Other income. Other operating income mainly consists of freight recharges, sub-rights and licensing income, distribution commissions, investment income and gains on minor asset disposals together with service fee income from Penguin Random House. Other operating income decreased to £45m in 2020 compared to £54m in 2019 mainly due to reductions in freight charges.

Other net gains and losses. In 2020 other net gains and losses largely relate to the sale of the remaining interest in PRH (£180m gain) and impairments of assets and other costs relating to the disposal of Pearson Institute of Higher Education (£8m loss). In 2019, other net gains largely relate to the sale of the US K12 business.

Share of results of joint ventures and associates

The contribution from the Group’s joint ventures and associates decreased by £49m to £5m in 2020 from £54m in 2019. The decrease is mainly due to the disposal of the 25% interest in Penguin Random House in April 2020.

Operating profit

In 2020, the Group reported an operating profit of £411m compared to an operating profit of £275m in 2019. The increase in profit of £136m is mainly due to the gain on sale of PRH, the reduction in restructuring costs and the reduction in intangible charges, which were more than enough to offset the impact of COVID-19 on trading profits. After stripping out the effect of the sale of businesses, intangible charges, restructuring costs and the impact of currency movements, profits from trading decreased by around £210m. This underlying trading decrease was primarily due to the impact of COVID-19 on trading in the Global Assessment and International segments, continued pressure in the US Higher Education Courseware market, partly offset by growth in the Global Online Learning segment and cost savings in the Enabling Functions.

Net finance costs

Net finance costs increased by £14m from £43m in 2019 to £57m in 2020. The Group’s net interest payable increased from £41m in 2019 to £61m in 2020. The increase is mainly due to interest on tax with credits recorded in 2019 not being repeated in 2020, and interest charges on the bond raised in June 2020. Also included in net finance costs are net finance costs relating to employee benefit plans, foreign exchange and other gains and losses. In 2020 the total of these items was a gain of £4m compared to a loss of £2m 2019. Net finance income relating to retirement benefits decreased from £13m in 2019 to £6m in 2020 reflecting the comparative funding position of the plans at the beginning of each year and lower prevailing discount rates. In 2020, finance income of £26m relating to the revaluation of the US K12 disposal proceeds was recorded and there were increases in losses on long-term interest rate hedges and increases in foreign exchange losses on unhedged inter-company loans and cash and cash equivalents in 2020 compared to 2019.

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

Taxation

The reported tax charge in 2020 was £44m (12.5%) compared to a credit of £34m (14.7%) in 2019. The decrease in the effective tax rate is mainly due to a benefit from the release of tax provisions due to the expiry of the relevant statute of limitation. The statutory tax credit in 2019 was primarily due to US tax losses generated on the disposal of the US K12 business. In February 2021, the Group received charging notices requiring payment of materially all of the alleged State Aid. A payment of £100m was made on 8 March 2021. The Group expects to recover the funds in due course.

Discontinued operations

There were no discontinued operations in either 2019 or 2020.

Profit for the year

The profit for the financial year in 2020 was £310m compared to a profit in 2019 of £266m. The increased profit reflects increased operating profit offset by higher net finance costs and a higher tax charge.

Earnings per ordinary share

The basic earnings per ordinary share, which is defined as the profit for the financial year divided by the weighted average number of shares in issue, was 41.0p in 2020 compared to 34.0p in 2019 based on a weighted average number of shares in issue of 755.4m in 2020 and 777.0m in 2019. The increase in earnings per share was due to the increase in profit for 2020 as described above and was impacted by the decrease in the number of weighted average number of shares in 2020 compared to 2019 which mainly arise as a result of the share buy back in 2020.

The diluted earnings per ordinary share was 41.0p in 2020 and 34.0p in 2019 , with the dilutive effect of options being minimal.

Exchange rate fluctuations

Currency movements decreased sales by £31m and increased operating profit by £1m. See “Item 11. Quantitative and Qualitative Disclosures about Market Risk” for a discussion regarding the Group’s management of exchange rate risks.

Sales and operating profit by segment

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

In the Group’s adjusted operating profit, it has excluded other net gains and losses, acquisition related costs, amortization and impairment of acquired intangibles and the cost of major restructuring programs. The intangible charges relate only to intangible assets acquired through business combinations and acquisition costs are the direct costs of acquiring those businesses. The Group does not believe these charges are relevant to an understanding of the underlying performance. Charges relating to acquired intangible assets are non-cash charges that reflect the historical expenditure of the acquired business. These acquired intangible assets continue to be supported by ongoing expenditure that is reported within adjusted operating profit. Other net gains and losses that represent profits and losses on the sale of subsidiaries, joint ventures, associates and other financial assets are also excluded from adjusted operating profit as it is important to highlight their impact on operating profit, as reported, in the period in which the disposal transaction takes place in order to understand the underlying trend in the performance of the Group.

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

	Year ended December 31, 2020						
	Global Online Learning	Global Assessment	North American Courseware	International	Enabling Functions	PRH	Total
	£m	£m	£m	£m	£m	£m	£m
Sales	697	892	894	914	—	—	3,397
	21%	*26%*	*26%*	*27%*	—	—	*100%*
Total operating profit / (loss)	70	209	193	162	(404)	181	411
Add back:							
Cost of major restructuring	—	—	—	—	—	—	—
Intangible charges	29	36	—	15	—	—	80
Other net gains and losses	—	—	(3)	5	—	(180)	(178)
Total adjusted operating profit	99	245	190	182	(404)	1	313

	Year ended December 31, 2019						
	Global Online Learning	Global Assessment	North American Courseware	International	Enabling Functions	PRH	Total
	£m	£m	£m	£m	£m	£m	£m
Sales	586	1,031	1,091	1,161	—	—	3,869
	15%	*27%*	*28%*	*30%*	—	—	*100%*
Total operating profit / (loss)	49	317	193	189	(524)	51	275
Add back:							
Cost of major restructuring	—	7	51	24	75	2	159
Intangible charges	35	27	—	89	—	12	163
Other net gains and losses	—	—	(13)	(3)	—	—	(16)
Total adjusted operating profit	84	351	231	299	(449)	65	581

Global Online Learning

Global Online Learning sales increased by £111m or 19% from £586m in 2019 to £697m in 2020 and adjusted operating profit increased by £15m or 18% from £84m in 2019 to £99m in 2020. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2019 and 2020, Global Online Learning sales increased by 18% in 2020 compared to 2019 and adjusted operating profit also increased by 23%. The sales growth reflects strong enrolment growth in Virtual Schools and good growth in OPM. Adjusted operating profit growth was due to margin on sales growth more than offsetting the investment in our virtual schools platform and customer care support and margin impact in OPM due to discontinued programs. Headline profit grew 18% with good growth in adjusted operating profit partially offset by FX and portfolio changes.

Virtual Schools performed strongly driven by 43% enrolment growth in new and existing schools for the 2020/2021 academic year. We opened three new full-time, state-wide partner schools, and combined with two contract exits this takes the total partner schools to 43 in 29 states. We are launching two new partner schools in Florida and Oregon for the 2021/2022 academic year.

In OPM, we saw good sales growth with a strong performance in undergraduate and international, partially offset by discontinued programs. We also saw the benefits of the operational changes made earlier this year, with increased efficiencies in our student recruitment process and student acquisition costs. Underlying course enrolments (excluding discontinued programs) grew 20% and total course enrolments declined 7%. We are delivering 470 programs across 34 partners globally. We launched Pearson Pathways, a digital marketplace that provides learners with tailored recommendations for courses and credentials to help them achieve the skills they require.

The Global Online Learning results also include intangible charges of £29m in 2020 compared to £35m in 2019 reflecting lower acquisition activity in recent years.

Global Assessment

Global Assessment sales decreased by £139m or 13% from £1,031m in 2019 to £892m in 2020 and adjusted operating profit decreased by £106m or 30% from £351m in 2019 to £245m in 2020. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2019 and 2020, Global Assessment sales decreased by 14% in 2020 compared to 2019 and adjusted operating profit also decreased by 30%. Sales declined 10% at Pearson VUE reflecting the impact of the test center closures in the first half of the year offset by pent up demand in the second half partially moderated by further lockdowns in Q4. Online Proctoring saw strong growth in the year with volumes up from 0.2m at the end of 2019 to 2.1m at the end of 2020 predominantly driven by demand from the IT sector. Overall testing volumes were down 22% to 12.9m due to test center closures. In School and Clinical Assessment, cancelation of Spring testing and school closures impacted both businesses respectively in H1 with a further modest impact due to COVID-19 in H2.

Adjusted operating profit declined 30% due to the COVID-19 impact on trading, partially offset by mitigating actions.

The Global Assessment results also include intangible charges of £36m in 2020 compared to £27m in 2019 reflecting impairments of £12m made in 2020. Major restructuring costs were £7m in 2019 and £nil in 2020.

North American Courseware

North America Courseware sales decreased by £197m or 18% from £1,091m in 2019 to £894m in 2020 and adjusted operating profit decreased by £41m or 18% from £231m in 2019 to £190m in 2020. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2019 and 2020, North America Courseware sales decreased by 13% in 2020 compared to 2019 and adjusted operating profit also decreased by 20%. In US Higher Education Courseware sales declined 12% with total unit sales increasing slightly and digital registrations including eBooks growing 9%. In Canada, courseware sales were down significantly due to school and bookstore closures. The sales decline also reflects the disposal of the US K12 business in 2019. Adjusted operating profit declined 18% due to the impact of trading partially offset by restructuring and discretionary savings and the disposal of our US K12 courseware business in 2019.

The Group continued to see unbundling of premium priced print and digital products for digital only formats. In 2020 2.2m textbooks were sold into US Higher Education colleges, compared with 3.7m in 2019. Sales of standalone eBook units into colleges grew 33% to 3.7m units, showing signs of secondary market recapture. There has also been continued momentum in Inclusive Access with sales to not-for-profit institutions up 29% on last year representing 13% of US Higher Education Courseware revenue.

The North American Courseware results also include other net gains and losses of £3m gain in 2020 compared to a £13m gain in 2019. In 2019 these primarily relate to the gain on sale of the US K12 business and in 2020 they relate to favorable adjustments to prior year disposal costs. Major restructuring costs in 2019 were £51m and are £nil in 2020.

International

International sales decreased by £247m or 21% from £1,161m in 2019 to £914m in 2020 and adjusted operating profit decreased by £117m or 39% from £299m in 2019 to £182m in 2020. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2019 and 2020, International sales decreased by 19% in 2020 compared to 2019 and adjusted operating profit also decreased by 39%. The sales decline reflects the interruption of Australian immigration and test center closures impacting PTE, as well as budgetary pressures caused by the impact of COVID-19 on courseware purchasing. Adjusted operating profit declined 39% due to the impact of trading partially offset by mitigating actions.

For School & HE Courseware, budget constraints and school closures have led to fewer purchases. In the UK, qualifications revenue was impacted, as expected, by the cancelation of exams in 2020, as well as the end of the NCT contract. In our franchise business in Brazil and across courseware, we have seen market contraction as a result of the pandemic.

PTE volumes were down 36% with declines in all key markets except China where we saw 17% growth due to an improved competitive performance.

The International results also include intangible charges of £15m in 2020 compared to £89m in 2019 reflecting impairments made in relation to Brazil in 2019 of £65m which have not been repeated in 2020. Major restructuring costs were £24m in 2019 and £nil in 2020. Other net gains and losses in 2020 primarily relate to charges in relation to the disposal of PIHE. In 2019 other net gains and losses relate to small acquisitions and disposals.

On 5 March 2021, the Group agreed the disposal of its K-12 Sistemas – COC and Dom Bosco – in Brazil, subject to securing regulatory approval and closing.

Enabling Functions

Enabling functions adjusted operating loss decreased by £45m or 10% from £449m in 2019 to £404m in 2020. The Group estimates that after excluding the impact of exchange rates and the contribution from businesses disposed in 2019 and 2020, the Enabling Functions adjusted operating loss decreased by 9%. Cost reductions were due to restructuring and discretionary savings.

Penguin Random House

The Group’s share of Penguin Random House adjusted operating profits was £nil in 2020 compared to £65m in 2019. Dividend income of £1m was recognised in 2020. In December 2019, the Group announced the sale of its remaining 25% interest in Penguin Random House. At the end of December 2019 the Group’s share of the assets of Penguin Random House was classified as held for sale on the balance sheet. In April 2020, the Group completed the sale of the remaining 25% interest in Penguin Random House to Bertelsmann, generating net proceeds of £531m and resulting in a pre-tax profit of £180m.

Results of operations

Year ended December 31, 2019 compared to year ended December 31, 2018

Consolidated results of operations

Sales

The Group’s total sales decreased from £4,129m in 2018 to £3,869m in 2019, a decrease of £260m or 6%. The year on year movement was impacted by exchange rates, primarily the comparative strength of the US dollar relative to sterling during the year. In 2019, currency movements increased sales by £97m when compared to the equivalent figures at constant 2018 rates. When measured at 2018 constant exchange rates, the Group’s sales declined by 9%. Part of the decrease is due to the absence of sales from businesses sold during 2018 and 2019. The Group estimates that after excluding the impact of disposals sales were flat in 2019 compared to 2018 at constant exchange rates. Although sales at constant rates after taking account of disposals were flat there were further significant decreases in North America in higher education courseware, offset by aggregate growth in the rest of the business.

Global Online Learning sales increased by £65m or 12% from £521m in 2018 to £586m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019, Global Online Learning sales increased by 8% in 2019 compared to 2018. Revenue at Virtual Schools and OPM grew at 6% and 4% respectively due to increased enrolment and course registrations.

Global Assessment sales increased by £76m or 8% from £955m in 2018 to £1,031m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019, Global Assessment sales increased by 4% in 2019 compared to 2018. In US School Assessment, revenue declined slightly with continued contraction in revenue associated with the PARCC and ACT-Aspire multi state contracts and contract losses were partially offset by new contract wins. In Professional Certification (Pearson VUE) revenue grew driven by increases in global test volumes.

North American Courseware sales decreased by £370m or 25% from £1,461m in 2018 to £1,091m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019, North American Courseware sales decreased by 11% in 2019 compared to 2018. The sales decline was primarily due to North American Higher Education Courseware which declined 12% with print declining by close to 30%, partially offset by modest growth in digital.

International sales decreased by £31m or 3% from £1,192m in 2018 to £1,161m in 2019. The Group estimates that after excluding the impact of exchange rates and the contribution from businesses disposed in 2018 and 2019, International sales increased by 3% in 2019 compared to 2018. Courseware revenue declined moderately. Declines in School Courseware in the UK and Australia offset growth in Italy. In Higher Education Courseware, revenue declines in the UK and Europe more than offset growth in Australia. There was with growth in English Language Courseware in China and School Courseware in the Middle East and Hispano America, offset by declines in school courseware in India and Higher Education courseware in South Africa following a change in government funding.

Cost of goods sold and operating expenses

The following table summarizes the Group's cost of sales, net operating expense and other net gains and losses:

	Year ended December 31	
	2019	2018
	£m	£m
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	(16)	(230)
Total continuing operations	3,648	3,620

Cost of goods sold. Cost of sales consists of costs for raw materials, primarily paper, printing and binding costs, amortization of pre-publication costs, royalty charges, the cost of service provision in the assessment and testing business and the cost of teaching and facilities in direct delivery businesses. The Group's cost of sales decreased by £85m, or 4%, from £1,943m in 2018, to £1,858m in 2019. The decrease largely reflects the decrease in sales but also includes some continuing benefit from restructuring. In addition, cost of sales as a percentage of sales increased largely as a result of the mix effect caused by a sales decline in businesses with generally higher gross margins than Pearson as a whole. Cost of sales was 48.0% of sales in 2019 compared to 47.1% in 2018.

Distribution costs. Distribution costs consist primarily of shipping costs, postage and packing. Distribution costs decreased by £15m reflecting the flow through of restructuring savings, the absence of costs from businesses disposed, the decrease in physical print sales and some one-off costs in the Core business in 2018 relating to a change in distribution arrangements that year.

Selling, marketing and product development costs. The Group's selling, marketing and product development costs decreased by £128m or 17% from £759m in 2018 to £631m in 2019. The decrease is explained by the absence of costs from businesses disposed and restructuring savings realized in the year. As a percentage of sales, these costs decreased in 2019 from 18.4% in 2018 to 16.3% in 2019.

Administrative and other expenses. The Group's administrative and other expenses decreased by £40m or 4% from £1,039m in 2018 to £999m in 2019. This decrease is explained by the absence of costs from businesses disposed, the impact of restructuring savings particularly in enabling functions and the benefit from adoption of IFRS 16 partly offset by continuing investment in technology and the impact of higher intangible charges. In 2019 intangible charges increased due to an additional £65m impairment charge relating to acquired intangibles in the Brazil business following a reassessment of the relative risk in that market.

Restructuring costs. Restructuring costs of £157m in 2019 and £90m in 2018 (excluding the share of associate restructuring charges) relate to the 2017-2019 restructuring program announced in May 2017. This program began in the second half of 2017 and costs incurred related to delivery of cost efficiencies in enabling functions and the US higher education courseware business together with further rationalization of the property and supplier portfolio. The restructuring costs in 2018 and 2019 relate predominantly to staff redundancies and, in 2018, to the net cost of property rationalization. Included in the property rationalization in 2018 is the impact of the consolidation of the Group's property footprint in London which resulted in a charge for onerous leases of £91m partially offset by profit from the sale of property of £81m.

Other income. Other operating income mainly consists of freight recharges, sub-rights and licensing income, distribution commissions, investment income and gains on minor asset disposals together with service fee income from Penguin Random House. Other operating income decreased to £54m in 2019 compared to £69m in 2018 mainly due to decreased rights income, the absence of recoveries following legal settlements in 2018 and fewer asset gains in 2019.

Other net gains and losses. In 2019 gains of £16m largely relate to the sale of the K12 school courseware business in the US. In 2018 a £230m gain from the sale of businesses related to the sale of the Wall Street English language teaching business (WSE), realizing a gain of £207m, the disposal of the Group's equity interest in UTEL, the online University partnership in Mexico, realizing a gain of £19m, and various other smaller disposal items realizing a net gain of £4m.

Share of results of joint ventures and associates

The contribution from the Group's joint ventures and associates increased by £10m to £54m in 2019 from £44m in 2018. The increase is mainly due to reduced intangible and restructuring charges in PRH in 2019 and in addition, there were restructuring costs incurred in respect of the Group's ACT Aspire joint venture in 2018 that were absent in 2019.

Operating profit

In 2019, the Group reported an operating profit of £275m compared to an operating profit of £553m in 2018. The decrease in profit of £278m mainly reflects the absence of significant gains on disposal in 2019 compared to 2018, an increase in intangible charges and restructuring costs and the lost contribution from businesses disposed which more than offset a favorable impact from currency movements and the adoption of IFRS 16 'Leases'. Excluding out the effect of the sale of businesses, intangible charges, restructuring costs, one-off pension related charges and the impact of currency movements and IFRS 16, profits from trading increased by around £30m. This trading increase was primarily due to savings from restructuring and lower staff incentives which offset the impact on profits of lower sales in North America higher education courseware and inflationary pressures.

Net finance costs

Net finance costs decreased from £55m in 2018 to £43m in 2019. Net interest payable increased from £24m in 2018 to £41m in 2019. The increase is due to the adoption of IFRS 16 which resulted in an additional £34m of net interest payable in 2019. After excluding the impact of IFRS 16 there was a reduction in net interest payable due to lower levels of average net debt together with favorable movements in interest on tax and the absence of one-off costs relating to the redemption of bonds. Also included in net finance costs are net finance costs relating to employee benefit plans, foreign exchange and other gains and losses. In 2019 the total of these items was a loss of £2m compared to a loss of £31m 2018. Income relating to employee benefit plans was £2m higher in 2019 than in 2018 reflecting the higher net surplus on pension balances at the beginning of 2019 compared to the beginning of 2018. Other losses in both 2019 and 2018 primarily relate to foreign exchange differences on un-hedged cash and cash equivalents, and other financial instruments although these losses were much lower in 2019.

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

Taxation

The reported tax credit in 2019 was £34m (14.7%) compared to a credit of £92m (18.5%) in 2018. The movement in the tax rate reflects several one-off benefits in 2018 including provision releases due to the expiry of relevant statutes of limitation and due to the reassessment of historical positions, as well as a one-off benefit from a reassessment of the tax treatment of certain items of income and expenditure. In 2019, the credit is primarily due to US tax losses generated on the disposal of the K12 business.

Discontinued operations

There were no discontinued operations in either 2018 or 2019.

Profit for the year

The profit for the financial year in 2019 was £266m compared to a profit in 2018 of £590m. The decreased profit reflects decreased operating profit and reduced tax credits partially offset by lower net finance costs as set out above.

Earnings per ordinary share

The basic earnings per ordinary share, which is defined as the profit for the financial year divided by the weighted average number of shares in issue, was 34.0p in 2019 compared to 75.6p in 2018 based on a weighted average number of shares in issue of 777.0m in 2019 and 778.1m in 2018. The decrease in earnings per share was due to the decrease in profit for 2019 as described above and was not significantly impacted by the small decrease in the number of weighted average number of shares in 2019 compared to 2018.

The diluted earnings per ordinary share was 34.0p in 2019 and 75.5p in 2018, with the dilutive effect of options being minimal.

Exchange rate fluctuations

Currency movements increased sales by £97m and increased operating profit by £15m. See "Item 11. Quantitative and Qualitative Disclosures about Market Risk" for a discussion regarding the Group's management of exchange rate risks.

Sales and operating profit by segment

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

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

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

	Year ended December 31, 2019						
	Global Online Learning £m	Global Assessment £m	North American Courseware £m	International £m	Enabling Functions £m	PRH £m	Total £m
Sales	586	1,031	1,091	1,161	—	—	3,869
	15%	*27%*	*28%*	*30%*	—	—	*100%*
Total operating profit / (loss)	49	317	193	189	(524)	51	275
Add back:							
Cost of major restructuring	—	7	51	24	75	2	159
Intangible charges	35	27	—	89	—	12	163
Other net gains and losses	—	—	(13)	(3)	—	—	(16)
UK pension GMP equalization	—	—	—	—	—	—	—
Total adjusted operating profit	84	351	231	299	(449)	65	581

	Year ended December 31, 2018						
	Global Online Learning £m	Global Assessment £m	North American Courseware £m	International £m	Enabling Functions £m	PRH £m	Total £m
Sales	521	955	1,461	1,192	—	—	4,129
	13%	*23%*	*35%*	*29%*	—	—	*100%*
Total operating profit / (loss)	49	242	293	488	(565)	46	553
Add back:							
Cost of major restructuring	7	33	7	9	38	8	102
Intangible charges	43	29	1	26	—	14	113
Other net gains and losses	—	—	(4)	(226)	—	—	(230)
UK pension GMP equalization	—	—	—	8	—	—	8
Total adjusted operating profit	99	304	297	305	(527)	68	546

Global Online Learning

Global Online Learning sales increased by £65m or 12% from £521m in 2018 to £586m in 2019 and adjusted operating profit decreased by £15m or 15% from £99m in 2018 to £84m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019 and the impact of adopting IFRS 16 on profits, Global Online Learning sales increased by 8% in 2019 compared to 2018 and adjusted operating profit decreased by 17%. Revenue at Virtual Schools and OPM grew at 6% and 4% respectively due to increased enrolment and course registrations.

Virtual Schools grew revenue 6% and served 76,000 full time equivalent students through 42 continuing full-time virtual partner schools in 28 states, up 5% on last year. Six new full-time online, state- wide partner schools opened in the 2019-20 school year in the states of Oregon, Washington, Tennessee, Minnesota and California, while a contract was exited in North Carolina.

Higher Education Services (including OPM and Learning Studio) grew revenue 4%, due to growth in OPM, partially offset by a small drag from Learning Studio revenue, a learning management system, which was fully retire in 2019. In OPM, revenue grew 9%, with growth in course registrations of 5% and new programs launched more than offsetting programs terminated. The overall active program count grew to 347 from 325 in 2018.

During 2019, the OPM business continued to optimize its portfolio and reduced the number of partners to 25 from 35. This will allow the business to shift towards enterprise models where it has a number of programs with a single partner and can benefit from economies of scale in marketing and recruitment and integrate more content and assessment services into these partnerships.

The decrease in adjusted operating profit reflected inflation and investment in strategic growth priorities which offset the impact of sales increases, restructuring savings and lower staff incentives.

The Global Online Learning results also include costs of £nil in 2019 and £7m in 2018 in respect of the 2017- 2019 restructuring program. Amortization relating to acquired intangibles was £35m in 2019 compared to £43m in 2018 reflecting lower acquisition activity in recent years.

Global Assessment

Global Assessment sales increased by £76m or 8% from £955m in 2018 to £1,031m in 2019 and adjusted operating profit increased by £47m or 15% from £304m in 2018 to £351m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019 and the impact of adopting IFRS 16 on profits, Global Assessment sales increased by 4% in 2019 compared to 2018 and adjusted operating profit increased by 11%.

In Student Assessment, revenue declined slightly in 2019 with continued contraction in revenue associated with PARCC and ACT-Aspire multi-state contracts and contract losses which were partially offset by new contract wins. During 2019, Pearson won new contracts or signed renewals in several key incumbent states including Kentucky, Maryland, Colorado and New Jersey, as well as the federal NCES contract for delivering the National Assessment of Educational Progress (NAEP). Pearson also won back the testing contract in the state of Tennessee. Automated scoring continues to be a competitive strength for Pearson. In 2019, we scored 39 million responses with AI, up 8% from 2018.

In Professional Certification (VUE), global test volume rose 8% to c.16.5 million tests. Revenue in North America was up a high single-digit percentage, mostly driven by the IT sector with increased demand for cloud technology certifications through Microsoft and Amazon, and volume growth in an education contract launched at the end of 2018 which is now operating at its full run-rate. VUE signed over 40 new contracts in 2019, including the Project Management Institute (PMI) and our renewal rate on existing contracts continues to be over 95%.

Clinical Assessment declined as demand for new product only partially offset normal declines in products in the later stages of their lifecycle.

The increase in adjusted operating profit reflected the sales increase, the impact of restructuring savings and lower staff incentives.

The Global Assessment results also include costs of £7m in 2019 and £33m in 2018 in respect of the 2017-2019 restructuring program. Amortization relating to acquired intangibles was £27m in 2019 compared to £29m in 2018.

North American Courseware

North American Courseware sales decreased by £370m or 25% from £1,461m in 2018 to £1,091m in 2019 and adjusted operating profit decreased by £66m or 22% from £297m in 2018 to £231m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019 and the impact of adopting IFRS 16 on profits, North American Courseware sales decreased by 11% in 2019 compared to 2018 and adjusted operating profit decreased by 21%. The sales decline was primarily due to North American Higher Education Courseware which declined 12% with print declining by close to 30%, partially offset by modest growth in digital.

In 2019 the weaker performance was driven by several factors: Premium-priced print and digital products were substituted for digital only formats and sales of bundle units declined 45% during 2019; Campus bookstores bought less physical inventory due to changing student behavior, with over 50% of learners now preferring an eBook to a physical text with offsetting eBook growth of 18% during 2019 and; There were modest adoption share losses caused by delivery issues due to the implementation of the new ERP system in the second half of 2018 as well as the re-organization of the sales force.

The business is focused on regaining share over time as it builds traction from the rollout of our next wave of digital products on the Pearson Learning Platform (PLP), which launched in September 2019. 60% of all Revel titles will migrate onto the PLP in 2020 enhancing the faculty and student experience. The business is also launching a direct-to-learner version of the Pearson eBook in 2020, with enhanced features and AI-driven text-to-speech.

US Higher Education Courseware digital registrations, including eBooks, declined 2%. Good registration growth in Revel, up 9%, was offset by continued market pressure in Developmental Mathematics and the planned retirement and reprioritization of niche products with lower demand. There was continued good progress with Inclusive Access signing 162 new institutions in 2019, taking the total not-for-profit and public institutions served to 779. The business now has direct relationships with over 850 institutions, including 80 longer-standing contracts with for-profit colleges. In 2019, 1.8m Inclusive Access enrolments were served up from 1.4m in 2018, making up 9% of 2019 US Higher Education Courseware revenue, up 19% on 2018 on a like-for-like basis, excluding the 80 for-profit colleges.

The decrease in adjusted operating profit reflected the sales shortfall, inflation and the disposal of the K12 business which offset the impact of restructuring savings and lower staff incentives.

The North American Courseware results also include costs of £51m in 2019 and £7m in 2018 in respect of the 2017- 2019 restructuring program. Amortization relating to acquired intangibles was £nil in 2019 compared to £1m in 2018 reflecting lower acquisition activity in recent years. Net gains on business disposals of £13m in 2019 relate to the K12 sale with £4m of profits on several small disposals in 2018.

On March 29, 2019 the Group completed the sale of the US K12 school courseware business to Nexus Capital Management LP for headline consideration of $250m comprising an initial cash payment of $25m and an unconditional vendor note for $225m expected to be repaid in three to seven years.

International

International sales decreased by £31m or 3% from £1,192m in 2018 to £1,161m in 2019 and adjusted operating profit decreased by £6m or 2% from £305m in 2018 to £299m in 2019. The Group estimates that after excluding the impact of exchange rates and the impact of adopting IFRS 16 on profits, the contribution from businesses disposed in 2018 and 2019, International sales increased by 3% in 2019 compared to 2018 and adjusted operating profit increased by 2%.

Courseware revenue declined moderately. Declines in School Courseware in the UK and Australia offset growth in Italy. In Higher Education Courseware, revenue declines in the UK and Europe more than offset growth in Australia. There was with growth in English Language Courseware in China and School Courseware in the Middle East and Hispano America, offset by declines in school courseware in India and Higher Education courseware in South Africa following a change in government funding.

In Student Assessment and Qualifications, revenue grew strongly, due to price and volume increases for A levels and GCSE qualifications in the UK and the delivery of a new digital assessment contract in Egypt. This was partially offset by continued market declines in Apprenticeships. In 2019, the business successfully delivered the UK’s National Curriculum Test (NCT), marking 3.8m scripts, up slightly from 2018. The NCT will be delivered by another provider in 2020.

PTE Academic saw continued strong growth in test volumes in Australia and New Zealand up 14% from 2018. This was driven by its use to support visa applications to the Australian Department of Home Affairs as well as good growth in New Zealand. The business recently announced the win of the UK Secure English Language Test (SELT) contract with the UK Home Office which is expected to drive future growth.

In English Services, underlying revenue grew slightly in our English Language School franchise in Brazil due to new product launches. In School Services, underlying revenue grew slightly due to price increases and new product launches in our private sistemas in Brazil. In Higher Education Services, enrolments grew 3% at the Pearson Institute of Higher Education (formerly CTI), however revenue declined modestly due to changes in mix.

Adjusted operating profit benefitted from higher revenue together with the benefits of restructuring.

The Group’s statutory operating profit for International included restructuring costs of £24m in 2019 and £9m in 2018. Also included in the statutory operating profit is amortization and impairment of acquired intangibles and gains and losses on disposal of businesses. In 2019 intangible charges of £89m compare to a charge of £26m in 2018 and this increase was due to an additional £65m impairment charge relating to acquired intangibles in the Brazil business following a reassessment of the relative risk in that market. In 2018 gains on the disposal of businesses amounted to £226m and result from the sale of the Wall Street English language teaching business (WSE), realizing a gain of £207m and the disposal of the equity interest in UTEL, the online University partnership in Mexico, realizing a gain of £19m. Gains on disposals in 2019 of £3m relate to adjustments to prior year disposals. The statutory operating profit in 2018 also includes the one-off £8m charge in respect of guaranteed minimum pension (GMP) equalization in the UK.

Enabling Functions

Enabling functions adjusted operating loss decreased by £78m or 15% from £527m in 2018 to £449m in 2019. The Group estimates that after excluding the impact of exchange rates, the contribution from businesses disposed in 2018 and 2019, Enabling Functions adjusted operating loss also decreased by 14%. The decrease in the loss reflects restructuring savings. The Group’s statutory operating profit for Enabling Functions included restructuring costs of £75m in 2019 and £38m in 2018.

Penguin Random House

The Group owned 25% of Penguin Random House, the first truly global consumer book publishing company. The Group’s share of Penguin Random House adjusted operating profits were £65m in 2019 compared to £68m in 2018. Penguin Random House performed solidly in 2019 with underlying revenue growth from a rise in audio sales, stable print sales, and the industry’s top bestsellers, including “Where the Crawdads Sing” by Delia Owen, “Becoming” by Michelle Obama, and bestselling books by Margaret Atwood, Tara Westover, Lee Child, Jamie Oliver, Jeff Kinney, and Dr. Seuss.

In December 2019, the Group announced the sale of its remaining 25% interest in Penguin Random House. The sale is expected to complete in the first half of 2020. At the end of December our share of the assets of Penguin Random House was classified as held for sale on the balance sheet.

Liquidity and capital resources

Cash flows and financing

Net cash generated from operations decreased to £450m in 2020 from £480m in 2019. The decrease in cash generated from operations is largely explained by the drop-through of reduced profit due to COVID-19, offset by improved working capital.

Net interest paid at £50m in 2020 compares to £64m in 2019 and reflects a reduction in interest on lease liabilities and a reduction in payments related to FX contracts. Tax received in 2020 was £2m compared to tax paid of £30m in 2019 with the decrease mainly explained by refunds received in the US and UK relating to historical periods, the settlement of a historical tax audit and the impact of the disposal of our US K12 business.

Capital expenditure on property, plant and equipment was £53m in 2020 compared to £55m in 2019. There were no material property sales in 2019 or 2020. Capital expenditure on software intangibles decreased from £138m in 2019 to £81m in 2020. The reduction in expenditure on intangible capital reflects the reduction in investment in enabling function technology as the digital transformation program comes to an end.

Cash outflow from acquisitions in 2020 was £12m compared to £97m in 2019. There were no significant acquisitions in 2020, the net cash outflow on acquisition of subsidiaries in 2020 relates to deferred payments for prior year acquisitions and investment purchases. There were two small acquisitions in 2019, Lumerit and Smart Sparrow which together accounted for £40m of cash consideration, £40m of additional capital was invested in PRH, with the balance of the cash outflow on acquisitions in 2019 being in relation to investments and prior year items. The net cash inflow in respect of businesses and investments disposed was £631m in 2020 compared to a net outflow of £96m in 2019. In 2020 the cash received largely related to the disposal of PRH and the partial repayment of the receivable held in relation to the disposal of the US K12 business. In 2019 the cash outflow mainly relates to the US K12 Courseware business and reflects the deferral of proceeds and the level of working capital in the business at the disposal date.

Dividends from joint ventures and associates decreased from £64m in 2019 to £4m in 2020. The reduction is primarily due to the fact that the PRH disposal completed in April 2020. Dividends paid to company shareholders in 2020 of £146m compares to £147m in 2019. Cash returned to shareholders via the share buyback program in H1 2020 amounted to £176m in 2020. Treasury share purchases in 2020 in respect of employee share plans were £6m compared to £52m in 2019.

The cash outflow from financing of £299m in 2020 compares to £102m in 2019 and includes the repayment of borrowings of £230m in 2020 and £48m in 2019. These repayments include the repayment of the draw down of the revolving credit facility in 2020 and in 2019 the early redemption of various bonds (and their associated swaps). In 2019, the Group announced the refinancing of its bank facility, reducing its size to $1.19bn and extending its maturity date to February 2024. Drawings of £230m representing a financing cash inflow in 2019 were outstanding on this facility at the end of December 2019 and were repaid in 2020. In March 2019, the Group executed market tenders to repurchase €55m of its €500m 1.875% notes due 2021 of which €250m were outstanding at December 31, 2018. Also included in financing cash flows are repayments of lease liabilities which increased from £91m in 2019 to £92m in 2020. Dividends paid to company shareholders in 2020 of £147m compares to £148m in 2019. Cash returned to shareholders via the 2020 share buyback program amounted to £176m. Treasury share purchases in 2020 in respect of employee share plans were £6m compared to £52m in 2019.

This was offset by proceeds from the issuance of £350m guaranteed notes maturing June 4, 2030. The notes bear a coupon of 3.75% and have been issued in accordance with the ICMA Social Bond Principles 2018. The proceeds will be primarily used to finance and re-finance delivery of education in our Connections Academy, BTEC and GED businesses to help achieve the United Nations’ 4th Sustainable Development Goal (SDG) for a Quality Education. The social bond framework is a natural progression of Pearson’s long-standing commitment to integrating social and environmental sustainability into the business.

Overall the Group’s net borrowings decreased from £1,016m at the end of 2019 to £463m at the end of 2020. In addition to the cash flows referred to above, the adoption of IFRS 16 added £666m of net debt on transition after taking account of both lease liabilities and the investment in finance lease receivable brought on balance sheet at January 1, 2019.

Capital resources

The Group’s borrowings fluctuate by season because of the school year’s effect on the working capital requirements in the educational materials business. Assuming no acquisitions or disposals, the Group’s maximum level of net debt normally occurs in July, and its minimum level of net debt normally occurs in December.

In assessing the Group’s liquidity, the impact of the COVID-19 pandemic has been modeled under several scenarios to ensure that the likelihood of a prolonged period of disruption has been appropriately considered in assessing the availability of funding to the Group and the ability of the Group to comply with its banking covenants. The modeling includes a severe reduction in revenue, profit and operating cash flow that extends through the full three-year period to ensure that the Group has adequate resources to manage for a prolonged period of disruption.

In assessing the Group’s ability to continue as a going concern for the period to June 30, 2022, the board analyzed a variety of downside scenarios including a severe but plausible scenario where the Group is impacted by all principal risks from 2021 (weighted for probability of occurrence) as well as reverse stress testing to identify what would be required to either breach covenants or run out of liquidity. The severe but plausible scenario modeled an impact from COVID-19 and other risks which in aggregate were significantly greater than seen in 2020 continuing throughout 2021 to 2022.

At December 31, 2020, the Group had available liquidity of c£1.9bn, comprising central cash balances and its undrawn $1.19bn Revolving Credit Facility (RCF) maturing February 2024. Even under a severe downside case where further declines in profitability compared to 2020 are modeled in 2021 and 2022, the Group would maintain liquidity headroom in excess of £800m and sufficient headroom against covenant requirements during the period under assessment even before modeling the mitigating effect of actions that management would take in the event that these downside risks were to crystallize.

At December 31, 2020, the Group’s net debt was £463m compared to £1,016m at December 31, 2019. The decrease is largely due to the receipt of proceeds of £531m from the PRH sale, the receipt of deferred proceeds of £105m from the US K12 sale, the £48m repayment of the loan to PRH and positive operating cash flow offset by interest and dividend payments and the cash outflow of £176m from the Group’s share buyback program.

Net debt is defined as all short-term, medium-term and long-term borrowing (including leases and related derivatives), less all cash, cash equivalents, other liquid resources and the net investment in finance lease receivables. Cash equivalents comprise short-term deposits with a maturity of up to 90 days, while liquid resources comprise short-term deposits with maturities of more than 90 days and other marketable instruments which are readily realizable and held on a short-term basis. Total short-term, medium- term and long-term borrowing excluding derivatives amounted to £1,720m at December 31, 2020, compared to £1,664m at December 31, 2019 reflecting the issuance of a bond in 2020. At December 31, 2020, total cash and liquid resources were £1,116m, compared to £437m at December 31, 2019. The increase in 2020 was primarily driven by the receipt of proceeds of £531m from the PRH sale, the receipt of deferred proceeds of £105m from the US K12 sale, the £48m repayment of the loan to PRH, the £57m reduction in spending on software assets and the receipt of proceeds of £346m from the bond issue. These were offset by the cash outflow of £176m from the Group’s share buyback program and the £230m repayment of the Revolving Credit Facility which was drawn at December 31, 2019.

In February 2021, the Group renegotiated its revolving credit facility, extending the maturity of $1bn of the facility by one year to 2025.

Contractual obligations

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

	Year ended December 31, 2020				
	Total	Less than one year	One to Two years	Two to five years	After five years
	£m	£m	£m	£m	£m
Gross Borrowings:					
Bank loans and overdrafts	3	3	—	—	—
Revolving credit facility	—	—	—	—	—
Bonds	965	178	86	348	353
Lease liabilities	752	76	77	194	405
Deferred consideration	30	4	3	9	14
UK pension funding obligation	—	—	—	—	—
Total	1,750	261	166	551	772

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

At December 31, 2020 the Group had no capital commitments for fixed assets. There are contingent liabilities in respect of indemnities, warranties, legal and royalty claims and guarantees in relation to former subsidiaries and in respect of guarantees in relation to subsidiaries and associates. In addition, there are contingent liabilities in respect of tax assessments as outlined in note 34 in "Item 18. Financial statements". None of these claims, guarantees or assessments is currently expected to result in a material gain or loss.

Off-balance sheet arrangements

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

Borrowings

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

At December 31, 2020, the Group had a $1.19bn committed revolving credit facility with a maturity date in February 2024. At December 31, 2019, none of the $1.19bn credit facility had been drawn. The facility set in place in March 2019, contains two key covenants measured for each 12-month period ending June 30 and December 31:

The Group must maintain the ratio of its profit before interest, tax and amortization to its net interest payable at no less than 3:1; and must maintain the ratio of its net debt to its EBITDA at no more than 4:1. "EBITDA" refers to earnings before interest, taxes, depreciation and amortization. The Group is currently in compliance with these covenants.