

Financial statements

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Independent auditors' report to the members of Pearson plc

Report on the audit of the financial statements

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 at 31 December 2019 and of the Group's profit and the Group's and the company's cash flows for the year then ended;
- › have been properly prepared in accordance with International Financial Reporting Standards (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
- › 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.

We have audited the financial statements, included within the Annual Report and Accounts (the "Annual Report"), which comprise: the consolidated and company balance sheets at 31 December 2019; the consolidated income statement and consolidated statement of comprehensive income, the consolidated and company cash flow statements and the consolidated and company statements of changes in equity for the year then ended; and the notes to the financial statements, which include a description of the significant accounting policies.

Our opinion is consistent with our reporting to the Audit Committee.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (UK) ("ISAs (UK)") and applicable law. Our responsibilities under ISAs (UK) are further described in the auditors' responsibilities for the audit of the financial statements section of our report. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Independence

We remained independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the UK, which includes the FRC's Ethical Standard, as applicable to listed public interest entities, and we have fulfilled our other ethical responsibilities in accordance with these requirements.

To the best of our knowledge and belief, we declare that non-audit services prohibited by the FRC's Ethical Standard were not provided to the Group or to the company.

Other than those disclosed in note 4 to the consolidated financial statements, we have provided no non-audit services to the Group or to the company in the period from 1 January 2019 to 31 December 2019.

Our audit approach



Overview

Materiality

- › Overall Group materiality: £27 million (2018: £25 million) based on approximately 5% of adjusted profit before tax.
- › Overall company materiality: £49 million (2018: £45 million) based on approximately 1% of net assets.

Audit scope

- › We conducted work in four key territories, being the UK, US, Brazil and Italy. This included full scope audits at four reporting components and specific audit procedures at a further eight components. In addition, we obtained an audit opinion on the financial information reported by the US component of the Group's associate, Penguin Random House.
- › The territories where we conducted audit procedures, together with work performed at corporate functions and at the Group level, accounted for approximately: 73% of the Group's revenue; 73% of the Group's statutory profit before tax; and 73% of the Group's adjusted profit before tax.

Areas of focus for the 2019 audit were as follows:

- › Carrying values of goodwill and acquired intangible assets (Group)
- › Returns provisioning (Group)
- › Recoverability of pre-publication assets (Group)
- › Provisions for uncertain tax positions (Group)
- › Finance transformation (Group)
- › Disposals (Group)
- › Risk of fraud in revenue recognition (Group)
- › Carrying values of investments in subsidiaries (company)

The scope of our audit

As part of designing our audit, we determined materiality and assessed the risks of material misstatement in the financial statements.

Capability of the audit in detecting irregularities, including fraud

Based on our understanding of the Group and the industry in which it operates, we identified that the principal risks of non-compliance with laws and regulations related to failure to comply with UK and international tax regulations and we considered the extent to which non-compliance might have a material effect on the financial statements. We also considered those laws and regulations that have a direct impact on the preparation of the financial statements such as the Companies Act 2006. We evaluated management's incentives and opportunities for fraudulent manipulation of the financial statements (including the risk of override of controls) and determined that the principal risks were related to posting inappropriate journal entries, management bias in accounting for estimates including estimates relating to revenue recognition and manipulation of cut-off of shipments at major warehouse locations. The Group engagement team shared this risk assessment with the component auditors so that they could include appropriate audit procedures in response to such risks in their work. Audit procedures performed by the Group engagement team and/or component auditors included:

- › Discussions with management, internal audit and the Group's legal advisors, including consideration of known or suspected instances of non-compliance with laws and regulations and fraud;
- › Evaluation of the effectiveness of management's controls designed to prevent and detect irregularities;
- › Identification and testing of significant manual journal entries; and
- › Testing of assumptions and judgements made by management in making significant accounting estimates.

There are inherent limitations in the audit procedures described above and the further removed non-compliance with laws and regulations is from the events and transactions reflected in the financial statements, the less likely we would become aware of it. Also, the risk of not detecting a material misstatement due to fraud is higher than the risk of not detecting one resulting from error as fraud may involve deliberate concealment by, for example, forgery or intentional misrepresentations or through collusion.

Independent auditors' report to the members of Pearson plc

Key audit matters

Key audit matters are those matters that, in the auditors' professional judgement, were of most significance in the audit of the financial statements of the current period and include the most significant assessed risks of material misstatement (whether or not due to fraud) identified by the auditors, including those which had the greatest effect on: the overall audit strategy; the allocation of resources in the audit; and directing the efforts of the engagement team. These matters, and any comments we make on the results of our procedures thereon, were addressed in the context of our audit of the financial statements as a whole and in forming our opinion thereon and we do not provide a separate opinion on these matters. This is not a complete list of all risks identified by our audit.

Significant issues considered by the Audit Committee

Key audit matter

How our audit addressed the key audit matter

→ Carrying values of goodwill and acquired intangible assets

Refer to note 11 in the consolidated financial statements.

The Group recorded goodwill of £2,139m (2018: £2,111m) and acquired intangible assets of £310m (2018: £451m) at 31 December 2019, including acquired customer lists, contracts and relationships, acquired trademarks and brands and acquired publishing rights.

The carrying values of goodwill and intangible assets are dependent on estimates of future cash flows of the underlying cash generating units (CGUs) and there is a risk that if management does not achieve these cash flow estimates it could give rise to further impairment charges. This risk increases in periods when the Group's trading performance and projections do not meet expectations.

The impairment reviews performed by management contain a number of significant judgements and estimates. Changes in these assumptions can result in materially different impairment charges or available headroom.

In addition, management has changed the level at which certain reporting units are monitored and reported in 2019 as a result of the continued roll-out of the Group's new ERP system and following the disposal of the US K12 Courseware business, thereby requiring a change in CGU determination and a reallocation of goodwill to the new CGU groupings.

An impairment charge of £65m has been recorded in 2019 relating to Brazil which has been applied against Brazil's acquired intangible assets.

We tested management's CGU reassessment and reallocation of goodwill within these newly defined CGUs and we evaluated the methodology applied by management to reallocate goodwill. We assessed whether return on asset measures encompassing goodwill are monitored or measured at a level lower than management's revised CGU groupings.

We obtained management's value in use impairment model at 31 December 2019 and we tested its mathematical integrity, including validating forecasts and carrying values included in management's model.

Our procedures have been focused on the North American Courseware, OPM, Core and Brazil CGUs where headroom is lower or more sensitive to changes in key assumptions.

We agreed the forecast cash flows to Board approved budgets and strategic plans and we assessed how these budgets and strategic plans are compiled. We evaluated management's related judgements and estimates, including short-term revenue and operating profit growth rates, cash conversion, corporate cost allocations and restructuring savings. We compared management's forecasts and key assumptions to industry projections and comparable companies where this information was available.

Management has applied a longer forecast period extending until 2030 for specific cash flow projections for the OPM CGU compared to the three year period covered by the Group's strategic planning process, which is applied to all other CGUs. We evaluated the rationale why a longer period was appropriate for OPM and why management was able to prepare reliable forecasts over the longer-term.

We deployed valuations experts 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 compared management's valuations with third party valuations implied by trading and transaction multiples of the Group's competitors where this information was available for specific CGUs.

Where an impairment was identified by management relating to the Brazil CGU based on value in use, we tested the calculation of the impairment charge and we ensured that the fair value less costs of disposal would not give rise to a higher recoverable amount for this CGU.

We performed our own independent sensitivity analyses to understand the impact of reasonably possible changes to key assumptions. We assessed the appropriateness of management's decision to provide additional disclosures about sensitivities in note 11 of the financial statements in relation to the North American Courseware, OPM, Core and Brazil CGUs. More broadly, we considered whether the disclosures in note 11 complied with IAS 36.

Based on the procedures performed, we noted no material issues arising from our work.

Key audit matter

How our audit addressed the key audit matter

→ Returns provisioning

Refer to notes 3 and 24 in the consolidated financial statements.

The Group has provided £122m (2018: £173m) for sales returns at 31 December 2019. The most significant exposure to potential returns within the Group arises in the US Higher Education Courseware business. Trends in the US market, including the growth of textbook rentals and the availability of free online content, continue to affect this business and have the potential to impact returns levels if shipping practices and arrangements with retailers are not managed in response to these trends.

Management provides for returns based on past experience by customer and channel. In 2019, management changed its methodology to apply a two year historical returns average compared to three years previously in response to market changes and related changes to customer buying patterns.

We assessed management's evaluation of market trends and the Group's responses and we considered whether management's revised provisioning methodology is appropriate in this context.

We tested the returns provision calculations at 31 December 2019 and we agreed inputs including historical sales and actual returns experience to underlying records. We performed detailed testing over shipment and returns levels around the year-end and we evaluated whether these gave rise to an increased risk of future returns. We considered the reduction in the provision for sales returns in 2019 by reference to the related reduction in US Higher Education Courseware sales.

We evaluated whether management had adopted methods and reached estimates for future returns that were supportable and appropriate.

Based on the procedures performed, we noted no material issues arising from our work.

→ Recoverability of pre-publication assets

Refer to note 20 in the consolidated financial statements.

The Group holds £870m (2018: £817m) of pre-publication assets at 31 December 2019. 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 judgement is further complicated by the transition to digital as the Group invests in new, less proven, inter-linked digital content and platforms.

We assessed the appropriateness of capitalisation and amortisation policies and we considered whether these policies had been consistently applied. We selected a sample of costs to test their magnitude and appropriateness for capitalisation. We evaluated the reasonableness of amortisation periods and profiles compared to sales forecasts and historical sales experience, including considering the impact 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 we obtained supporting evidence for management's explanations.

Based on the procedures performed, we noted no material issues arising from our work.

→ Provisions for uncertain tax positions

Refer to notes 7 and 34 in the consolidated financial statements.

The Group is subject to several tax regimes due to the geographical diversity of its businesses. At 31 December 2019, the Group held provisions for uncertain tax positions of £152m (2018: £181m).

Management is required to exercise significant judgement in determining the appropriate amount to provide in respect of potential tax exposures and uncertain tax positions. The most significant provisions relate to US tax, transfer pricing and tax on prior year disposals. In addition, there are material unprovided tax exposures related to EU state aid and a Brazilian tax authority assessment related to goodwill amortisation deductions.

Changes in assumptions about the views that might be taken by tax authorities can materially impact the level of provisions recorded in the consolidated financial statements.

We engaged our tax specialists in the US and UK and we obtained an understanding of the Group's tax strategy and risks. We assessed the tax impact of business developments in 2019, including the disposal of the US K12 Courseware business and internal refinancing transactions. We recalculated the Group's tax provisions and determined whether the treatments adopted were in line with the Group's tax policies and had been applied consistently.

We evaluated the key underlying assumptions, particularly in the US and UK. In making this evaluation, we considered the status of tax authority audits and enquiries. We considered the basis and support in particular for provisions not subject to tax audit in comparison with our experience of similar situations at comparable companies. We evaluated whether any risk of material misstatement existed for uncertain tax position provisioning outside of the US and UK.

We evaluated the consistency of management's approach to establishing or changing prior provision estimates and we validated that changes in prior provisions reflected a change in facts and circumstances during 2019. Where provisions have not been established, including for material potential exposures like EU state aid and the assessment from the Brazilian tax authority, we evaluated the basis for management's judgements, including an assessment of the treatment of similar exposures at comparable companies. We evaluated third party advice obtained by the Group as we independently formed our own view about the likelihood of these possible tax risks crystallising in future cash outflows.

We noted that the assumptions and judgements required to formulate these provisions mean that the range of possible outcomes is broad. We evaluated the disclosures in notes 7 and 34 in relation to uncertain tax provisions and we considered whether the disclosures were consistent with the underlying positions and with the requirements of IAS 1 and IAS 12. In addition, we considered the Group's application of IFRIC 23 with effect from 1 January 2019.

Based on the procedures performed, we noted no material issues arising from our work.

Independent auditors' report to the members of Pearson plc

Key audit matter

How our audit addressed the key audit matter

→ Finance transformation

The Group has continued to implement significant change across its finance function in 2019 with the continued roll-out of The Enabling Programme (TEP) and the organisational change resulting from implementing the target operating model. The ERP system roll-out continued in 2019 with certain US businesses going live and finance transaction processing activities were migrated to offshore shared service centres.

This change represents a risk as controls and processes that have been established and embedded over a number of years are changed and migrated to the new ERP system environment and into new shared service centres. There is an increased risk of break-down in internal control during the transition.

We centrally managed the work performed by component audit teams at Pearson Finance Services and in migrating markets like the US, which consisted of controls and substantive transaction testing, and we conducted oversight visits to key sites impacted by the transformation activities to direct the work performed.

We evaluated the design and tested the operating effectiveness of key automated and manual controls after the migration including IT general controls and controls in respect of data migration into the new ERP system environment. We also tested balance sheet reconciliations for migrating entities to identify any migration issues. Where issues were identified, we performed testing of compensating controls and we increased the level of substantive transaction testing to address any residual risk.

→ Disposals

Refer to note 31 in the consolidated financial statements.

In March 2019, the Group completed the disposal of its US K12 Courseware business, resulting in a pre-tax profit of £13m. Total proceeds amounted to £200m of which £180m is deferred.

Accounting for the transaction required management judgement and estimation to establish the fair value of the deferred proceeds related to an unconditional vendor note for \$225m and an entitlement to 20% of future cash flows to equity holders and to 20% of net proceeds in the event of a subsequent sale of K12. Changes to the assumptions applied by management in establishing the fair value of the deferred proceeds could have a material effect on the profit on disposal.

We reviewed the sale agreement and we vouched the cash received. We assessed the net assets disposed by reference to the audited balance sheet of K12 at 31 December 2018, understanding and evaluating any subsequent movements in key balances. We validated the cash held on the completion balance sheet and we recalculated management's goodwill allocation. We tested a sample of the transaction costs.

We focused our assessment on the valuation of the deferred proceeds at the date of disposal. The vendor note and earn-out receivables are measured at fair value which is calculated as the present value of the expected future cash flows, meaning that the fair value is impacted by both the quantum and timing of any future payments from the vendor. We assessed management's assumptions related to the expected payment profile of the vendor note, the expected timing of the vendor's potential exit and the estimated equity value of K12 at that time. We compared management's assumptions against external evidence where available. We performed our own independent sensitivity analyses to understand the impact of reasonably possible changes in the key assumptions.

We deployed our treasury specialists to test the appropriateness of the discount rate used to present value the future cash flows and to assess management's classification of these receivables as fair value through profit and loss as defined by IFRS 9.

We have subsequently tested management's remeasurement and disclosure of these receivables at 31 December 2019.

We separately considered management's decision to classify Penguin Random House (PRH) as held for sale at year-end and whether the announcement of the sale of the Group's stake in December 2019 crystallised any impairment, comparing the carrying value of PRH's net assets with the contracted disposal proceeds.

Based on the procedures performed, we noted no material issues arising from our work.

→ Risk of fraud in revenue recognition

Refer to note 3 in the consolidated financial statements.

Certain of the Group's businesses in the US and UK enter into 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 services.

These contracts generate material deferred revenue balances and changes to the underlying assumptions or estimation calculations could have a material effect on the consolidated financial statements.

For a selection of the larger, more judgemental and more recent long-term contracts, covering both assessment activities and online delivery of teaching, we read the contracts and we assessed the accounting methodologies being applied to calculate the proportion of revenue being recognised in 2019. We considered whether management's revenue recognition practices are in accordance with Group policies and related accounting standards and have been consistently applied.

We tested costs incurred to date and management's estimates of forecast costs and revenues by reference to historical experience and current contract status. We recalculated management's percentage of completion estimates and we performed look-back tests to assess management's historical accuracy of forecasting for these types of arrangement.

In addition, we performed manual journals testing focusing on unusual or unexpected entries to revenue.

Based on the procedures performed, we noted no material issues arising from our work.

Key audit matter

How our audit addressed the key audit matter

→ Carrying values of investments in subsidiaries

Refer to note 2 in the company financial statements.

The company holds investments in subsidiaries amounting to £6,664m (2018: £6,710m) at 31 December 2019.

Investments in subsidiaries are accounted for at cost less provision for impairment in the company balance sheet. Investments are tested for impairment if impairment indicators exist. If such indicators exist, the recoverable amounts of investments in subsidiaries are estimated in order to determine the extent of the impairment loss, if any. Any such impairment loss is recognised in the income statement.

The impairment assessment was identified as a key audit matter given the size of the underlying investment carrying values and the differential to the Group's market capitalisation. Further impairment indicators were identified in connection with certain of the investments in subsidiaries due to the carrying value of investments exceeding their net assets. The assessment required the application of management judgement, particularly in determining whether any impairment indicators have arisen that trigger the need for an impairment assessment and in assessing whether the carrying value of each investment can be supported by the recoverable amount. Changes to these judgements and estimates could have a material impact on the company financial statements.

We evaluated management's assessment whether any indicators of impairment existed by comparing the carrying values of investments in subsidiaries with their net assets at 31 December 2019.

For investments where the net assets were lower than the carrying values, we assessed their recoverable value by reference to the value in use of the investments compared to their carrying values at 31 December 2019. Where applicable, we verified that the recoverable values of investments were consistent with the recoverable values of the related CGUs tested for goodwill impairment purposes, leveraging the audit work undertaken as part of the Group audit.

We separately evaluated the difference between the investment carrying values and the Group's market capitalisation.

Based on the procedures performed, we noted no material issues arising from our work.

How we tailored the audit scope

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

The consolidated financial statements are a consolidation of 565 reporting units, each of which is considered to be a component. We identified four components in the UK, US and Italy that required a full scope audit due to their size. Audit procedures over specific financial statement line items were performed at a further eight components in the UK, US and Brazil to achieve appropriate audit coverage. In addition, we obtained an audit opinion on the financial information reported by the US component of the Group's associate, Penguin Random House.

In establishing the overall approach to the Group audit, we determined the type of work that needed to be performed at the components 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.

We performed full scope audits in respect of NCS Pearson, Pearson Education US, Pearson Education UK, Pearson Italy and Penguin Random House US.

We performed specified procedures at a further eight components over financial statement line items including revenue, trade and other receivables and deferred income, cash, intangible assets, accruals, provisions for returns, product development and amortisation, fixed assets and depreciation, cost of sales and operating expenses.

This ensured that sufficient and appropriate audit procedures were performed to achieve sufficient coverage over these financial statement line items.

In addition to instructing and reviewing the reporting from our component audit teams, we conducted visits to component teams in the US (New York and Minneapolis), Italy, Brazil and the UK (Belfast) which included file reviews and attendance at key meetings with local management. We also had regular dialogue with component teams throughout the year.

The Group consolidation, financial statement disclosures and corporate functions were audited by the Group engagement team. This included our work over taxation, goodwill and acquired intangible assets, post-retirement benefits and major transactions.

Taken together, the components and corporate functions where we conducted audit procedures accounted for approximately 73% of the Group's revenue, 73% of the Group's statutory profit before tax and 73% of the Group's adjusted profit before tax. This provided the evidence we needed for our opinion on the consolidated financial statements taken as a whole. This was before considering the contribution to our audit evidence from performing audit work at the Group level, including disaggregated analytical review procedures, which covered certain of the Group's smaller and lower risk components that were not directly included in our Group audit scope.

Materiality

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

Independent auditors' report to the members of Pearson plc

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

	Group financial statements	Company financial statements
Overall materiality	£27 million (2018: £25 million)	£49 million (2018: £45 million)
How we determined it	Approximately 5% of adjusted profit before tax	Approximately 1% of net assets
Rationale for benchmark applied	The Group's principal measure of performance is adjusted operating profit (£581m), which excludes one-off gains and losses, costs of major restructuring and acquired intangible asset amortisation and impairment charges, in order to present results from operating activities on a consistent basis. We have taken this measure into account in determining our materiality. From adjusted operating profit, we deducted net finance costs.	We consider net assets to be an appropriate benchmark for a Group holding company. Certain account balances were included in scope for the Group audit and were audited to a materiality level set below overall materiality established for our audit of the consolidated financial statements.

For each component in the scope of our Group audit, we allocated a materiality that is less than our overall Group materiality. The range of materiality allocated across components was £4 million to £20 million. We agreed with the Audit Committee that we would report to them misstatements identified during our audit above £2 million (2018: £2 million) for the Group and company audits as well as misstatements below those amounts that, in our view, warranted reporting for qualitative reasons.

Going concern

In accordance with ISAs (UK) we report as follows:

Reporting obligation	Outcome
We are required to report if we have anything material to add or draw attention to in respect of the Directors' statement in the financial statements about whether the Directors considered it appropriate to adopt the going concern basis of accounting in preparing the financial statements and the Directors' identification of any material uncertainties to the Group's and the company's ability to continue as a going concern over a period of at least twelve months from the date of approval of the financial statements.	We have nothing material to add or to draw attention to. However, because not all future events or conditions can be predicted, this statement is not a guarantee as to the company's ability to continue as a going concern. For example, the terms of the United Kingdom's withdrawal from the European Union are not clear and it is difficult to evaluate all of the potential implications on the Group's trade, customers, suppliers and the wider economy.
We are required to report if the Directors' statement relating to going concern in accordance with Listing Rule 9.8.6R(3) is materially inconsistent with our knowledge obtained in the audit.	We have nothing to report.

Reporting on other information

The other information comprises all of the information in the Annual Report other than the financial statements and our auditors' report thereon. The Directors are responsible for the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except to the extent otherwise explicitly stated in this report, any form of assurance thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit or otherwise appears to be materially misstated. If we identify an apparent material inconsistency or material misstatement, we are required to perform procedures to conclude whether there is a material misstatement of the financial statements or a material misstatement of the other information. If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report based on these responsibilities.

With respect to the Strategic Report and Governance Report, we also considered whether the disclosures required by the UK Companies Act 2006 have been included.

Based on the responsibilities described above and our work undertaken in the course of the audit, the Companies Act 2006 (CA06), ISAs (UK) and the Listing Rules of the Financial Conduct Authority (FCA) require us also to report certain opinions and matters as described below (required by ISAs (UK) unless otherwise stated).

Strategic Report and Governance Report

In our opinion, based on the work undertaken in the course of the audit, the information given in the Strategic Report and Governance Report for the year ended 31 December 2019 is consistent with the financial statements and has been prepared in accordance with applicable legal requirements. (CA06)

In light of the knowledge and understanding of the Group and company and their environment obtained in the course of the audit, we did not identify any material misstatements in the Strategic Report and Governance Report. (CA06)

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

We have nothing material to add or draw attention to regarding:

- › The Directors' confirmation on p40 of the Annual Report that they have carried out a robust assessment of the principal risks facing the Group, including those that would threaten its business model, future performance, solvency or liquidity;
- › The disclosures in the Annual Report that describe those risks and explain how they are being managed or mitigated; and
- › The Directors' explanation on p50 of the Annual Report as to how they have assessed the prospects of the Group, over what period they have done so and why they consider that period to be appropriate and their statement on p107 of the Annual Report as to whether they have a reasonable expectation that the Group will be able to continue in operation and meet its liabilities as they fall due over the period of their assessment, including any related disclosures drawing attention to any necessary qualifications or assumptions.

We have nothing to report having performed a review of the Directors' statement that they have carried out a robust assessment of the principal risks facing the Group and statement in relation to the longer-term viability of the Group. Our review was substantially less in scope than an audit and only consisted of making inquiries and considering the Directors' process supporting their statements; checking that the statements are in alignment with the relevant provisions of the UK Corporate Governance Code (the "Code"); and considering whether the statements are consistent with the knowledge and understanding of the Group and company and their environment obtained in the course of the audit. (Listing Rules)

Other Code provisions

We have nothing to report in respect of our responsibility to report when:

- › The statement given by the Directors, on p111, that they consider the Annual Report taken as a whole to be fair, balanced and understandable and provides the information necessary for the members to assess the Group's and company's position and performance, business model and strategy is materially inconsistent with our knowledge of the Group and company obtained in the course of performing our audit;
- › The section of the Annual Report on p80 and 81 describing the work of the Audit Committee does not appropriately address matters communicated by us to the Audit Committee; and
- › The Directors' statement relating to the company's compliance with the Code does not properly disclose a departure from a relevant provision of the Code specified, under the Listing Rules, for review by the auditors.

Directors' Remuneration

In our opinion, the part of the Directors' Remuneration Report to be audited has been properly prepared in accordance with the Companies Act 2006. (CA06)

Responsibilities for the financial statements and the audit

Responsibilities of the Directors for the financial statements

As explained more fully in the Statement of Directors' Responsibilities set out on p112, the Directors are responsible for the preparation of the financial statements in accordance with the applicable framework and for being satisfied that they give a true and fair view. The Directors are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Directors are responsible for assessing the Group's and the company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Group or the company or to cease operations or have no realistic alternative but to do so.

Auditors' responsibilities for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditors' report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs (UK) will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

A further description of our responsibilities for the audit of the financial statements is located on the FRC's website at: www.frc.org.uk/auditorsresponsibilities. This description forms part of our auditors' report

Use of this report

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.

Other required reporting

Companies Act 2006 exception reporting

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

- › we have not received all the information and explanations we require for our audit; or
- › adequate accounting records have not been kept by the company or returns adequate for our audit have not been received from branches not visited by us; or
- › certain disclosures of Directors' remuneration specified by law are not made; or
- › the company financial statements and the part of the Directors' Remuneration Report to be audited are not in agreement with the accounting records and returns.

We have no exceptions to report arising from this responsibility.

Appointment

Following the recommendation of the Audit Committee, we were appointed by the members on 6 February 1996 to audit the financial statements for the year ended 31 December 1996 and subsequent financial periods. The period of total uninterrupted engagement is 24 years, covering the years ended 31 December 1996 to 31 December 2019.

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

6 March 2020

Consolidated income statement

Year ended 31 December 2019

All figures in £ millions	Notes	2019	2018
Continuing operations			
Sales	2	3,869	4,129
Cost of goods sold	4	(1,858)	(1,943)
Gross profit		2,011	2,186
Operating expenses	4	(1,806)	(1,907)
Other net gains and losses	4	16	230
Share of results of joint ventures and associates	12	54	44
Operating profit	2	275	553
Finance costs	6	(84)	(91)
Finance income	6	41	36
Profit before tax		232	498
Income tax	7	34	92
Profit for the year		266	590
Attributable to:			
Equity holders of the company		264	588
Non-controlling interest		2	2
Earnings per share attributable to equity holders of the company during the year (expressed in pence per share)			
– basic	8	34.0p	75.6p
– diluted	8	34.0p	75.5p

Consolidated statement of comprehensive income

Year ended 31 December 2019

All figures in £ millions	Notes	2019	2018
Profit for the year		266	590
Items that may be reclassified to the income statement			
Net exchange differences on translation of foreign operations – Group		(113)	91
Net exchange differences on translation of foreign operations – associates		(2)	(1)
Currency translation adjustment disposed		4	(4)
Attributable tax	7	5	(4)
Items that are not reclassified to the income statement			
Fair value gain on other financial assets		20	8
Attributable tax	7	(4)	–
Remeasurement of retirement benefit obligations – Group	25	(145)	22
Remeasurement of retirement benefit obligations – associates		(4)	3
Attributable tax	7	22	9
Other comprehensive (expense)/income for the year	29	(217)	124
Total comprehensive income for the year		49	714
Attributable to:			
Equity holders of the company		47	712
Non-controlling interest		2	2

Consolidated balance sheet

As at 31 December 2019

All figures in £ millions	Notes	2019	2018
Assets			
Non-current assets			
Property, plant and equipment	10	618	237
Intangible assets	11	2,900	3,009
Investments in joint ventures and associates	12	7	392
Deferred income tax assets	13	59	60
Financial assets – derivative financial instruments	16	29	67
Retirement benefit assets	25	429	571
Other financial assets	15	122	93
Trade and other receivables	22	313	100
		4,477	4,529
Current assets			
Intangible assets – pre-publication	20	870	817
Inventories	21	169	164
Trade and other receivables	22	1,275	1,178
Financial assets – derivative financial instruments	16	25	1
Cash and cash equivalents (excluding overdrafts)	17	437	568
		2,776	2,728
Assets classified as held for sale	32	397	648
Total assets		7,650	7,905
Liabilities			
Non-current liabilities			
Financial liabilities – borrowings	18	(1,572)	(674)
Financial liabilities – derivative financial instruments	16	(24)	(36)
Deferred income tax liabilities	13	(48)	(136)
Retirement benefit obligations	25	(92)	(100)
Provisions for other liabilities and charges	23	(13)	(145)
Other liabilities	24	(86)	(155)
		(1,835)	(1,246)

Consolidated balance sheet continued

As at 31 December 2019

All figures in £ millions	Notes	2019	2018
Current liabilities			
Trade and other liabilities	24	(1,278)	(1,400)
Financial liabilities – borrowings	18	(92)	(46)
Financial liabilities – derivative financial instruments	16	(15)	(23)
Current income tax liabilities		(55)	(72)
Provisions for other liabilities and charges	23	(52)	(20)
		(1,492)	(1,561)
Liabilities classified as held for sale	32	–	(573)
Total liabilities		(3,327)	(3,380)
Net assets		4,323	4,525
Equity			
Share capital	27	195	195
Share premium	27	2,614	2,607
Treasury shares	28	(24)	(33)
Capital redemption reserve		11	11
Fair value reserve		39	19
Translation reserve		567	678
Retained earnings		911	1,039
Total equity attributable to equity holders of the company		4,313	4,516
Non-controlling interest		10	9
Total equity		4,323	4,525

These financial statements have been approved for issue by the Board of Directors on 6 March 2020 and signed on its behalf by



Coram Williams
Chief Financial Officer

Consolidated statement of changes in equity

Year ended 31 December 2019

All figures in £ millions	Equity attributable to equity holders of the company								Non-controlling interest	Total equity
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Fair value reserve	Translation reserve	Retained earnings	Total		
At 1 January 2019	195	2,607	(33)	11	19	678	1,039	4,516	9	4,525
Adjustment on initial application of IFRS 16 net of tax (see note 1b)	-	-	-	-	-	-	(83)	(83)	-	(83)
Adjustment on initial application of IFRIC 23 net of tax (see note 1c)	-	-	-	-	-	-	5	5	-	5
At 1 January 2019 (restated)	195	2,607	(33)	11	19	678	961	4,438	9	4,447
Profit for the year	-	-	-	-	-	-	264	264	2	266
Other comprehensive income/(expense)	-	-	-	-	20	(111)	(126)	(217)	-	(217)
Total comprehensive income/(expense)	-	-	-	-	20	(111)	138	47	2	49
Equity-settled transactions	-	-	-	-	-	-	25	25	-	25
Tax on equity-settled transactions	-	-	-	-	-	-	(5)	(5)	-	(5)
Issue of ordinary shares under share option schemes	-	7	-	-	-	-	-	7	-	7
Buyback of equity	-	-	-	-	-	-	-	-	-	-
Purchase of treasury shares	-	-	(52)	-	-	-	-	(52)	-	(52)
Release of treasury shares	-	-	61	-	-	-	(61)	-	-	-
Transfer of gain on disposal of FVOCI investment	-	-	-	-	-	-	-	-	-	-
Dividends	-	-	-	-	-	-	(147)	(147)	(1)	(148)
At 31 December 2019	195	2,614	(24)	11	39	567	911	4,313	10	4,323

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

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

Consolidated cash flow statement

Year ended 31 December 2019

All figures in £ millions	Notes	2019	2018
Cash flows from operating activities			
Net cash generated from operations	33	480	547
Interest paid		(81)	(42)
Tax paid		(30)	(43)
Net cash generated from operating activities		369	462
Cash flows from investing activities			
Acquisition of subsidiaries, net of cash acquired	30	(45)	(5)
Additional capital invested in associates		(40)	–
Purchase of investments		(12)	(10)
Purchase of property, plant and equipment		(55)	(70)
Purchase of intangible assets		(138)	(130)
Disposal of subsidiaries, net of cash disposed	31	(101)	83
Proceeds from sale of associates	31	–	18
Proceeds from sale of investments		5	6
Proceeds from sale of property, plant and equipment	33	1	128
Proceeds from sale of liquid resources		–	10
Lease receivables repaid		26	–
Loans (advance to)/repaid by related parties		(49)	46
Investment in liquid resources		–	(2)
Interest received		17	20
Investment income		2	–
Dividends received from joint ventures and associates		64	117
Net cash (used in)/generated from investing activities		(325)	211
Cash flows from financing activities			
Proceeds from issue of ordinary shares	27	7	6
Buyback of equity	27	–	(153)
Purchase of treasury shares		(52)	–
Proceeds from borrowings		230	–
Repayment of borrowings		(48)	(441)
Repayment of lease liabilities		(91)	(4)
Dividends paid to company's shareholders	9	(147)	(136)
Dividends paid to non-controlling interest		(1)	(1)
Net cash used in financing activities		(102)	(729)
Effects of exchange rate changes on cash and cash equivalents		(33)	(49)
Net decrease in cash and cash equivalents		(91)	(105)
Cash and cash equivalents at beginning of year		525	630
Cash and cash equivalents at end of year	17	434	525

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 6 March 2020.

1a. Accounting policies

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

Basis of preparation

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

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

1. Interpretations and amendments to published standards effective 2019 – The following standards were adopted in 2019:

- › IFRS 16 Leases
- › IFRIC 23 Uncertainty over Income Tax Treatments
- › IFRS 9 and IFRS 7 Amendments

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

A number of other new pronouncements are also effective from 1 January 2019 but they do not have a material impact on the consolidated financial statements, or the company financial statements. Additional disclosure has been given where relevant.

2. Standards, interpretations and amendments to published standards that are not yet effective – A number of other new standards and amendments to standards and interpretations are effective for annual periods beginning after 1 January 2020, and have not been applied in preparing these financial statements. None of these is expected to have a material impact on the consolidated financial statements, or the company financial statements.

3. Critical accounting assumptions and judgements – The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting assumptions. It also requires management to exercise its judgement in the process of applying the Group's accounting policies.

The areas requiring a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the consolidated financial statements, are discussed in the relevant accounting policies under the following headings and in the notes to the accounts where appropriate:

Intangible assets: Goodwill
Intangible assets: Pre-publication assets
Taxation
Revenue: Provisions for returns
Employee benefits: Pensions

In addition, certain assumptions have been used and judgements exercised in the valuation of the other receivable which arose on the disposal of the US K12 Courseware business (see note 14).

Consolidation

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

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

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

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

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

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

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

1a. Accounting policies continued

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.

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

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

Foreign currency translation

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

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

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

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

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

The principal overseas currency for the Group is the US dollar. The average rate for the year against sterling was \$1.28 (2018: \$1.34) and the year-end rate was \$1.32 (2018: \$1.27).

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.

Notes to the consolidated financial statements

1a. Accounting policies continued

Intangible assets

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

Goodwill is tested at least annually for impairment and carried at cost less accumulated impairment losses. An impairment loss is recognised to the extent that the carrying value of goodwill exceeds the recoverable amount. The recoverable amount is the higher of fair value less costs of disposal and value in use. These calculations require the use of estimates in respect of forecast cash flows and discount rates and significant management judgement in respect of CGU and cost allocation; impairment is a key source of estimation uncertainty and has a significant risk of resulting in a material adjustment to the carrying amount of relevant assets within the next financial year. A summary of these assets by CGU and 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 ten 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 relating to content 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. Pre-publication assets relating to product platforms are amortised over ten years or less being an estimate of the expected useful life.

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

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

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

Other financial assets

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

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

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

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

1a. Accounting policies continued

Inventories

Inventories are stated at the lower of cost and net realisable value. Cost is determined using the weighted average method or an approximation thereof, such as the first in first out (FIFO) method. The cost of finished goods and work in progress comprises raw materials, direct labour, other direct costs and related production overheads. Net realisable value is the estimated selling price in the ordinary course of business, less estimated costs necessary to make the sale. Provisions are made for slow-moving and obsolete stock.

Royalty advances

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

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

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

Cash and cash equivalents

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

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

Share capital

Ordinary shares are classified as equity.

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

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

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

Borrowings

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

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

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

Derivative financial instruments

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

For derivatives in a hedge relationship, the currency basis spread is excluded from the designation as a hedging instrument.

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.

Notes to the consolidated financial statements

1a. Accounting policies continued

Derivative financial instruments continued

The accounting treatment is summarised as follows:

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 and foreign exchange rates are offset by equal and opposite changes in the value of the derivative. When the Group's debt is swapped to floating rates, the contracts used are designated as fair value hedges.	Gains and losses on the derivative are reported in finance income or finance costs. However, an equal and opposite change is made to the carrying value of the debt (a 'fair value adjustment') with the benefit/cost reported in finance income or finance costs. The net result should be a zero charge on a perfectly effective hedge.	If the debt and derivative are disposed of, the value of the derivative and the debt (including the fair value adjustment) are reset to zero. Any resultant gain or loss is recognised in finance income or finance costs.
Non-hedge accounted contracts		
These are not designated as hedging instruments. Typically these are short-term contracts to convert debt back to fixed rates or foreign exchange contracts where a natural offset exists.	No hedge accounting applies.	

Taxation

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

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

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

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

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

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

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

Employee benefits

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

When the calculation results in a potential asset, the recognition of that asset is limited to the asset ceiling – that is the present value of any economic benefits available in the form of refunds from the plan or a reduction in future contributions. Management uses judgement to determine the level of refunds available from the plan in recognising an asset.

The determination of the pension cost and defined benefit obligation of the Group's defined benefit pension schemes depends on the selection of certain assumptions, which include the discount rate, inflation rate, salary growth and longevity (see note 25).

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions are charged or credited to equity in other comprehensive income in the period in which they arise.

The service cost, representing benefits accruing over the year, is included in the income statement as an operating cost. Net interest is calculated by applying the discount rate to the net defined benefit obligation and is presented as finance costs or finance income.

1a. Accounting policies continued

Employee benefits continued

Obligations for contributions to defined contribution pension plans are recognised as an operating expense in the income statement as incurred.

2. Other post-retirement obligations – The expected costs of post-retirement medical and life assurance benefits are accrued over the period of employment, using a similar accounting methodology as for defined benefit pension obligations. The liabilities and costs relating to significant other post-retirement obligations are assessed annually by independent qualified actuaries.

3. Share-based payments – The fair value of options or shares granted under the Group's share and option plans is recognised as an employee expense after taking into account the Group's best estimate of the number of awards expected to vest. Fair value is measured at the date of grant and is spread over the vesting period of the option or share. The fair value of the options granted is measured using an option model that is most appropriate to the award. The fair value of shares awarded is measured using the share price at the date of grant unless another method is more appropriate. Any proceeds received are credited to share capital and share premium when the options are exercised.

Provisions

Provisions are recognised if the Group has a present legal or constructive obligation as a result of past events, it is more likely than not that an outflow of resources will be required to settle the obligation and the amount can be reliably estimated. Provisions are discounted to present value where the effect is material.

Prior to 1 January 2019 the Group recognised a provision for onerous lease contracts when the expected benefits to be derived from a contract were less than the unavoidable costs of meeting the obligations under the contract. The calculation of onerous lease provisions involved estimates of potential sublet income, lease terms including rent free periods, void periods, lease incentives and running costs. On the initial application of IFRS 16 on 1 January 2019, onerous lease provisions have been offset against the relevant right-of-use asset (see note 23).

The provision was based on the present value of future payments for surplus leased properties under non-cancellable operating leases, net of estimated sub-leasing income.

Revenue recognition

The Group's revenue streams are courseware, assessments and services. Courseware includes curriculum materials provided in book form and/or via access to digital content. Assessments includes test development, processing and scoring services provided to governments, educational institutions, corporations and professional bodies. Services includes the operation of schools, colleges and universities, including sistemas in Brazil, as well as the provision of online learning services in partnership with universities and other academic institutions.

Revenue is recognised in order to depict the transfer of control of promised goods and services to customers in an amount that reflects the consideration to which we expect to be entitled in exchange for those goods and services. This process begins with the identification of our contract with a customer, which is generally through a master services agreement, customer purchase order, or a combination thereof. Within each contract, judgement is applied to determine the extent to which activities within the contract represent distinct performance obligations to be delivered and the total amount of transaction price to which we expect to be entitled.

The transaction price determined is net of sales taxes, rebates and discounts, and after eliminating sales within the Group. Where a contract contains multiple performance obligations such as the provision of supplementary materials or online access with textbooks, revenue is allocated on the basis of relative standalone selling prices. Where a contract contains variable consideration significant estimation is required to determine the amount to which the Group is expected to be entitled.

Revenue is recognised on contracts with customers when or as performance obligations are satisfied which is the period or the point in time where control of goods or services transfers to the customer. Judgement is applied to determine first whether control passes over time and if not, then the point in time at which control passes. Where revenue is recognised over time judgement is used to determine the method which best depicts the transfer of control. Where an input method is used significant estimation is required to determine the progress towards delivering the performance obligation.

Revenue from the sale of books is recognised net of a provision for anticipated returns. This provision is based primarily on historical return rates, customer buying patterns and retailer behaviours including stock levels (see note 22). If these estimates do not reflect actual returns in future periods then revenues could be understated or overstated for a particular period. When the provision for returns is remeasured at each reporting date to reflect changes in estimates, a corresponding adjustment is also recorded to revenue.

The Group may enter into contracts with another party in addition to our customer. In making the determination as to whether revenue should be recognised on a gross or net basis, the contract with the customer is analysed to understand which party controls the relevant good or service prior to transferring to the customer. This judgement is informed by facts and circumstances of the contract in determining whether the Group has promised to provide the specified good or service or whether the Group is arranging for the transfer of the specified good or service, including which party is responsible for fulfilment, has discretion to set the price to the customer and is responsible for inventory risk. On certain contracts, where the Group acts as an agent, only commissions and fees receivable for services rendered are recognised as revenue. Any third party costs incurred on behalf of the principal that are rechargeable under the contractual arrangement are not included in revenue.

Income from recharges of freight and other activities which are incidental to the normal revenue-generating activities is included in other income.

Additional details on the Group's revenue streams are also included in note 3.

Notes to the consolidated financial statements

1a. Accounting policies continued

Leases

Policy applicable from 1 January 2019

The Group as a lessee

The Group assesses whether a contract is or contains a lease at the inception of the contract. A contract is, or contains a lease, if the contract conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The Group recognises a right-of-use asset and a lease liability at the lease commencement date with respect to all lease arrangements except for short-term leases (leases with a lease term of 12 months or less) and leases of low value assets. For these leases, the lease payments are recognised as an operating expense on a straight-line basis over the term of the lease.

The right-of-use asset is initially measured at cost, comprising the initial amount of the lease liability plus any initial direct costs incurred and an estimate of costs to restore the underlying asset, less any lease incentives received. The right-of-use asset is subsequently depreciated using the straight-line method from the commencement date to the earlier of the end of the useful life of the asset or the end of the lease term. The Group applies IAS 36 to determine whether a right-of-use asset is impaired. The lease liability is initially measured at the present value of the lease payments that are not paid at the commencement date, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the incremental borrowing rate. The lease liability is measured at amortised cost using the effective interest method. It is remeasured when there is a change in future lease payments arising from a change in an index or a rate or a change in the Group's assessment of whether it will exercise an extension or termination option. When the lease liability is remeasured, a corresponding adjustment is made to the right-of-use asset.

Management uses judgement to determine the lease term where extension and termination options are available within the lease.

The Group as a lessor:

When the Group is an intermediate lessor, the head lease and sub-lease are accounted for as two separate contracts. The head lease is accounted for as per the lessee policy above. The sub-lease is classified as a finance lease or operating lease by reference to the right-of-use asset arising from the head lease. Where the lease transfers substantially all the risks and rewards of ownership to the lessee the contract is classified as a finance lease; all other leases are classified as operating leases. Rental income from operating leases is recognised on a straight-line basis over the term of the relevant lease. Amounts due from lessees under finance sub-leases are recognised as receivables at the amount of the Group's net investment in the leases discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, the discount rate used in the head lease.

Policy applicable before 1 January 2019

Leases of property, plant and equipment where the Group has substantially all the risks and rewards of ownership are classified as finance leases. Finance leases are capitalised at the commencement of the lease at the lower of the fair value of the leased property and the present value of the minimum lease payments. Each lease payment is allocated between the liability and finance charges to achieve a constant rate on the finance balance outstanding. The corresponding rental obligations, net of finance charges, are included in financial liabilities – borrowings. The interest element of the finance cost is charged to the income statement over the lease period to produce a constant periodic rate of interest on the remaining balance of the liability for each period. The property, plant and equipment acquired under finance leases are depreciated over the shorter of the useful life of the asset or the lease term.

Leases where a significant portion of the risks and rewards of ownership are retained by the lessor are classified as operating leases by the lessee. Payments made under operating leases (net of any incentives received from the lessor) are charged to the income statement on a straight-line basis over the period of the lease.

Dividends

Final dividends are recorded in the Group's financial statements in the period in which they are approved by the company's shareholders. Interim dividends are recorded when paid.

Discontinued operations

A discontinued operation is a component of the Group's business that represents a separate major line of business or geographical area of operations that has been disposed of or meets the criteria to be classified as held for sale.

Discontinued operations are presented in the income statement as a separate line and are shown net of tax.

Assets and liabilities held for sale

Assets and liabilities are classified as held for sale and stated at the lower of carrying amount and fair value less costs to sell if it is highly probable that the carrying amount will be recovered principally through a sale transaction rather than through continuing use. No depreciation is charged in respect of non-current assets classified as held for sale. Amounts relating to non-current assets and liabilities held for sale are classified as discontinued operations in the income statement where appropriate.

Trade receivables

Trade receivables are stated at fair value after provision for bad and doubtful debts. Provisions for bad and doubtful debts are based on the expected credit loss model. The 'simplified approach' is used with the expected loss allowance measured at an amount equal to the lifetime expected credit losses. Trade receivables are also stated after provision for anticipated future sales returns (also see Revenue recognition policy).

1b. Change of accounting policy: IFRS 16

The Group has adopted IFRS 16 'Leases' at 1 January 2019 and applied the modified retrospective approach. Comparatives for 2018 have not been restated and the cumulative impact of adoption has been recognised as a decrease to net assets with a corresponding decrease in retained earnings at 1 January 2019 as follows:

All figures in £ millions	1 January 2019
Non-current assets	
Property, plant and equipment (right-of-use assets)	424
Investment in joint ventures and associates	(2)
Deferred income tax assets	1
Trade and other receivables	185
Current assets	
Trade and other receivables	7
Non-current liabilities	
Financial liabilities – borrowings	(792)
Deferred income tax liabilities	14
Provisions for other liabilities and charges	101
Other liabilities	58
Current liabilities	
Financial liabilities – borrowings	(89)
Trade and other liabilities	10
Total decrease in retained earnings at 1 January 2019	(83)

The Group's lease portfolio consists of approximately 750 property leases together with a number of vehicle and equipment leases. The lease liability has been measured at the present value of the remaining lease payments, discounted using the incremental borrowing rate at transition. The right-of-use asset has been measured at the carrying amount as if the standard had been applied since the commencement of the lease, discounted using the incremental borrowing rate at transition. Where data was not available to enable this measurement to be made, the right-of-use asset has been measured at an amount equal to the lease liability.

On transition the Group elected not to reassess whether a contract is, or contains, a lease, instead relying on the assessment already made applying IAS 17 'Leases' and IFRIC 4 'Determining whether an Arrangement contains a Lease'. In addition, the Group applied the available practical expedients as follows:

- › Relied on its assessment of whether leases are onerous immediately prior to the date of initial application.
- › Applied the short-term leases exemptions to leases with lease term ending within 12 months at the date of the initial application.
- › Excluded the initial direct costs from the measurement of the right-to-use asset at the date of the initial application.
- › Used hindsight in determining the lease term where the contract contains options to extend or terminate the lease.

Adoption of the new standard has a material impact on the Group. The lease liability brought onto the balance sheet at transition was £881m with the corresponding right-of-use asset valued at £424m. In addition, certain subleases have been reclassified as finance leases resulting in an additional lease receivable of £215m being brought on balance sheet. The net impact on the balance sheet is a reduction of net assets of £83m after taking into account existing liabilities relating to onerous lease provisions, lease incentives, prepayments, adjustments to tax and the net impact on associates. There were no leases relating to held for sale assets at 1 January 2019.

For leases previously classified as finance leases under IAS 17 'Leases', the carrying amount of the right-of-use asset and the lease liability at 1 January 2019 are determined at the carrying amount of the lease asset and lease liability under IAS 17 immediately before that date.

The impact on the income statement for 2019 was to reduce profit before tax by £9m (increasing both adjusted and statutory operating profit by £25m and increasing net finance costs by £34m). The operating lease expense recognised under the previous accounting standards is now replaced by depreciation and net finance costs. The impact on the Group's share of joint venture and associate profit is not material.

There is no overall impact on the Group's cash and cash equivalents although there is a change to the classification of cash flows in the cash flow statement with lease payments and finance lease receipts previously categorised as net cash used in operations now being split between the principal element (categorised in financing activities for payments and investing activities for receipts) and the interest element (categorised as interest paid in operating activities or interest received in investing activities). In 2019 there were £91m of lease payments classified as financing cash flows, £26m of lease receipts classified as investing cash flows, £45m of lease interest payments and £11m of lease interest receipts.

Notes to the consolidated financial statements

1b. Change of accounting policy: IFRS 16 continued

The Group has also included the lease liability and investment in finance lease as part of its net debt which impacts the calculation of the Group's non-GAAP measures for operating cash flow and free cash flow.

The lease liabilities at 1 January 2019 can be reconciled to the operating lease commitments at 31 December 2018 as follows:

All figures in £ millions	1 January 2019
Operating lease commitments disclosed at 31 December 2018 (note 35)	1,175
Discounted using the lessee's incremental borrowing rate at the date of initial application	(290)
(Less): commitments relating to short-term leases	(7)
Add: adjustments relating to the different treatment of extension and termination options	3
Additional lease liability recognised at 1 January 2019	881
Analysed at:	
Current lease liabilities	89
Non-current lease liabilities	792

In addition to the lease liabilities transitioned above, the Group had £5m of lease liabilities that were accounted for as finance leases at 31 December 2018. The weighted average incremental borrowing rate applied to the lease liabilities on 1 January 2019 was 5.0%.

1c. Change of accounting policy: IFRIC 23

The Group adopted IFRIC 23 'Uncertainty over Income Tax Treatments' effective 1 January 2019. The interpretation clarifies the application of the recognition and measurement requirements in IAS 12 'Income taxes' where there is uncertainty over income tax treatments.

The interpretation provides guidance to determine whether uncertain tax positions should be considered separately or together, and that measurement should be whether the single most likely outcome or the probability weighted sum of a range of outcomes, whichever better predicts the resolution. The reassessment of current tax liabilities resulted in a decrease in liabilities of £5m but does not have a material impact on the income statement.

1d. Change of accounting policy: Amendments to IFRS 9 and IFRS 7

The Group has considered the impact of IBOR reform on its hedge accounting. The Group has elected to early adopt amendments to IFRS 9 and IFRS 7 'Interest Rate Benchmark Reform' issued in September 2019. In accordance with the transition provisions, the amendments have been adopted retrospectively to hedging relationships that existed at the start of the reporting period or were designated thereafter. The amendments provide temporary relief from applying specific hedge accounting requirements to hedging relationships directly affected by IBOR reform. The adoption of these amendments has not had a material impact on these financial statements (see note 19).

2. Segment information

The primary segments for management and reporting are geographies as outlined below. In addition, the Group separately discloses the results from the Penguin Random House associate.

The chief operating decision-maker is the Pearson Executive.

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

Core – Courseware, Assessments and Services businesses in more mature markets including UK, Europe, Asia Pacific and North Africa.

Growth – Courseware, Assessments and Services businesses in emerging markets including Brazil, India, South Africa, Hispano-America, Hong Kong and China, and the Middle East.

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

							2019
All figures in £ millions	Notes	North America	Core	Growth	Penguin Random House	Corporate	Group
Sales		2,534	838	497	–	–	3,869
Adjusted operating profit		361	92	63	65	–	581
Cost of major restructuring		(110)	(28)	(19)	(2)	–	(159)
Intangible charges		(62)	(7)	(82)	(12)	–	(163)
Other net gains and losses		13	8	(5)	–	–	16
Operating profit (loss)		202	65	(43)	51	–	275
Finance costs	6						(84)
Finance income	6						41
Profit before tax							232
Income tax	7						34
Profit for the year							266
Segment assets		4,316	1,957	484	–	489	7,246
Associates	12	–	7	–	397	–	404
Total assets		4,316	1,964	484	397	489	7,650
Other segment items							
Share of results of joint ventures and associates	12	–	3	–	51	–	54
Capital expenditure	10, 11	176	35	51	–	–	262
Pre-publication investment	20	189	81	49	–	–	319
Depreciation	10	75	23	25	–	–	123
Amortisation	11, 20	305	85	147	–	–	537

Notes to the consolidated financial statements

2. Segment information continued

							2018
All figures in £ millions	Notes	North America	Core	Growth	Penguin Random House	Corporate	Group
Sales		2,784	806	539	–	–	4,129
Adjusted operating profit		362	57	59	68	–	546
Cost of major restructuring		(78)	(16)	–	(8)	–	(102)
Intangible charges		(72)	(8)	(19)	(14)	–	(113)
Other net gains and losses		4	–	226	–	–	230
UK pension GMP equalisation		–	(8)	–	–	–	(8)
Operating profit		216	25	266	46	–	553
Finance costs	6						(91)
Finance income	6						36
Profit before tax							498
Income tax	7						92
Profit for the year							590
Segment assets		4,366	1,975	536	–	636	7,513
Associates	12	–	5	–	387	–	392
Total assets		4,366	1,980	536	387	636	7,905
Other segment items							
Share of results of joint ventures and associates	12	(4)	1	1	46	–	44
Capital expenditure	10, 11	135	25	36	–	–	196
Pre-publication investment	20	234	90	64	–	–	388
Depreciation	10	41	12	13	–	–	66
Amortisation	11, 20	344	92	89	–	–	525

Included in the North America segment in 2018 is £60m in pre-publication investment and £67m in amortisation relating to assets held for sale.

There were no material inter-segment sales in either 2019 or 2018.

For additional detailed information on the calculation of adjusted operating profit as shown in the above tables, see p201-204 (Financial key performance indicators).

Adjusted operating profit is shown in the above tables as it is the key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments. The measure also enables investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments over time by separating out those items of income and expenditure relating to acquisition and disposal transactions, major restructuring programmes and certain other items that are also not representative of underlying performance, which are explained below and reconciled in note 8.

Cost of major restructuring – In May 2017, the Group announced a restructuring programme, to run between 2017 and 2019, to drive significant cost savings. This programme began in the second half of 2017 and costs incurred to date relate to delivery of cost efficiencies in the US Higher Education Courseware business and enabling functions together with further rationalisation of the property and supplier portfolio. The restructuring costs in 2019 of £159m mainly relate to staff redundancies while the restructuring costs in 2018 relate predominantly to staff redundancies and the net cost of property rationalisation including the net impact of the consolidation of the

Group's property footprint in London. The costs of this restructuring programme are significant enough to exclude from the adjusted operating profit measure so as to better highlight the underlying performance (see note 4).

Intangible charges – These represent charges relating to acquired intangibles, acquisition costs and movements in contingent acquisition and disposal consideration. These charges are excluded as they reflect past acquisition activity and do not necessarily reflect the current year performance of the Group. Intangible amortisation charges in 2019 were £163m, including an impairment charge of £65m relating to acquired intangibles in Brazil, compared with a charge of £113m in 2018.

Other net gains and losses – These represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets and are excluded from adjusted operating profit as they distort the performance of the Group as reported on a statutory basis. Other net gains of £16m in 2019 mainly relate to the sale of the US K12 Courseware business. Other net gains of £230m in 2018 relate to the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m, the disposal of the Group's equity interest in UTEL, the online university partnership in Mexico, realising a gain of £19m, and various other smaller disposal items for a net gain of £4m (see note 31).

UK pension GMP equalisation – In 2018, also excluded is the impact of adjustments arising from clarification of guaranteed minimum pension (GMP) equalisation legislation in the UK as this relates to historical circumstances.

2. Segment information continued

Corporate costs are allocated to business segments on an appropriate basis depending on the nature of the cost and therefore the total segment result is equal to the Group operating profit.

Segment assets, excluding corporate assets, consist of property, plant and equipment, intangible assets, inventories, receivables, deferred taxation and other financial assets and exclude cash and cash equivalents and derivative assets. Corporate assets comprise cash and cash equivalents, marketable securities and derivative financial instruments. Capital expenditure comprises additions to property, plant and equipment and software (see notes 10 and 11).

Property, plant and equipment and intangible assets acquired through business combinations were £23m (2018: £nil) (see note 30).

The Group operates in the following main geographic areas:

All figures in £ millions	Sales		Non-current assets	
	2019	2018	2019	2018
UK	385	377	694	900
Other European countries	244	246	125	143
US	2,417	2,627	2,604	2,162
Canada	105	126	163	250
Asia Pacific	441	455	149	146
Other countries	277	298	103	137
Total	3,869	4,129	3,838	3,738

Sales are allocated based on the country in which the customer is located. This does not differ materially from the location where the order is received. The geographical split of non-current assets is based on the subsidiary's country of domicile. This is not materially different to the location of the assets. Non-current assets comprise property, plant and equipment, intangible assets, investments in joint ventures and associates and trade and other receivables.

3. Revenue from contracts with customers

The following tables analyse the Group's revenue streams. Courseware includes curriculum materials provided in book form and/or via access to digital content. Assessments includes test development, processing and scoring services provided to governments, educational institutions, corporations and professional bodies. Services includes the operation of schools, colleges and universities, including sistemas in Brazil, as well as the provision of online learning services in partnership with universities and other academic institutions.

All figures in £ millions	2019			
	North America	Core	Growth	Group
Sales:				
Courseware				
School Courseware	86	169	118	373
Higher Education Courseware	975	81	44	1,100
English Courseware	14	56	107	177
	1,075	306	269	1,650
Assessments				
School and Higher Education Assessments	309	264	26	599
Clinical Assessments	175	52	-	227
Professional and English Certification	390	168	80	638
	874	484	106	1,464
Services				
School Services	319	2	46	367
Higher Education Services	266	45	26	337
English Services	-	1	50	51
	585	48	122	755
Total	2,534	838	497	3,869

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

	2018			
All figures in £ millions	North America	Core	Growth	Group
Sales:				
Courseware				
School Courseware	378	172	127	677
Higher Education Courseware	1,042	87	57	1,186
English Courseware	16	58	102	176
	1,436	317	286	2,039
Assessments				
School and Higher Education Assessments ¹	298	237	23	558
Clinical Assessments ¹	174	55	–	229
Professional and English Certification	344	150	64	558
	816	442	87	1,345
Services				
School Services	288	2	47	337
Higher Education Services	244	40	29	313
English Services	–	5	90	95
	532	47	166	745
Total	2,784	806	539	4,129

1 The analysis of Assessments revenues in 2018 has been re-presented to reflect the transfer of a product from School to Clinical.

The Group derived revenue from the transfer of goods and services over time and at a point in time in the following major product lines:

	2019			
All figures in £ millions	North America	Core	Growth	Total
Courseware				
Products transferred at a point in time (sale or return)	448	291	178	917
Products transferred at a point in time (other)	–	–	37	37
Products and services transferred over time	627	15	54	696
	1,075	306	269	1,650
Assessments				
Products transferred at a point in time	113	55	6	174
Products and services transferred over time	761	429	100	1,290
	874	484	106	1,464
Services				
Products transferred at a point in time	–	26	–	26
Products and services transferred over time	585	22	122	729
	585	48	122	755
Total	2,534	838	497	3,869

3. Revenue from contracts with customers continued

All figures in £ millions	2018			
	North America	Core	Growth	Total
Courseware				
Products transferred at a point in time (sale or return)	718	313	197	1,228
Products transferred at a point in time (other)	–	–	35	35
Products and services transferred over time	718	4	54	776
	1,436	317	286	2,039
Assessments¹				
Products transferred at a point in time	106	52	–	158
Products and services transferred over time	710	390	87	1,187
	816	442	87	1,345
Services				
Products transferred at a point in time	–	26	38	64
Products and services transferred over time	532	21	128	681
	532	47	166	745
Total	2,784	806	539	4,129

1 The analysis of Assessments revenues in 2018 has been re-presented to better reflect the nature of sales.

a. Nature of goods and services

The following is a description of the nature of the Group's performance obligations within contracts with customers broken down by revenue stream, along with significant judgements and estimates made within each of those revenue streams.

Courseware

Revenue is generated from customers through the sales of print and digital courseware materials to schools, bookstores and direct to individual learners. Goods and services may be sold separately or purchased together in bundled packages. The goods and services included in bundled arrangements are considered distinct performance obligations, except for where Pearson provides both a licence of intellectual property and an on-going hosting service. As the licence of intellectual property is only available with the concurrent hosting service, the licence is not treated as a distinct performance obligation separate from the hosting service.

The transaction price is allocated between distinct performance obligations on the basis of their relative standalone selling prices.

In determining the transaction price, variable consideration exists in the form of discounts and anticipated returns. Discounts reduce the transaction price on a given transaction. A provision for anticipated returns is made based primarily on historical return rates, customer buying patterns and retailer behaviours including stock levels (see note 24). If these estimates do not reflect actual returns in future periods then revenues could be understated or overstated for a particular period. Variable consideration as described above is determined using the expected value approach. The sales return liability at the end of 2019 was £122m (see note 24). This represents 3% of annual sales subject to sale or return.

While payment for these goods and services generally occurs at the start of these arrangements, the length of time between payment and delivery of the performance obligations is generally short-term in nature or the reason for early payment relates to reasons other than financing, including customers securing a vendor in a longer-term arrangement or the transfer of goods or services is at the discretion of

the customer. For these reasons and the use of the practical expedient on short-term financing, significant financing components are not recognised within Courseware transactions.

Revenue from the sale of physical books is recognised at a point in time when control passes. This is generally at the point of shipment when title passes to the customer, when the Group has a present right to payment and the significant risks and rewards of ownership have passed to the customer. Revenue from physical books sold through the direct print rental method is recognised over the rental period, as the customer is simultaneously receiving and consuming the benefits of this rental service through the passage of time.

Revenue from the sale of digital courseware products is recognised on a straight-line basis over the subscription period, unless hosted by a third party or representative of a downloadable product, in which case Pearson has no on-going obligation and recognises revenue when control transfers as the customer is granted access to the digital product.

Revenue from the sale of 'off-the-shelf' software is recognised on delivery or on installation of the software where that is a condition of the contract. In certain circumstances, where installation is complex, revenue is recognised when the customer has completed their acceptance procedures.

Assessments

Revenue is primarily generated from multi-year contractual arrangements related to large-scale assessment delivery, such as contracts to process qualifying tests for individual professions and government departments, and is recognised as performance occurs. Under these arrangements, while the agreement spans multiple years, the contract duration has been determined to be each testing cycle based on contract structure, including clauses regarding termination. While in some cases the customer may have the ability to terminate during the term for convenience, significant financial or qualitative barriers exist limiting the potential for such terminations in the middle of a testing cycle.

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

a. Nature of goods and services continued

Within each testing cycle, a variety of service activities are performed such as test administration, delivery, scoring, reporting, item development, operational services and programme management. These services are not treated as distinct in the context of the customer contract as Pearson provides an integrated managed service offering and these activities are accounted for together as one comprehensive performance obligation.

Within each testing cycle, the transaction price may contain both fixed and variable amounts. Variable consideration within these transactions primarily relates to expected testing volumes to be delivered in the cycle. The assumptions, risks and uncertainties inherent to long-term contract accounting can affect the amounts and timing of revenue and related expenses reported. Variable consideration is measured using the expected value method, except where amounts are contingent upon a future event's occurrence, such as performance bonuses. Such event-driven contingency payments are measured using the most likely amount approach. To the extent that a higher degree of uncertainty exists regarding variable consideration, these amounts are excluded from the transaction price and expensed when the uncertainty is reasonably removed.

Customer payments are generally defined in the contract through a payment schedule, which may require customer acceptance for services rendered. Pearson has a history of providing satisfactory services which are accepted by the customer. While a delay between rendering of services and payment may exist, payment terms are within 12 months and the Group has elected to use the practical expedient available in IFRS 15 Revenue from Contracts with Customers and not identify a significant financing component on these transactions.

Revenue is recognised for Assessment contracts over time as the customer is benefiting as performance takes place through a continuous transfer of control to the customer. This continuous transfer of control to the customer is supported by clauses in the contracts which may allow the customer to terminate for convenience, compensate us for work performed to date, and take possession of work in process.

As control transfers over time, revenue is recognised based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgement and is based on the nature of the services provided. Revenue is recognised on a percentage completion basis, calculated using the proportion of the total estimated costs incurred to date. Percentage of completion is used to recognise the transfer of control of services provided as these services are not provided evenly throughout the testing cycle and involve varying degrees of effort during the term.

Losses on contracts are recognised in the period in which the loss first becomes foreseeable. Contract losses are determined to be the amount by which estimated total costs of the contract exceed the estimated total revenues that will be generated.

In Assessments contracts driven primarily by transactions directly to end users, Pearson's main obligation to the customer involves test delivery and scoring. Test delivery and scoring are defined as a single performance obligation delivered over time whether the test is subsequently manually scored or digitally scored on the day of the assessment. Customers may also purchase print and digital supplemental materials. Print products in this revenue stream are recognised at a point in time when control passes to the customer upon shipment. Recognition of digital revenue will occur based on the extent of Pearson's on-going hosting obligation.

Services

Revenue is primarily generated from multi-year contractual arrangements related to large-scale educational service delivery to academic institutions, such as schools and higher education universities. Under these arrangements, while an agreement may span multiple years, the contract duration has been determined to be each academic period based on the structure of contracts, including clauses regarding termination. While in some cases the customer may have the ability to terminate during the term for convenience, significant financial or qualitative barriers exist limiting the potential for such terminations in the middle of an academic period. The academic period for this customer base is normally an academic year for schools and a semester for higher education universities.

Within each academic period, a variety of services are provided such as programme development, student acquisition, education technology and student support services. These services are not distinct in the context of the customer contract as Pearson provides an integrated managed service offering and these activities are accounted for together as a comprehensive performance obligation.

Where Services are provided to university customers, volume and transaction price are fixed at the start of the semester. Where Services are provided to School customers, the transaction price may contain both fixed and variable amounts which require estimation during the academic period. Estimation is required where consideration is based upon average enrolments or other metrics which are not known at the start of the academic year. Variable consideration is measured using the expected value method. To the extent that a higher degree of uncertainty exists regarding variable consideration, these amounts are excluded from the transaction price and recognised when the uncertainty is reasonably removed.

Customer payments are generally defined in the contract as occurring shortly after invoicing. Where there is a longer payment term offered to a customer through a payment schedule, payment terms are within 12 months and the Group has elected to use the practical expedient available in IFRS 15 and not identify a significant financing component on these transactions.

Revenue is recognised for Service contracts over time as the customer is benefiting as performance takes place through a continuous transfer of control to the customer. This continuous transfer of control to the customer is supported by clauses in the contracts which may allow the customer to terminate for convenience, compensate for work performed to date, and take possession of work in process.

3. Revenue from contracts with customers continued

a. Nature of goods and services continued

As control transfers over time, revenue is recognised based on the extent of progress towards completion of the performance obligation. The selection of the method to measure progress towards completion requires judgement and is based on the nature of the products or services provided. Within the comprehensive service obligation, the timing of services occurs relatively evenly over each academic period and, as such, time elapsed is used to recognise the transfer of control to the customer on a straight-line basis.

Losses on contracts are recognised in the period in which the loss first becomes foreseeable. Contract losses are determined to be the amount by which estimated total costs of the contract exceed the estimated total revenues that will be generated.

In cases of optional or add-on purchases, institutions may purchase physical goods priced at their standalone value, which are accounted for separately and recognised at the point in time when control passes to the customer upon shipment.

b. Disaggregation of revenue

The tables in notes 2 and 3 show revenue from contracts with customers disaggregated by operating segment, geography and revenue stream. These disaggregation categories are appropriate as they represent the key groupings used in managing and evaluating underlying performance of each of the businesses. The categories also reflect groups of similar types of transactional characteristics, among similar customers, with similar accounting conclusions.

c. Contract balances

Transactions within the Courseware revenue stream generally entail customer billings at or near the contract's inception and accordingly Courseware deferred income balances are primarily related to subscription performance obligations to be delivered over time.

Transactions within the Assessments and Services revenue streams generally entail customer billings over time based on periodic intervals, progress towards milestones or enrolment census dates. As the performance obligations within these arrangements are delivered over time, the extent of accrued income or deferred income will ultimately depend upon the difference between revenue recognised and billings to date.

Refer to note 22 for opening and closing balances of accrued income. Refer to note 24 for opening and closing balances of deferred income. Revenue recognised during the period from changes in deferred income was driven primarily by the release of revenue over time from digital subscriptions.

d. Contract costs

The Group capitalises incremental costs to obtain contracts with customers where it is expected these costs will be recoverable. Incremental costs to obtain contracts with customers are considered those which would not have been incurred if the contract had not been obtained. For the Group, these costs relate primarily to sales commissions. The Group has elected to use the practical expedient as allowable by IFRS 15 whereby such costs will be expensed as incurred where the expected amortisation period is one year or less. Where the amortisation period is greater than one year, these costs are amortised over the contract term on a systematic basis consistent with the transfer of the underlying goods and services within the contract to which these costs relate, which will generally be on a ratable basis. Impairment of capitalised contract costs was £nil in both 2019 and 2018.

The Group does not recognise any material costs to fulfil contracts with customers as these types of activities are governed by other accounting standards.

Refer to note 22 for further details of opening and closing balances of these costs reflected within deferred contract costs.

e. Remaining transaction price

The below table depicts the remaining transaction price on unsatisfied or partially unsatisfied performance obligations from contracts with customers.

						2019	
All figures in £ millions						2020	2021 and later
	Sales	Deferred income	Committed sales	Total remaining transaction price			
Courseware							
Products transferred at a point in time (sale or return)	917	1	–	1	1	–	–
Products transferred at a point in time (other)	37	1	–	1	1	–	–
Products and services transferred over time	696	118	–	118	82	13	23
Assessments							
Products transferred at a point in time	174	–	–	–	–	–	–
Products and services transferred over time	1,290	206	375	581	433	146	2
Services							
Products transferred at a point in time	26	3	–	3	3	–	–
Products and services transferred over time – subscriptions	310	11	–	11	11	–	–
Products and services transferred over time – other ongoing performance obligations	419	20	106	126	125	1	–
Total	3,869	360	481	841	656	160	25

Notes to the consolidated financial statements

3. Revenue from contracts with customers continued

e. Remaining transaction price continued

					2018		
					2019	2020	2021 and later
All figures in £ millions	Sales	Deferred income	Committed sales	Total remaining transaction price			
Courseware							
Products transferred at a point in time (sale or return)	1,228	1	–	1	1	–	–
Products transferred at a point in time (other)	35	–	–	–	–	–	–
Products and services transferred over time	776	679	8	687	272	131	284
Assessments¹							
Products transferred at a point in time	158	–	–	–	–	–	–
Products and services transferred over time	1,187	196	402	598	420	173	5
Services							
Products transferred at a point in time	64	–	–	–	–	–	–
Products and services transferred over time – subscriptions	310	17	–	17	13	3	1
Products and services transferred over time – other ongoing performance obligations	371	19	145	164	162	1	1
Total	4,129	912	555	1,467	868	308	291

¹ The analysis of Assessments revenues in 2018 has been re-presented to better reflect the nature of sales.

Committed sales amounts are equal to the transaction price from contracts with customers, excluding those amounts previously recognised as revenue and amounts currently recognised in deferred income. The total of committed sales and deferred income is equal to the remaining transaction price.

Time bands stated above represent the expected timing of when the remaining transaction price will be recognised as revenue.

4. Operating expenses

All figures in £ millions	2019	2018
By function:		
Cost of goods sold	1,858	1,943
Operating expenses		
Distribution costs	73	88
Selling, marketing and product development costs	631	759
Administrative and other expenses	999	1,039
Restructuring costs	157	90
Other income	(54)	(69)
Total net operating expenses	1,806	1,907
Other net gains and losses	(16)	(230)
Total	3,648	3,620

Included in other income is service fee income from Penguin Random House of £4m (2018: £3m). Included in administrative and other expenses are research and efficacy costs of £13m (2018: £14m). In addition to the restructuring costs shown above, there were major restructuring costs in relation to associates of £2m (2018: £12m).

4. Operating expenses continued

An analysis of major restructuring costs is as follows:

All figures in £ millions	2019	2018
By nature:		
Product costs	16	12
Employee costs	90	56
Depreciation and amortisation	14	1
Property and facilities	12	(5)
Technology and communications	2	1
Professional and outsourced services	17	9
General and administrative costs	6	16
Total restructuring – operating expenses	157	90
Share of associate restructuring	2	12
Total	159	102

In May 2017, the Group announced a restructuring programme to run between 2017 and 2019 to drive further significant cost savings. The costs of this programme have been excluded from adjusted operating profit so as to better highlight the underlying performance (see note 8). In 2018, property and facilities costs include gains on the disposal of properties sold as part of the restructuring programme.

All figures in £ millions	Notes	2019	2018
By nature:			
Royalties expensed		242	236
Other product costs		466	516
Employee benefit expense	5	1,452	1,637
Contract labour		139	161
Employee-related expense		94	115
Promotional costs		254	233
Depreciation of property, plant and equipment	10	123	66
Amortisation of intangible assets – pre-publication	20	271	338
Amortisation of intangible assets – software	11	115	88
Amortisation and impairment of intangible assets – other	11	151	99
Property and facilities		96	147
Technology and communications		196	192
Professional and outsourced services		480	396
Other general and administrative costs		104	85
Costs capitalised to intangible assets		(465)	(390)
Other net gains and losses		(16)	(230)
Other income		(54)	(69)
Total		3,648	3,620

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

All figures in £ millions	2019	2018
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
Audit-related and other assurance services	–	1
Other non-audit services	–	–
Total other services	–	1
Total non-audit services	–	1
Total	7	7

Notes to the consolidated financial statements

4. Operating expenses continued

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

All figures in £ millions	2019	2018
Group audit fees including fees for attestation under section 404 of the Sarbanes-Oxley Act	7	6
Non-audit fees	-	1
Total	7	7

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 Group audit fees for 2019 are additional fees in relation to prior year audit work.

5. Employee information

All figures in £ millions	Notes	2019	2018
Employee benefit expense			
Wages and salaries (including termination costs)		1,258	1,421
Social security costs		100	112
Share-based payment costs	26	25	37
Retirement benefits – defined contribution plans	25	57	56
Retirement benefits – defined benefit plans	25	13	23
Other post-retirement medical benefits	25	(1)	(12)
Total		1,452	1,637

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

Average number employed	2019	2018
Employee numbers		
North America	13,564	14,113
Core	4,951	5,192
Growth	3,693	4,521
Other	526	496
Total	22,734	24,322

6. Net finance costs

All figures in £ millions	Notes	2019	2018
Interest payable on financial liabilities at amortised cost and associated derivatives		(22)	(42)
Interest on lease liabilities		(45)	-
Net foreign exchange losses		(5)	(36)
Finance costs associated with transactions		-	(1)
Derivatives not in a hedge relationship		(12)	(7)
Derivatives in a hedge relationship		-	(5)
Finance costs		(84)	(91)
Interest receivable on financial assets at amortised cost		15	18
Interest on lease receivables		11	-
Net finance income in respect of retirement benefits	25	13	11
Derivatives not in a hedge relationship		2	6
Derivatives in a hedge relationship		-	1
Finance income		41	36
Net finance costs		(43)	(55)
Analysed as:			
Net interest payable reflected in adjusted earnings		(41)	(24)
Other net finance costs		(2)	(31)
Total net finance costs		(43)	(55)

6. Net finance costs continued

Included in interest receivable is £1m (2018: £1m) of interest receivable from related parties. Net movement in fair value of hedges is explained in note 16.

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

7. Income tax

All figures in £ millions	Notes	2019	2018
Current tax			
(Charge)/credit in respect of current year		(51)	92
Adjustments in respect of prior years		21	34
Total current tax (charge)/credit		(30)	126
Deferred tax			
In respect of temporary differences		59	(6)
Other adjustments in respect of prior years		5	(28)
Total deferred tax credit/(charge)	13	64	(34)
Total tax credit		34	92

The adjustments in respect of prior years in both 2019 and 2018 primarily arise from revising the previous year's reported tax provision to reflect the tax returns subsequently filed. This results in a change between deferred and current tax as well as an absolute benefit to the total tax charge.

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

All figures in £ millions	2019	2018
Profit before tax	232	498
Tax calculated at UK rate (2019: 19%, 2018: 19%)	(44)	(94)
Effect of overseas tax rates	(2)	(28)
Joint venture and associate income reported net of tax	10	8
Intra-group financing benefit	11	25
Movement in provisions for tax uncertainties	3	111
Net expense not subject to tax	(10)	(29)
Benefit from change in US tax accounting treatment	-	25
Gains and losses on sale of businesses not subject to tax	57	77
Unrecognised tax losses	(17)	(9)
Adjustments in respect of prior years	26	6
Total tax credit	34	92
UK	(12)	37
Overseas	46	55
Total tax credit	34	92
Tax rate reflected in earnings	(14.7)%	(18.5)%

Included in net expense not subject to tax are foreign taxes not creditable, the tax impact of share-based payments and other expenses not deductible.

Factors which may affect future tax charges include changes in tax legislation, transfer pricing regulations, the level and mix of profitability in different countries, and settlements with tax authorities.

The movement in provisions for tax uncertainties primarily reflects releases due to the expiry of relevant statutes of limitation, utilisation of brought forward provisions and the establishment of provisions for new uncertain tax positions. The current tax liability of £55m (2018: £72m) includes £152m (2018: £181m) of provisions for tax uncertainties principally in respect of a number of issues in the US, the UK and China. The issues provided for include the allocation between territories of proceeds of historical business disposals and the

potential disallowance of intra-Group recharges. The Group is currently under audit in a number of countries, and the timing of any resolution of these audits is uncertain. Of the balance of £152m, £88m relates to 2015 and earlier and is mostly under audit. In most countries, tax years up to and including 2014 are now statute barred from examination by tax authorities. Of the remaining balance, £18m relates to 2016, £30m to 2017, £4m to 2018 and £12m to 2019. If relevant enquiry windows pass with no audit, management believes it is reasonably possible that provision levels will reduce by an estimated £3m within the next 12 months. However the tax authorities may take a different view from management and the final liability may be greater than provided. For items currently under audit if tax authorities are successful, any incremental exposure is not expected to be material this year (2018: £25m). Contingent liabilities relating to tax are disclosed in note 34.

Notes to the consolidated financial statements

7. Income tax continued

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

All figures in £ millions	2019	2018
Profit before tax	232	498
Adjustments:		
Cost of major restructuring	159	102
Other net gains and losses	(16)	(230)
Intangible charges	163	113
Other net finance costs/(income)	2	31
UK pension GMP equalisation	-	8
Adjusted profit before tax	540	522
Total tax credit	34	92
Adjustments:		
Tax benefit on cost of major restructuring	(35)	(37)
Tax benefit on other net gains and losses	(68)	(31)
Tax benefit on intangible charges	(48)	(18)
Tax benefit on other net finance costs	-	(6)
Tax benefit on UK pension GMP equalisation	-	(2)
Tax amortisation benefit on goodwill and intangibles	28	29
Adjusted income tax (charge)/credit	(89)	27
Tax rate reflected in adjusted earnings	16.5%	(5.2)%

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	2019	2018
Net exchange differences on translation of foreign operations	5	(4)
Fair value gain on other financial assets	(4)	-
Remeasurement of retirement benefit obligations	22	9
	23	5

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.

All figures in £ millions	2019	2018
Earnings for the year	266	590
Non-controlling interest	(2)	(2)
Earnings attributable to equity holders of the company	264	588
Weighted average number of shares (millions)	777.0	778.1
Effect of dilutive share options (millions)	0.5	0.6
Weighted average number of shares (millions) for diluted earnings	777.5	778.7
Earnings per share		
Basic	34.0p	75.6p
Diluted	34.0p	75.5p

8. Earnings per share continued

Adjusted

For additional detailed information on the calculation of adjusted measures, see p201-204 (Financial key performance indicators). See note 2 for details of specific items excluded from or included in adjusted operating profit in 2019 and 2018.

In order to show results from operating activities on a consistent basis, an adjusted earnings per share is presented. The Group'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 (non-statutory) financial measure and is included as it is a key financial measure used by management to evaluate the performance of the Group and allocate resources to business segments. The measure also enables investors to more easily, and consistently, track the underlying operational performance of the Group and its business segments over time by separating out those items of income and expenditure relating to acquisition and disposal transactions, major restructuring programmes and certain other items that are also not representative of underlying performance.

Adjusted earnings per share is calculated as adjusted earnings divided by the weighted average number of shares in issue on an undiluted basis. The following items are excluded from or included in adjusted earnings:

Cost of major restructuring – In May 2017, the Group announced a restructuring programme, to run between 2017 and 2019, to drive significant cost savings. This programme began in the second half of 2017 and costs incurred to date relate to delivery of cost efficiencies in the US Higher Education Courseware business and enabling functions together with further rationalisation of the property and supplier portfolio. The restructuring costs in 2019 of £159m mainly relate to staff redundancies while the restructuring costs in 2018 relate predominantly to staff redundancies and the net cost of property rationalisation including the net cost of the consolidation of the Group's property footprint in London. The costs of this restructuring programme are significant enough to exclude from the adjusted operating profit measure so as to better highlight the underlying performance (see note 4).

Other net gains and losses – These represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets and are excluded from adjusted earnings as they distort the performance of the Group as reported on a statutory basis. Other net gains of £16m in 2019 mainly relate to the sale of the US K12 Courseware business. Other net gains of £230m in 2018 relate to the sale of the Wall Street English language teaching business (WSE), realising a gain of £207m, the disposal of the Group's equity interest in UTEL, the online university partnership in Mexico, realising a gain of £19m, and various other smaller disposal items for a net gain of £4m (see note 31).

Intangible charges – These represent charges in respect of intangible assets acquired through business combinations and the direct costs of acquiring those businesses. These charges are excluded as they reflect past acquisition activity and do not necessarily reflect the current year performance of the Group. Intangible amortisation charges in 2019 were £163m, including an impairment charge of £65m relating to acquired intangibles in Brazil, compared with a charge of £113m in 2018.

Other net finance income/costs – These include finance costs in respect of retirement benefits, finance costs of deferred consideration and foreign exchange and other gains and losses. Finance income relating to retirement benefits is 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. Finance costs associated with transactions are excluded as these relate to future earn-outs or acquisition expenses and are not part of the underlying financing. 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. In 2019 and 2018 the foreign exchange gains and losses largely relate to foreign exchange differences on unhedged US dollar and euro loans, cash and cash equivalents.

UK pension GMP equalisation – In 2018, also excluded is the impact of adjustments arising from clarification of guaranteed minimum pension (GMP) equalisation legislation in the UK as this relates to historical circumstances.

Tax – 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 – Non-controlling interest for the above items is excluded from adjusted earnings.

Notes to the consolidated financial statements

8. Earnings per share continued

Adjusted continued

The following tables reconcile the statutory income statement to the adjusted income statement.

	2019							
All figures in £ millions	Statutory income statement	Cost of major restructuring	Other net gains and losses	Intangible charges	Other net finance income/ costs	UK pension GMP equalisation	Tax amortisation benefit	Adjusted income statement
Operating profit	275	159	(16)	163	–	–	–	581
Net finance costs	(43)	–	–	–	2	–	–	(41)
Profit before tax	232	159	(16)	163	2	–	–	540
Income tax	34	(35)	(68)	(48)	–	–	28	(89)
Profit for the year	266	124	(84)	115	2	–	28	451
Non-controlling interest	(2)	–	–	–	–	–	–	(2)
Earnings	264	124	(84)	115	2	–	28	449
Weighted average number of shares (millions)	777.0							777.0
Weighted average number of shares (millions) for diluted earnings	777.5							777.5
Earnings per share (basic)	34.0p							57.8p
Earnings per share (diluted)	34.0p							57.7p

	2018							
All figures in £ millions	Statutory income statement	Cost of major restructuring	Other net gains and losses	Intangible charges	Other net finance income/ costs	UK pension GMP equalisation	Tax amortisation benefit	Adjusted income statement
Operating profit	553	102	(230)	113	–	8	–	546
Net finance costs	(55)	–	–	–	31	–	–	(24)
Profit before tax	498	102	(230)	113	31	8	–	522
Income tax	92	(37)	(31)	(18)	(6)	(2)	29	27
Profit for the year	590	65	(261)	95	25	6	29	549
Non-controlling interest	(2)	–	–	–	–	–	–	(2)
Earnings	588	65	(261)	95	25	6	29	547
Weighted average number of shares (millions)	778.1							778.1
Weighted average number of shares (millions) for diluted earnings	778.7							778.7
Earnings per share (basic)	75.6p							70.3p
Earnings per share (diluted)	75.5p							70.2p

9. Dividends

All figures in £ millions	2019	2018
Final paid in respect of prior year 13p (2018: 12.0p)	101	93
Interim paid in respect of current year 6p (2018: 5.5p)	46	43
	147	136

The Directors are proposing a final dividend in respect of the financial year ended 31 December 2019 of 13.5p per equity share which will absorb an estimated £106m of shareholders' funds. It will be paid on 7 May 2020 to shareholders who are on the register of members on 27 March 2020. These financial statements do not reflect this dividend.

10. Property, plant and equipment

	Right-of-use assets		Owned assets			
	Land and buildings	Plant and equipment	Land and buildings	Plant and equipment	Assets in course of construction	Total
All figures in £ millions						
Cost						
At 1 January 2018	–	–	330	527	29	886
Exchange differences	–	–	11	14	1	26
Additions	–	–	32	22	12	66
Disposals	–	–	(75)	(97)	–	(172)
Reclassifications	–	–	19	(8)	(11)	–
Transfer to intangible assets	–	–	–	–	(11)	(11)
Transfer to intangible assets – pre-publication	–	–	–	–	(2)	(2)
At 31 December 2018	–	–	317	458	18	793
Adjustment on initial application of IFRS 16 (see note 1b)	418	6	–	–	–	424
Exchange differences	(9)	–	(8)	(15)	–	(32)
Additions	64	2	–	18	40	124
Disposals	(13)	(4)	(13)	(108)	(8)	(146)
Reclassifications	–	–	4	(4)	–	–
Transfer of finance leases	–	19	–	(19)	–	–
Transfer to intangible assets	–	–	–	(3)	(4)	(7)
Transfer to intangible assets – pre-publication	–	–	–	(2)	(10)	(12)
At 31 December 2019	460	23	300	325	36	1,144

	Right-of-use assets		Owned assets			
	Land and buildings	Plant and equipment	Land and buildings	Plant and equipment	Assets in course of construction	Total
All figures in £ millions						
Depreciation						
At 1 January 2018	–	–	(197)	(408)	–	(605)
Exchange differences	–	–	(5)	(11)	–	(16)
Charge for the year	–	–	(20)	(46)	–	(66)
Disposals	–	–	34	97	–	131
Reclassifications	–	–	(7)	7	–	–
At 31 December 2018	–	–	(195)	(361)	–	(556)
Exchange differences	2	–	6	13	–	21
Charge for the year	(60)	(4)	(21)	(38)	–	(123)
Disposals	–	–	10	116	–	126
Transfer of finance leases	–	(12)	–	12	–	–
Transfer to intangible assets	–	–	–	3	–	3
Transfer to intangible assets – pre-publication	–	–	–	3	–	3
At 31 December 2019	(58)	(16)	(200)	(252)	–	(526)
Carrying amounts						
At 1 January 2018	–	–	133	119	29	281
At 31 December 2018	–	–	122	97	18	237
At 31 December 2019	402	7	100	73	36	618

Notes to the consolidated financial statements

10. Property, plant and equipment continued

Depreciation expense of £42m (2018: £18m) has been included in the income statement in cost of goods sold and £81m (2018: £48m) in operating expenses.

Prior to 1 January 2019 the Group leased certain equipment under a number of finance lease agreements. The net carrying amount of leased plant and equipment included within property, plant and equipment in 2018 was £7m. On the initial application of IFRS 16 these finance leases have been transferred from owned assets to right-of-use assets within property, plant and equipment.

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 2018	2,030	882	889	281	184	489	4,755
Exchange differences	74	32	39	(2)	–	1	144
Additions – internal development	–	124	–	–	–	–	124
Additions – purchased	–	6	–	–	–	–	6
Disposals	–	(94)	(18)	(12)	–	(33)	(157)
Disposal through business disposal	–	(2)	–	–	–	–	(2)
Transfer from property, plant and equipment	–	11	–	–	–	–	11
Transfer to assets classified as held for sale	7	–	–	–	–	–	7
At 31 December 2018	2,111	959	910	267	184	457	4,888
Exchange differences	(57)	(22)	(29)	(10)	(5)	(20)	(143)
Additions – internal development	–	137	–	–	–	–	137
Additions – purchased	–	1	–	–	–	–	1
Disposals	–	(15)	(88)	(19)	–	(47)	(169)
Acquisition through business combination	18	–	–	–	–	23	41
Transfer from property, plant and equipment	–	7	–	–	–	–	7
Transfer to intangible assets – pre-publication	–	(28)	–	–	–	–	(28)
Movement in held for sale	67	–	–	–	–	–	67
At 31 December 2019	2,139	1,039	793	238	179	413	4,801
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 2018	–	(493)	(580)	(180)	(178)	(360)	(1,791)
Exchange differences	–	(23)	(26)	1	2	(10)	(56)
Charge for the year	–	(88)	(59)	(14)	(2)	(24)	(187)
Disposals	–	92	18	12	–	33	155
At 31 December 2018	–	(512)	(647)	(181)	(178)	(361)	(1,879)
Exchange differences	–	16	22	7	4	19	68
Charge for the year	–	(115)	(51)	(23)	(2)	(75)	(266)
Disposals	–	10	88	19	–	46	163
Transfer from property, plant and equipment	–	(3)	–	–	–	–	(3)
Transfer to intangible assets – pre-publication	–	16	–	–	–	–	16
At 31 December 2019	–	(588)	(588)	(178)	(176)	(371)	(1,901)
Carrying amounts							
At 1 January 2018	2,030	389	309	101	6	129	2,964
At 31 December 2018	2,111	447	263	86	6	96	3,009
At 31 December 2019	2,139	451	205	60	3	42	2,900

11. Intangible assets continued

Goodwill

The goodwill carrying value of £2,139m relates to acquisitions completed after 1 January 1998. Prior to 1 January 1998 all goodwill was written off to reserves on the date of acquisition. For acquisitions completed between 1 January 1998 and 31 December 2002, no value was ascribed to intangibles other than goodwill which was amortised over a period of up to 20 years. On adoption of IFRS on 1 January 2003, the Group chose not to restate the goodwill balance and at that date the balance was frozen (i.e. amortisation ceased). If goodwill had been restated, then a significant value would have been ascribed to other intangible assets, which would be subject to amortisation, and the carrying value of goodwill would be significantly lower. For acquisitions completed after 1 January 2003, value has been ascribed to other intangible assets which are amortised.

Other intangible assets

The range of useful economic lives for each major class of intangible asset (excluding goodwill and software) is shown below:

	2019
	Useful economic life
Class of intangible asset	
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:

	2019			
	One to five years	Six to ten years	More than ten years	Total
All figures in £ millions				
Class of intangible asset				
Acquired customer lists, contracts and relationships	154	49	2	205
Acquired trademarks and brands	42	14	4	60
Acquired publishing rights	3	–	–	3
Other intangibles acquired	31	11	–	42

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

Impairment tests have been carried out where appropriate as described below. Goodwill was allocated to CGUs, or an aggregation of CGUs, where goodwill could not be reasonably allocated to individual business units. CGUs have been revised in 2019. Impairment reviews were conducted on these revised CGUs as summarised below:

2019 CGUs

	2019
	Goodwill
All figures in £ millions	
North American Courseware	–
OPM	18
Virtual Schools	386
Assessments	1,035
Core	700
Growth (includes the separate CGUs of Brazil, China, India and South Africa)	–
Total	2,139

Goodwill is tested at least annually for impairment. The recoverable amount of each aggregated CGU is based on the higher of value in use and fair value less costs of disposal. The value in use was higher than the fair value less costs of disposal in each of the CGUs. Other than goodwill there are no intangible assets with indefinite lives.

Notes to the consolidated financial statements

11. Intangible assets continued

2018 CGUs

All figures in £ millions	2018
North America	930
Core	701
Growth (includes the separate CGUs of Brazil, China, India and South Africa)	–
Pearson VUE	480
Total	2,111

Following a reassessment of the relative risk in the Brazil CGU compared to Pearson as a whole, it was determined in the course of the impairment review that neither the value in use nor the fair value less costs of disposal of the Brazil CGU supported the carrying value of the CGU. As the goodwill related to the Brazil CGU was fully impaired in prior years, the acquired intangibles of the Brazil CGU were impaired by £65m, bringing their carrying value to £27m. The Brazil CGU incorporates all the Group's trading operations in Brazil. A pre-tax discount rate of 16.3% was used to determine the value in use of the Brazil CGU. At 31 December 2018, the impairment review showed headroom of £20m in the Brazil CGU.

Determination of CGUs and reallocation of goodwill

Pearson identifies its CGUs based on its operating model and how data is collected and reviewed for management reporting and strategic planning purposes in accordance with IAS 36 "Impairment of assets". In 2019, the CGUs and aggregation of CGUs have been revised to take account of the following:

- › The implementation of a new Enterprise Resource Planning (ERP) system in North America meant that ledgers are structured on a legal entity basis rather than the previous divisional basis. This has meant it is no longer possible to identify the carrying values of the Pearson VUE business separately from the wider Assessments business. As a result, the Pearson VUE business has been combined with the Assessments business as one CGU for impairment testing.
- › The disposal of the US K12 Courseware business in 2019 has caused management to disaggregate the North America CGU.

At 1 January 2019, the goodwill of the previous North America and Pearson VUE CGUs was therefore reallocated between North American Courseware, OPM, Virtual Schools and Assessments, based on their relative fair value at 1 January 2019 amended to take into account previous impairments taken. No goodwill was allocated to the North American Courseware CGU reflecting the significant impairments taken in 2015 and 2016.

Key assumptions

For the purpose of estimating the value in use 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 three-year period, whilst a projection to 2030 was available and used for the OPM CGU, as the three-year projection reflected the investment phase and not the longer-term return of this business, and because the long-term nature of OPM's contracts allows for reliable forecasts to be prepared beyond three years. OPM relies on contracts with key customers and the forecast to 2030 assumes these are renewed or replaced. The key assumptions used by management in the value in use 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 CGU. The average pre-tax discount rates range from 9.5% to 17% (2018: post-tax 7.9% to 15.8%). Discount rates are lower for those businesses which operate in more mature markets with low inflation and higher for those operating in emerging markets with higher inflation.

Perpetuity growth rates – A perpetuity growth rate of 2% (2018: 2%) was used for cash flows subsequent to the approved budget period for CGUs operating in mature markets. This perpetuity growth rate is a conservative rate and is considered to be lower than the long-term historical growth rates of the underlying territories in which the CGU operates and the long-term growth rate prospects of the sectors in which the CGU operates. CGU growth rates between 3.2% to 6.5% (2018: 3.0% and 6.5%) were used for cash flows subsequent to the approved budget period for CGUs operating in emerging markets with high inflation. These growth rates are also below the long-term historical growth rates in these markets.

The key assumptions used by management in setting the financial budgets were as follows:

Forecast sales growth rates – Forecast sales growth rates are based on past experience adjusted for the strategic direction and near-term investment priorities within each CGU. Key assumptions include growth in Online Program Management, Virtual Schools and Professional Certification, stabilisation in UK Qualifications and US Assessments, and ongoing pressures in the US Higher Education Courseware market. The sales forecasts use average nominal growth rates between (5%) and 11% (2018: 2% and 3%) for mature markets and between 5% and 11% (2018: (1)% and 12%) for emerging markets with high inflation.

Operating profits – operating profits are forecast based on historical experience of operating margins, adjusted for the impact of changes to product costs and the impact of the implementation of our 2017-2019 cost efficiency programme. Management applies judgement in allocating corporate costs in order to determine operating profit at a CGU level.

11. Intangible assets continued

Key assumptions continued

The table below shows the key assumptions for those CGUs for which the carrying value of goodwill is significant in comparison to the total carrying value of goodwill:

	Discount rate	Perpetuity growth rate
Virtual Schools	10%	2%
Core	10%	2%
Assessments	10%	2%

Comparative figures have not been shown as CGUs have been changed in 2019.

Sensitivities

Impairment testing for the year ended 31 December 2019 has identified the following CGUs, or groups of CGUs, as being sensitive to reasonably possible changes in key assumptions. The table below shows the headroom at 31 December 2019 and the changes in the key assumptions required in order for the recoverable amount to equal the carrying value.

	Headroom at 31 December 2019	Discount rate	Discount rate for zero headroom	Perpetuity growth rate	Perpetuity growth rate for zero headroom	Contribution* reduction p.a. for zero headroom
North American Courseware	£115m	10.0%	10.3%	2.0%	1.6%	£9m
OPM	£81m	10.0%	10.3%	2.0%	0.3%	£7m
Core	£191m	10.0%	10.7%	2.0%	1.2%	£15m
Brazil	–	16.3%	16.3%	4.1%	4.1%	–

* CGU contribution is operating profit excluding fixed costs and corporate overheads.

12. Investments in joint ventures and associates

The amounts recognised in the balance sheet are as follows:

All figures in £ millions	2019	2018
Associates	7	392
Joint ventures	–	–
Associates classified as held for sale	397	–
Total	404	392

The amounts recognised in the income statement are as follows:

All figures in £ millions	2019	2018
Associates	54	43
Joint ventures	–	1
Total	54	44

Investment in associates

The Group has the following material associates:

	Principal place of business	Ownership interest	Nature of relationship	Measurement method
Penguin Random House Ltd	UK/Global	25%	See below	Equity
Penguin Random House LLC	US	25%	See below	Equity

On 1 July 2013, Penguin Random House was formed, upon the completion of an agreement between Pearson and Bertelsmann to merge their respective trade publishing companies, Penguin and Random House, with the parent companies owning 47% and 53% of the combined business respectively. On 5 October 2017, Pearson sold a 22% stake in Penguin Random House to Bertelsmann, retaining a 25% share. Pearson owns its 25% interest in Penguin Random House via 25% interests in each of the two entities listed in the table above. Despite the separate legal structures of the two Penguin Random House entities, Pearson regards Penguin Random House as one combined global business. Pearson discloses Penguin Random House separately, presenting disclosures related to its interests in Penguin Random House on a combined basis.

Notes to the consolidated financial statements

12. Investments in joint ventures and associates continued

Investment in associates continued

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 Penguin Random House and Bertelsmann has the power to direct the relevant activities and therefore control. Following the transaction in 2017 the assessment of significant influence did not change. Penguin Random House does not have a quoted market price.

In December 2019, the Group announced the sale of its remaining 25% interest in Penguin Random House. At the end of 2019 the Group's share of the assets of Penguin Random House has been classified as held for sale on the balance sheet (see note 32).

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

	2019	2018
	Penguin Random House	Penguin Random House
All figures in £ millions		
Assets		
Non-current assets	1,346	1,043
Current assets	2,273	1,929
Liabilities		
Non-current liabilities	(1,357)	(1,104)
Current liabilities	(1,874)	(1,546)
Net assets	388	322
Sales	2,916	2,775
Profit for the year	205	185
Other comprehensive (expense)/income	(27)	13
Total comprehensive income	178	198
Dividends received from associate in relation to profits	63	67
Re-capitalisation dividends received from associate	–	50

The information above reflects the amounts presented in the financial statements of the associate, adjusted for fair value and similar adjustments. The tax on Penguin Random House LLC is settled by the partners. For the purposes of clear and consistent presentation, the tax has been shown in the associate line items in the consolidated income statement and consolidated balance sheet, recording the Group's share of profit after tax consistently for the Penguin Random House associates.

A reconciliation of the full summarised financial information to the carrying value of the material associate is shown below:

	2019	2018
	Penguin Random House	Penguin Random House
All figures in £ millions		
Opening net assets	322	368
Adjustment on initial application of IFRS 16 (see note 1b)	(7)	–
Exchange differences	(9)	18
Profit for the year	205	185
Other comprehensive (expense)/income	(27)	13
Dividends, net of tax paid	(260)	(262)
Capital contribution	164	–
Closing net assets	388	322
Share of net assets	97	80
Goodwill	300	307
Carrying value of associate (see note 32)	397	387

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	2019	2018
Profit/(loss) for the year	3	(3)
Total comprehensive income/(expense)	3	(3)

Transactions with material associates

From time to time the Group loans funds to Penguin Random House which are unsecured and interest is calculated based on market rates. The amount outstanding at 31 December 2019 was £49m (2018: £nil) and interest received was £1m (2018: £1m). The loans are provided under a working capital facility and fluctuate during the year.

The Group also has a current asset receivable of £16m (2018: £17m) from Penguin Random House arising from the provision of services. Included in other income (note 4) is £4m (2018: £3m) of service fees. In 2018 the Group received a further re-capitalisation dividend of £50m which was triggered by the Group's decision to sell a 22% stake in Penguin Random House in 2017.

Investment in joint ventures

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

All figures in £ millions	2019	2018
Profit for the year	-	1
Total comprehensive income	-	1

13. Deferred income tax

All figures in £ millions	2019	2018
Deferred income tax assets	59	60
Deferred income tax liabilities	(48)	(136)
Net deferred income tax	11	(76)

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

Deferred income tax assets and liabilities shall be offset when there is a legally enforceable right to offset current income tax assets with current income tax liabilities and where the deferred income taxes relate to the same fiscal authority. At 31 December 2019, the Group has unrecognised deferred income tax assets of £28m (2018: £31m) in respect of UK losses, £20m (2018: £28m) in respect of US losses and approximately £100m (2018: £90m) in respect of losses in other territories. The UK losses are capital losses. The US losses relate to federal and state taxes. Federal tax losses can be carried forward indefinitely; state tax losses have expiry periods of between five and 20 years. Other deferred tax assets of £25m (2018: £12m) have not been recognised.

Deferred tax assets of £41m (2018: £43m) have been recognised in countries that reported a tax loss in either the current or preceding year. The majority arises in Brazil in respect of tax deductible goodwill. It is considered more likely than not that there will be sufficient future taxable profits to realise these assets.

The recognition of the deferred income tax assets is supported by management's forecasts of the future profitability of the relevant countries. In some cases deferred income tax assets are forecast to be recovered through taxable profits over a period that exceeds five years. Management consider these forecasts are sufficiently reliable to support the recovery of the assets.

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	Goodwill and intangibles	Other	Total
Deferred income tax assets/(liabilities)							
At 1 January 2018	9	34	(44)	42	(155)	64	(50)
Exchange differences	–	1	1	6	(16)	(5)	(13)
Income statement (charge)/benefit	11	(4)	(21)	20	(34)	(14)	(42)
Disposal through business disposal	–	–	–	–	–	16	16
Tax benefit in other comprehensive income	–	–	9	–	–	–	9
Tax benefit in equity	–	–	–	–	–	4	4
At 31 December 2018	20	31	(55)	68	(205)	65	(76)
Adjustment on initial application of IFRS 16 (see note 1b)	–	–	–	–	–	15	15
Exchange differences	(1)	(1)	(1)	(3)	6	(5)	(5)
Income statement benefit/(charge)	70	(10)	(4)	(24)	–	32	64
Tax benefit/(charge) in other comprehensive income	–	–	22	–	–	(4)	18
Tax charge in equity	–	–	–	–	–	(5)	(5)
At 31 December 2019	89	20	(38)	41	(199)	98	11

Other deferred income tax items include temporary differences in respect of share-based payments, provisions, depreciation, interest limitation and royalty advances.

As at 31 December 2019, no deferred tax assets or liabilities were classified as held for sale (2018: £98m asset). In 2018 there was a charge of £8m relating to assets and liabilities held for sale.

14. Classification of financial instruments

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

All figures in £ millions	Notes	2019					2018				
		Fair value			Amortised cost	Total carrying value	Fair value			Amortised cost	Total carrying value
		FVOCI	FVTPL	Fair value – hedging instrument	Financial assets		FVOCI	FVTPL	Fair value – hedging instrument	Financial assets	
Investments in unlisted securities	15	122	–	–	–	122	93	–	–	–	93
Cash and cash equivalents	17	–	–	–	437	437	–	–	–	568	568
Derivative financial instruments	16	–	6	48	–	54	–	4	64	–	68
Trade receivables	22	–	–	–	918	918	–	–	–	904	904
Other receivable		–	182	–	–	182	–	–	–	–	–
Trade receivables – within assets classified as held for sale		–	–	–	–	–	–	–	–	49	49
Total financial assets		122	188	48	1,355	1,713	93	4	64	1,521	1,682

The carrying value of the Group's financial assets is equal to, or approximately equal to, the market value. The other receivable relates to the receivable which arose on the disposal of the US K12 Courseware business and is included in other receivables, non-current and current, in note 22.

14. Classification of financial instruments continued

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

All figures in £ millions	Notes	2019					2018				
		Fair value		Amortised cost	Total carrying value	Total market value	Fair value		Amortised cost	Total carrying value	Total market value
		FVTPL	Fair value – hedging instrument	Other financial liabilities			FVTPL	Fair value – hedging instrument	Other financial liabilities		
Derivative financial instruments	16	(7)	(32)	–	(39)	(39)	–	(59)	–	(59)	(59)
Trade payables	24	–	–	(358)	(358)	(358)	–	–	(311)	(311)	(311)
Trade payables – within liabilities classified as held for sale		–	–	–	–	–	–	–	(22)	(22)	(22)
Bank loans and overdrafts	18	–	–	(3)	(3)	(3)	–	–	(43)	(43)	(43)
Other borrowings due within one year	18	–	–	(89)	(89)	(89)	–	–	(3)	(3)	(3)
Borrowings due after more than one year	18	–	–	(1,572)	(1,572)	(1,574)	–	–	(674)	(674)	(663)
Total financial liabilities		(7)	(32)	(2,022)	(2,061)	(2,063)	–	(59)	(1,053)	(1,112)	(1,101)

The market value of leases has been stated at book value.

Fair value measurement

As shown above, the Group's derivative assets and liabilities, unlisted securities and marketable securities are held at fair value. Financial instruments that are measured subsequently to initial recognition at fair value are grouped into levels 1 to 3, based on the degree to which the fair value is observable, as follows:

Level 1 fair value measurements are those derived from unadjusted quoted prices in active markets for identical assets or liabilities.

Level 2 fair value measurements are those derived from inputs, other than quoted prices included within level 1, that are observable for the asset or liability, either directly (as prices) or indirectly (derived from prices).

Level 3 fair value measurements are those derived from valuation techniques that include inputs for the asset or liability that are not based on observable market data (unobservable inputs).

The Group's bonds valued at £595m (2018: £661m) are classified as level 1. The Group's derivative assets valued at £54m (2018: £68m) and derivative liabilities valued at £39m (2018: £59m) are classified as level 2. The Group's investments in unlisted securities are valued at £122m (2018: £93m) and holding in other receivable is valued at £182m (2018: £nil); both are classified as level 3.

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

All figures in £ millions	2019			2018
	Other receivable	Investments in unlisted securities	Total	Investments in unlisted securities
At beginning of year	–	93	93	77
Exchange differences	1	(3)	(2)	4
Acquisition of investments and other receivable	181	12	193	13
Fair value movements	–	20	20	7
Disposal of investments	–	–	–	(8)
At end of year	182	122	304	93

The fair value of the investments in unlisted securities is determined by reference to the financial performance of the underlying asset, recent funding rounds and amounts realised on the sale of similar assets.

The fair value of the other receivable, which arose on the disposal of the US K12 Courseware business, is determined using present value techniques whereby the expected value of future cash flows is discounted using a rate which is representative of the creditworthiness of the US K12 Courseware business. The key inputs used in the present value calculations are forecast sales, discount rate and the expected date of a subsequent sale of the US K12 Courseware business. If the forecast sales used in the calculations were increased/ decreased by 5%, the value of the receivable would increase/decrease by approximately £20m. If the discount rate used in the calculations of 3.25% was increased/decreased by 1%, the value of the receivable would decrease/increase by approximately £5m. The calculations are not materially sensitive to reasonable changes in the expected date of a subsequent sale of the K12 business.

Notes to the consolidated financial statements

15. Other financial assets

All figures in £ millions	2019	2018
At beginning of year	93	77
Exchange differences	(3)	4
Acquisition of investments	12	13
Fair value movements	20	7
Disposal of investments	–	(8)
At end of year	122	93

Other financial assets include unlisted securities of £122m (2018: £93m) that are classified at fair value through other comprehensive income (FVOCI). The assets, which are not held for trading, relate to the Group's interests in new and innovative educational ventures across the world. These are strategic investments and the Group considers the classification as FVOCI to be more relevant. None of the investments are individually significant to the financial statements. In 2018, equities held at a fair value of £8m were disposed. The cumulative gain on disposal was £nil and £2m was recycled from the fair value reserve to retained earnings.

16. Derivative financial instruments and hedge accounting

The Group's approach to the management of financial risks is set out in note 19. The Group's outstanding derivative financial instruments are as follows:

All figures in £ millions	2019			2018		
	Gross notional amounts	Assets	Liabilities	Gross notional amounts	Assets	Liabilities
Interest rate derivatives – in a fair value hedge relationship	336	13	–	404	13	–
Interest rate derivatives – not in a hedge relationship	557	2	(6)	362	3	–
Cross-currency rate derivatives – in a hedge relationship	502	29	(31)	577	51	(35)
FX derivatives – in a hedge relationship	555	6	(1)	434	–	(24)
FX derivatives – not in a hedge relationship	386	4	(1)	473	1	–
Total	2,336	54	(39)	2,250	68	(59)
Analysed as expiring:						
In less than one year	1,167	25	(15)	771	1	(23)
Later than one year and not later than five years	694	13	(6)	795	22	(1)
Later than five years	475	16	(18)	684	45	(35)
Total	2,336	54	(39)	2,250	68	(59)

The Group's treasury policies only allow derivatives to be traded where the objective is risk mitigation. These are then designated for hedge accounting using the following criteria:

- › If the derivative and the underlying hedged exposure would normally be revalued through the income statement and valuation changes are expected to be perfectly or near perfectly equal and opposite, these will not be classified in a hedge relationship.
- › Where interest rate and cross currency interest rate swaps are used to convert fixed rate debt to floating and we expect to receive inflows equal to the fixed rate debt interest, these are classified as fair value hedges.
- › Where derivatives are used to create a future foreign currency liability to provide protection against currency movements affecting the valuation of an overseas investment, these are designated as a net investment hedge.

The Group's fixed rate USD debt is held as fixed rate instruments at amortised cost.

The majority of the Group's fixed rate euro debt is converted to a floating rate exposure using interest rate and cross-currency swaps. The Group receives interest under its euro debt related swap contracts to match the interest on the bonds (ranging from a receipt of 1.375% on its euro 2025 notes to 1.875% on its euro 2021 notes) and, in turn, pays either a floating US dollar or sterling variable rates of GBP Libor + 0.81% and US Libor + 1.36%.

16. Derivative financial instruments and hedge accounting continued

GBP and USD Interest rate swaps are subsequently used to fix an element of the interest charge. The all-in rates (including the spread above Libor) that the Group pays are between 2.2% and 3.6%. In addition to this the Group has executed additional interest rate swaps to offset the floating rate borrowings paying between 0.83% and 2.1%. At 31 December 2019, the Group had interest rate swap contracts to fix £557m of debt and a further £246m of outstanding fixed rate bonds bringing the total fixed rate debt to £803m. These fixed interest rate derivatives are not in designated hedging relationships. Additionally the Group uses FX derivatives including forwards, collars and cross currency swaps to create synthetic USD debt as a hedge of its USD assets and to achieve certainty of USD currency conversion rates, in line with the Group's FX hedging policy. Outstanding contracts as at 31 December 2019 were held at an average GBP/USD rate of 1.34. These derivatives are in designated net investment hedging relationships. The weighted average rate achieved for the bonds in a net investment hedge relationship was GBP/USD 1.59 for the USD bonds and EUR/GBP 0.86 for the euro bonds. Outstanding contracts on the cross currency swaps at 31 December 2019 were held at an average EUR/GBP rate of 0.79. These derivatives are in designated fair value hedging relationships.

At the end of 2019, 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 £(167)m, sterling £(166)m and euro £336m (2018: US dollar £(185)m, sterling £(215)m and euro £432m).

The Group's portfolio of rate derivatives is diversified by maturity, counterparty and type. Natural offsets between transactions within the portfolio and the designation of certain derivatives as hedges significantly reduce the risk of income statement volatility. The sensitivity of the portfolio to changes in market rates is set out in note 19.

Fair value hedges

The Group uses Interest Rate Swaps and Cross Currency Swaps as Fair value hedges of the Groups euro issued debt.

Interest rate exposure arises from movements in the fair value of the Group's euro debt attributable to movements in euro interest rates. The hedged risk is the change in the euro bonds fair value attributable to interest rate movements. The hedged items are the Group's euro bonds which are issued at a fixed rate. The hedging instruments are fixed to floating euro interest rate swaps where the Group receives fixed interest payments and pays three month Euribor.

As the critical terms of the interest rate swaps match the bonds, there is an expectation that the value of the hedging instrument and the value of the hedged item will move in the opposite direction as a result of movements in the zero coupon Euribor curve. The hedge ratio is therefore expected to be 100%. Sources of hedge ineffectiveness are a reduction or modification in the hedged item or a material change in the credit risk of swap counterparties.

A foreign currency exposure arises from foreign exchange fluctuations on translation of the Group's euro debt into GBP. The hedged risk is the risk of changes in the GBPEUR spot rate that will result in changes in the value of the euro debt when translated into GBP. The hedged items are a portion of the Group's euro bonds. The hedging instruments are floating to floating cross currency swaps which creates an exposure to euro strengthening against GBP within the hedge item. The final exchange on the cross currency swap creates an exposure to euro weakening against GBP.

As the critical terms of the cross currency swap match the bonds there is an expectation that the value of the hedging instrument and the value of the hedged item move in the opposite direction as a result of movements in the EURGBP exchange rate. The hedge ratio is 100%. Sources of hedge ineffectiveness are a reduction or modification in the hedged item or a material change in the credit risk of swap counterparties.

The Group held the following instruments to hedge exposures to changes in interest rates and foreign currency risk associated with borrowings:

2019			
All figures in £ millions	Carrying amount of hedging instruments	Change in fair value of hedging instrument used to determine hedge ineffectiveness	Nominal amounts of hedging instruments
Derivative financial instruments for interest rate risk	13	–	336
Derivative financial instruments for currency risk	25	(21)	336
2018			
All figures in £ millions	Carrying amount of hedging instruments	Change in fair value of hedging instrument used to determine hedge ineffectiveness	Nominal amounts of hedging instruments
Derivative financial instruments for interest rate risk	13	(7)	404
Derivative financial instruments for currency risk	51	3	404

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16. Derivative financial instruments and hedge accounting continued

The amounts at the reporting date relating to items designated as hedge items were as follows:

2019					
All figures in £ millions	Carrying amount of hedged items	Accumulated amount of fair value hedge adjustments on the hedged item included in the carrying amount	Change in fair value of hedged item used to determine hedge ineffectiveness	Hedge ineffectiveness	Line item in profit or loss that includes hedge ineffectiveness
Interest rate risk					
Financial liabilities – borrowings	(347)	(9)	–	–	n/a
Currency risk					
Financial liabilities – borrowings	(347)	n/a	21	–	n/a
2018					
All figures in £ millions	Carrying amount of hedged items	Accumulated amount of fair value hedge adjustments on the hedged item included in the carrying amount	Change in fair value of hedged item used to determine hedge ineffectiveness	Hedge ineffectiveness	Line item in profit or loss that includes hedge ineffectiveness
Interest rate risk					
Financial liabilities – borrowings	(416)	(9)	7	–	n/a
Currency risk					
Financial liabilities – borrowings	(416)	n/a	(3)	–	n/a

Hedge of net investment in a foreign operation

A foreign currency exposure arises from the translation of the Group's net investments in its subsidiaries which have USD and euro functional currencies. The hedged risk is the risk of changes in the GBPUSD and GBPEUR spot rates that will result in changes in the value of the Group's net investment in its USD and euro assets when translated into GBP. The hedged items are a portion of the Group's assets which are denominated in USD and euro. The hedging instruments are debt and derivative financial instruments, including Cross Currency Swaps, FX Forwards and FX Collars which creates an exposure to USD and euro weakening against GBP.

It is expected that the change in value of each of these items will mirror each other as there is a clear and direct economic relationship between the hedge and the hedged item in the hedge relationship.

Hedge ineffectiveness would arise if the value of the hedged items fell below the value of the hedging instruments however this is unlikely as the value of the Group's assets denominated in USD and euro are significantly greater than the proposed net investment programme.

The amounts related to items designated as hedging instruments were as follows:

2019					
All figures in £ millions	Carrying amount of hedged instruments	Change in value of hedging instrument used to determine hedge ineffectiveness	Nominal amounts of hedging instruments	Hedging gains/(losses) recognised in OCI	Hedge ineffectiveness recognised in profit or loss
Derivative financial instruments	(21)	13	(722)	13	–
Financial liabilities – borrowings	(246)	10	(246)	10	–

16. Derivative financial instruments and hedge accounting continued

All figures in £ millions	2018				
	Carrying amount of hedged instruments	Change in value of hedging instrument used to determine hedge ineffectiveness	Nominal amounts of hedging instruments	Hedging gains/(losses) recognised in OCI	Hedge ineffectiveness recognised in profit or loss
Derivative financial instruments	(59)	(22)	(607)	(22)	–
Financial liabilities – borrowings	(256)	(10)	(256)	(10)	–

In addition to the above, £3m of hedging gains were recognised in OCI in relation to derivative financial instruments that matured during the year. Included in the translation reserve is a cost of hedging reserve of £2m relating to the time value of FX collars which is not separately disclosed due to materiality.

Offsetting arrangements with derivative counterparties

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

All figures in £ millions	2019			2018		
	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	52	(34)	18	67	(44)	23
Counterparties in a liability position	2	(5)	(3)	1	(15)	(14)
Total as presented in the balance sheet	54	(39)	15	68	(59)	9

All of the Group's derivative financial instruments are subject to enforceable netting arrangements with individual counterparties, allowing net settlement in the event of default of either party. Offset arrangements in respect of cash balances are described in note 17.

Counterparty exposure from all derivatives is managed, together with that from deposits and bank account balances, within credit limits that reflect published credit ratings and by reference to other market measures (e.g. market prices for credit default swaps) to ensure that there is no significant risk to any one counterparty.

The Group has no material embedded derivatives that are required to be separately accounted for in accordance with IFRS 9 'Financial Instruments'.

17. Cash and cash equivalents (excluding overdrafts)

All figures in £ millions	2019	2018
Cash at bank and in hand	401	533
Short-term bank deposits	36	35
	437	568

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

At the end of 2019, the currency split of cash and cash equivalents was US dollar 30% (2018: 18%), sterling 12% (2018: 30%), and other 58% (2018: 52%).

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	2019	2018
Cash and cash equivalents	437	568
Bank overdrafts	(3)	(43)
	434	525

The Group has certain cash pooling arrangements in US dollars, sterling, euro and Canadian dollars where both the company and the bank have a legal right of offset. Offsetting amounts are presented gross in the balance sheet. Offset arrangements in respect of derivatives are shown in note 16.

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18. Financial liabilities – borrowings

The Group's current and non-current borrowings are as follows:

All figures in £ millions	2019	2018
Non-current		
1.875% euro notes 2021 (nominal amount €195m; 2018 nominal amount €250m)	170	233
3.75% US dollar notes 2022 (nominal amount \$117m)	89	92
3.25% US dollar notes 2023 (nominal amount \$94m)	72	74
1.375% euro notes 2025 (nominal amount €300m)	262	273
Revolving credit facility	230	–
Lease liabilities (see note 35)	749	2
	1,572	674
Current		
Due within one year or on demand:		
Bank loans and overdrafts	3	43
Lease liabilities (see note 35)	89	3
	92	46
Total borrowings	1,664	720

Included in the non-current borrowings above is £5m of accrued interest (2018: £6m). Included in the current borrowings above is £nil of accrued interest (2018: £nil).

Prior to 1 January 2019 the Group leased certain equipment under a number of finance lease agreements which were included within Financial liabilities – borrowings. On the application of IFRS 16 at 1 January 2019 (see note 1b) all lease liabilities are now included within Financial liabilities – borrowings.

The maturities of the Group's non-current borrowings are as follows:

All figures in £ millions	2019	2018
Between one and two years	251	1
Between two and five years	609	400
Over five years	712	273
	1,572	674

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

All figures in £ millions	2019			2018		
	Effective interest rate	Carrying value	Market value	Effective interest rate	Carrying value	Market value
Bank loans and overdrafts	n/a	3	3	n/a	43	43
1.875% euro notes 2021	2.04%	170	170	2.04%	233	233
3.75% US dollar notes 2022	3.94%	89	90	3.94%	92	91
3.25% US dollar notes 2023	3.36%	72	72	3.36%	74	71
1.375% euro notes 2025	1.44%	262	263	1.44%	273	266
Revolving credit facility	1.075%	230	230	–	–	–
Lease liabilities	n/a	838	838	n/a	5	5
		1,664	1,666		720	709

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.

18. Financial liabilities – borrowings continued

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	2019	2018
US dollar	539	188
Sterling	576	23
Euro	442	506
Other	107	3
	1,664	720

The Group has \$0.9bn (£0.7bn) of undrawn capacity on its committed borrowing facilities as at 31 December 2019 (2018: \$1.75bn (£1.4bn) 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 lease obligations, the rights to the leased asset revert to the lessor in the event of default.

19. Financial risk management

The Group's approach to the management of financial risks together with sensitivity analyses of its financial instruments is set out below.

Treasury policy

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

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

Capital risk

The Group's objectives when managing capital are:

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

The Group aimed to maintain net debt at a level less than 1.5 times adjusted EBITDA before the adoption of IFRS 16 and less than 2.2 times adjusted EBITDA after the adoption of IFRS16. This is consistent with a solid investment-grade rating (assuming no material deterioration in trading performance) and provides comfortable headroom against covenants.

At 31 December 2019 the Group was rated BBB (negative outlook) with Standard and Poor's and Baa2 (stable outlook) with Moody's.

Net debt

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

All figures in £ millions	2019	2018
Cash and cash equivalents	437	568
Derivative financial instruments	15	9
Bank loans and overdrafts	(3)	(43)
Bonds	(593)	(672)
Revolving credit facility	(230)	–
Investment in finance lease receivable	196	–
Lease liabilities	(838)	(5)
Net debt	(1,016)	(143)

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 debt is primarily held in US dollars to provide a natural hedge of this exposure, which is achieved through issued US dollar debt or converting euro debt to US dollars using cross-currency swaps, forwards and collars. As at 31 December 2019, £1,641m of the Group's debt is held at fixed rates (2018: £674m), with £23m held at floating rates (2018: £103m), partially offset by US dollar cash balances which attract floating rate interest.

See note 16 for details of the Group's hedging programme which addresses interest rate risk and foreign currency risk.

Overseas profits are converted to sterling to satisfy sterling cash outflows such as dividends at the prevailing spot rate at the time of the transaction. To the extent the Group has sufficient sterling, US dollars may be held as dollar cash to provide a natural offset to the Group's debt or to satisfy future US dollar cash outflows.

The Group does not have significant cross-border foreign exchange transactional exposures.

Notes to the consolidated financial statements

19. Financial risk management continued

Interest and foreign exchange rate management continued

As at 31 December 2019, 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	2019				
	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	122	–	–	(9)	11
Other receivable	182	–	–	(17)	20
Cash and cash equivalents	437	–	–	(32)	39
Derivative financial instruments	15	16	(18)	22	(23)
Bonds	(593)	11	(12)	53	(64)
Other borrowings	(1,071)	2	(2)	46	(56)
Other net financial assets	560	–	–	(43)	52
Total financial instruments	(348)	29	(32)	20	(21)

All figures in £ millions	2018				
	Carrying value	Impact of 1% increase in interest rates	Impact of 1% decrease in interest rates	Impact of 10% strengthening in sterling	Impact of 10% weakening in sterling
Investments in unlisted securities	93	–	–	(7)	9
Cash and cash equivalents	568	–	–	(36)	45
Derivative financial instruments	9	(3)	3	1	(1)
Bonds	(672)	17	(17)	61	(74)
Other borrowings	(48)	–	–	2	(3)
Other net financial assets	620	–	–	(51)	62
Total financial instruments	570	14	(14)	(30)	38

The table shows the sensitivities of the fair values of each class of financial instrument to an isolated change in either interest rates or foreign exchange rates. Other net financial assets comprises trade receivables less trade payables. A significant proportion of the movements shown above would impact equity rather than the income statement due to the location and functional currency of the entities in which they arise and the availability of net investment hedging.

The Group's income statement is reported at average rates for the year while the balance sheet is translated at the year-end closing rate. Differences between these rates can distort ratio calculations such as debt to EBITDA and interest cover. Adjusted operating profit translated at year-end closing rates would be £22m lower than the reported figure of £581m at £559m. Adjusted EBITDA translated at year-end closing rates would be £26m lower than the reported figure of £804m at £778m.

Liquidity and re-financing risk management

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

At 31 December 2019, the Group had cash of £0.4bn and an outstanding drawing of £230m on the US dollar denominated revolving credit facility due 2024 of \$1.19bn (£0.9bn).

The \$1.19bn facility contains interest cover and leverage covenants which the Group has complied with for the year ended 31 December 2019. The maturity of the carrying values of the Group's borrowings and trade payables are set out in notes 18 and 24 respectively.

At the end of 2019, the currency split of the Group's trade payables was US dollar £214m, sterling £57m and other currencies £87m (2018: US dollar £178m, sterling £57m and other currencies £98m). Trade payables are all due within one year (2018: all due within one year).

The table opposite analyses the Group's bonds and derivative assets and liabilities into relevant maturity groupings based on the remaining period at the balance sheet date to the contractual maturity date. Short dated derivative instruments have not been included in this table. The amounts disclosed in the table are the contractual undiscounted cash flows (including interest) and as such may differ from the amounts disclosed on the balance sheet.

Financial counterparty and credit risk management

Financial counterparty and credit risk arises from cash and cash equivalents, favourable derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding receivables. Counterparty credit limits, which take published credit rating and other factors into account, are set to cover the Group's total aggregate exposure to a single financial institution. The limits applicable to published credit rating bands are approved by the Chief Financial Officer within guidelines approved by the Board. Exposures and limits applicable to each financial institution are reviewed on a regular basis.

19. Financial risk management continued

Financial counterparty and credit risk management continued

All figures in £ millions	Analysed by maturity			Total	Analysed by currency			Total
	Greater than one month and less than one year	Later than one year but less than five years	Five years or more		USD	GBP	Other	
At 31 December 2019								
Bonds	12	354	259	625	177	–	448	625
Rate derivatives – inflows	(19)	(223)	(332)	(574)	(41)	(172)	(361)	(574)
Rate derivatives – outflows	23	237	331	591	242	344	5	591
FX forwards – inflows	(186)	(24)	–	(210)	–	(210)	–	(210)
FX forwards – outflows	186	23	–	209	209	–	–	209
Total	16	367	258	641	587	(38)	92	641
At 31 December 2018								
Bonds	14	431	277	722	189	–	533	722
Rate derivatives – inflows	(20)	(288)	(343)	(651)	(40)	(167)	(444)	(651)
Rate derivatives – outflows	23	289	341	653	254	390	9	653
FX forwards – inflows	(251)	(35)	–	(286)	–	(286)	–	(286)
FX forwards – outflows	275	37	–	312	312	–	–	312
Total	41	434	275	750	715	(63)	98	750

Cash deposits and derivative transactions are made with approved counterparties up to pre-agreed limits. To manage counterparty risk associated with cash and cash equivalents, the Group uses a mixture of money market funds as well as bank deposits. As at 31 December 2019, 84% of cash and cash equivalents was held with investment grade bank counterparties, 12% with AAA money market funds and 4% held with non-investment grade bank counterparties.

For trade receivables and contract assets the Group's exposure to credit risk is influenced mainly by the individual characteristics of each customer. However, risk associated with the industry and country in which customers operate may also influence the credit risk. The credit quality of customers is assessed by taking into account financial position, past experience and other relevant factors. Individual credit limits are set for each customer based on internal ratings. The compliance with credit limits is regularly monitored by the Group. A default on a trade receivable is when the counterparty fails to make contractual payments within the stated payment terms. Trade receivables and contract assets are written off when there is no reasonable expectation of recovery. The carrying amounts of financial assets, trade receivables and contract assets represent the maximum credit exposure.

Trade receivables and contract assets are subject to impairment using the expected credit loss model. The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected credit loss allowance for all trade receivables and contract assets. To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. See note 22 for further details about trade receivables and contract assets including movements in provisions for bad and doubtful debts.

Change of accounting policy: Amendments to IFRS 9 and IFRS 7

Pearson has considered the impact of IBOR reform on Pearson's hedge accounting. The Group has elected to early adopt the 'Amendments to IFRS 9, and IFRS 7 Interest Rate Benchmark Reform' issued in September 2019. In accordance with the transition provisions, the amendments have been adopted retrospectively to hedging relationships that existed at the start of the reporting period or were designated thereafter. The amendments provide temporary relief from applying specific hedge accounting requirements to hedging relationships directly affected by IBOR reform.

The reliefs have the effect that IBOR reform should not generally cause hedge accounting to terminate. However, any hedge ineffectiveness continue should be recorded in the income statement. Furthermore, the amendments set out triggers for when the reliefs will end, which include the uncertainty arising from interest rate benchmark reform no longer being present.

Pearson has a limited exposure to changes in the EUR IBOR benchmark. The Group has €395m (£336m) of Interest Rate Swaps which are in fair value hedge relationships of €395m (£336m). Pearson has considered a IBOR transition plan. Pearson currently anticipates that the areas of greatest change will be amendments to the contractual terms of EUR-IBOR-referenced floating-rate swaps, and updating hedge designations

In summary, the reliefs provided by the amendments that apply to the Group are:

- › In assessing whether the hedge is expected to be highly effective on a forward-looking basis, the Group has assumed that the Euribor interest rate on which the cash flows of the interest rate swap that hedges fixed-rate Euro bonds is not altered by IBOR reform.
- › The Group will not discontinue hedge accounting during the period of IBOR-related uncertainty solely because the retrospective effectiveness demonstrates ineffectiveness due to IBOR reform. The Group has assessed whether the hedged Euribor risk component is a separately identifiable risk only when it first designates the hedge and not on an ongoing basis

Notes to the consolidated financial statements

20. Intangible assets – pre-publication

All figures in £ millions	2019	2018
Cost		
At beginning of year	2,096	1,854
Exchange differences	(66)	70
Additions	306	328
Disposals	(82)	(158)
Transfer from property, plant and equipment	9	2
Transfer from intangible assets	12	–
At end of year	2,275	2,096
Amortisation		
At beginning of year	(1,279)	(1,113)
Exchange differences	53	(53)
Charge for the year	(261)	(271)
Disposals	82	158
At end of year	(1,405)	(1,279)
Carrying amounts at end of year	870	817

Included in the above are pre-publication assets amounting to £585m (2018: £577m) which will be realised in more than one year.

Amortisation is included in the income statement in cost of goods sold.

In addition to the above, in 2019 there was a £10m charge and additions of £13m relating to assets and liabilities held for sale. In 2018 £242m of pre-publication assets were included in assets classified as held for sale (see note 32) with a charge of £67m and additions of £60m in 2018 related to assets and liabilities held for sale.

21. Inventories

All figures in £ millions	2019	2018
Raw materials	5	5
Work in progress	2	–
Finished goods	155	149
Returns asset	7	10
	169	164

The cost of inventories recognised as an expense and included in the income statement in cost of goods sold amounted to £231m (2018: £375m). In 2019, £33m (2018: £39m) of inventory provisions was charged in the income statement. None of the inventory is pledged as security.

Included within the inventory balance is the estimation of the right to receive goods from contracts with customers via returns. The value of the returns asset is measured at the carrying amount of the assets at the time of sale aligned to the Group's normal inventory valuation methodology less any expected costs to recover the asset and any expected reduction in value. Impairment charges against the inventory returns asset are £nil in 2019 (2018: £nil). The returns asset all relates to finished goods.

22. Trade and other receivables

All figures in £ millions	2019	2018
Current		
Trade receivables	903	874
Royalty advances	4	5
Prepayments	138	103
Investment in finance lease receivable	25	–
Deferred contract costs	–	1
Accrued income	11	2
Other receivables	194	193
	1,275	1,178
Non-current		
Trade receivables	15	30
Royalty advances	–	21
Prepayments	7	13
Investment in finance lease receivable	171	–
Deferred contract costs	–	1
Accrued income	5	10
Other receivables	115	25
	313	100

Accrued income represents contract assets which are unbilled amounts generally resulting from assessments and services revenue streams where revenue to be recognised over time has been recognised in excess of customer billings to date. Impairment charges on accrued income assets are £nil (2018: £nil). The carrying value of the Group's trade and other receivables approximates its fair value. Trade receivables are stated net of provisions for bad and doubtful debts.

The movements in the provision for bad and doubtful debts are as follows:

All figures in £ millions	2019	2018
At beginning of year	(96)	(116)
Adjustment on initial application of IFRS 9	–	(12)
Exchange differences	3	2
Income statement movements	(35)	(1)
Utilised	36	31
At end of year	(92)	(96)

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	2019	2018
Within due date	654	606
Up to three months past due date	155	172
Three to six months past due date	35	72
Six to nine months past due date	9	16
Nine to 12 months past due date	14	24
More than 12 months past due date	51	14
Net trade receivables	918	904

The Group reviews its bad debt provision at least twice a year following a detailed review of receivable balances and historical payment profiles, and assessment of forward looking risk factors. Management believes all the remaining receivable balances are fully recoverable.

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23. Provisions for other liabilities and charges

All figures in £ millions	Deferred consideration	Property	Disposals and closures	Legal and other	Total
At 1 January 2019	42	102	5	16	165
Adjustment on initial application of IFRS 16 (see note 1b)	–	(101)	–	–	(101)
Exchange differences	(1)	–	–	(2)	(3)
Charged to income statement	–	10	–	67	77
Released to income statement	–	–	(5)	(15)	(20)
Utilised	(5)	(1)	–	(17)	(23)
Transfer from trade and other liabilities	–	6	–	–	6
Transfer to other liabilities	(36)	–	–	–	(36)
At 31 December 2019	–	16	–	49	65

Analysis of provisions:

	2019				
All figures in £ millions	Deferred consideration	Property	Disposals and closures	Legal and other	Total
Current	–	9	–	43	52
Non-current	–	7	–	6	13
	–	16	–	49	65
	2018				
Current	6	2	5	7	20
Non-current	36	100	–	9	145
	42	102	5	16	165

Deferred consideration primarily related to the formation of a venture in North America in 2011. This provision was reclassified to other liabilities during 2019.

Property provisions in 2018 predominantly related to restructuring and onerous leases. The main provisions related to the consolidation of London properties and were expected to be utilised from 2020. Uncertainties around property provisions related to prevailing market conditions including potential sublet income, lease terms including rent free periods, void periods, lease incentives and running costs. On the initial application of IFRS 16 (see note 1b) in 2019 onerous lease provisions have been offset against the relevant right-of-use asset. Property provisions in 2019 relate to restructuring and dilapidation provisions.

Legal and other includes legal claims, contract disputes and potential contract losses with the provisions utilised as the cases are settled. Also included in legal and other are other restructuring provisions that are generally utilised within one year.

24. Trade and other liabilities

All figures in £ millions	2019	2018
Trade payables	358	311
Sales return liability	122	173
Social security and other taxes	13	16
Accruals	295	397
Deferred income	360	387
Interest payable	28	46
Other liabilities	188	225
	1,364	1,555
Less: non-current portion		
Accruals	–	15
Deferred income	55	66
Other liabilities	31	74
	86	155
Current portion	1,278	1,400

24. Trade and other liabilities continued

The carrying value of the Group's trade and other liabilities approximates its fair value. The deferred income balance comprises contract liabilities in respect of advance payments in assessment, testing and training businesses; subscription income in school and college businesses; and obligations to deliver digital content in future periods.

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 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 2019, the UK Group plan had approximately 26,000 members, analysed in the following table:

All figures in %	Active	Deferred	Pensioners	Total
Defined benefit	–	20	33	53
Defined contribution	12	35	–	47
Total	12	55	33	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.

The defined contribution section of the UK Group plan operates a Reference Scheme Test (RST) pension underpin for its members. Where a member's fund value is insufficient to purchase the RST pension upon retirement, the UK Group plan is liable for the shortfall to cover the member's RST pension. A liability of £33m (2018: £23m) in respect of the underpin is included in the UK Group plan's defined benefit obligation, calculated as the present value of projected payments less the fund value. From 1 January 2018, members who have sufficient funds to purchase an RST pension are able to convert their fund value into a pension in the UK Group plan as an alternative to purchasing an annuity with an insurer. The Group does not recognise the assets and liabilities for members of the defined contribution section of the UK Group plan whose fund values are expected to be sufficient to purchase an RST pension without assistance from the UK Group plan. The defined contribution section of the UK Group plan had gross assets of £512m at 31 December 2019 (2018: £453m).

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

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.

All figures in %	2019			2018		
	UK Group plan	Other plans	PRMB	UK Group plan	Other plans	PRMB
Inflation	3.0	1.7	1.5	3.3	1.6	1.5
Rate used to discount plan liabilities	2.0	3.0	3.1	2.8	4.0	4.1
Expected rate of increase in salaries	3.5	2.9	3.0	3.8	2.9	3.0
Expected rate of increase for pensions in payment and deferred pensions	1.85 to 5.05	–	–	2.1 to 5.1	–	–
Initial rate of increase in healthcare rate	–	–	6.8	–	–	7.0
Ultimate rate of increase in healthcare rate	–	–	5.0	–	–	5.5

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% 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% has been used.

The expected rate of increase in salaries has been set at 3.5% for 2019.

For the UK Group plan, the mortality base table assumptions have been updated and are derived from the SAPS S2 for males and females, adjusted to reflect the observed experience of the plan, with CMI model improvement factors. A 1.5% long-term rate improvement on the CMI model is applied for both males and females.

For the US plans, the mortality table (Pri – 2012) and 2019 improvement scale (MP – 2019) with generational projection for male and female annuitants has been adopted.

Using the above tables, the remaining average life expectancy in years of a pensioner retiring at age 65 on the balance sheet date for the UK Group plan and US plans is as follows:

All figures in years	UK		US	
	2019	2018	2019	2018
Male	24.0	23.8	20.6	20.7
Female	24.3	24.5	22.6	22.7

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:

All figures in years	UK		US	
	2019	2018	2019	2018
Male	25.5	25.4	22.2	22.3
Female	26.1	26.3	24.1	24.2

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.

25. Retirement benefit and other post-retirement obligations continued

Financial statement information

The amounts recognised in the income statement are as follows:

	2019					
All figures in £ millions	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	6	3	9	57	–	66
Past service cost	–	–	–	–	–	–
Curtailments	(2)	–	(2)	–	(1)	(3)
Administration expenses	6	–	6	–	–	6
Total operating expense	10	3	13	57	(1)	69
Interest on plan assets	(89)	(5)	(94)	–	–	(94)
Interest on plan liabilities	73	6	79	–	2	81
Net finance (income)/expense	(16)	1	(15)	–	2	(13)
Net income statement charge	(6)	4	(2)	57	1	56

	2018					
All figures in £ millions	UK Group plan	Defined benefit other	Sub-total	Defined contribution	PRMB	Total
Current service cost	7	2	9	56	(1)	64
Past service cost	8	–	8	–	–	8
Curtailments	–	–	–	–	(11)	(11)
Administration expenses	6	–	6	–	–	6
Total operating expense	21	2	23	56	(12)	67
Interest on plan assets	(82)	(5)	(87)	–	–	(87)
Interest on plan liabilities	68	6	74	–	2	76
Net finance (income)/expense	(14)	1	(13)	–	2	(11)
Net income statement charge	7	3	10	56	(10)	56

The amounts recognised in the balance sheet are as follows:

	2019				2018			
All figures in £ millions	UK Group plan	Other funded plans	Other unfunded plans	Total	UK Group plan	Other funded plans	Other unfunded plans	Total
Fair value of plan assets	3,341	120	–	3,461	3,240	141	–	3,381
Present value of defined benefit obligation	(2,912)	(138)	(19)	(3,069)	(2,671)	(158)	(19)	(2,848)
Net pension asset/(liability)	429	(18)	(19)	392	569	(17)	(19)	533
Other post-retirement medical benefit obligation				(43)				(49)
Other pension accruals				(12)				(13)
Net retirement benefit asset				337				471
Analysed as:								
Retirement benefit assets				429				571
Retirement benefit obligations				(92)				(100)

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

All figures in £ millions	2019	2018
Amounts recognised for defined benefit plans	(148)	16
Amounts recognised for post-retirement medical benefit plans	3	6
Total recognised in year	(145)	22

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

The fair value of plan assets comprises the following:

All figures in %	2019			2018		
	UK Group plan	Other funded plans	Total	UK Group plan	Other funded plans	Total
Insurance	43	–	43	28	1	29
Equities	1	1	2	1	1	2
Bonds	5	2	7	–	2	2
Property	5	–	5	7	–	7
Pooled asset investment funds	30	–	30	44	–	44
Other	13	–	13	16	–	16

The plan assets do not include any of the Group's own financial instruments, or any property occupied by the Group. The table below further disaggregates the plan assets into additional categories and those assets which have a quoted market price in an active market and those that do not:

All figures in %	2019		2018	
	Quoted market price	No quoted market price	Quoted market price	No quoted market price
Insurance	43	–	29	–
Non-UK equities	–	2	–	2
Fixed-interest securities	7	–	2	–
Property	–	5	–	7
Pooled asset investment funds	30	–	44	–
Other	–	13	–	16
Total	80	20	75	25

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

All figures in %	2019	2018
Liquid – call <1 month	37	51
Less liquid – call 1–3 months	–	–
Illiquid – call >3 months	63	49

25. Retirement benefit and other post-retirement obligations continued

Financial statement information continued

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

All figures in £ millions	2019			2018		
	UK Group plan	Other plans	Total	UK Group plan	Other plans	Total
Fair value of plan assets						
Opening fair value of plan assets	3,240	141	3,381	3,337	155	3,492
Exchange differences	-	(5)	(5)	-	4	4
Interest on plan assets	89	5	94	82	5	87
Return on plan assets excluding interest	133	13	146	(45)	(13)	(58)
Contributions by employer	3	2	5	6	1	7
Benefits paid	(124)	(16)	(140)	(140)	(11)	(151)
Other	-	(20)	(20)	-	-	-
Closing fair value of plan assets	3,341	120	3,461	3,240	141	3,381
Present value of defined benefit obligation						
Opening defined benefit obligation	(2,671)	(177)	(2,848)	(2,792)	(181)	(2,973)
Exchange differences	-	5	5	-	(3)	(3)
Current service cost	(6)	(3)	(9)	(7)	(2)	(9)
Past service cost	-	-	-	(8)	-	(8)
Curtailments	2	-	2	-	-	-
Administration expenses	(6)	-	(6)	(6)	-	(6)
Interest on plan liabilities	(73)	(6)	(79)	(68)	(6)	(74)
Actuarial gains/(losses) – experience	(6)	(1)	(7)	(49)	(2)	(51)
Actuarial gains/(losses) – demographic	18	1	19	(12)	-	(12)
Actuarial gains/(losses) – financial	(294)	(12)	(306)	131	6	137
Contributions by employee	-	-	-	-	-	-
Other	-	20	20	-	-	-
Benefits paid	124	16	140	140	11	151
Closing defined benefit obligation	(2,912)	(157)	(3,069)	(2,671)	(177)	(2,848)

The weighted average duration of the defined benefit obligation is 16 years for the UK and 8 years for the US.

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

All figures in £ millions	2019	2018
Opening defined benefit obligation	(49)	(67)
Exchange differences	1	(2)
Current service cost	-	1
Curtailments	1	11
Interest on plan liabilities	(2)	(2)
Actuarial gains/(losses) – experience	4	4
Actuarial gains/(losses) – demographic	1	-
Actuarial gains/(losses) – financial	(2)	2
Benefits paid	3	4
Closing defined benefit obligation	(43)	(49)

Notes to the consolidated financial statements

25. Retirement benefit and other post-retirement obligations continued

Funding

The UK Group plan is self-administered with the plan's assets being held independently of the Group in trust. The trustee of the plan is required to act in the best interest of the plan's beneficiaries. The most recent triennial actuarial valuation for funding purposes was completed as at 1 January 2018 and this valuation revealed a technical provisions funding surplus of £163m. The plan expects to be able to provide benefits (in accordance with the plan rules) with a very low level of reliance on future funding from the Group.

Assets of the plan are divided into two elements: matching assets, which are assets that produce cash flows that can be expected to match the cash flows for a proportion of the membership, and include a liability-driven investment mandate (UK bonds, interest rate/inflation swaps and other derivative instruments), pensioner buy-in insurance policies, inflation-linked property and infrastructure; and return seeking assets, which are assets invested with a longer-term horizon to generate the returns needed to provide the remaining expected cash flows for the beneficiaries, and include diversified growth funds, property and alternative asset classes. The plan's long-term investment strategy allocates 91.5% to matching assets and 8.5% to return-seeking assets.

In February 2019, the UK Group plan purchased a further pensioner buy-in policy valued at approximately £500m with Legal & General. This is in addition to the previous buy-in policies with Aviva and Legal & General totalling £1.2bn which were purchased in 2017. As a result of this latest transaction, 95% of the UK Group plan's pensioner liabilities are now matched with buy-in policies. These transfer significant longevity risk to Aviva and Legal & General, reducing the pension risks being underwritten by the Group and providing additional security for members.

Regular employer contributions to the plan in respect of the defined benefit sections are estimated to be £3m for 2020.

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:

All figures in £ millions	2019	
	1% increase	1% decrease
Effect:		
(Decrease)/increase in defined benefit obligation – UK Group plan	(434)	591
(Decrease)/increase in defined benefit obligation – US plan	(11)	13

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

All figures in £ millions	2019	
	One year increase	One year decrease
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	132	(126)
Increase/(decrease) in defined benefit obligation – US plan	8	(8)

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

All figures in £ millions	2019	
	0.5% increase	0.5% decrease
Effect:		
Increase/(decrease) in defined benefit obligation – UK Group plan	153	(136)
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	2019	2018
Pearson plans	25	37

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 Depositary Receipts (ADRs) with their accumulated funds at a purchase price equal to 85% of the lower of the market prices prevailing at the beginning or end of the period.

Long-Term Incentive Plan – The plan was first introduced in 2001, renewed again in 2006 and again in 2011. The plan consists of restricted shares. The vesting of restricted shares is normally dependent on continuing service over a three to five-year period, and in the case of executive directors and senior management upon the satisfaction of corporate performance targets over a three-year period. These targets may be based on market and/or non-market performance criteria. Restricted shares awarded to executive directors in May 2019 and May 2018 vest dependent on relative total shareholder return, return on invested capital and adjusted earnings per share growth. Other restricted shares awarded in 2019 and 2018 vest depending on continuing service over periods of up to three years.

Management Incentive Plan – The plan was introduced in 2017 combining the Group's Annual Incentive Plan and Long-Term Incentive Plan for senior management. The number of shares to be granted to participants is dependent on Group performance in the calendar year preceding the date of grant (on the same basis as the Annual Incentive Plan). Subsequently, the shares vest dependent on continuing service over a three-year period, and additionally in the case of Pearson Executive management, upon satisfaction of non-market based performance criteria as determined by the Remuneration Committee. Restricted shares awarded as part of the 2018 Management Incentive Plan were granted in April 2019. Restricted shares awarded as part of the 2019 Management Incentive Plan will be granted in April 2020.

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

	2019		2018	
	Number of share options 000s	Weighted average exercise price £	Number of share options 000s	Weighted average exercise price £
Outstanding at beginning of year	2,728	5.76	2,981	6.84
Granted during the year	660	6.77	729	5.80
Exercised during the year	(419)	6.74	(70)	6.57
Forfeited during the year	(492)	6.21	(668)	7.58
Expired during the year	(83)	11.15	(244)	8.19
Outstanding at end of year	2,394	6.06	2,728	5.76
Options exercisable at end of year	161	7.14	169	11.31

Options were exercised regularly throughout the year. The weighted average share price during the year was £8.07 (2018: £8.45). 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 £	2019		2018	
	Number of share options 000s	Weighted average contractual life Years	Number of share options 000s	Weighted average contractual life Years
5–10	2,376	1.94	2,553	2.29
>10	18	1.04	175	0.29
	2,394	1.93	2,728	2.16

Notes to the consolidated financial statements

26. Share-based payments

In 2019 and 2018, 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:

	2019 Weighted average	2018 Weighted average
Fair value	£2.31	£1.88
Weighted average share price	£8.30	£7.49
Weighted average exercise price	£6.77	£5.80
Expected volatility	32.07%	35.78%
Expected life	3.7 years	3.7 years
Risk-free rate	0.66%	0.87%
Expected dividend yield	2.11%	5.21%
Forfeiture rate	3.2%	3.2%

The expected volatility is based on the historical volatility of the company's share price over the previous three to seven years depending on the vesting term of the options.

The following shares were granted under restricted share arrangements:

	2019		2018	
	Number of shares 000s	Weighted average fair value £	Number of shares 000s	Weighted average fair value £
Long-Term Incentive Plan	2,785	8.09	2,907	7.55
Management Incentive Plan	1,435	8.49	2,035	7.45

The fair value of shares granted under the Long-Term Incentive Plan and the Management Incentive Plan that vest unconditionally is determined using the share price at the date of grant. The number of shares expected to vest is adjusted, based on historical experience, to account for potential forfeitures. Participants under the plans are entitled to dividends during the vesting period and therefore the share price is not discounted.

Restricted shares with a market performance condition were valued by an independent actuary using a Monte Carlo model. Restricted shares with a non-market performance condition were fair valued based on the share price at the date of grant. Non-market performance conditions are taken into consideration by adjusting the number of shares expected to vest based on the most likely outcome of the relevant performance criteria.

27. Share capital and share premium

	Number of shares 000s	Share capital £m	Share premium £m
At 1 January 2018	802,054	200	2,602
Issue of ordinary shares – share option schemes	864	1	5
Purchase of own shares	(21,840)	(6)	–
At 31 December 2018	781,078	195	2,607
Issue of ordinary shares – share option schemes	1,021	–	7
Purchase of own shares	–	–	–
At 31 December 2019	782,099	195	2,614

The ordinary shares have a par value of 25p per share (2018: 25p per share). All issued shares are fully paid. All shares have the same rights.

The £300m share buyback programme announced in October 2017 was completed on 16 February 2018. A further 22m shares were purchased under the programme in 2018. The shares bought back have been cancelled and the nominal value of these shares transferred to a capital redemption reserve. The nominal value of shares cancelled at 31 December 2019 was £11m (2018: £11m).

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.

27. Share capital and share premium continued

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 2018	5,994	61
Purchase of treasury shares	–	–
Release of treasury shares	(2,769)	(28)
At 31 December 2018	3,225	33
Purchase of treasury shares	6,100	52
Release of treasury shares	(6,067)	(61)
At 31 December 2019	3,258	24

The Group holds Pearson plc shares in trust to satisfy its obligations under its restricted share plans (see note 26). These shares, representing 0.4% (2018: 0.4%) of called-up share capital, are treated as treasury shares for accounting purposes and have a par value of 25p per share.

The nominal value of Pearson plc treasury shares amounts to £0.8m (2018: £0.8m). Dividends on treasury shares are waived.

At 31 December 2019, the market value of Pearson plc treasury shares was £21m (2018: £30m).

29. Other comprehensive income

All figures in £ millions	Attributable to equity holders of the company					2019
	Fair value reserve	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	–	(113)	–	(113)	–	(113)
Net exchange differences on translation of foreign operations – associates	–	(2)	–	(2)	–	(2)
Currency translation adjustment disposed	–	4	–	4	–	4
Attributable tax	–	–	5	5	–	5
Items that are not reclassified to the income statement						
Fair value gain on other financial assets	20	–	–	20	–	20
Attributable tax	–	–	(4)	(4)	–	(4)
Remeasurement of retirement benefit obligations – Group	–	–	(145)	(145)	–	(145)
Remeasurement of retirement benefit obligations – associates	–	–	(4)	(4)	–	(4)
Attributable tax	–	–	22	22	–	22
Other comprehensive (expense)/income for the year	20	(111)	(126)	(217)	–	(217)

Notes to the consolidated financial statements

29. Other comprehensive income continued

	Attributable to equity holders of the company				Non-controlling interest	2018
All figures in £ millions	Fair value reserve	Translation reserve	Retained earnings	Total		Total
Items that may be reclassified to the income statement						
Net exchange differences on translation of foreign operations – Group	–	91	–	91	–	91
Net exchange differences on translation of foreign operations – associates	–	(1)	–	(1)	–	(1)
Currency translation adjustment disposed	–	(4)	–	(4)	–	(4)
Attributable tax	–	–	(4)	(4)	–	(4)
Items that are not reclassified to the income statement						
Fair value gain on other financial assets	8	–	–	8	–	8
Attributable tax	–	–	–	–	–	–
Remeasurement of retirement benefit obligations – Group	–	–	22	22	–	22
Remeasurement of retirement benefit obligations – associates	–	–	3	3	–	3
Attributable tax	–	–	9	9	–	9
Other comprehensive income/(expense) for the year	8	86	30	124	–	124

30. Business combinations

During the year the Group made some small acquisitions, including Lumerit Education and Smart Sparrow, for total consideration of £40m. Details of the assets acquired, and the associated consideration, are shown in the table below.

all figures in £ millions	2019
Intangible assets	23
Trade and other receivables	1
Trade and other liabilities	(2)
Net assets acquired	22
Goodwill	18
Total	40
Satisfied by:	
Cash	40
Total consideration	40

There were no significant acquisitions in 2018. There were no material adjustments to prior year acquisitions in 2019. The net cash outflow relating to acquisitions in the year is shown below.

All figures in £ millions	2019	2018
Cash flow on acquisitions		
Cash – current year acquisitions	(40)	–
Deferred payments for prior year acquisitions and other items	(5)	(5)
Net cash outflow	(45)	(5)

During 2019, the Group's associate, Penguin Random House raised additional capital from its owners in proportion to their equity interests with the Group's share being £40m.

31. Disposals

In March 2019, the Group completed the sale of its US K12 Courseware business resulting in a pre-tax profit on sale of £13m. Total gross proceeds were £200m including £180m of deferred proceeds which include the fair value of an unconditional vendor note for \$225m and an entitlement to 20% of future cash flows to equity holders and 20% of net proceeds in the event of a subsequent sale (see note 14 for further details). Tax on the disposal is a benefit of £51m. Other disposal items relate to investment sales and adjustments to prior year transactions.

All figures in £ millions	Notes			2019	2018
		K12	Other	Total	Total
Disposal of subsidiaries and associates					
Property, plant and equipment		-	-	-	(17)
Intangible assets		(101)	-	(101)	(17)
Investments in joint ventures and associates		-	-	-	(3)
Net deferred income tax assets		(100)	-	(100)	-
Intangible assets – pre-publication		(238)	-	(238)	(8)
Inventories		(64)	-	(64)	(1)
Trade and other receivables		(70)	-	(70)	(30)
Cash and cash equivalents (excluding overdrafts)		(104)	-	(104)	(119)
Net deferred income tax liabilities		-	-	-	16
Trade and other liabilities		520	-	520	172
Provisions for other liabilities and charges		-	-	-	1
Cumulative currency translation adjustment	29	(4)	-	(4)	4
Net assets disposed		(161)	-	(161)	(2)
Cash received		20	-	20	243
Deferred proceeds		180	-	180	2
Fair value of financial asset acquired		-	-	-	3
Costs		(26)	3	(23)	(16)
Gain on disposal		13	3	16	230
All figures in £ millions				2019	2018
Cash flow from disposals					
Cash – current year disposals				20	243
Cash and cash equivalents disposed				(104)	(119)
Costs and other disposal liabilities paid				(17)	(23)
Net cash (outflow)/inflow				(101)	101
Analysed as:					
Cash (outflow)/inflow from sale of subsidiaries				(101)	83
Cash inflow from sale of joint ventures and associates				-	18

Notes to the consolidated financial statements

32. Held for sale

The held for sale asset in 2019 is the 25% holding in Penguin Random House following announcement of the sale in December 2019. Held for sale assets and liabilities in 2018 related to the US K12 Courseware business prior to disposal in 2019.

	2019	2018
All figures in £ millions	Total	Total
Non-current assets		
Intangible assets	–	168
Investments in joint ventures and associates	397	–
Deferred income tax assets	–	98
Trade and other receivables	–	25
	397	291
Current assets		
Intangible assets – pre-publication	–	242
Inventories	–	55
Trade and other receivables	–	60
	–	357
Assets classified as held for sale	397	648
Non-current liabilities		
Other liabilities	–	(371)
	–	(371)
Current liabilities		
Trade and other liabilities	–	(202)
	–	(202)
Liabilities classified as held for sale	–	(573)
Net assets classified as held for sale	397	75

Goodwill is allocated to the held for sale businesses on a relative fair value basis where these businesses form part of a larger cash generating unit (CGU).

The Group has historically presented the results of PRH separately within segment information (see note 2) to provide further information about the composition of the Group outside of the primary segments. The Group has not viewed Penguin Random House as comprising a separate major line of business since the sale of 22% of the Group's stake in Penguin Random House to Bertelsmann in 2017. On this basis, the Group has not classified Penguin Random House as a discontinued operation.

33. Cash generated from operations

All figures in £ millions	Notes	2019	2018
Profit		266	590
Adjustments for:			
Income tax		(34)	(92)
Depreciation	10	123	66
Amortisation and impairment of acquired intangibles and goodwill	11	151	99
Amortisation of software	11	115	88
Net finance costs	6	43	55
Charges relating to GMP equalisation		-	8
Share of results of joint ventures and associates	12	(54)	(44)
Profit on disposal of subsidiaries, associates, investments and fixed assets		(9)	(315)
Net profit on disposal of right-of-use assets held under leases		(4)	-
Net foreign exchange adjustment from transactions		(21)	28
Investment income		(2)	-
Share-based payment costs	26	25	37
Pre-publication		(55)	(37)
Inventories		(20)	(10)
Trade and other receivables		59	(15)
Trade and other liabilities		(157)	35
Retirement benefit obligations		5	(9)
Provisions for other liabilities and charges		49	63
Net cash generated from operations		480	547
Dividends from joint ventures and associates		64	117
Re-capitalisation dividends from Penguin Random House		-	(50)
Purchase of property, plant and equipment		(55)	(74)
Acquisition of new right-of-use lease assets		(64)	-
Purchase of intangible software assets		(138)	(130)
Proceeds from sale of property, plant and equipment and intangible software assets		1	128
Disposal of right-of-use lease assets		17	-
Investment income		2	-
Net cost paid for/(proceeds from) major restructuring		111	(25)
Operating cash flow		418	513
Operating tax paid		(9)	(43)
Net operating finance costs paid		(64)	(22)
Operating free cash flow		345	448
Non-operating tax paid		(21)	-
Net (cost paid for)/proceeds from major restructuring		(111)	25
Free cash flow		213	473
Dividends paid (including to non-controlling interests)		(148)	(137)
Net movement of funds from operations		65	336
Acquisitions and disposals		(193)	92
Re-capitalisation dividends from Penguin Random House		-	50
Loans (advanced)/repaid (including to related parties)		(49)	46
New equity		7	6
Buyback of equity		-	(153)
Purchase of treasury shares		(52)	-
Other movements on financial instruments		(9)	(6)
Net movement of funds		(231)	371
Exchange movements on net debt		24	(82)
Total movement in net debt		(207)	289
Opening net debt		(143)	(432)
Adjustment on initial application of IFRS 16		(666)	-
Closing net debt		(1,016)	(143)

Notes to the consolidated financial statements

33. 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 (non-statutory) measures and have been disclosed and reconciled in the above table as they are commonly used by investors to measure the cash performance of the Group. In the cash flow statement, proceeds from sale of property, plant and equipment comprise:

All figures in £ millions	2019	2018
Net book amount	3	41
Profit/(loss) on sale of property, plant and equipment	(2)	87
Proceeds from sale of property, plant and equipment	1	128

The movements in the Group's current and non-current borrowings are as follows:

All figures in £ millions	2018	IFRS 16 Transition	New leases/disposal of leases	Transfer from non-current to current	Financing cash flows	Foreign exchange movements	Fair value and other movements	2019
Financial liabilities								
Non-current borrowings	643	792	61	(88)	230	(80)	9	1,567
Current borrowings	25	89	–	88	(139)	16	–	79
Total	668	881	61	–	91	(64)	9	1,646

Non-current borrowings include bonds, derivative financial instruments and leases. Current borrowings include loans repayable within one year and leases, but exclude overdrafts classified within cash and cash equivalents.

34. Contingencies and commitments

There are contingent Group liabilities that arise in the normal course of business in respect of indemnities, warranties and guarantees in relation to former subsidiaries and in respect of guarantees in relation to subsidiaries, joint ventures and associates. In addition, there are contingent liabilities of the Group in respect of unsettled or disputed tax liabilities, legal claims, contract disputes, royalties, copyright fees, permissions and other rights. None of these claims are expected to result in a material gain or loss to the Group.

On 25 April 2019, the European Commission published the full decision that the United Kingdom controlled foreign company group financing partial exemption (FCPE) partially constitutes State Aid. The Group has lodged an appeal. The Group has benefited from the FCPE in 2018 and prior years by approximately £116m. At present the Group believes no provision is required in respect of this issue.

During 2019 the Group received an assessment from the tax authorities in Brazil challenging the deduction for tax purposes of goodwill amortisation for the years 2013 to 2016. Similar assessments may be raised for other years. Potential total exposure could be up to £124m (BRL 656m) up to 31 December 2019, with additional potential exposure of £45m (BRL 239m) in relation to deductions expected to be taken in future periods. Such assessments are common in Brazil. The Group believes that the likelihood that the tax authorities will ultimately prevail is low, and that the Group's position is strong. At present the Group believes no provision is required.

At the balance sheet date there were no commitments for capital expenditure contracted for but not yet incurred. Commitments in respect of leases are shown in note 35.

35. Leases

The Group's lease portfolio consists of approximately 750 property leases, mainly offices and test centres, together with a number of vehicle and equipment leases. The Group has adopted IFRS 16 'Leases' at 1 January 2019 and applied the modified retrospective approach. Comparatives for 2018 have not been restated. The Group has elected not to recognise right-of-use assets and lease liabilities for short-term leases that have a lease term of 12 months or less and leases of low value assets. The Group recognises the lease payments associated with these leases as an expense on a straight-line basis over the lease term.

Disclosure required by IFRS 16:

As a lessee:

The amounts recognised in the income statement are as follows:

All figures in £ millions	Note	2019
Interest on lease liabilities	6	(45)
Expenses relating to short-term leases		(2)
Depreciation of right-of-use assets	10	(64)

35. Leases continued

Right-of-use assets comprise the following and are included within property, plant and equipment in the balance sheet:

	2019		
All figures in £ millions	Land and buildings	Plant and equipment	Total
Balance at 1 January 2019	–	–	–
Adjustment on initial application of IFRS 16 (see note 1b)	418	6	424
Balance at 31 December 2019	402	7	409

For additional analysis of the right-of-use assets, including additions, depreciation and disposals, see note 10.

Lease liabilities are included within financial liabilities – borrowings in the balance sheet, see note 18. The maturities of the Group's lease liabilities are as follows:

All figures in £ millions	2019
Less than one year	123
One to five years	420
More than five years	622
Total undiscounted lease liabilities	1,165
Lease liabilities included in the balance sheet	838
Analysed as:	
Current	89
Non-current	749

The amounts recognised in the cash flow statement are as follows:

All figures in £ millions	2019
Total cash outflow for leases as a lessee	136

At the balance sheet date commitments for capital leases contracted for but not yet incurred were £25m. Extension and termination options and variable lease payments are not significant within the lease portfolio. Short-term leases to which the Group is committed at the balance sheet date are similar to the portfolio of short-term leases to which the short-term lease expense is disclosed above.

As a lessor:

In the event that the Group has excess capacity in its leased offices and warehouses, the Group sub-leases some of its properties under operating and finance leases.

The amounts recognised in the income statement are as follows:

All figures in £ millions	Note	2019
Interest on finance lease receivable	6	11
Income from sub-leasing right-of-use assets (within other income)		17

The amounts recognised in the cash flow statement are as follows:

All figures in £ millions	2019
Total cash inflow for leases as a lessor	37

During the year the investment in finance lease receivable decreased by £19m due to payments received.

Notes to the consolidated financial statements

35. Leases continued

The following table sets out the maturity analysis of lease payments receivable for sub-leases classified as operating leases, showing the undiscounted lease payments to be received after the reporting date, and sub-leases classified as finance leases showing the undiscounted lease payments to be received after the reporting date and the net investment in the finance lease receivable.

All figures in £ millions	Operating leases	Finance leases	2019 Total
Less than one year	12	34	46
One to two years	4	40	44
Two to three years	4	33	37
Three to four years	3	30	33
Four to five years	3	31	34
More than five years	20	67	87
Total undiscounted lease payments receivable	46	235	281
Unearned finance income		(39)	
Net investment in finance lease receivable		196	

IAS 17 disclosure for 2018:

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

All figures in £ millions	2018
Finance lease liabilities – minimum lease payments	
Not later than one year	3
Later than one year and not later than two years	1
Later than two years and not later than three years	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	5

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

All figures in £ millions	2018
Not later than one year	3
Later than one year and not later than five years	2
Later than five years	–
	5

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

In 2018 the Group leased various offices and warehouses under non-cancellable operating lease agreements. The leases had varying terms and renewal rights. The Group also leased various plant and equipment under operating lease agreements, also with varying terms. Lease expenditure charged to the income statement in 2018 was £128m. The future aggregate minimum lease payments in respect of operating leases were as follows:

All figures in £ millions	2018
Not later than one year	143
Later than one year and not later than two years	130
Later than two years and not later than three years	115
Later than three years and not later than four years	101
Later than four years and not later than five years	91
Later than five years	595
	1,175

35. Leases continued

In the event that the Group had excess capacity in its leased offices and warehouses, it entered into sub-lease contracts in order to offset costs. The future aggregate minimum sub-lease payments expected to be received under non-cancellable sub-leases were as follows:

All figures in £ millions	2018
Not later than one year	51
Later than one year and not later than two years	44
Later than two years and not later than three years	41
Later than three years and not later than four years	39
Later than four years and not later than five years	35
Later than five years	124
	334

36. Related party transactions

Joint ventures and associates

Amounts advanced to joint ventures and associates during the year and at the balance sheet date are set out in note 12.

Key management personnel

Key management personnel are deemed to be the members of the Pearson executive (see p57). It is this Committee which had responsibility for planning, directing and controlling the activities of the Group in 2019. Key management personnel compensation is disclosed below:

All figures in £ millions	2019	2018
Short-term employee benefits	5	6
Retirement benefits	1	1
Share-based payment costs	4	7
Total	10	14

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

37. Events after the balance sheet date

In January 2020, the Group commenced a £350m share buyback programme in connection with the announcement in December 2019 of the sale of its remaining 25% interest in Penguin Random House.

38. 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		Company number	
Aldwych Finance Limited	04720439	Pearson Loan Finance No. 4 Limited	02635107
Edexcel Limited	04496750	Pearson Loan Finance No. 5 Limited	12017252
Education Development International plc	03914767	Pearson Loan Finance No. 6 Limited	12030662
Longman Group (Overseas Holdings) Limited	00690236	Pearson Loan Finance Unlimited	05144467
Major123 Limited	05333023	Pearson Management Services Limited	00096263
Pearson Australia Finance Unlimited	05578463	Pearson Overseas Holdings Limited	00145205
Pearson Books Limited	02512075	Pearson Pension Trustee Services Limited	10803853
Pearson Brazil Finance Limited	08848874	Pearson PRH Holdings Limited	08561316
Pearson Canada Finance Unlimited	05578491	Pearson Real Estate Holdings Limited	09768242
Pearson Dollar Finance plc	05111013	Pearson Services Limited	01341060
Pearson Dollar Finance Two Limited	06507766	Pearson Shared Services Limited	04623186
Pearson Education Holdings Limited	00210859	Pearson Strand Finance Limited	11091691
Pearson Education Investments Limited	08444933	PVNT Limited	08038068
Pearson Education Limited	00872828	TQ Catalis Limited	07307943
Pearson Funding Four Limited	07970304	TQ Clapham Limited	07307925
Pearson International Finance Limited	02496206	TQ Global Limited	07802458
Pearson Loan Finance No. 3 Limited	05052661		

Company balance sheet

As at 31 December 2019

All figures in £ millions	Notes	2019	2018
Assets			
Non-current assets			
Investments in subsidiaries	2	6,664	6,710
Amounts due from subsidiaries		2,122	2,269
Deferred income tax assets		21	–
Financial assets – derivative financial instruments	6	29	67
		8,836	9,046
Current assets			
Amounts due from subsidiaries		827	361
Amounts due from related parties	11	48	–
Current income tax assets		2	28
Cash and cash equivalents (excluding overdrafts)	4	18	50
Financial assets – derivative financial instruments	6	25	1
Other assets		2	–
		922	440
Total assets		9,758	9,486
Liabilities			
Non-current liabilities			
Amounts due to subsidiaries		(2,740)	(2,944)
Financial liabilities – borrowings	5	(230)	–
Financial liabilities – derivative financial instruments	6	(24)	(36)
		(2,994)	(2,980)
Current liabilities			
Amounts due to subsidiaries		(1,800)	(2,007)
Financial liabilities – borrowings	5	–	(11)
Other liabilities		(5)	(8)
Financial liabilities – derivative financial instruments	6	(15)	(23)
		(1,820)	(2,049)
Total liabilities		(4,814)	(5,029)
Net assets		4,944	4,457
Equity			
Share capital	7	195	195
Share premium	7	2,614	2,607
Treasury shares	8	21	12
Capital redemption reserve		11	11
Special reserve		447	447
Retained earnings – including profit for the year of £789m (2018: loss of £160m)		1,656	1,185
Total equity attributable to equity holders of the company		4,944	4,457

These financial statements have been approved for issue by the Board of Directors on 6 March 2020 and signed on its behalf by



Coram Williams
Chief Financial Officer

Company statement of changes in equity

Year ended 31 December 2019

All figures in £ millions	Equity attributable to equity holders of the company						
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Special reserve	Retained earnings	Total
At 1 January 2019	195	2,607	12	11	447	1,185	4,457
Profit for the year	-	-	-	-	-	789	789
Issue of ordinary shares under share option schemes ¹	-	7	-	-	-	-	7
Buyback of equity	-	-	-	-	-	-	-
Purchase of treasury shares	-	-	(52)	-	-	-	(52)
Release of treasury shares	-	-	61	-	-	(61)	-
Capital reduction	-	-	-	-	-	(110)	(110)
Dividends	-	-	-	-	-	(147)	(147)
At 31 December 2019	195	2,614	21	11	447	1,656	4,944

All figures in £ millions	Equity attributable to equity holders of the company						
	Share capital	Share premium	Treasury shares	Capital redemption reserve	Special reserve	Retained earnings	Total
At 1 January 2018	200	2,602	(16)	5	447	1,511	4,749
Loss for the year	-	-	-	-	-	(160)	(160)
Issue of ordinary shares under share option schemes ¹	1	5	-	-	-	-	6
Buyback of equity	(6)	-	-	6	-	(2)	(2)
Purchase of treasury shares	-	-	-	-	-	-	-
Release of treasury shares	-	-	28	-	-	(28)	-
Dividends	-	-	-	-	-	(136)	(136)
At 31 December 2018	195	2,607	12	11	447	1,185	4,457

The capital redemption reserve reflects the nominal value of shares cancelled in the Group's share buyback programme. 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 (2018: £162m) relating to profit on intra-Group disposals that is not distributable.

¹ 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 2019

All figures in £ millions	Notes	2019	2018
Cash flows from operating activities			
Net profit/(loss)		789	(160)
Adjustments for:			
Income tax		-	(26)
Net finance costs		29	107
Disposals, liquidations and impairment charges		-	57
Amounts due (to)/from subsidiaries		(818)	302
Net cash generated from operations		-	280
Interest paid		(26)	(68)
Tax paid		7	(7)
Net cash generated from operating activities		(19)	205
Cash flows from investing activities			
Loans (advanced to) /repaid by related parties		(49)	46
Interest received		-	4
Net cash received (used in)/ from investing activities		(49)	50
Cash flows from financing activities			
Proceeds from issue of ordinary shares	7	7	6
Buyback of equity		(52)	(153)
Repayment of borrowings		-	(44)
Proceeds from borrowings		230	-
Dividends paid to company's shareholders		(147)	(136)
Net cash used in financing activities		38	(327)
Effects of exchange rate changes on cash and cash equivalents		9	(5)
Net decrease in cash and cash equivalents		(21)	(77)
Cash and cash equivalents at beginning of year		39	116
Cash and cash equivalents at end of year	4	18	39

Notes to the company financial statements

1. Accounting policies

The financial statements on p188-198 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 (2018: nil).

The basis of preparation and accounting policies applied in the preparation of these company financial statements are the same as those set out in note 1a 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.

Lending to/from subsidiaries is considered to be an operating activity and any movements are classified as cash flows from operating activities in the cash flow statement.

Amounts owed by subsidiaries

Amounts owed by subsidiaries generally mature within five years, but can be called upon on short notice, or are repayable on demand. The company has assessed and concluded that these loans will be fully recovered. Therefore credit losses are considered to be immaterial.

New accounting standards

The following standards were adopted in 2019:

- › IFRS 16 Leases
- › IFRIC 23 Uncertainty over Income Tax Treatment
- › Amendments to IFRS 9 and IFRS 7

Adoption of these standards has not had a material impact on the company financial statements.

2. Investments in subsidiaries

All figures in £ millions	2019	2018
At beginning of year	6,710	6,691
Impairments	–	(57)
Currency revaluations	(46)	76
At end of year	6,664	6,710

Impairments in 2018 related to the carrying value of intermediate holding company investments. There were no impairments in 2019.

The recoverability of investments is considered annually and significant estimation is required to determine the recoverable amount. Recoverability is based upon financial information related to the subsidiaries including cash flow projections in conjunction with the goodwill impairment analysis performed by the Group (see note 11 of the consolidated financial statements).

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 borrowings. Derivative financial instruments are held at fair value, with all other financial instruments held at amortised cost, which approximates fair value. 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 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 a £16m increase in the carrying value of its financial instruments, with a 1% decrease in interest rates resulting in an £18m decrease in their carrying value. The company also estimates that a 10% strengthening in sterling would decrease the carrying value of its financial instruments by £23m, while a 10% weakening in the value of sterling would increase the carrying value by £22m. 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%.

Notes to the company financial statements

3. Financial risk management continued

The following table analyses the company's 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.

All figures in £ millions	Analysed by maturity				Analysed by currency			
	Greater than one month and less than one year	Later than one year but less than five years	Five years or more	Total	USD	GBP	Other	Total
At 31 December 2019								
Rate derivatives – inflows	(19)	(223)	(332)	(574)	(41)	(172)	(361)	(574)
Rate derivatives – outflows	23	237	331	591	242	344	5	591
FX forwards – inflows	(186)	(24)	–	(210)	–	(210)	–	(210)
FX forwards – outflows	186	23	–	209	209	–	–	209
Total	4	13	(1)	16	410	(38)	(356)	16
At 31 December 2018								
Rate derivatives – inflows	(20)	(288)	(343)	(651)	(40)	(167)	(444)	(651)
Rate derivatives – outflows	23	289	341	653	254	390	9	653
FX forwards – inflows	(251)	(35)	–	(286)	–	(286)	–	(286)
FX forwards – outflows	275	37	–	312	312	–	–	312
Total	27	3	(2)	28	526	(63)	(435)	28

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.

Fair value hedge accounting

A foreign currency exposure arises from foreign exchange fluctuations on translation of the company's investments in subsidiaries denominated in USD into GBP. The hedged risk is the risk of changes in the GBPUSD spot rate that will result in changes in the value of the USD investments when translated into GBP. The hedged items are a portion of the company's equity investment in subsidiaries denominated in USD. The hedging instruments are a portion of the company's intercompany loans due from subsidiaries which are denominated in USD.

It is expected that the change in value of each of these items will mirror each other as there is a clear and direct economic relationship

between the hedge and the hedged item in the hedge relationship. The hedge ratio is 100%. Hedge ineffectiveness would arise if the value of the hedged items fell below the value of the hedging instruments however this is unlikely as the value of the company's investments denominated in USD are significantly greater than the proposed fair value hedge programme.

The value of the hedged items and the hedging instruments are £1.3bn (2018: £1.4bn) and the change in value during the year which was used to assess hedge ineffectiveness was £46m (2018: £76m). There was no hedge ineffectiveness.

Credit risk management

The company's main exposure to credit risk relates to lending to subsidiaries. Amounts due from subsidiaries are stated net of provisions for bad and doubtful debts. The credit risk of each subsidiary is influenced by the industry and country in which they operate, however, the company considers the credit risk of subsidiaries to be low as it has visibility of, and the ability to influence, their cash flows.

4. Cash and cash equivalents (excluding overdrafts)

All figures in £ millions	2019	2018
Cash at bank and in hand	18	50
	18	50

At the end of 2019 the currency split of cash and cash equivalents was US dollar 2% (2018: 0%), sterling 59% (2018: 79%) and other 39% (2018: 21%).

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	2019	2018
Cash and cash equivalents	18	50
Bank overdrafts	–	(11)
	18	39

5. Financial liabilities – borrowings

All figures in £ millions	2019	2018
Non-current		
Revolving credit facility	230	–
	230	–
Current		
Due within one year or on demand:		
Bank loans and overdrafts	–	11
	–	11
Total borrowings	230	11

Current borrowings are classified within cash and cash equivalents and do not give rise to financing cash flows. The carrying amounts of the company's borrowings is equal to, or approximately equal to, the market value.

The carrying amounts of the company's borrowings in 2018 are denominated in US dollars.

6. Derivative financial instruments

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

All figures in £ millions	2019			2018		
	Gross notional amounts	Assets	Liabilities	Gross notional amounts	Assets	Liabilities
Interest rate derivatives	893	15	(6)	766	16	–
Cross-currency rate derivatives	502	29	(31)	577	51	(35)
FX derivatives	941	10	(2)	907	1	(24)
Total	2,336	54	(39)	2,250	68	(59)
Analysed as expiring:						
In less than one year	1,167	25	(15)	771	1	(23)
Later than one year and not later than five years	694	13	(6)	795	22	(1)
Later than five years	475	16	(18)	684	45	(35)
Total	2,336	54	(39)	2,250	68	(59)

The carrying value of the above derivative financial instruments equals their fair value. Derivatives are categorised as Level 2 on the fair value hierarchy. 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. Share capital and share premium

	Number of shares 000s	Share capital £m	Share premium £m
At 1 January 2018	802,054	200	2,602
Issue of ordinary shares – share option schemes	864	1	5
Purchase of own shares	(21,840)	(6)	–
At 31 December 2018	781,078	195	2,607
Issue of ordinary shares – share option schemes	1,021	–	7
Purchase of own shares	–	–	–
At 31 December 2019	782,099	195	2,614

The ordinary shares have a par value of 25p per share (2018: 25p per share). All issued shares are fully paid. All shares have the same rights.

The £300m share buyback programme announced in October 2017 was completed on 16 February 2018. A further 22m shares were purchased under the programme in 2018. The shares bought back have been cancelled and the nominal value of these shares transferred to a capital redemption reserve. The nominal value of shares cancelled at 31 December 2019 was £11m (2018: £11m).

Notes to the company financial statements

8. Treasury shares

	Number of shares 000s	£m
At 1 January 2018	5,994	16
Release of treasury shares	(2,769)	(28)
At 31 December 2018	3,225	(12)
Purchase of treasury shares	6,100	52
Release of treasury shares	(6,067)	(61)
At 31 December 2019	3,258	(21)

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 £0.8m (2018: £0.8m). At 31 December 2019, the market value of the company's treasury shares was £21m (2018: £30m). The gross book value of the shares at 31 December 2019 amounts to £24m. This value has been netted off with contributions received from operating companies of £45m, resulting in a net credit value of £21m.

9. 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.

10. Audit fees

Statutory audit fees relating to the company were £35,000 (2018: £35,000).

11. 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 £104m (2018: £105m) and interest and guarantee fees receivable from subsidiaries for the year of £91m (2018: £105m). Management fees payable to subsidiaries in respect of centrally provided services amounted to £45m (2018: £59m). Management fees receivable from subsidiaries in respect of centrally provided services amounted to £35m (2018: £35m). Dividends received from subsidiaries were £803m (2018: £nil).

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 2019 was £48m (2018: £nil). The loans are provided under a working capital facility and fluctuate during the year.

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 2019. Key management personnel compensation is disclosed in note 36 to the consolidated financial statements.

12. 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 2019 is disclosed below. Unless otherwise stated, the shares are all indirectly held by Pearson plc. Unless otherwise stated, all wholly-owned and partly-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
Addison Wesley Longman, Inc.	US	3
Addison-Wesley Educational Publishers Inc.	US	4
AEL (S) PTE Limited	SG	5
Aldwych Finance Limited	UK	1
ATI Professional Development LLC	US	4
Atkey Finance Limited	IE	7
Axis Finance Inc.	US	4
Camsaw, Inc.	US	4
CAMSAWUSA, Inc.	US	31
Casapsi Livraria e Editora Ltda	BR	12
Centro Cultural Americano Franquias e Comércio Ltda.	BR	16
Century Consultants Ltd.	US	14
Certiport China Holding, LLC	US	4
Certiport, Inc.	US	4
Cogmed Systems AB	SE	15
Connections Academy of Florida, LLC	US	22
Connections Academy of Iowa, LLC	US	26
Connections Academy of Maine, LLC	US	30
Connections Academy of Maryland, LLC	US	31
Connections Academy of Nevada, LLC	US	34
Connections Academy of New Mexico, LLC	US	35
Connections Academy of Oregon, LLC	US	40
Connections Academy of Pennsylvania LLC	US	41
Connections Academy of Tennessee, LLC	US	43
Connections Academy of Texas LLC	US	44
Connections Education LLC	US	4
Connections Education of Florida, LLC	US	22
Connections Education, Inc.	US	4
CTI Education Group (Pty) Limited	ZA	50
Dominie Press, Inc.	US	19
Dorian Finance Limited	IE	7
Dorling Kindersley Australasia Pty Limited	AU	51
EBNT Canada Holdings ULC	CA	61
EBNT Holdings Limited	CA	60
EBNT USA Holdings Inc.	US	4
eCollege.com	US	4
Edexcel Limited [†]	UK	52
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
Embanet ULC	CA	47
Embanet-Compass Knowledge Group Inc.	US	22
English Language Learning and Instruction System, Inc.	US	57
Escape Studios Limited*	UK	6
Falstaff Holdco Inc.	US	4
Falstaff Inc.	US	58
FBH, Inc.	US	4
George (Shanghai) Commercial Information Consulting Co., Ltd	CN	23
Global George II limited	CN	56
Globe Fearon Inc.	US	19

Registered company name	Country of Incorp.	Reg. office
Guangzhou Crescent Software Co., Ltd [†]	CN	64
Heinemann Education Botswana (Publishers) (Proprietary) Limited	BW	65
IndiaCan Education Private Limited	IN	2
Integral 7, Inc.	US	4
INTELLIPRO, INC.	US	14
Kagiso Education Pty Ltd*	ZA	50
Knowledge Analysis Technologies, LLC	US	20
LCCIEB Training Consultancy., Ltd	CN	69
LessonLab, Inc.	US	19
Lignum Oil Company	US	4
LION SG PTE. LTD	SG	5
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	45
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
Lumerit Education, LLC	US	44
Major123 Limited	UK	1
MeasureUp, LLC	US	4
Modern Curriculum Inc.	US	19
Multi Treinamento e Editora Ltda	BR	17
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

Registered company name	Country of Incorp.	Reg. office
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 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 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	42
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 Limited	UK	1
Pearson Educacion de Chile Limitada	CL	87
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 Asia Limited	CN	56
Pearson Education Botswana (Proprietary) Limited	BW	8
Pearson Education do Brasil Ltda	BR	63
Pearson Education Hellas SA	GR	28
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

Notes to the company financial statements

Registered company name	Country of Incorp.	Reg office
Pearson Education Taiwan Ltd	TW	101
Pearson Education, Inc.	US	4
Pearson Educational Measurement Canada, Inc.	CA	39
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 Four Limited [†]	UK	1
Pearson Funding plc [†]	UK	1
Pearson Holdings Inc.	US	4
Pearson Holdings Southern Africa (Pty) Limited	ZA	50
Pearson Hungary LLC	HU	27
Pearson India Education Services Private Limited	IN	2
Pearson India Support Services Private Limited [†]	IN	18
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	68
Pearson Lanka (Private) Limited	LK	67
Pearson Lanka Support Services (Private) Limited	LK	13
Pearson Learning China (HK) Limited*	CN	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.5 Limited	UK	1
Pearson Loan Finance No. 6 Limited	UK	1
Pearson Loan Finance Unlimited	UK	1
Pearson Longman Uganda Limited	UG	46
Pearson Malaysia Sdn. Bhd.	MY	62
Pearson Management Services Limited [†]	UK	1
Pearson Management Services Philippines Inc.	PH	36
Pearson Maryland Inc.	US	11
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	21
Pearson Pension Nominees Limited	UK	1
Pearson Pension Property Fund Limited	UK	1
Pearson Pension Trustee Limited	UK	1
Pearson Pension Trustee Services Limited [†]	UK	1
Pearson Phoenix Pty Ltd	AU	51
Pearson PRH Holdings Limited	UK	1
Pearson Professional Assessments Limited	UK	1
Pearson Real Estate Holdings Inc.	US	4
Pearson Real Estate Holdings Limited [†]	UK	1
Pearson Schweiz AG	CH	37
Pearson Services Limited [†]	UK	1
Pearson Shared Services Limited [†]	UK	1
Pearson Strand Finance Limited [†]	UK	1

Registered company name	Country of Incorp.	Reg office
Pearson Sweden AB	SE	15
Pearson VUE Philippines, Inc.	PH	29
Penguin Capital, LLC	US	4
Phumelela Publishers (Pty) Ltd*	ZA	50
PN Holdings Inc.	US	4
ProctorCam, Inc.	US	33
PT Efficient English Services	ID	89
PVNT Limited	UK	1
Reading Property Holdings LLC	US	79
Rebus Planning Associates, Inc.	US	10
Reston Publishing Company, Inc.	US	4
Rycade Capital Corporation	US	4
Shanghai AWL Education Software Ltd*	CN	78
Silver Burdett Ginn Inc.	US	4
Skylight Training and Publishing Inc.	US	55
Smarthinking, Inc.	US	4
Sound Holdings Inc.	US	4
Sparrow Phoenix Pty Ltd	AU	25
Spear Insurance Company Limited [†]	BM	48
Stark Verlag GmbH	DE	88
The Financial Times (I) Pvt Ltd	IN	24
The Learning Edge International Pty Ltd	AU	71
The Waite Group Inc	US	19
TQ Catalis Limited	UK	1
TQ Clapham Limited	UK	1
TQ Education and Training Limited	UK	1
TQ Education and Training Limited	SA	59
TQ Global Limited	UK	1
TQ Group Limited	UK	1
TQ Holdings Limited	UK	1
Trio Parent Holdings LLC	US	4
Vue Testing Services Israel Ltd	IL	49
Vue Testing Services Korea Limited	KR	38
Williams Education GmbH	DE	88

* In liquidation

† Directly owned by Pearson plc

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 The HIVE, 3rd Floor, No 44, Pillaiyar Koil Street, Jawaharlal Nehru Road, Anna Nagar, Chennai, TN 600040, 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, #13-05/06, North Buona Vista Drive, The Metropolis Tower One, 138588, Singapore
6 Evergreen House North, Grafton Place, London, NW1 3DX England
7 1st Floor The Liffey Trust Centre, 117-126 Sheriff Street Upper, Dublin 1, Ireland
8 Unit 3, Lot 20613, Gaborone, Botswana
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 Corporation Trust Company, 2405 York Road, Suite 201, Lutherville Timonium, MD, 21093-2264, United States
12 No 1400, Francisco Matarazzo Avenue 7th and 8th floor, São Paulo, SP, 05001-903, Brazil
13 #1, 3, 5th Floor, East Tower, World Trade Centre, Echelon Square, Colombo, O1, Sri Lanka
14 820, Bear Tavern Road, West Trenton, Mercer, NJ, 08628, United States
15 Gustavslundsvägen 137, 167 51 Bromma, Stockholm, Sweden
16 Comendador Aladino Selmi Avenue, 4630, Galpão 1, Sala 3, Parque Cidade Campinas, City of Campinas, São Paulo 13069-036, Brazil
17 Comendador Aladino Selmi Avenue, 4630, Galpão 1, e 2, Sala 10, Parque Cidade Campinas, City of Campinas, São Paulo 13069-036, Brazil
18 7th Floor, SDB2, ODC 7, 8 & 9, Survey No.01 ELCOT IT/ITES-SEZ, Shollinganallur, Chennai, TN, TN 600119, India
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
21 500, 401, Calle de la Tanca Edificio Ochoa, San Juan, 00901-1969, Puerto Rico
22 1200, South Pine Island Road, Plantation, FL, 33324, United States
23 Room 1658, Suites 1604-06, 16/F, 588 Dalian Road, Yangpu District, Shanghai, China
24 N-94, S-2 Outer Ring Road Panchsheel Park, Panchsheel Club, New Delhi, South Delhi, DL 110017, India
25 Suite 201, 25 Cooper Street, Surry Hills, NSW, 2010, Australia
26 C T Corporation System, 400 E Court Ave, Des Moines, IA, 50309, United States
27 Hermina út 17. 8th floor, Budapest, 1146, Hungary
28 4 Zalogou Str., 15343 Agia Paraskevi, Athens, Greece
29 27/F Trident Tower, 312 Sen. Gil Puyat Avenue, Makati City, Metro Manila, Philippines
30 C T Corporation System, 128 State St #3, Augusta, ME, 04330, United States
31 7 St. Paul Street, Suite 1660, Baltimore, MD, 21202, United States
32 C T Corporation System Inc., 1010 Dale Street North, St Paul, MN, 55117-5603, United States

Registered office address	
33	National Registered Agents, inc., 160 Greentree Dr Ste 101, Dover, Kent, DE, 19904, 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	7/F North Tower, Rockwell Business Center COR. Sheridan & United Street, Brgy. Highway Hills, Mandaluyong, Philippines
37	10 Gewerbestrasse, Cham, 6330, Switzerland
38	21, Mugyo-ro Jung-gu, Seoul, Republic of Korea
39	199 Bay Street, Commerce Court West, Suite 2800, Toronto, ON, M5L1A9, Canada
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	Ulica Szamocka 8 01-748, Warszawa, Poland
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	Numero 776, Avenida 24 de Julho, Maputo, Mozambique
46	Plot 8, Berkley Road, Old Kampala, Uganda
47	3500, 855 - 2nd Street, S.W., Calgary, AB, T2P 4K7, Canada
48	Thistle House, 4 Burnaby Street, Hamilton, HM11, Bermuda
49	Derech Ben Gurion 2, BSR Building 9th Floor, Ramat Gan, 52573, Israel
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	King Fahad Road, Olaya, Riyadh, 58774, 11515, Saudi Arabia

Registered office address	
60	44 Chipman Hill, Suite 1000, Saint Jon, NB, E2L 4S6, Canada
61	Suite 2600, Three Bentall Centre, P.O. Box 49314, 595 Burrard Street, Vancouver, BC, V7X 1L3, Canada
62	Unit 30-01, Level 30, Tower A, Vertical Business Suite, Avenue 3, Bangsar South, No 8, Jalan Kerinchi, 59200 Kuala Lumpur, Malaysia
63	Comendador Aladino Selmi Avenue, 4630, Galpão 1, Mezanino, Sala 5, Parque Cidade Campinas, City of Campinas, São Paulo, 13069-036, Brazil
64	Suite 1201 (site: self-made No. 1219), No. 85 Huacheng Avenue, Tianhe District, Guangzhou, China
65	Plot 50371, Fairground Office Park, Gaborone, Botswana
66	C/o Du Preez, Liebetrau & Co, 252 Kingsway, Next to USA Embassy, Maseru, Lesotho
67	MAGA ONE-Level 22, No. 200, Nawala Road, Narahenpita, Colombo 05, 11222, Sri Lanka
68	1-5-15, Kanda-Sarugakucho, Chiyoda-ku, Tokyo, Japan
69	Room 305, Building 2, 6555 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, Sokhzmililo 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, Ardennie, Harare, Zimbabwe
77	Andalucía y cordero E12-35. Edificio CYEDE piso 1, Oficina 11, Sector "La Floresta", Quito, Pichincha, Ecuador
78	Suite 302-9, Block 3, No. 333 Weining Road, Changning District, Shanghai, China
79	C/O Pearson Education, 501 Boylston St, Boston, MA, 02116, United States
80	Teikoku Hotel Tower 18F, 1-1-1 Uchi Saiwai-Cho, Chiyoda-ku, Tokyo, Japan
81	Suite 1201, Tower 2, No. 36 North Third Ring East Road, Dongcheng District, Beijing, China
82	268 Munoz Rivera Avenue, Suite 1400, San Juan, 00918, Puerto Rico
83	Suite 1208, 12/F, Tower 2, No. 36 North Third Ring East Road, Dongcheng District, Beijing, China
84	Suites 3-28 (2:3), Shi Guang Jun Yuan, No. 89 Hubin Road, Goden Sun Technology Industrial Park, High Technical & Industrial Development District, Guiyang City, Guizhou Province, China

Registered office address	
85	Gatwickstraat 1, Amsterdam, 1043 GK, Netherlands
86	26 Prince Andrew Place, Don Mills, Toronto, ON, M3C 2T8, Canada
87	Oficina N°117, edificio Casa Colorada, calle Merced N°838-A Santiago Centro, Santiago, Chile
88	2, Lilienthalstrasse, Hallbergmoos, 85399, Germany
89	30th Floor, Ratu Plaza Office Tower, Jl. Jend. Sudirman Kav 9, Jakarta, 10270, Indonesia
90	Carrera 7 Nro 156 - 68, Piso 26, Bogota, Colombia
91	Calle Antonio Dovali Jaime #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, Panama, 0832-0588, Panama
93	Cal. Los Halcones, no. 275, Urb. Limatambo, Lima, Perú
94	16, 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	6F Kwanjeong Building, 35, Cheonggyecheon-Ro, Jongno-gu, Seoul, 03188, Republic of Korea
97	Unit 7 Kingland Park, 98 Nickel Street, Prosperita, 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	Humboldt 1509 piso 6 (C1414CTM), Ciudad Autonoma de Buenos Aires, Argentina
101	No 219, Room D, 11F, Sec 3, Beixin Road, New Taipei City, Xindian District, 23143, Taiwan
102	Nida Kule Kozyatagi, Kozatagi Mahallesi, Degirmen Sokak No:18, Kat:6, D:15 Kadikoy 34742, Istanbul, 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

Notes to the company financial statements

Partly-owned subsidiaries

Registered company Name	Country of Incorp.	% Owned	Reg office
Certiport China Co Ltd	CN	50.69	1
Educational Publishers LLP	UK	85	2
GED Domains LLC	US	70	3
GED Testing Service LLC	US	70	4
Heinemann Publishers (Pty) Ltd	SA	75	5
Maskew Miller Longman (Pty) Limited	SA	75	5
Pearson Education Achievement Solutions (RF) (Pty) Limited	SA	97.3	5
Pearson South Africa (Pty) Ltd	SA	75	5

Associated undertakings

Registered company Name	Country of Incorp.	% Owned	Reg office
ACT Aspire LLC	US	50	6
Avanti Learning Centres Private Limited [‡]	IN	23.06	7
eAdvance Proprietary Limited [‡]	ZA	29.03	8
Institute for Private Education & Training KSCC*	KU	49.02	9
Karadi Path learning Company Private Limited [‡]	IN	24.96	11
Learn Capital Special Opportunities Fund I, L.P. [‡]	US	99.59	16
Learn Capital Venture Partners II, L.P. [‡]	US	72.93	16
Learn Capital Venture Partners IIIA, L.P. [‡]	KY	99.00	10
Learn Capital Venture Partners, L.P. [‡]	US	99.15	16
Omega Schools Franchise Limited	GH	49.05	12
Peking University Pearson (Beijing) Cultural Development Co., Ltd	CN	45	13
Penguin Random House Limited	UK	25	2
Penguin Random House LLC	US	25	6
Tenyl Education Company Limited	CN	49	17
The Egyptian International Publishing Company-Longman	EG	49	14
Zaya Learning Labs Private Limited [‡]	IN	20	15

* In liquidation

‡ 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 80 Strand, London, WC2R 0RL, England
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4 The Corporation Trust Company, Corporation Trust Center, 1209 Orange Street, Wilmington, New Castle, DE, 19801, United States
5 Auto Atlantic, 4th Floor, Corner Hertzog Boulevard and Heerengracht, Cape Town, 8001, South Africa
6 C/o Corporation Service Company, 2711 Centerville Road, Suite 400, Wilmington, Delaware, 19808, United States
7 16 Paschimi Marg, Vasant Vihar, New Delhi, DL, India
8 Office 201, Parktown Quarter, Corner 3rd & 7th Avenue, Parktown North, Johannesburg, 2193. South Africa
9 P.O. Box No. 6320, 32038 Hawalli, Kuwait City, Kuwait
10 Campbells Corporate Services Limited, Floor 4, Willow House, Cricket Square, Grand Cayman, KY1-9010, Cayman Islands
11 3A Dev Regency II, First Main Road, Gandhinagar, Adyar, Chennai, TN, India
12 2nd Floor OTS Building, off Accra-Winneba Road, Kasoa second, Kasoa P.O. Box WJ973, Weija, Accra. Ghana
13 Suite 216, No. 127-1 Zhongguancun North Street, Haidian District, Beijing, China
14 10a Hussein Wassef St, Midan Missaha, Dokki Giza, 12311, Egypt
15 Unit No. 404, New Udyog Mandir 2, Mogul Lane, Mahim(West), Mumbai, MH, 400016, India
16 Incorporating Services, Ltd. 3500 S Dupont Way, Dover, Kent, DE, United States
17 28/F, 1063 King's Road, Quarry Bay, Hong Kong