividend paid directly into your bank account
- Consider holding your shares electronically in a CREST account via a nominee.

2017 financial calendar

Ex-dividend date	**6 April**
Record date	**7 April**
Last date for dividend reinvestment election	**20 April**
Annual General Meeting	**5 May**
Payment date for dividend and share purchase date for dividend reinvestment	**12 May**