FOR RELEASE ON **11 March 2020**

("IP Group" or "the Group" or "the Company")
IP Group plc Annual Results Release

IP Group plc (LSE: IPO), the developer of intellectual property-based businesses, today announces its annual financial results for the year ended 31 December 2019.

Portfolio highlights

- Fair value of portfolio: £1,045.6m (2018: £1,128.2m)
- 169% increase in cash realisations to £79.5m, which exceeded investment into portfolio for the first time since 2007 (2018: £29.5m)
- Investment into portfolio: £64.7m (2018: £100.9m)
- Net portfolio fair value reduction[1] of £43.9m, approximately 4% (2018: £48.4m, 4%)
- Oxford Nanopore announced investment and secondary share sales totalling £109.5m, having more than doubled revenue and orders in 2018 to $43.7m and $60.6m respectively
- Istesso announced positive outcome from Phase 2a study of MBS2320 for rheumatoid arthritis
- Significant commercial progress at Ceres Power including first product launch with Japan's Miura and further £8m licence and joint development agreement with Korea's Doosan
- Total funds raised by portfolio companies of £430m (2018: £717m) including financing rounds for Inivata (£40.0m), Featurespace (£25.0m) and Azuri Technologies (£20.0m)

Financial and operational highlights

- Hard NAV[1] £1,141.5m or 108 pence per share (2018: £1,217.5m, 115 pence per share)
- Net assets £1,141.9m (2018: £1,218.2m)
- Strong liquidity with gross cash and deposits at 31 December 2019 of £194.9m (2018: £219.0m) and net cash of £112.4m (2018: £121.2m)
- Return on Hard NAV[1] of negative £73.7m (2018: negative £75.6m)
- Loss for the year of £78.9m (2018: £293.8m loss)
- Net overheads reduced by 13% to £22.6m (2018: £26.0m)
- Parkwalk Advisors, the Group's specialist EIS subsidiary, grew assets under management to £300m (2018: £220m)
- Further encouraging progress made in developing the Group's businesses in the US and Australia
- Board strengthened through appointment of two additional independent non-executive directors

Post period end highlights

- Ceres Power announces Bosch to increase stake to 18% from 4% with £38m strategic investment, which included a £22m partial realisation by IP Group
- Total further cash realisations from the portfolio of £55.4m in 2020

[1] Alternative performance measure, see Note 27 for definition and reconciliation to IFRS primary statements

Alan Aubrey, Chief Executive of IP Group, said: "In 2019 realisations from our portfolio hit a record £79.5m and exceeded investment into the portfolio for the first time since 2007. This strong cash generation has continued into 2020, with realisations to date now totalling more than £55m. Realisations from our maturing companies, the ongoing focusing and rationalisation of the portfolio as well as tight cost control has placed the Group in a strong financial position and these remain three areas of focus for the Group in 2020.

During 2019 the Group's portfolio saw a net fair value reduction of £43.9 or 4%, and, whilst disappointing, this reflects ongoing rationalisation in the portfolio and significant headwinds, particularly in the UK market. However, our three most valuable holdings, Oxford Nanopore, Istesso and Ceres Power, made excellent progress during the year with Oxford Nanopore and Ceres Power also announcing positive developments since the year end. Consequently, we remain confident in the prospects of our portfolio, which we continue to believe includes world-changing businesses that will deliver impact and significant benefits for multiple stakeholders."

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Notes

(i) Nature of announcement

This Annual Results Release was approved by the directors on 10 March 2020.

The financial information set out in this Annual Results Release does not constitute the company's statutory accounts for 2019 or 2018. Statutory accounts for the years ended 31 December 2019 and 31 December 2018 have been reported on by the Independent Auditor. The Independent Auditor's Reports on the Annual Report and Financial Statements for 2019 and 2018 were unqualified, did not draw attention to any matters by way of emphasis, and did not contain a statement under 498(2) or 498(3) of the Companies Act 2006. Statutory accounts for the year ended 31 December 2016 have been filed with the Registrar of Companies. The statutory accounts for the year ended 31 December 2019 will be delivered to the Registrar following the Company's annual general meeting.

The 2019 Annual Report and Accounts will be published in April 2020 and a copy will be posted on the Group's website (www.ipgroupplc.com). In accordance with Listing Rule 9.6.1 a copy of the Annual Report and Accounts will also be submitted to the National Storage Mechanism on or around this date and will be available for inspection at: www.Hemscott.com/nsm.do from that time.

Throughout this Annual Results Release the Group's holdings in portfolio companies reflect the undiluted beneficial equity interest excluding debt, unless otherwise explicitly stated.

(ii) Forward looking statements

This Annual Report and Accounts may contain forward looking statements. These statements reflect the Board's current view, are subject to a number of material risks and uncertainties and could change in the future. Factors which could cause or contribute to such changes include, but are not limited to, the general economic climate and market conditions, as well as specific factors relating to the financial or commercial prospects or performance of individual companies within the Group's portfolio.

STRATEGIC REPORT

Chairman's summary

2019 was a pivotal year for IP Group. It was the year in which the resilience of the Group, its operating and funding models and the cohesion and adaptability of its management team were all severely tested. Our share price fell by 35% during the year to close at 71p, while net assets per share reduced by 6% to 108p. It is testament to the strength of the Group's culture, in particular executive management's determination to demonstrate the latent value within the portfolio of companies, that we enter 2020 in a more sustainable financial position than that in which we entered 2019. This has yet to be reflected in the share price which, after an initial recovery, has fallen further in 2020 as part of the recent general market decline. The share price therefore remains significantly below the Group's year end net asset value per share, a gap which the Board is focused on reducing.

At the outset of 2019, the Board recognised that it was no longer prudent to continue to rely upon a funding model dominated by a small number of shareholders, a number of whom were facing their own challenges, due in part to weakening public market sentiment for smaller, technology driven companies. This led to the Board exploring the full range of alternative operating and funding models to determine which were best suited to support the Group's backing of world-changing technology through its 'cradle to maturity' operating model. The urgency of this review was accelerated upon the well-publicised difficulties surrounding Woodford Investment Management who had hitherto been a leading supporter and investor in IP Group.

Management's response to the challenges the Group faced was both insightful and pragmatic. There was a clear recognition that hard choices needed to be made, first to realise cash from the portfolio and second, to be even more selective in deploying our valuable financial and management resources to the portfolio companies most likely to demonstrate returns in the short to medium term. The cohesion and adaptability displayed by executive management in making the necessary choices was impressive. Through the course of 2019, the Group made cash realisations from the portfolio of £79.5m, a record sum, and ended the year with gross cash resources of £194.9m, significantly ahead of its plan. This was achieved after supporting the portfolio with a further £64.7m of investment.

2019 was also the year in which the maturity of the portfolio began to show clearly the value inherent from the range and depth of past investment activity. A few examples illustrate this well. Life Sciences portfolio company, Istesso successfully concluded Phase 2a trials for its leading investigational drug, with no serious adverse events and some evidence of clinical benefit. Oxford Nanopore's technology was selected for the population-scale 'Genome Program' launched by Abu Dhabi's Department of Health. Oxford Nanopore also successfully negotiated primary and secondary funding deals at the turn of the year which confirmed its valuation and encouraged optimism over future growth. Finally, Ceres Power further developed its industrial partnerships with leading global companies in the power generation and supply sectors, building on its global leadership in fuel cell technology. The company is on track to make a meaningful contribution to the achievement of a lower carbon future. The Chief Executive's review covers these in more detail together with other notable developments within the portfolio.

Coincident with this, the Group's recent expansion of its University partnership model into both Australia and the United States showed encouraging progress, both in terms of portfolio investment and fresh sources of funding. A highly successful roadshow of portfolio companies in Beijing in October added to the growing international reach and reputation of the Group.

This progress without doubt contributed to the company's ability during 2019 to reshape its shareholder base. A bookbuild led by BofA Securities in September facilitated liquidity for departing shareholders and attracted a broad range of new shareholders including leading public pension fund, RPMI Railpen, who have built their stake in the Company to just over 15 per cent. We are delighted to welcome them as shareholders.

We took steps during the year to strengthen the Board in terms of experience and prepare for known retirement plans. Dr. Caroline Brown, a seasoned Non-executive Director ("NED") in energy and technology focussed companies, with a successful investment banking career behind her, joined the Board on 1 July. On 1 August we welcomed Aedhmar Hynes to the Board who brought with her invaluable experience from having founded and led a global, US-based, digital marketing and communications business. Jonathan Brooks, who served on the Board for nearly nine years, is stepping down from the Board as of today. On behalf of shareholders and the Board I want to record our sincere appreciation of his dedication and wise counsel over his period of service. Dr. Brown has taken over his role as Chair of the Audit and Risk Committee and Heejae Chae succeeds him as Chair of the Remuneration Committee.

The current year has started well with the Group realising a further £55.4m of cash from its portfolio in the year to date. The major contributors to this have been Oxford Nanopore, as described above, and Ceres, who in January announced that Bosch was increasing its equity shareholding in the company to c.18% from c.4% - a significant strategic step forward in the partnership established in August 2018 following successful collaboration on technology development and manufacturing in both the UK and Germany. IP Group took this opportunity to realise a small portion of its investment in Ceres while retaining a significant holding in the company. Following this announcement, Ceres Power has seen its share price rise 37% in early 2020 adding approximately £25m to the value of our shareholding. Overall, as at 10 March 2020, the Group's quoted portfolio has seen a net fair value gain of £20m, versus a decline in the AIM market of 16% over the same period.

There is still, however, much to do to build on the reshaping of the Group which commenced last year but we start from a good position, with momentum within the portfolio and against a backdrop of strong commitment from the new Government to expand support and development to the UK's leadership positions in science and technology.

We also benefit from a strong purpose-led and entrepreneurial culture at IP Group, one in which our team are deeply committed to the Group's aim of delivering and supporting world-changing businesses for the benefit of all stakeholders. IP Group recognises that meaningful engagement with stakeholders is critical as it enables the Board to make informed decisions. In my role as Chair, I held a number of meetings with shareholders during the course of the year. Engagement with all stakeholders is reported in further detail in the Section 172 report.

As the world seeks expanded support from technology to contribute to addressing the major challenges of our time in terms of climate change, demographic ageing and more productive use of scarce resources, IP Group is well placed through our portfolio companies to be part of the solutions needed. The Group is monitoring the spread and impact of Coronavirus, which has caused significant volatility in global equity markets, focusing on the safety of our employees and monitoring potential impacts within our portfolio. Oxford Nanopore is supporting and collaborating with public health professionals enabling real-time genomic surveillance to be used in the fight against the virus around the world.

Finally, I want to express the Board's appreciation of all our colleagues working for the Group who, in challenging times, worked tirelessly and effectively to secure the strong position from which the Group can now build.

Sir Douglas Flint
Chairman

Chief Executive's Operational review

Summary

During 2019, the Group focussed on its financial priorities including generating realisations and managing the Group's net overheads. The Group continued to prioritise maintaining strong liquidity and our targeted disposals programme resulted in record cash realisations from our portfolio in 2019 of £79.5m (FY 2018: £29.5m), resulting in year-end cash balances of £194.9m while net overheads for the year reduced to £22.6m (FY 2018: £26.0m).

This was a positive outcome in a year characterised by significant geopolitical developments and the consequent increased political and economic uncertainty as well as challenging market sentiment. Against that backdrop, there were fewer large-scale capital raises completed by the Group's portfolio companies in 2019 than in the previous year. As a result, the total portfolio capital raised reduced to £430m of which the Group contributed £64.7m (2018: £717m; £100.9m). Further, and continuing a trend also evident in 2018, less than 1% of the £430m total capital raised was from parties with a shareholding of 1% or more in IP Group (FY18: 6% of £717m).

In addition to the recent success in generating cash realisations from its increasingly mature portfolio, the Group has been seeking to broaden its formal access to third-party private capital. The Group's 'hybrid' strategy for accessing capital for its portfolio companies comprises funds from its 'evergreen' balance sheet, third-party funds under management or advisement, and its wide network of international co-investors. In recent years, the Group has developed the second category through its market leading EIS fund management business, Parkwalk Advisors, and in Australia through its advisory mandate with Hostplus, one of the largest Australian Superannuation Funds. In addition, the Group has seen recent success in attracting blue-chip family office investment into its US platform. The Group continues to explore several similar opportunities.

In 2019, the Group also took further actions to focus the portfolio, aimed at returning to NAV growth in the short to medium term, while our three most valuable assets Oxford Nanopore, Ceres Power and Istesso, which account for 37% of net asset value, all performed strongly in the year.

As at 31 December 2019, the fair value of the Group's portfolio was £1,045.6m (2018: £1,128.2m). This reflects net portfolio fair value reductions of 3.9% or £43.9m (2018: £48.4m) during the period. Including Net Overheads, the overall Return on Hard NAV for the period was negative £73.7m (2018: negative £75.6m), or around 7p per share, with the Group finishing the period with Hard NAV per share of 107.8p (2018: 115.0p).

The Group's purpose of addressing some of the world's most pressing challenges through the companies we back remains highly relevant. Our portfolio is well aligned with the UN's Sustainable Development Goals ('SDGs') and we have made good progress this year in embedding ESG matters across our organisation.

UK portfolio

The UK portfolio continues to represent more than 80% of the Group's net assets and our teams have directed time and resources primarily at the focus assets considered most likely to have a meaningful impact on Group NAV in the short to medium term. The Group also continued to invest capital cautiously, primarily into those focus assets.

Individual company highlights in the portfolio came from Oxford Nanopore, Istesso and Ceres Power, which all announced significant technical and/or commercial developments. Oxford Nanopore confirmed a more than doubling of revenues in 2018 to $43.7m and orders to $60.6m alongside opening a new factory in Oxfordshire this year to support rapid growth in demand for nanopore sequencing technology. In January 2020, Oxford Nanopore announced it had raised £29.3m of new capital and facilitated the secondary sale of £80.2m of shares, an aggregate investment of £109.5m. The resulting fair value gain was reflected in the Group's 2019 results while the £22.0m cash proceeds were received in February 2020.

Istesso, the Group's most valuable life sciences company holding, announced positive headline results from its Phase 2a study of MBS2320, its investigational drug for the treatment of rheumatoid arthritis. In the third quarter of the year, Istesso was notified by its collaboration partner J&J that it did not intend to exercise its option in respect of the programme. We see this as a neutral development when offset against the increase in value conferred by the positive Phase 2a data. The J&J partnership was signed in 2014 at a pre-clinical stage, whereas the drug is now in Phase 2 with a novel mechanism-of-action that has potential in rheumatoid arthritis, other autoimmune conditions and cancer. Thus, we believe that the product has significant development potential and licensing value as an unencumbered asset. Ceres Power also announced a number of key milestones, including its first product launch, having jointly developed a fuel cell heat and power system with Miura Co. Ltd, Japan's largest industrial boiler company, as well as an £8m collaboration and licensing agreement with South Korea's Doosan. In January 2020, Ceres completed a £38m financing and announced that Bosch increased its holding in Ceres to c.18% from c.4% and extended its strategic relationship.

These positive performances were, however, offset by the reduction in value of a number of life sciences companies due to clinical or commercial setbacks. The Group regularly assesses its portfolio and, particularly in light of their recent performance, has given consideration to those therapeutic development companies in its life sciences portfolio, which, excluding Istesso, are valued at £144m. Management considers that there continues to be a significant opportunity to generate value for stakeholders through therapeutic development companies, a view supported by a significant recent McKinsey & Company report, *Biotech in Europe: A strong foundation for growth and innovation*. However, recognising the risk profile typically associated with such companies, going forward it intends to direct capital expenditure at a smaller number of high conviction assets with a target ownership of at least 25%.

In the cleantech portfolio, while First Light Fusion successfully commissioned its pulsed power fusion demonstrator, 'Machine 3', it has not yet demonstrated a fusion reaction, a delay to the targeted schedule that it had previously communicated. The company remains confident, however, that achieving fusion is a matter of time and believes there is no fundamental issue with its approach. This view is supported by the eminent First Light Scientific Advisory Board.

Further information on the performance of the Group's portfolio businesses is provided in the Portfolio Review below.

Parkwalk Advisors

Parkwalk, the Group's specialist EIS fund management subsidiary, now has assets under management of over £300m (FY 2018: £220m) including funds managed in conjunction with the universities of Oxford, Cambridge and Bristol and, for the first time in 2020, Imperial College London. Parkwalk has managed the largest EIS fund (by monies raised) in each of the last three years. In 2019, Parkwalk invested £65.0m (FY 2018: £64.3m) in the university spin-out sector across 38 companies including four companies in the core IP Group portfolio. Fifteen new companies joined the portfolio and Parkwalk achieved ten exits: five higher than cost (between 1.7x and 12.8x) and five lower. Investments were made across a range of technologies including plant genetics, graphene-based electronics, autonomous driving, clean-tech, healthcare, AI and genomics. In 2019 Parkwalk liaised with the government and universities on improving the financial ecosystem for knowledge-intensive spin-out companies. Over the period Parkwalk received five awards, including 'Growth Investor of the Year'.

North America

In North America, IP Group, Inc. and its portfolio companies continued to make progress, achieving a number of financial and developmental milestones. Most notably, two companies in the portfolio secured external investment rounds from strategic and financial investors. Exyn Technologies, Inc. (University of Pennsylvania) raised $16m in a Series A round, including investment from Centricus Asset Management, Yamaha Ventures, In-Q-Tel, Corecam Family Office, and Red and Blue Ventures; and MOBILion Systems, Inc. (Pacific Northwest National Laboratory) raised $15.4m in a Series A financing, which included investment from Agilent Technologies, Hostplus, Cultivation Capital, and iSelect Fund. The total amount raised by the US portfolio was $31m with 75% of the funds coming from external investment.

Prior to its Series A funding, MOBILion was deemed to be controlled by IP Group, and hence consolidated as a subsidiary. The successful Series A financing resulted in a dilution of the Group's shareholding and loss of control of the board of MOBILion, resulting in its deconsolidation as a subsidiary and recognition as a portfolio company. This resulted in a fair value gain of £10.6m.

Other advancements include Optimeos Life Sciences (Princeton University) signing a commercial agreement with an undisclosed pharmaceutical company, marking their third commercial deal to date. Chip Diagnostics (University of Pennsylvania) was awarded the Johnson & Johnson Quickfire Challenge and will be collaborating with J&J on cancer diagnostics. MOBILion Systems partnered with strategic investor, Agilent Technologies Inc. to integrate its patented ion mobility separations technology, called Structures for Lossless Ion Manipulation (SLIM), with Agilent's Q-TOF mass spectrometry platform as its first commercial product offering. MOBILion also partnered with investigators at the Complex Carbohydrate Research Center at the University of Georgia to explore ion mobility technology in glycoscience. Exyn Technologies announced the commercial availability of its Autonomy Aerial Robots ("A3Rs"), the first and most advanced fully autonomous aerial system for data collection in GPS-denied environments. The US team closed six proof-of-concept investments with the University of Pennsylvania, National Renewable Energy Laboratory (NREL), Princeton University, the University of Washington and Yale University

In March 2020, IP Group, Inc. attracted further strategic investment into the US business, building on the investment made by two US-based blue-chip family offices during late 2018 and early 2019.

Australasia

In Australasia, the Group continued to build on the solid foundation of its partnerships with the Group of Eight and the University of Auckland, completing a further six new investments, bringing the portfolio to eight companies. Among these new investments were AMSL Aero (University of Sydney) which is developing a highly efficient novel electric vertical take-off and landing (eVTOL) aircraft platform, and Kira Biotech which is developing an antibody against a novel target for the treatment of GvHD and other autoimmune diseases. Alongside these companies, the Group continues to build a strong pipeline of projects from across its university partners. The IP Group team in Australasia now stands at eleven, split between Melbourne, Sydney, Brisbane and Perth. In terms of capital, the Group continues to work with Hostplus, one of Australia's largest superannuation funds with over A$46bn in funds under management through the AU$100m IP Group Hostplus Innovation Fund which is invested in a number of companies across the global portfolio.

Greater China

Following the launch of IP Group Greater China in Hong Kong in 2018, two employees relocated from London HQ in 2019 to establish the office. The Greater China office continued to facilitate market entry and business partnership engagement with relevant Chinese partners for our portfolio companies. The Group hosted its third annual 'Global Deep Tech Forum' event in Beijing in October where 13 of our portfolio companies introduced their technology and business to over 200 attendees from the Greater China area. Having seen increasing business needs from our portfolio companies for local partnership, joint-venture, and/or supply chain management in China, the Group is working with top tier financial institutions in China to explore ways of providing our portfolio companies with support in accessing local capital as well as relationships with local customers and suppliers.

Outlook

During 2019 the Group realised a record £79.5m in cash from its portfolio, which exceeded investment for the first time since 2007. This strong cash generation has continued into 2020, with realisations to date now totalling more than £55m. Realisations from our maturing companies, the ongoing focusing and rationalisation of the portfolio as well as tight cost control has placed the Group in a strong financial position and these remain three areas of focus for the Group in 2020.

Our three most valuable holdings, Oxford Nanopore, Istesso and Ceres Power, made excellent progress during the year with Oxford Nanopore and Ceres Power also announcing positive developments since the year end. We also anticipate further commercial and technical updates from a number of other companies over the coming twelve months, including Diurnal, Featurespace, First Light Fusion, Microbiotica, PsiOxus, Ultraleap and Wave Optics. Consequently, we remain confident in the prospects of our portfolio, which we continue to believe includes world-changing businesses that will deliver significant benefits for multiple stakeholders.

Our portfolio aligns well with the UN's Sustainable Development Goals, such as Climate Action and Human Health, and we are well positioned to benefit from the increased investor interest in impact investing given the efforts being made by portfolio companies to address climate change, disease prevention, and an ageing population, among other issues.

Alan Aubrey
Chief Executive Officer

PORTFOLIO REVIEW

Our portfolio: On the path to self-sustainability, with portfolio realisations exceeding investment

Overview

As at 31 December 2019, the value of the Group's portfolio was £1,045.6m (2018: £1,128.2m) reflecting net investment offset by net portfolio losses of £43.9m (2018: loss £48.4m). The portfolio consists of interests in 57 'focus' companies, representing over 87% of the portfolio value, and 75 other companies (2018: 61, 90%, 76). Of these, 99 are based in the UK, 23 in the US and eight in Australasia (2018:122, 23, 2). In addition, the Group has holdings in two multi-sector platform businesses as well as a further 49 *de minimis* holdings and 40 organic holdings. (2018: 3, 44, 47).

The Group exited its interest in eight companies (2018: three) and realised total cash proceeds during the year of £79.5m (2018: £29.5m). In addition, £22.0m of cash from the Group's partial realisation of its holding in Oxford Nanopore was received in February, while a further £5.3m of deferred consideration was outstanding at year end (2018: £nil). The largest contributors to this cash figure were the Group's partial realisation of its holdings in Oxford Sciences Innovation plc (£32.1m), Concirrus Limited (£6.1m), Cambridge Innovation Capital plc (£4.3m) and Nexeon Limited (£4.0m), and the full realisation of its holdings in Process Systems Enterprise Limited (£13.8m), Dukosi Technologies Limited (£5.3m cash received in year, £5.0m deferred consideration), Circassia Pharmaceuticals plc (£4.6m) and Cortexica Vision Systems Limited (£4.5m).

During the year to 31 December 2019, the Group provided pre-seed, seed and post-seed capital totalling £64.7m to its portfolio companies (2018: £100.9m). The Group deployed capital into ten new companies and six new pre-incorporation projects during the year (2018: nine, zero). Two of the companies were sourced from the UK, two from the US and six from Australasia (2018: five, two, two), and the six pre-incubation projects were sourced from the US (2018: zero).

Performance summary

A summary of the Income Statement gains and losses that are directly attributable to the portfolio is as follows:

	2019 £m	2018 £m
Unrealised gains on the revaluation of investments	**86.3**	99.7
Unrealised losses on the revaluation of investments	**(154.6)**	(153.1)
Effects of movement in exchange rates	**(2.3)**	3.0
Change in fair value of equity and debt investments	**(70.6)**	(50.4)
Gain on disposals of equity investments	**16.1**	2.0
Gain on deconsolidation of subsidiary	**10.6**	—
Net portfolio gains/(losses)	**(43.9)**	(48.4)

The largest contributors to unrealised gains on the revaluation of investments were Ceres Power Holdings plc (£27.5m), Istesso Limited (£24.7m) and Oxford Nanopore Technologies Limited (£12.2m). These unrealised gains were principally offset by unrealised losses on the revaluation of Autifony Therapeutics Limited (£13.0m), PsiOxus Therapeutics Limited (£10.9m), Topivert Limited (£10.7m), AIM-quoted Actual Experience plc (£10.6m), and AIM-quoted Circassia Pharmaceuticals plc (£8.4m).

The performance of the Group's holdings in companies quoted on AIM saw a net unrealised fair value decrease of £12.4m (2018: decrease of £99.8m) while the Group's holdings in unquoted companies experienced a net fair value decrease of £58.2m (2018: increase of £46.4m).

Investments and realisations

The Group deployed a total of £64.7m across 55 new and existing projects during the period (2018: £100.9m, 77 projects), versus realisations of £79.5m (2018: 29.5m), resulting in overall net realisations for the year of £14.8m (2018: net investment of £71.4m). An analysis of amounts invested by company focus as follows:

	2019 £m	2018 £m
Top 20	**21.8**	26.0
Focus	**21.2**	41.6
Other (including companies exited by 31 December 2019)	**11.8**	19.4
Total United Kingdom	**54.8**	87.0
United States[1]	**6.9**	13.2
Australasia	**3.0**	0.7
Total purchase of equity and debt investments	**64.7**	100.9
Less cash proceeds from sales of equity investments	**(79.5)**	(29.5)
Net (realisations) / investment	**(14.8)**	71.4

1 United States investment total includes £1.6m (2018: £1.1m) invested in Uniformity Labs, Inc., which is one of the Top 20 holdings by value.

Co-investment analysis

Including the £65m invested by the Group, the Group's portfolio raised a total of £[440]m during the year to 31 December 2019 (2018: £717m). Co-investment in 2019 came from more than 200 different investors, excluding individuals, and less than 1% of the funding came from parties with a greater than 1% shareholding in IP Group plc (2018: 6%). An analysis of this co-investment by source is as follows:

Portfolio capital raised	**2019** £m	**2019** %	**2018** £m	**2018** %
IP Group [1]	**64.5**	**15%**	100.9	14%
Funds managed by Parkwalk Advisors	**13.2**	**3%**	20.8	3%
IP Group plc shareholders (>1% holdings)	**0.7**	**0%**	43.1	6%
Institutional investors	**147.0**	**34%**	291.6	41%
Corporate, other EIS, individuals, universities and other	**138.6**	**33%**	234.6	33%
Capital into multi-sector platforms	**66.3**	**15%**	26.0	3%
Total	**430.3**	**100%**	717.0	100%

1. Reflects primary investment only; the Group made further £0.2m investment via secondary purchase of shares

Portfolio analysis by focus

At 31 December 2019, the Group's portfolio fair value of £1,045.6m was distributed across the portfolio as follows:

	As at 31 December 2019				As at 31 December 2018			
	Fair value		**Number**		Fair value[2]		Number	
Stage	**£m**	**%**		**%**	£m	%		%
Top 20 by value	**720.2**	**72%**	**20**	**15%**	732.5	68%	20	13%
Focus	**164.0**	**16%**	**37**	**28%**	204.4	19%	41	27%
Other	**110.2**	**12%**	**75**	**57%**	147.7	13%	89	60%
Total	**994.4**	**100%**	**132**	**100%**	1,084.6	100%	150	100%
De minimis and organic holdings	**13.0**				8.3			
Total Portfolio	**1,007.4**				1,092.9			
Attributable to third parties[1]	**38.2**				35.3			
Gross Portfolio	**1,045.6**				1,128.2			

1. In the above table, the amount attributable to third parties consists of £17.2m attributable to minority interests represented by third party limited partners in the consolidated fund, IP Venture Fund II, £7.2m attributable to minority interests represented by third party limited partners in the consolidated US portfolio, £10.9m attributable to Imperial College London and £2.9m attributable to other third parties (2018: £18.7m, £5.5m, £8.1m and £3.0m).

Top 20 investments consist of the 20 most valuable holdings in the Group's portfolio by the period-end value. Focus investments are those investments that are not within the 20 most valuable, but on which the Life Sciences and Technology teams focus a significant proportion of their resources and capital. These investments typically, although not exclusively, fall within the 100 most valuable portfolio company holdings by period-end value, and they comprise 88% of the portfolio by value (2018: 84%). Outside of these companies, the portfolio contains a broad selection of potentially exciting opportunities, categorised as 'other'. Many of these opportunities are at an early stage, and they typically receive a lower level of capital and management resource.

Companies which are at a very early stage or in which the Group's holding is of minimal value, but remain as operating businesses, are classed as *de minimis* holdings. Organic holdings are investments in which the Group has acquired a shareholding upon creating the company as a result of our technology transfer relationship with Imperial College London, but in which we have not actively invested.

The total value of the Group's portfolio companies (excluding multi-sector platforms, organic investments and *de minimis* holdings) is almost £5bn.

Portfolio analysis by sector

The Group funds spin-out companies based on a wide variety of scientific research emerging from leading research-intensive institutions and does not limit itself to funding companies from particular areas of science. The Group splits its core opportunity evaluation, investment and business-building team into two specialist divisions, Life Sciences and Technology. Where the Group invests in businesses that cannot be classified within these divisions, primarily those portfolio companies which also invest in other opportunities, they are recorded as multi-sector platforms. An update on the two primary operating segments is included in the financial review below.

	As at 31 December 2019				As at 31 December 2018			
	Fair value		**Number**		Fair value[2]		Number	
Sector	**£m**	**%**		**%**	£m	%		%
Life Sciences	**598.7**	**60%**	**56**	**42%**	624.5	57%	64	43%
Technology	**369.0**	**37%**	**74**	**56%**	396.9	37%	83	55%
Multi-sector platforms	**26.7**	**3%**	**2**	**2%**	63.2	6%	3	2%
Total	**994.4**	**100%**	**132**	**100%**	1,084.6	100%	150	100%
De minimis and organic holdings	**13.0**				8.3			
Total Portfolio	**1,007.4**				1,092.9			
Attributable to third parties[1]	**38.2**				35.3			
Gross Portfolio	**1,045.6**				1,128.2			

1. The amount attributable to third parties consists of £17.2m attributable to minority interests represented by third party limited partners in the consolidated fund, IP Venture Fund II, £7.2m attributable to minority interests represented by third party limited partners in the consolidated US portfolio, £10.9m attributable to Imperial College London and £2.9m attributable to other third parties (2018: £18.7m, £5.5m, £8.1m and £3.0m).

The following table lists information on the 20 most valuable portfolio company investments, which represent 71% of the total portfolio value (2018: 63%). Additional detail on the performance of these companies is included in the Life Sciences and Technology portfolio reviews.

Company name (sector)	Description	Significant named co-investors at 31 Dec 2019	Primary valuation basis at 31 Dec 2019	Group Stake at 31 Dec 2019[i] %	Fair value of Group holding at 31 Dec 2018 £m	Net investment/ (divestment) [iii] £m	Unrealised Fair value movement and fees settled in equity £m	Fair value of Group holding at 31 Dec 2019 £m
Oxford Nanopore Technologies Limited (Life Sciences)	Enabling the analysis of any living thing, by any person, in any environment	Amgen, CCB, GIC, Hostplus, Invesco, Lansdowne	Recent financing (within 0-6 months)	*16.7*	274.1	(22.5)	12.2	**263.8**
Istesso Limited (Life Sciences)	Reprogramming metabolism to treat autoimmune disease	Puhua Capital	DCF*	*56.4*	57.9	-	24.7	**82.6**
Ceres Power Holdings plc (Technology)	Cheaper, cleaner power for a changing world	Bosch, Oceanwood, Weichai Power	Quoted (bid price)	*18.6*	47.1	-	27.5	**74.6**
Featurespace Limited (Technology)	Leading predictive analytics company	Highland Europe, Insight, Invoke, MissionOG, TTV Capital, Robert Sansom	Recent financing (within 6-12 months)	*22.3*	25.2	4.1	0.1	**29.4**
Garrison Technology Limited (Technology)	Anti-malware solutions for enterprise cyber defences	BGF, Dawn Capital, NM Capital	Recent financing (within 12-18 months) *	*23.4*	28.8	-	-	**28.8**
Ultraleap Holdings Limited (Technology)	Contactless haptic technology "feeling without touching"	Cornes, Dolby Ventures, Hostplus, Mayfair Partners	Recent financing (within 12-18 months) *	*22.6*	27.5	-	-	**27.5**
Inivata Limited (Life Sciences)	Transforming clinical cancer care with liquid biopsy	Cancer Research, CIC, J&J Innovation, RT Partners	Recent financing (within 6-12 months)	*28.2*	18.9	4.1	1.0	**24.0**
Oxford Sciences Innovation plc (Multi-sector)	University of Oxford preferred IP partner under 15-year framework agreement	Blue Pool, Fosun Pharma, Invesco, Lansdowne, Redmile, Sequoia, Temasek, Tencent	Post-balance sheet transaction	*3.2*	55.5	(31.8)	0.2	**23.9**
Ieso Digital Health Limited	Digital therapeutics for psychiatry	Draper Esprit	Recent financing (anticipated)	*46.6*	13.9	2.0	2.5	**18.4**
First Light Fusion Limited (Technology)	Solving fusion with the simplest possible machine	OSI	DCF, Market-based *	*35.9*	17.9	-	-	**17.9**
Wave Optics Limited (Technology)	Novel optical waveguides and modules for augmented reality displays	Bosch Venture Capital, Gobi Partners, GoerTek Inc., Octopus	Recent financing (within 0-6 months)	*17.5*	15.2	-	-	**15.2**
PsiOxus Therapeutics Limited (Life Sciences)	Gene and viral therapies for cancer	Invesco, Lundbeckfonden, Mercia, SR one, Schroder	PWERM *	*26.3*	22.6	2.8	(10.9)	**14.5**
Uniformity Labs, Inc. (Technology)	Equipment, materials and software for additive manufacturing	Not disclosed	Recent financing (within 18-24 months) *	*22.8*	13.1	1.4	(0.4)	**14.1**
Mission Therapeutics Limited (Life Sciences)	Targeting deubiquitylating enzymes for the treatment of CNS and mitochondrial disorders	Pfizer, Roche, Sofinnova Partners, SR one, Schroder	PWERM	*20.2*	13.7	-	-	**13.7**
YoYo Wallet Limited (Technology)	Mobile payments with integrated loyalty schemes	Hard Yaka, LeadX Capital	Recent financing (within 12-18 months)	*39.6*	13.7	-	-	**13.7**
Autifony Therapeutics Limited (Life Sciences)	Developing high value, novel medicines to treat serious diseases of the central nervous system	Pfizer, SV Health Investors	DCF *	*27.6*	25.6	-	(13.0)	**12.6**
Crescendo Biologics Limited (Life Sciences)	Biologic therapeutics eliciting the immune system against solid tumours	Andera Partners, Astellas, EMBL Ventures, Quan Capital, Sofinnova Partners, Takeda,	Recent financing (within 12-18 months)	*18.7*	12.3	-	-	**12.3**
Oxbotica Limited (Technology)	Software to enable every vehicle to become autonomous	Fundamental Insurance Investments	Recent financing (within 0-6 months)	*17.2*	5.5	5.0	1.1	**11.6**
Creavo Medical Technologies Limited (Life Sciences)	Next generation cardiac diagnostic device platform bringing magnetocardiography to the point of care	Puhua Capital, University of Leeds	Recent financing (18-24 months) adjusted downwards	*39.3*	14.4	3.0	(6.1)	**11.3**
Genomics plc (Life Sciences)	Leading the genomic transformation of healthcare	Vertex, Foresight, F-Prime Capital, Tamorer, Invesco, Lansdowne, Schroder, OSI	Recent financing (within 12-18 months)	*12.7*	10.3	-	-	**10.3**
Other companies (**112** companies)					371.4	14.0	(111.2)	**274.2**
De minimis and organic investments					8.3	(0.2)	4.9	**13.0**
Value not attributable to equity holders [ii]					35.3	(1.2)	4.1	**38.2**
Total					**1,128.2**	**(19.3)**	**(63.3)**	**1,045.6**

i. Represents the Group's undiluted beneficial economic equity interest (excluding debt), including only the Group's portion of IPVF II, and the Group's portion of the US portfolio. Voting interest is below 50%.
ii. Includes £2.7m increase in revenue share to Imperial College London, with a corresponding increase in revenue share liability resulting in no net fair value movement.
iii. Includes £11.2m movement in respect of the deconsolidation of MOBILion Systems, Inc. and recognition as a portfolio company.

* Third party valuation specialists used for 31 December 2019 valuation

Portfolio review: Life Sciences

IP Group's Life Sciences portfolio comprises 56 companies worth £598.7m as at 31 December 2019.

Oxford Nanopore

Oxford Nanopore Technologies Ltd, the Group's most valuable holding, made further significant progress in 2019. The company, whose goal is to enable the analysis of any living thing, by anyone, anywhere, is behind the only real-time DNA/RNA sequencer that can sequence any read length. The technology is also fully scalable from smaller portable formats to larger devices for population-scale sequencing.

In 2019, expansion of the customer community continued as evidenced by the bank of more than 650 scientific publications, driven by continued technology improvement and a greater range of devices that serve broader market segments. Between 2017 and 2018, sales growth of 2.3x was achieved, whilst maintaining margins, and managing a small increase in operating expenditure (8%).

More recently, in January 2020, Oxford Nanopore announced that it had completed another successful fundraising, raising £29.3m of new capital and facilitating the secondary sale of £80.2m of shares, representing an aggregate investment of £109.5m. Funds were raised from both new investors and existing shareholders from the US, Europe and Asia Pacific. The fundraising brings the total primary investment in Oxford Nanopore to approximately £480m.

In early 2020, highlights also include the heavy involvement of Oxford Nanopore's technology in genomic surveillance during the novel coronavirus outbreak with the company shipping an additional 200 MinION sequencers and related consumables to China.

2019 highlights

Oxford Nanopore's technology has continued to be proven in broader applications. New publications and applications citing the technology in 2019 included workflows for rapid, accurate and data-rich cancer genome analysis, pathogen analysis, crop genomes and human genetics and, in 2020, COVID-19 pathogen analysis and outbreak surveillance. The total number of publications citing nanopore technology for sequencing is now in excess of 750. The technology is also starting to be adopted beyond research laboratories into more regulated environments, and 2019 saw tests becoming available in infectious disease, HLA tissue typing and food safety.

Oxford Nanopore also continued to scale up production and in July, the first processes at its new manufacturing facility in Oxfordshire came online. The MinION building features what is one of the largest clean rooms in Europe and when fully fitted out will have the ability to run 20 modular production lines for the manufacturing of 1.2m flow cells a year. This will be achieved with deep automation, for consistent high-quality product and increasingly cost-efficient manufacturing.

In December 2019, Oxford Nanopore noted that its technology had been selected for the population-scale 'Genome Program' launched by Abu Dhabi's Department of Health. The project aims to be the first of its kind worldwide to provide citizens with their own high-quality genome as a baseline and aims to incorporate genomic data into healthcare management.

Technology

Oxford Nanopore has developed and commercialised a novel generation of DNA/RNA sequencing technology. Unlike any other sequencing technology on the market, nanopore sequencing provides all of the following features:

- The ability to **sequence any length fragment** of DNA/RNA, whether short to ultra-long – conferring benefits in genome assembly, the characterisation of structural variation, phasing and other advantages
- **Real time analysis** – with data available as soon as an experiment starts, analysis workflows can be shortened for rapid insights. Dynamic workflows are possible, for example 'adaptive sampling' where the device selects regions of interest (typically this has been done with sample preparation techniques)
- **Scalability – to portable devices**. This provides the unique ability to take the device into the field, or simply for researchers to operate a personal sequencer, on-demand
- **Scalability – to ultra-high yields**, catering to large genome projects or larger genomes (e.g. human or plant genomes, at scale)
- Direct electronic analysis – resulting in rich biological information such as direct methylation or direct RNA sequencing

Notable technical developments in 2019 included:

- The delivery of **PromethION 48** to the market in 2019. This device can run the full 48 flow cells concurrently. A single run using all flow cells, performed internally, has generated more than 7Tb of data. (for context, a human genome is ~3Gb). P48 is designed to address ultra- high throughput opportunities such as human or plant genomes, at scale.
- The introduction of **Flongle**, a flow cell adapter for MinION or GridION. This is the first on-demand, low cost sequencing solution for smaller tests on the market and is designed to open up new users and markets. Demand for Flongle has been very high and the company is currently scaling up production of this technology.
- Device upgrades in 2019 include **GridION Mk1, PromethION 24, VolTRAXv2**. The latter provides an automated, programmable sample prep solution that is designed to drive consistent high performance for any user – with or without lab skills or kit.

In addition, the company has focused on improving performance by enhancing yield, accuracy and usability, adding to existing disruptive properties such as portability, real-time data and long reads.

Recent customer records include the generation of 43Gb data from a MinION Flow Cell and 180Gb from a PromethION Flow Cell. This translates to better value experiments for customers and increased uptake of the technology as it becomes increasingly cost competitive and able to enable larger projects. Yields have been driven by multiple factors including software upgrades and new kits that can 'refuel' flow cells. Oxford Nanopore has also addressed the increasing power of nanopore devices by providing high-performance GPUs for real time analysis in PromethION and GridION devices, as well as the MinIT accessory for MinION.

Multiple strategies have also been deployed to continuously increase accuracy, including the improvement of basecalling algorithms/onward analysis tools and new nanopore chemistries. A range of applications are enabled by the current, improved performance of the R9.4.1 nanopore, and the newest R10.3 nanopore is also showing positive results in high consensus accuracy. In addition, Oxford Nanopore continues to focus on delivering even further enhanced accuracy through a combination of data analysis and chemistry, with a goal of providing across-the-board competitive and disruptive performance.

Other significant portfolio company updates

At 31 December 2019, the Life Sciences division, excluding Oxford Nanopore, consisted of 55 companies, with a combined value of £334.9m (2018: 63 companies; £350.4m). The reduction in number of companies and a £60.2m net fair value reduction, excluding net investment, reflects three main factors:

1. poor performance in the public markets;
2. technical and commercial setbacks in several key private companies; and
3. ongoing rationalisation of the portfolio.

In terms of the performance of the quoted Life Sciences portfolio, there was a net reduction of £18.6m, equating to 33% of the net fair value loss, with the biggest impact coming from Circassia and Tissue Regenix (each down approximately £8m). Diurnal's development of its late-stage portfolio of endocrinology products continued to show progress, with marketing applications filed for Alkindi in the US and Chronocort in Europe.

In the private portfolio, the key write-downs related to Autifony (£13.0m), PsiOxus (£10.9m), Topivert (£10.7m), Creavo (£7.4m) and Cell Medica (£7.0m), each resulting from financing, partnering or technical setbacks. In terms of positive developments, Istesso announced positive headline data from its Phase 2a study of its investigational drug for rheumatoid arthritis, MBS2320, which led to a £25m write-up of the division's holding value. In the third quarter of the year, Istesso was notified by its collaboration partner J&J that it did not intend to exercise its option in respect of the programme. We see this as a neutral development when offset against the increase in value conferred by the positive Phase 2a data. The J&J partnership was signed in 2014 at a pre-clinical stage, whereas the drug is now in Phase 2 with a novel mechanism-of-action that has potential in rheumatoid arthritis, other autoimmune conditions and cancer. Thus, we believe that the product has significant development potential and licensing value as an unencumbered asset. Elsewhere, Pulmocide generated promising data in a study of its novel agent for the treatment of fungal infection in lung transplant.

Rationalisation of the portfolio has been ongoing since the combination of the Life Sciences portfolios of both IP Group and Touchstone in late 2017. This rationalisation process will continue over the next year or so and will result in a smaller, more focussed but diverse portfolio of 10-20 companies, each one with 'NASDAQ potential' and with a target ownership of at least 25%.

During 2020, several companies are expected to go through key, potentially value-enhancing inflection points, for example, Diurnal, Microbiotica and PsiOxus.

Dr Sam Williams
Managing Partner, Life Sciences

Portfolio review: Technology

IP Group's Technology portfolio comprises 74 companies worth £372.0m as at 31 December 2019.

Technology

The Technology division had two strategic priorities in 2019: focus and sustainability. We aimed to ensure that our human and capital resources were focused on a small group of assets that we believe to have the greatest potential to deliver strong returns, whilst also achieving cash sustainability by taking advantage of a maturing portfolio to increase cash realisations compared to previous years. Both objectives were comprehensively achieved: investment capital was directed to a narrow group of high conviction portfolio company holdings and in parallel we were able to realise significant proceeds from equity sales with an overall IRR of 9.1% and 1.3x multiple. As a result of the full and partial exits achieved during 2019, the sale proceeds (including £5m deferred funds) from the Tech portfolio exceeded the investment outflow by £13.1m, whilst the portfolio overall decreased in value by roughly £10.0m against a challenging market backdrop.

The largest realisation in the Tech portfolio came from the sale of our portfolio company Process Systems Enterprise Ltd (PSE) to Siemens in a deal that yielded £13.8m for the Group. This transaction served as an excellent example of the strength in depth of the portfolio: PSE was not amongst our most valuable holdings and may not have been particularly well-known to IP Group shareholders, but the company was profitable with healthy revenue streams and had a compelling product suite that attracted a top-tier acquirer. We were also pleased to be able to realise around £6m from the sale of some of our stake in insurance data analytics company Concirrus, which allowed us the opportunity to realise all monies invested to date alongside increasing ownership from co-investors deeply connected to the sector.

In terms of major investment transactions, Featurespace closed a £25m round led by Insight Partners, a leading US venture capital and private equity firm, in early 2019. The company continues to grow strongly, closing commercial deals with Enfuce, RBS and Circulo de Credito. The market Featurespace is addressing continues to expand rapidly and the company is well positioned to take advantage of this growth. Elsewhere in the Tech portfolio, we saw relatively few major fundraise transactions as many of the most valuable portfolio company holdings in the portfolio, including UltraLeap (formerly Ultrahaptics) and Garrison, completed large funding rounds during 2018 and so were focused on deploying that capital to achieve commercial progress in 2019.

In another positive move, UltraLeap, acquired the Silicon Valley company Leap Motion, which owned a broad portfolio of fundamental patents relating to hand tracking. The Leap Motion technology, which was already embedded in UltraLeap's own products, can very accurately recognise human hand gestures. We believe that the combined company now owns the most compelling technology stack for gesture-based computer input and feedback. The merger presents an opportunity for UltraLeap to become one of the defining players in the rapidly evolving field of human-machine interaction. The company is seeing strong early commercial progress, recording a doubling of booked orders in Q4 2019 compared to the previous quarter.

Also in the field of Virtual and Augmented Reality, our portfolio company WaveOptics made excellent progress this year with further investment secured from Goertek and Hostplus alongside the achievement of some very encouraging commercial milestones.

Progress has also been made by the new management team at Mirriad plc, which announced a major deal with Tencent in June 2019 that the company reported would generate multiple millions of pounds of revenue for Mirriad over the 24-month contract term. This followed proactive management of the asset by IP Group that precipitated a fundamental change in the leadership team and strategy last year.

The share price of AIM-listed Actual Experience plc decreased significantly during the year, despite that company announcing 1.8x revenue growth to £1.9 million, "significant customer deployments" and a successful evaluation with Vodafone, resulting in a £10.6m fair value reduction in the Group's holding. We reduced the fair value of the Group's holding in private company, Impression Technologies, that is developing 'lightweighting' solutions for manufacturing processes, as well as holdings in a handful of other assets. This followed an assessment of each company's value in light of delayed technical and/or commercial progress or based on investor feedback where such companies are seeking to raise further capital.

Cleantech

It has been a very successful year for the Cleantech portfolio's most valuable asset, Ceres Power. The company has seen significant commercial progress including the doubling of revenue for a fourth consecutive year, the first product launch with Japan's Miura Co. using Ceres' SteelCell® in a combined heat and power ('CHP') system for commercial use, and the signing of a new system licence and joint development agreement with Doosan worth £8m over two years. This progress was recognised in the company's share price, which continued to increase during 2019, adding around £27.5m to the Group's holding value. Since the year-end, the share price has risen a further 37 per cent, resulting in a further increase of approximately £25m to the value of the Group's holding]. In January 2020 Bosch announced a strategic move to increase its holding in Ceres to c.18%, and as part of this transaction the Group sold approximately a quarter of its shareholding, generating £22.4m cash proceeds and realising a 5.1x equity multiple and a 46% IRR.

Elsewhere in the Cleantech portfolio, our cell-level battery controls company, Dukosi, was sold to the investment group KCK, delivering an overall gross IRR of 33%. The Cleantech team identified battery management systems as an attractive part of the value chain, assembled a compelling offering from university and industrial IP and expertise, funded the company from an early stage and dedicated considerable effort to developing and helping to shape the business into an attractive exit proposition.

We were also pleased to see Azuri, the provider of pay-as-you-go solar home solutions to off-grid households across Africa, close a new investment of US$26 million, led by Fortune Global 500 company Marubeni Corporation.

In the first half of the year, First Light Fusion successfully commissioned its pulsed power fusion demonstrator, 'Machine 3'. Constructing the world's highest-current (14 MA) pulsed power machine dedicated to fusion for a capital cost of only £4m was a remarkable achievement. In October, the UK Atomic Energy Authority (UKAEA), the leading government lab for fusion energy research, completed a project to establish the basic operating parameters for First Light's 'fusion island' concept at the heart of its power plant design, and concluded that it is fundamentally viable, the first time a start-up in the space has received this endorsement. As at the results publication date, First Light has not yet demonstrated a fusion reaction, a delay to the targeted schedule that it had previously communicated. The company remains confident that achieving fusion is a matter of time and believes there is no fundamental issue with its approach. This view is supported by the eminent First Light Scientific Advisory Board. Balancing the progress since the last financing round, particularly on reactor development, with the more recent delay to the forecast achievement of fusion, the Group has maintained the fair value of its 35.9% holding in First Light at £17.9m.

Mark Reilly
Managing Partner, Technology

Multi-Sector Platforms

The Group has shareholdings in two multisector platform companies, Oxford Sciences Innovation plc ("OSI") and Cambridge Innovation Capital plc ("CIC"). During 2019, the Group has reduced its exposure to OSI and CIC and has exited its small holding in AIM-quoted Frontier IP Group plc, generating total proceeds of £36.8m. As at 31 December 2019, IP Group has a 3.3% holding in OSI valued at £23.9m and a 1.0% holding in CIC valued at £2.8m.

As a result of its 15-year framework agreement with the University of Oxford, OSI is the preferred intellectual property partner for the provision of capital to, and development of, Oxford spin-out companies and is entitled to 50% of the university's founder equity in spin-out companies. In 2019 OSI has continued to support its existing portfolio, with £58.2m further investment being made and OSI leading on 32 investments. The number of investments now stands at 78 with a total portfolio value of £290.6m and cash and deposits of £173.7m. Net asset value per share has risen from 116.1p to 118.0p during 2019.

CIC is a preferred investor for the University of Cambridge for the commercialisation of intellectual property created at the University under a ten-year memorandum of understanding, and a Cambridge-based investor in technology and healthcare companies from the Cambridge Cluster. Since its inception, CIC has secured £275m of investment, invested £155.3m, and its current portfolio of 31 investments is held at £253.6m.

FINANCIAL REVIEW

Greg Smith
Chief Financial Officer

The Group recorded a loss for the year of £78.9m (2018: loss of £293.8m) and a negative Return on Hard NAV, i.e. on the Group's net assets excluding goodwill and intangible assets, of £73.7m (2018: negative £75.6m). Net assets at 31 December 2019 were £1,141.9m (2018: £1,218.2m) and Hard NAV totalled £1,141.5m at 31 December 2019 (2018: £1,217.5m), representing 107.8p per share (2018: 115.0p).

Consolidated statement of comprehensive income
A summary analysis of the Group's financial performance is provided below:

	2019 £m	2018 £m
Net portfolio losses[1]	**(43.9)**	(48.4)
Change in fair value of limited and limited liability partnership interests	**(0.7)**	2.3
Net overheads[2]	**(22.6)**	(26.0)
Administrative expenses – consolidated portfolio companies	**(5.4)**	(2.6)
Administrative expenses – share-based payments charge	**(2.3)**	(1.9)
IFRS 3 charge in respect of acquisition of subsidiary	**(2.5)**	(3.3)
Carried interest plan release	**1.3**	1.1
Amortisation of intangible assets	**(0.3)**	(9.9)
Goodwill impairment	**—**	(203.2)
Net finance (expense)/income	**(2.4)**	(1.8)
Taxation	**(0.1)**	(0.1)
(Loss)/profit for the year	**(78.9)**	(293.8)
Other comprehensive income	**0.1**	(0.1)
Total comprehensive income/(loss) for the year	**(78.8)**	(293.9)
Exclude:		
Amortisation of intangible assets	**0.3**	9.9
Goodwill impairment	**—**	203.2
Share-based payment charge	**2.3**	1.9
IFRS charge in respect of acquisition of subsidiary	**2.5**	3.3
Return on Hard NAV	**(73.7)**	(75.6)

1. Defined in note 29 Alternative Performance Measures.
2. See net overheads table below and definition in note 29 Alternative Performance Measures.

Net portfolio gains/(losses) consist primarily of realised and unrealised fair value gains and losses from the Group's equity and debt holdings in spin-out businesses, which are analysed in detail in the Portfolio review below.

In addition to portfolio fair value gains and losses, 2019 net portfolio gains include a £10.6m gain on deconsolidation of Mobilion Sytems, Inc. Prior to its 2019 Series A funding, MOBILion was deemed to be controlled by IP Group, and hence consolidated as a subsidiary. The successful Series A financing resulted in a dilution of the Group's shareholding and loss of control of the board of MOBILion, resulting in its deconsolidation as a subsidiary as at 1 July 2019 and recognition as a portfolio company. This resulted in a fair value gain of £10.6m, being the fair value of the Group's investment in MOBILion, less its net assets at the point of deconsolidation.

Net overheads

	2019 £m	2018 £m
Other income	**8.6**	9.9
Administrative expenses – all other expenses	**(29.2)**	(34.5)
Administrative expenses – Annual Incentive Scheme	**(2.0)**	(1.4)
Net overheads	**(22.6)**	(26.0)

Other income totalled £8.6m, a decrease on the year (2018: £9.9m) due in part to the transfer of future commercialisation operations of the Group's Technology Transfer Office to Imperial College London on 28 February 2019. Under this arrangement, the Group retains its rights to earnings in respect of existing licences, while new commercialisation activity is undertaken directly by Imperial, resulting in reduced income in respect of these activities in 2019. Additionally, 2019 saw a lower level of corporate finance fees earned by its IP Capital team, reflecting the lower level of funding raised by the portfolio in 2019. Other income comprises fund management fees, licensing and patent income from Imperial Innovations, corporate finance fees as well as consulting and similar fees, typically chargeable to portfolio companies for services including executive search and selection as well as legal and administrative support.

Other central administrative expenses, excluding performance-based staff incentives and share-based payments charges, have decreased to £29.2m during the period (2018: £34.5m), primarily as a result of cost savings realised from the transfer of the TTO noted above, as well as the surrender of the lease on 7 Air Street, the former Touchstone head office on 22 March 2019. Offsetting these savings was growth in the cost of the Group's US and Australasian operations. Of the £29.2m gross overheads, £6.5m relates to the cost of the Group's US, Australasian and Greater China operations (2018: £5.8m).

The charge of £2.0m in respect of the Group's Annual Incentive Scheme (2018: £1.4m), reflects performance against 2019 AIS targets.

Other income statement items

The share-based payments charge of £2.3m (2018: £1.9m) reflects the accounting charge for the Group's Long-Term Incentive Plan and Deferred Bonus Share Plan. This non-cash charge reflects the fair value of services received from employees, measured by reference to the fair value of the share-based payments at the date of award, but has no net impact on the Group's total equity or net assets.

Included within the Group's administrative expenses are costs in respect of a small number of other portfolio companies. Typically, the Group owns a non-controlling interest in its portfolio companies; however, in certain circumstances the Group takes a controlling stake and hence consolidates the results of a portfolio company into the Group's financial statements. The administrative expenses included in the Group's results for such companies primarily comprise staff costs, R&D and other operating expenses. These costs included consolidated costs in respect of MOBILion Systems, Inc., for the first half of the year until its deconsolidation on 1 July 2019.

The carried interest plan release of £1.3m (2018: release of £1.1m) relates to the recalculation of liabilities under the Group's carry schemes, which include the current UK scheme, as well as historic IP Group and Touchstone schemes. Payments are generally only due to carry plan participants when sufficient asset realisations have occurred.

Costs of £2.5m (2018: £3.3m) were recognised in relation to contingent consideration payable to the sellers of Parkwalk Advisors Limited deemed under IFRS 3 to be a payment for post-acquisition services.

Acquisition intangibles relate to separately identifiable assets recognised through the acquisition of Touchstone Innovations plc, Parkwalk Advisors Limited and Fusion IP plc; these assets are amortised over the period to which the contractual commitments relate and were fully amortised as at 31 December 2019.

Consolidated statement of financial position

A summary analysis of the Group's assets and liabilities is provided below:

	Year ended 31 December 2019 £m	Year ended 31 December 2018 £m
Goodwill and other intangible assets	**0.4**	0.7
Portfolio	**1,045.6**	1,128.2
Other non-current assets	**22.5**	18.8
Cash and deposits	**194.9**	219.0
EIB debt facility	**(82.5)**	(97.8)
Other net current assets/(liabilities)	**6.3**	(9.9)
Other non-current liabilities	**(45.3)**	(40.8)
Total Equity or Net Assets	**1,141.9**	1,218.2
Exclude:		
Goodwill and other intangible assets	**(0.4)**	(0.7)
Hard NAV	**1,141.5**	**1,217.5**
Hard NAV per share	**107.8p**	**115.0p**

The composition of, and movements in, the Group's portfolio is described in the Portfolio review below.

Portfolio Valuation Basis

	Year ended 31 December 2019 £m	Year ended 31 December 2018 £m
Quoted	**117.7**	133.2
Recent financing (<12 months)	**455.3**	657.3
Recent financing (>12 months)	**251.1**	197.9
Other valuation methods	**197.8**	106.7
Debt	**23.7**	33.1
Total portfolio	**1,045.6**	1,128.2

The table above summarises the valuation basis for the Group's portfolio. Further details on the Group's valuation policy can be found in notes 1 and 15**.** The Group seeks to use observable market data as the primary basis for determining asset fair values where appropriate. Other valuation methods include: market-derived valuations adjusted to reflect considerations including (inter alia) technical measures, financial measures and market and sales measures; discounted cash flows and price-earnings multiples.

The Group engages third party valuation specialists to provide valuation support where required; during 2019 we commissioned third party valuations on ten out of the top 20 holdings in respect of our half-yearly or full year reporting (2018: five).

Other Assets/Liabilities

The majority of non-current assets relate to holdings in LP and LLP funds, namely UCL Technology Fund LP, Apollo Therapeutics LLP and Technikos LLP. These funds give us both economic interest and direct investment opportunities in a portfolio of early-stage companies, as well as relationships with high-quality institutional co-investors.

The largest items within other non-current liabilities are loans from LPs of consolidated funds. The Group consolidates the assets of two managed funds in which it has a significant economic interest, specifically co-investment fund IP Venture Fund II LP and IPG Cayman LP. The latter was created in late 2018 to facilitate third-party investment into the Group's US portfolio. Loans from third parties of consolidated funds represent third-party loans into these partnerships. These loans are repayable only upon these funds generating sufficient realisations to repay the Limited Partners.

At 31 December 2019, the Group held gross cash and deposits of £194.9m (2018: £219.0m). It remains the Group's policy to place cash that is surplus to near-term working capital requirements on short-term and overnight deposits with financial institutions that meet the Group's treasury policy criteria or in low-risk treasury funds rated Prime or above. The Group's treasury policy is described in detail in note 2 to the Group financial statements alongside details of the credit ratings of the Group's cash and deposit counterparties.

At 31 December 2019, the Group had a total of £16.6m (2018: £40.2m) held in US Dollars and £0.2m (2018: £0.1m) held in AUS Dollars.

Both IP Group and Touchstone Innovations plc arranged debt facilities with the European Investment Bank ("the EIB"), total borrowings under which totalled £82.5m at the period end (2018: £97.8m). Of these facilities, £15.4m is due to be repaid within twelve months of the period end (2018: £15.4m). The facility provides IP Group with an additional source of long-term capital to support the development of the portfolio.

Share Capital

In November 2019, the Board approved in principle a capital reduction involving a reduction of the Group's share premium and merger reserves, with a corresponding increase in the Group's retained profit reserve, in order to create distributable reserves at the IP Group plc individual company level. This gave the Group the flexibility to make future purchases of its own shares and/or to make future distributions of profits in cash or specie although at the time the Board confirmed that it had no current plans to do so. The capital reduction was completed in December 2019, and the impact is shown in the Group Statement of Changes in Equity below.

Cash and deposits

The principal constituents of the movement in Cash and deposits during the year are summarised as follows:

	2019 £m	2018 £m
Net Cash generated/(used) by operating activities	**(17.3)**	(24.9)
Net Cash generated/(used) in investing activities (excluding cash flows from deposits)	**9.3**	(76.0)
Cash acquired on acquisition of subsidiary undertakings net of cash acquired)	**(2.5)**	—
Repayment/drawdown of debt facility	**(15.3)**	(6.3)
Other financing activities	**1.7**	—
Effect of foreign exchange rate changes	—	(0.1)
Movement during period	**(24.1)**	(107.3)

At 31 December 2019, the Group's Cash and deposits totalled £194.9m, a decrease of £24.1m from a total of £219.0m at 31 December 2018 due largely to net cash used by operating activities of £17.3m, net cash generated by investing activities of £9.3m and debt repayments of £15.3m.

A categorisation of the Group's Cash and deposits is provided below:

	2019 £m	2018 £m
Held within Group subsidiaries	**188.1**	199.6
Held by consolidated funds – US portfolio	**5.8**	15.7
Held by consolidated funds – all other funds	**0.5**	1.8
Held by consolidated portfolio companies	**0.5**	1.9
Total Cash and deposits	**194.9**	219.0

Under the terms of its term loans with the EIB, the Group is required to maintain a minimum cash balance of £30m. The Group is also required to hold six months of debt service costs (interest and capital repayments) in a separate bank account, which totalled £9.4m at 31 December 2019 (2018: £9.4m).

Taxation

The Group's business model seeks to deliver long-term value to its stakeholders through the commercialisation of fundamental research carried out at its partner universities. To date, this has been largely achieved through the formation of, and provision of services and development capital to, spin-out companies formed around the output of such research. The Group primarily seeks to generate capital gains from its holdings in spin-out companies over the longer term but has historically made annual net operating losses from its operations from a UK tax perspective. Capital gains achieved by the Group would ordinarily be taxed upon realisation of such holdings; however, since the Group typically holds in excess of 10% in its portfolio companies and those companies are themselves trading, the Directors continue to believe that the majority of its holdings will qualify for the Substantial Shareholdings Exemption ("SSE"). This exemption provides that gains arising on the disposal of qualifying holdings are not chargeable to UK corporation tax and, as such, the Group has continued not to recognise a provision for deferred taxation in respect of uplifts in value on those equity holdings that meet the qualifying criteria. Gains arising on sales of non-qualifying holdings would ordinarily give rise to taxable profits for the Group, to the extent that these exceed the Group's operating losses from time to time.

The Group complies with relevant global initiatives including the US Foreign Account Tax Compliance Act ("FATCA") and the OECD Common Reporting Standard.

Alternative Performance Measures ("APMs")

The Group discloses alternative performance measures, such as Hard NAV, Hard NAV per share and Return on Hard NAV, in this Annual Report. The Directors believe that these APMs assist in providing additional useful information on the underlying trends, performance and position of the Group. Further information on APMs utilised in the Group is set out in note 29.

RISK MANAGEMENT

Managing risk: our framework for balancing risk and reward

Governance

Overall responsibility for the risk framework and definition of risk appetite rests with the Board, who, through regular review of risks ensure, that risk exposure is matched with an ability to achieve the Group's strategic objectives. The IP Group Risk Council is the executive body that operates to establish, recommend and maintain a fit-for-purpose risk management framework appropriate for the Group and oversees the effective application of the framework across the business. The Risk Council is chaired by the CFO, has representation from operational business units as required during the year, and is supported in its operation by PwC. Risk identification is carried out through a bottom-up process via operational risk registers maintained by individual teams which are updated and reported to the Risk Council at least bi-annually, with additional top-down input from the management team with non-executive review being carried out by the Audit and Risk Committee at least annually.

Risk management process

Ranking of the Group's risks is carried out by combining the financial, strategic, operational, reputational, regulatory and employee impact of risks and the likelihood that they may occur. Operational risks are collated into strategic risks which identifies key themes and emerging risks and ultimately informs our principal risks which are detailed in the Principal Risk and Uncertainty section of this report. The operations of the Group, and the implementation of its objectives and strategy, are subject to a number of principal risks and uncertainties. Were more than one of the risks to occur together, the overall impact on the Group may be compounded.

The design and ongoing effectiveness of the key controls over the Group's principal risks are documented using a "risk and control matrix", which includes an assessment of the design and operating effectiveness of the controls in question. The key controls over the Group's identified principal risks are reviewed as part of the Group's risk management process, by management, the Audit & Risk Committee and the Board during the year. However, the Group's risk management programme can only provide reasonable, not absolute, assurance that principal risks are managed to an acceptable level.

During 2019 we have continued to build on our existing risk management framework, enhancing risk management and internal control processes and working with PwC in an outsourced internal audit capacity. This activity included refreshing the Group's operational, strategic and principal risk registers, an assessment of the strategic risks and the appropriateness of our principal risks, which resulted in the identification of two new principal risks, as described below. Testing of key controls over our principal risks, a refresh of the Group's risk appetite statements over the principal risks and developing key risk indicators to aid Board monitoring also took place. Internal audit reviews were conducted over the investment process, financial controls and Cyber and IT security and an updated assessment of the risk posed by Brexit was led by the Risk Council. The Risk Council has continued to support the Board in exercising its responsibility surrounding risk management through its regular meetings. Priorities for 2020 include further business reviews by the internal audit function, enhancing risk reporting across the business and communicating the key outputs of the risk management programme to the wider employee group.

Emerging Risks

The Group's management and Board regularly considers emerging risks and opportunities, both internal and external, which may affect the Group in the near, medium and long term. The Board also considered this subject in detail at its strategy day in October. Set out below are examples of some of the potential emerging risks that are currently being monitored by management and the Board:

Near term – Covid-19 (novel Coronavirus)

As the Covid-19 virus has developed over recent weeks, we have been assessing the impact on our employees and our business to ensure that both are effectively supported and managed. We are regularly communicating advice to all of our employees, based on local government advice in each of our geographies, that focuses on safety, travel, hygiene (including self-quarantine) and recognising the symptoms of the virus. Contingency planning, primarily centred around remote working, has been carried out to help ensure that the Group can continue to operate as effectively as possible. It is too early for us to be able to fully assess the likely impact on our portfolio companies although the fair values of a number of the Group's quoted portfolio companies have experienced volatility in recent weeks. In addition, management teams are generally following government travel advice, which may limit fundraising or commercial activities in the short term. However, certain companies, such as Oxford Nanopore, have seen both disruption for certain customers alongside an increase in recent demand for their products and services as a result of the outbreak. We will continue to monitor the impact.

Near term – Cyber and IT security

Cyber and IT security continue to be areas of risk for the Group and its portfolio as we continue to invest in intellectual-property based portfolio companies which could be targets for hackers or competitors and the regulatory landscape which is evolving rapidly around data security and the increasing powers of regulators to impose significant fines on companies who inadvertently breach new legislation such as GDPR. It is against this backdrop that the Group has now considered that Cyber and IT security now constitutes a principal risk for the Group in its own right. While historically this risk was recognised and captured within the risk of failing to comply with legislation, government policy and regulation risk, it has now been elevated to a stand-alone risk.

Medium term – the UK's withdrawal from the EU

The UK left the EU on 31 January 2020 and at the time of writing, had entered into a transition period scheduled to last until the end of 2020, during which it will continue to be bound by EU laws until it negotiates a new trade deal with the remaining 27 member states. While the Group has considered that the risk posted by Brexit does not constitute a principal risk for the Group, uncertainty in the medium term remains over certain areas that could impact the Group's strategic aims, as follows:

Key risks
Access to capital Macroeconomic environment could cause a short-term UK recession which would reduce investor confidence and impact access to capital for both IP Group and its portfolio companies. Uncertainty over grant funding capital available for the Group's early-stage portfolio companies could cause funding risks for university spin out companies in the UK.
Performance and management of portfolio companies The performance and management of portfolio companies is crucial to the success of the Group and, as a result, the preparation that portfolio company management teams have undertaken to address key Brexit risks will be central to the successful navigation of operational and other issues that may impact their performance.
People The macroeconomic environment has an impact on long-term recruitment and planning for companies. Additional visa restrictions will also impact academics and student movement to the UK, thus affecting the pool for potential portfolio companies and the quality of university partnerships.
Partnerships University research funding risks could mean that the UK becomes a less attractive place for academics to come and perform research projects in the UK.

Longer term – climate change

Climate change continues to be a key concern of the Group and all its stakeholders. IP Group invests in technology which has the potential to have positive impacts on the environment and the Group is well positioned to take advantage of the changing preferences of governments, businesses and individuals, see case study on C-Capture Ltd.

Consideration of risk appetite:

The industry the Group operates in inherently involves accepting risk in order to achieve the Group's strategic aims of creating and maintaining a pipeline of compelling intellectual property-based opportunities, developing and supporting its portfolio companies into a diversified portfolio of robust businesses and delivering attractive financial returns on those assets and third-party funds. The Group accepts risk only as it is consistent with the Group's purpose and strategy and where they can be appropriately managed and offer a sufficient reward. The Board has determined its risk appetite in relation to each of its principal risks and considered appropriate metrics to monitor performance to ensure it remains within the defined thresholds. The Board's assessment of risk appetite is described in the summary of each principal risk below.

Risk appetite ratings defined:

Very low: following a marginal-risk, marginal-reward approach that represents the safest strategic route available

Low: seeking to integrate sufficient control and mitigation methods in order to accommodate a low level of risk, though this will also limit reward potential

Balanced: An approach which brings a high chance of success, considering the risks, along with reasonable rewards, economic and otherwise

High: Willing to consider bolder opportunities with higher levels of risk in exchange for increased business payoffs

Very high: pursuing high-risk, inherently uncertain options that carry with them the potential for high-level rewards

<table>
<tr><td colspan="2">1 It may be difficult for the Group to maintain the required level of capital to continue to operate at optimum levels of investment, activity and overheads
The Group’s business has historically been reliant on capital markets, particularly those in the UK. While the Group’s business model is moving towards self-sustainability with realisations contributing to the Group’s ongoing capital needs, the ability of the Group to raise further capital, either through equity issues, debt or realisations is influenced by the general economic climate and capital market conditions, particularly in the UK.</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">Risk appetite
Very low</td></tr>
<tr><td>Link to Strategy</td><td>Actions taken by management</td></tr>
<tr><td>Access to sufficient levels of capital allows the Group to invest in its investment assets, develop early-stage investment opportunities and invest in its most exciting companies to ensure future financial returns.

Develop
Deliver</td><td>The Group has significant internal capital and managed funds capital to deploy in portfolio opportunities
The Group regularly forecasts cash requirements of the portfolio and ensures all capital allocations are compliant with budgetary limits, treasury policy guidelines and transaction authorisation controls
The Group ensures that minimum cash is available for maintain sufficient headroom over debt covenants and regulatory capital requirements</td></tr>
<tr><td>KPI</td><td>Developments during the year</td></tr>
<tr><td>Change in fair value of equity and debt investments
Total equity (“Net Assets”)
Profit/loss attributable to equity holders</td><td>Significant proceeds from sale of equity and debt investments in the year (£79.5m)
The Group’s share register diversified in the year and saw significant changes in the constitution of its major shareholders.
The Group’s share price traded below NAV during the year which makes it less attractive to raise new capital through share issues</td></tr>
<tr><td>Examples of risks</td><td>Change from 2018</td></tr>
<tr><td>The Group may not be able to provide the necessary capital to key strategic assets which may affect the portfolio companies’ performance or dilute future returns of the Group</td><td>No change</td></tr>
</table>

<table>
<tr><td colspan="2">2 It may be difficult for the Group’s portfolio companies to attract sufficient capital
The Group’s portfolio companies are typically in their development or growth phases and therefore require new capital to continue operations. While a proportion of this capital will generally be forthcoming from the Group, subject to capital allocation and company progress, additional third-party capital will usually be necessary. The ability of portfolio companies to attract further capital is influenced by their financial and operational performance and the general economic climate and trading conditions, particularly (for many companies) in the UK.</td></tr>
<tr><td colspan="2"></td></tr>
<tr><td colspan="2">Risk appetite
Low</td></tr>
<tr><td>Link to Strategy</td><td>Actions taken by management</td></tr>
<tr><td>Access to sufficient levels of capital allows the Group’s portfolio companies to invest in its technology and commercial opportunities to ensure future financial returns.

Develop
Deliver</td><td>• The Group operates a corporate finance function which carries out fundraising mandates for portfolio companies
• The Group maintains close relationships with a wide variety of co-investors that focus on companies at differing stages of development
• The Group regularly forecasts cash requirements of the portfolio
• While Parkwalk Advisors operates independently they have been and continue to be an important co-investor of the Group, supporting shared portfolio companies</td></tr>
<tr><td>KPI</td><td>Developments during the year</td></tr>
<tr><td>• Change in fair value of equity and debt investments
• Total equity (“Net Assets”)
• Profit/loss attributable to equity holders</td><td>• IP Group hosted investor events in 2019 including a Deep Tech Forum in China and the IP Group Technology Summit in the US to showcase portfolio technology to investors
• Continued management of an AUS$100m trust for an Australian Super Fund which has a mandate to co-invest with IP Group plc portfolio companies. In the year, four Group portfolio companies received funding from this investment vehicle.</td></tr>
<tr><td>Examples of risks</td><td>Change from 2018</td></tr>
<tr><td>• The success of those portfolio companies which require significant funding in the future may be influenced by the market’s appetite for investment in early stage companies, which may not be sufficient
• Failure of companies within the Group’s portfolio may make it more difficult for the Group or its spin-out companies to raise additional capital</td><td>No change</td></tr>
</table>

3 The returns and cash proceeds from the Group's early-stage companies can be very uncertain
Early-stage companies typically face a number or risks, including not being able to secure later rounds of funding at crucial development inflection points and not being able to source or retain appropriately skilled staff. Other risks arise where competing technologies enter the market, technology can be materially unproven and may ultimately fail, IP may be infringed, copied or stolen, may be more susceptible to cybercrime and other administrative taxation or compliance issues. These factors may lead to the Group not realising a sufficient return on its invested capital at an individual company or overall portfolio level.

Risk appetite
High

Link to Strategy	**Actions taken by management**
Uncertain cash returns could impact the Group's ability to deliver attractive returns to shareholders when our ability to react to portfolio company funding requirements is negatively impacted or where budgeted cash proceeds are delayed. **Deliver**	• The Group's employees have significant experience in sourcing, developing and growing early-stage technology companies to significant value, including use of the Group's systematic opportunity evaluation and business building methodologies within delegated board authorities • Members of the Group's senior leadership team often serve as non-executive directors or advisers to portfolio companies to help identify and remedy critical issues promptly • Support on operational, legal and company secretarial matters is offered to minimise failures due to common administrative factors • The Group has spin-out company holdings across different sectors managed by experienced sector-specialist teams to reduce the impact of a single company failure or sector demise • The Group maintains significant cash balances and seeks to employ a capital efficient process deploying low levels of initial capital to enable identification and mitigation of potential failures at the earliest possible stage
KPI	**Developments during the year**
• Change in fair value of equity and debt investments • Purchase of equity and debt investments • Proceeds from the sale of equity investments	• The Group's portfolio companies raised approximately £430m of capital in 2019 • The Group maintained board representation on more than 92% of its "focus" companies by number
Examples of risks	**Change from 2018**
• Portfolio company failure directly impacts the Group's value and profitability • At any time, a large proportion of the Group's portfolio may be accounted for by very few companies which could exacerbate the impact of any impairment or failure of one or more of these companies • The value of the Group's drug discovery and development portfolio companies may be significantly impacted by a negative clinical trial result • Cash realisations from the Group's portfolio through trade sales and IPOs could vary significantly from year to year	No change

4 Universities or other research-intensive institutions may terminate their partnerships or other collaborative relationships with the Group

The Group's business, results of operations and prospects are at least partially dependent on access to leading scientific research through partnerships and other collaborative relationships with research-intensive institutions. Failure to maintain such relationships may impact the Group's ability to source new investment opportunities.

Risk appetite

High

Link to Strategy	**Actions taken by management**
The Group's strategic objective of building and maintaining a pipeline of compelling intellectual property-based opportunities, in part depends on the quality of the commercialisation partnerships and other collaborative relationships the Group holds. **Create**	• The Group continues to consider and, where appropriate, enter into new and innovative partnerships and collaborations with research institutions • The Group has been able to source opportunities through non-exclusive relationships and other sources • Members of the Group's senior team work closely with partner institutions to ensure that each commercial relationship is mutually beneficial and productive • The Group's track record in IP commercialisation may make the Group a partner of choice for other institutions, acting as a barrier to entry for competitors
KPI	**Developments during the year**
• Number of new portfolio companies	• Integrated the management of UK university partnerships within the UK investment partnership teams • Completed investments with four new university partnerships in Australasia
Examples of risks	**Change from 2018**
• Termination or non-renewal of arrangements through failure to perform obligations may result in the loss of exclusive rights • The loss of exclusive rights may limit the Group's ability to secure attractive IP opportunities to commercialise • This could potentially have a material adverse effect on the Group's long-term business, results of operations, performance and prospects • Competition in the market may reduce the opportunities available to create new spin-out companies	Decreased

5 The Group may lose key personnel or fail to attract and integrate new personnel The industry in which the Group operates is a specialised area and the Group requires highly qualified and experienced employees. There is a risk that the Group's employees could be approached and solicited by competitors or other technology-based companies and organisations or could otherwise choose to leave the Group. Scaling the team, particularly in foreign jurisdictions such as Australasia and Hong Kong, presents an additional potential risk.	
Risk appetite Balanced	
Link to Strategy	**Actions taken by management**
The Group's strategic objectives of developing and supporting a portfolio of compelling intellectual property-based opportunities into robust businesses capable of delivering attractive financial returns on our assets is dependent on the Group's employees who work with the portfolio companies and those who support them. **Develop** **Deliver**	• Senior team succession plans have been developed • The Group carries out regular market comparisons for staff and executive remuneration and seeks to offer a balanced incentive package comprising a mix of salary, benefits, performance-based long-term incentives and benefits such as flexible working and salary sacrifice arrangements • The Group encourages employee development and inclusion through coaching and mentoring and carries out annual objective setting and appraisals • The Group promotes an open culture of communication and provides an inspiring and challenging workplace where people are given autonomy to do their jobs. The Group is fully supportive of flexible working and has enabled employees to work flexibly.
KPI	**Developments during the year**
• Total equity • "Net Assets" • Number of new portfolio companies	• Created IP Connect employee forum and appointed Designated Non-executive Director to facilitate dialogue with Board in both directions. Part of IP Connect's remit is also to support the evolution of the culture and continuous improvement of working life at the Group. • Continued to support the 30% Club initiative and during the year 17 employees across the Group took part in the Club's annual cross-company mentoring programme. • Continued to dedicate resources to remuneration and incentivisation. • Staff attrition, excluding the technology transfer operations was 18.5%, broadly flat with 2018. • Approximately 42% of employees have been with the Company for at least five years.
Examples of risks	**Change from 2018**
• Loss of key executives and employees of the Group or an inability to attract, retain and integrate appropriately skilled and experienced employees could have an adverse effect on the Group's competitive advantage, business, financial condition, operational results and future prospects	Decreased

6 Macroeconomic conditions may negatively impact the Group's ability to achieve its strategic objectives
Adverse macroeconomic conditions could reduce the opportunity to deploy capital into opportunities or may limit the ability of such portfolio companies to receive third party funding, develop profitable businesses or achieve increases in value or exits. Political uncertainty, including impacts from Brexit or similar scenarios, could have a number of potential impacts, including changes to the labour market available to the Group for recruitment or regulatory environment in which the Group and its portfolio companies operate.

Risk appetite
Very high

Link to Strategy	**Actions taken by management**
The Group's strategic objectives of developing a portfolio of commercially successful portfolio companies and delivering attractive financial returns on our assets and third-party funds can be materially impacted by the current macroeconomic environment **Develop** **Deliver**	• Senior management receive regular capital market and economic updates from the Group's capital markets team and its brokers • Six-monthly budget and quarterly capital allocation process and monitoring against agreed budget • Regular oversight of upcoming capital requirements of portfolio from both the Group and third parties • The Group's Risk Council conducts horizon scanning for upcoming events which may impact the Group such as a hard Brexit or climate change.
KPI	**Developments during the year**
• Change in fair value of equity and debt investments • Total equity • "Net Assets" • Profit or loss attributable to equity holders	• Macroeconomic and geopolitical conditions remain uncertain in the UK. The UK left the EU on 31 January 2020 and at the time of writing, had entered into a transition period scheduled to last until the end of the year, during which it will continue to be bound by EU laws until it negotiates a new trade deal with the remaining 27 member states. Uncertainty remains on the long-term impacts of Brexit and anticipated future trade deals. • Brexit process remained a source of uncertainty in the year. The Risk Council reconsidered the risks posed by a hard Brexit for the Group's operations and portfolio companies and took precautionary actions to ensure any impacts were mitigated appropriately.
Examples of risks	**Change from 2018**
• The success of those portfolio companies which require significant external funding may be influenced by the market's appetite for investment in early-stage companies, which may not be sufficient • 11.2% of the Group's portfolio value is held in companies quoted on the AIM market and decreases in values to this market could result in a material fair value impact to the portfolio as a whole	No change

7 There may be changes to, impacts from, or failure to comply with, legislation, government policy and regulation There may be unforeseen changes in, or impacts from, government policy, regulation or legislation (including taxation legislation). This could include changes to funding levels or to the terms upon which public monies are made available to universities and research institutions and the ownership of any resulting intellectual property.	
Risk appetite Balanced	
Link to Strategy	**Actions taken by management**
The Group's strategic objectives of creating and maintaining a portfolio of compelling opportunities to deliver attractive returns for shareholders could be materially impacted by failure to comply with or adequately plan for a change in legislation, government policy or regulation. **Create** **Deliver**	• University partners are incentivised to protect their IP for exploitation as the partnership agreements share returns between universities, academic founders and the Group • The Group utilises professional advisers as appropriate to support its monitoring of, and response to changes in, tax, insurance or other legislation • The Group has internal policies and procedures to ensure its compliance with applicable FCA regulations • The Group maintains D&O, professional indemnity and clinical trial insurance policies
KPI	**Developments during the year**
• Total equity • "Net Assets"	• Ongoing focus on regulatory compliance, including third party reviews and utilisation of specialist advisers • UK Government has committed to university funding and has emphasised the importance of science and innovation • Group of specialist therapeutics advisors continually consulted
Examples of risks	**Change from 2018**
• Changes could result in universities and researchers no longer being able to own, exploit or protect intellectual property on attractive terms. • Changes to tax legislation or the nature of the Group's activities, in particular in relation to the Substantial Shareholder Exemption, may adversely affect the Group's tax position and accordingly its value and operations. • Regulatory changes or breaches could ultimately lead to withdrawal of regulatory permissions for the Group's FCA-authorised subsidiaries, resulting in loss of fund management contracts, reputational damage or fines. • The UK's decision to leave the EU could have an adverse impact on the level of research funding made available to UK universities from which the Group sources new opportunities.	No change

8 The Group may be subjected to Phishing and Ransomware attacks, data leakage and hacking. This could include taking over email accounts to request or authorise payments, GDPR breaches and access to sensitive corporate and portfolio company data.	
Risk appetite Balanced	
Link to Strategy	**Actions taken by management**
The Group's strategic objectives of creating and maintaining a portfolio of compelling opportunities to deliver attractive returns for shareholders could be materially impacted by a serious cyber security breach at a corporate or portfolio company level. **Create** **Deliver**	• The Group reviews its data and cyber-security processes with its external outsourced IT provider and applies the UK Government's "ten steps" framework • Regular IT management reporting framework in place • Internal and third-party reviews of policies and procedures in place to ensure appropriate framework in place to safeguard data • Assessment of third-party suppliers of cloud-based and on-premises systems in use
KPI	**Developments during the year**
• Total equity • "Net Assets"	• Ongoing focus on IT security and staff training, including internal audit reviews and utilisation of specialist advisers • Implementation of network and infrastructure security systems to respond to emerging threats • Continued programme of penetration testing • Review of business continuity and disaster recovery plan undertaken in the year
Examples of risks	**Change from 2018**
• The Group or one or a combination of its portfolio companies could face significant fines from a data security breach • The Group or one of its portfolio companies could be subjected to a phishing attack which could lead to invalid payments being authorised or a sensitive information leak • A malware or ransomware attack could lead to systems becoming non-functioning and impair the ability of the business to operate in the short term	New

9 The Group may be negatively impacted operationally as a result of its recent international expansion The potential for a negative impact to the Group arising from the overseas operations through non-compliance with local laws and regulations, failure to integrate overseas operations with the Group, an inability to foresee territory-specific risks and macro-events. The Group may also fail to establish effective control mechanisms, considering different working culture and environment, leading to significant senior management time requirement, distracting from core day-to-day business.	
Risk appetite Balanced	
Link to Strategy	**Actions taken by management**
The Group's strategy includes building a portfolio of compelling intellectual-property based companies across the UK, US and Australasia. The scale of the Group's international operations represents increased importance of successful execution of this element of the Group's strategy. **Create** **Develop**	• Local legal and regulatory advisers have been engaged in the establishment phase of overseas operations. US and Australasian teams have their own in-house legal teams who regularly report to the Global Head of Legal • IP Exec and HR are involved in senior hires for new territories. Senior international personnel include current and former UK employees, encouraging a shared culture across territories • There is regular travel between the UK and other territories to ensure the Group is aligned in its strategy and culture • The risk management framework in place across each business unit has been established in each international territory and is integrated into the Group's regular risk management processes and reporting • Third party suppliers are used for accounting and payroll services to reduce the risk of fraud
KPI	**Developments during the year**
• Total equity • "Net Assets"	• Coordination of risk reporting across Australia, Hong Kong and USA • Developed a US operating manual alongside professional advisors having restructured the US operation in late 2018 • Application for Hong Kong regulatory permissions being explored with specialist local advisors
Examples of risks	**Change from 2018**
• A legal or regulatory breach could ultimately lead to the withdrawal of regulatory permissions in Australia, resulting in loss of trust management contracts, reputational damage and fines • Divergent group cultures may lead to difficulties in achieving the Group's strategic aims • A major control failure could lead to a successful fraudulent attack on the Group's IT infrastructure or access to bank accounts • Senior management may spend a significant amount of time in setting up and establishing new territories which could detract from central Group strategy and operations	No change

STRATEGIC REPORT APPROVAL

The Strategic Report as set out above has been approved by the Board.

CONSOLIDATED FINANCIAL INFORMATION

The financial information set out below has been extracted from the Annual Report and Accounts of IP Group plc for the year ended 31 December 2019 and is an abridged version of the full financial statements, not all of which are reproduced in this announcement.

DIRECTORS' RESPONSIBILITIES STATEMENT

The responsibility statement set out below has been reproduced from the Annual Report and Accounts, which will be published in April 2020, and relates to that document and not this announcement.

Each of the directors confirms to the best of their knowledge:

- The Group financial statements have been prepared in accordance with International Financial Reporting Standards (IFRSs) as adopted by the European Union and Article 4 of the IAS Regulation and give a true and fair view of the assets, liabilities, financial position and profit and loss of the Group.
- The Annual Report and Accounts includes a fair review of the development and performance of the business and the financial position of the group and the parent company, together with a description or the principal risks and uncertainties that they face.

ON BEHALF OF THE BOARD

Sir Douglas Flint	Alan Aubrey
Chairman	Chief Executive Officer

10 March 2020

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2019

	Note	**2019 £m**	2018 £m
Portfolio return and revenue			
Change in fair value of equity and debt investments	15	**(70.6)**	(50.4)
Gain on disposal of equity investments	16	**16.1**	2.0
Gain on deconsolidation of subsidiary	17	**10.6**	—
Change in fair value of limited and limited liability partnership interests	25	**(0.7)**	2.3
Revenue from services and other income		**8.6**	9.9
		(36.0)	(36.2)
Administrative expenses			
Carried interest plan release		**1.3**	1.1
Share-based payment charge	24	**(2.3)**	(1.9)
Goodwill impairment	12	—	(203.2)
Amortisation of intangible assets	13	**(0.3)**	(9.9)
Other administrative expenses	8	**(39.1)**	(41.8)
		(40.4)	(255.7)
Operating loss	7	**(76.4)**	(291.9)
Finance income		**1.2**	1.2
Finance costs		**(3.6)**	(3.0)
Loss before taxation		**(78.8)**	(293.7)
Taxation	10	**(0.1)**	(0.1)
Loss for the year		**(78.9)**	(293.8)
Other comprehensive income			
Exchange differences on translating foreign operations		**0.1**	(0.1)
Total comprehensive loss for the year		**(78.8)**	(293.9)
Attributable to:			
Equity holders of the parent		**(75.4)**	(293.8)
Non-controlling interest		**(3.4)**	(0.1)
		(78.8)	(293.9)
Loss per share			
Basic (p)	11	**(7.12)**	(27.71)
Diluted (p)	11	**(7.12)**	(27.71)

The accompanying notes form an integral part of the financial statements.

CONSOLIDATED STATEMENT OF COMPREHENSIVE INCOME

For the year ended 31 December 2019

	Note	**2019 £m**	2018 £m
Portfolio return and revenue			
Change in fair value of equity and debt investments	15	**(70.6)**	(50.4)
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Diluted (p)	11	**(7.12)**	(27.71)

The accompanying notes form an integral part of the financial statements.

CONSOLIDATED STATEMENT OF FINANCIAL POSITION

As at 31 December 2019

	Note	2019 £m	2018 £m
ASSETS			
Non-current assets			
Intangible assets:			
Goodwill	12	**0.4**	0.4
Acquired intangible assets	13	—	0.3
Property, plant and equipment		**1.1**	1.5
Portfolio:			
Equity investments	15	**1,021.9**	1,095.1
Debt investments	15	**23.7**	33.1
Limited and limited liability partnership interests	25	**21.4**	17.3
Total non-current assets		**1,068.5**	1,147.7
Current assets			
Trade and other receivables	18	**5.0**	6.6
Receivable on sale of debt and equity investments	16,19	**27.3**	—
Deposits		**73.0**	90.0
Cash and cash equivalents		**121.9**	129.0
Total current assets		**227.2**	225.6
Total assets		**1,295.7**	1,373.3
EQUITY AND LIABILITIES			
Equity attributable to owners of the parent			
Called up share capital	22	**21.2**	21.2
Share premium account		**99.7**	684.7
Merger reserve		—	372.6
Retained earnings		**1,020.5**	135.8
Total equity attributable to equity holders		**1,141.4**	1,214.3
Non-controlling interest		**0.5**	3.9
Total equity		**1,141.9**	1,218.2
Current liabilities			
Trade and other payables	20	**26.0**	16.5
EIB debt facility	21	**15.4**	15.4
Non-current liabilities			
EIB debt facility	21	**67.1**	82.4
Carried interest plan liability		**5.5**	6.8
Loans from limited partners of consolidated funds	21	**26.0**	23.0
Revenue share liability	15	**13.8**	11.0
Total equity and liabilities		**1,295.7**	1,373.3

Registered number: 4204490

The accompanying notes form an integral part of the financial statements. The financial statements were approved by the Board of Directors and authorised for issue on 10 March 2020 and were signed on its behalf by:

Greg Smith
Chief Financial Officer

Alan Aubrey
Chief Executive Officer

CONSOLIDATED STATEMENT OF CASH FLOWS

For the year ended 31 December 2019

	Note	**2019 £m**	2018 £m
Operating activities			
Operating loss for the period		**(76.4)**	(291.9)
Adjusted for:			
Change in fair value of equity and debt investments	15	**70.6**	50.4
Change in fair value of limited and limited liability partnership interests	25	**0.7**	(2.3)
Gain on disposal of equity investments	16	**(16.1)**	(2.0)
Gain on deconsolidation of subsidiary	17	**(10.6)**	—
Depreciation of property, plant and equipment		**1.2**	1.2
Amortisation of intangible non-current assets	13	**0.3**	9.9
Goodwill impairment	12	—	203.2
Long-term incentive carry scheme release		**(1.3)**	(1.1)
Fees settled in the form of equity		—	(0.3)
Share-based payment charge		**2.3**	1.9
Changes in working capital			
Decrease in trade and other receivables		**1.6**	1.5
Decrease in trade and other payables		**9.5**	(3.6)
Increase loans from limited partners of consolidated funds		**3.0**	9.9
Other operating cash flows			
Net interest paid		**(2.1)**	(1.7)
Net cash outflow from operating activities		**(17.3)**	(24.9)
Investing activities			
Purchase of property, plant and equipment		**(0.7)**	(0.6)
Purchase of equity and debt investments	15	**(64.7)**	(100.9)
Investment in limited and limited liability partnership funds	25	**(6.8)**	(4.8)
Distribution from limited partnership funds	25	**2.0**	0.8
Net cash flow from deposits		**17.0**	5.0
Cash disposed via deconsolidation of subsidiary	17	**(2.5)**	—
Proceeds from sale of equity and debt investments	16	**79.5**	29.5
Net cash inflow/(outflow) from investing activities		**23.8**	(71.0)
Financing activities			
Proceeds from the issue of share capital by consolidated portfolio company	17	**2.9**	—
Lease principal payment		**(1.2)**	—
Repayment of EIB facility	21	**(15.3)**	(6.3)
Net cash outflow from financing activities		**(13.6)**	(6.3)
Net decrease in cash and cash equivalents		**(7.1)**	(102.2)
Cash and cash equivalents at the beginning of the year		**129.0**	231.3
Effect of foreign exchange rate changes		—	(0.1)
Cash and cash equivalents at the end of the year		**121.9**	129.0

The accompanying notes form an integral part of the financial statements.

CONSOLIDATED STATEMENT OF CHANGES IN EQUITY

For the year ended 31 December 2019

	Attributable to equity holders of the parent						
	Share capital £m	Share premium(i) £m	Merger reserve(ii) £m	Retained earnings(iii) £m	Total £m	Non-controlling interest(iv) £m	Total equity £m
At 1 January 2018	21.1	683.1	508.6	291.7	1,504.5	4.0	1,508.5
Comprehensive income	—	—	—	(293.8)	(293.8)	(0.1)	(293.9)
IFRS 3 charge – equity settled	0.1	1.6	—	—	1.7	—	1.7
Transfer between reserves on impairment of subsidiaries	—	—	(136.0)	136.0	—	—	—
Equity-settled share-based payments	—	—	—	1.9	1.9	—	1.9
At 1 January 2019	**21.2**	**684.7**	**372.6**	**135.8**	**1,214.3**	**3.9**	**1,218.2**
Capital reduction (v)	**—**	**(585.0)**	**(372.6)**	**957.6**	**—**	**—**	**—**
Comprehensive income	**—**	**—**	**—**	**(75.4)**	**(75.4)**	**(3.4)**	**(78.8)**
Purchase of treasury stock (vi)	**—**	**—**	**—**	**(0.2)**	**(0.2)**	**—**	**(0.2)**
Equity-settled share-based payments	**—**	**—**	**—**	**2.3**	**2.3**	**—**	**2.3**
Currency translation	**—**	**—**	**—**	**0.4**	**0.4**	**—**	**0.4**
At 31 December 2019	**21.2**	**99.7**	**—**	**1,020.5**	**1,141.4**	**0.5**	**1,141.9**

(i) Share premium — Amount subscribed for share capital in excess of nominal value, net of directly attributable issue costs.
(ii) Merger reserve — Amount subscribed for share capital in excess of nominal value in relation to the qualifying acquisition of subsidiary undertakings.
(iii) Retained earnings — Cumulative net gains and losses recognised in the consolidated statement of comprehensive income net of associated share-based payments credits.
(iv) Non-controlling interest — Share of profits attributable to the Limited Partners of IP Venture Fund II LP – a consolidated fund which was created in May 2013 – as well as the equity invested in partially-owned subsidiaries that is held by third parties.
(v) In 2019 Group effected a reduction of capital and cancellation of share premium account, which was count approved on 17th December 2019, resulting in the reduction in the share premium and merger reserves, and a corresponding increase in retained earnings.
(vi) Reflects purchase of IP Group equity to settle exercise of options in respect of the Group's Defined Benefit Share Plan.
(vii) Reflects currency translation differences on reserves non-GBP functional currency subsidiaries.

The accompanying notes form an integral part of the financial statements.

Notes to the consolidated financial statements

1. Accounting Policies

Basis of preparation
The Annual Report and Accounts of IP Group plc (“IP Group” or the “Company”) and its subsidiary companies (together, the “Group”) are for the year ended 31 December 2019. The principal accounting policies adopted in the preparation of the financial statements are set out below. The policies have been consistently applied to all the years presented, unless otherwise stated. These financial statements have been prepared in accordance with International Financial Reporting Standards, International Accounting Standards and Interpretations (collectively “IFRS”) issued by the International Accounting Standards Board (“IASB”) as adopted by the European Union (“adopted IFRSs”).

The preparation of financial statements in compliance with IFRS requires the use of certain critical accounting estimates. It also requires Group management to exercise judgement in the most appropriate selection of the Group’s accounting policies. The areas where significant judgements and estimates have been made in preparing the financial statements and their effect are disclosed in note 3.

The financial statements are prepared on a going concern basis, as the directors are satisfied that the Group and parent Company have the resources to continue in business for the foreseeable future. In making this assessment, the directors have considered a wide range of information relating to present and future conditions, including future projections of profitability, cash flows and capital resources.

Changes in accounting policies
(i) New standards, interpretations and amendments effective from 1 January 2019
The following new standards have been applied in these financial statements:

IFRS 16 Leases
IFRS 16 Leases was issued on 13 January 2016 and replaces IAS 17 Leases. IFRS 16 requires all operating leases in excess of one year, where the Group is the lessee, to be included on the Group’s statement of financial position, and recognised as a right-of-use (“ROU”) asset and a related lease liability representing the obligation to make lease payments. The ROU asset will be amortised on a straight-line basis with the lease liability being amortised using the effective interest method. Optional exemptions are available under IFRS 16 for short-term leases (lease terms less than 12 months) and for small-value leases.

The Group has applied IFRS 16 using the modified retrospective approach and therefore the comparative information has not been restated and continues to be reported under IAS 17. The details of accounting policies under IAS 17 are disclosed separately if they are different from those under IFRS 16 and the impact of changes is disclosed in Note 23.

(ii) New standards, interpretations and amendments not yet effective
No new standards, interpretations and amendments not yet effective are expected to have a material effect on the Group’s future financial statements.

Basis of consolidation

(i) Business Combinations
The Group accounts for business combinations using the acquisition method from the date that control is transferred to the Group (see (ii) Subsidiaries below). Both the identifiable net assets and the consideration transferred in the acquisition are measured at fair value at the date of acquisition and transaction costs are expensed as incurred. Goodwill arising on acquisitions is tested at least annually for impairment. In instances where the Group owns a non-controlling stake prior to acquisition the step acquisition method is applied, and any gain or losses on the fair value of the pre-acquisition holding is recognised in the consolidated statement of comprehensive income.

(ii) Subsidiaries
Where the Group has control over an entity, it is classified as a subsidiary. Typically, the Group owns a non-controlling interest in its portfolio companies; however in certain circumstances the Group takes a controlling interest and hence treats the portfolio company as a subsidiary. As per IFRS 10, an entity is classed as under the control of the Group when all three of the following elements are present: power over the entity; exposure to variable returns from the entity; and the ability of the Group to use its power to affect those variable returns.

In situations where the Company has the practical ability to direct the relevant activities of the investee without holding the majority of the voting rights, it is considered that de facto control exists. In determining whether de facto control exists the Group considers all relevant facts and circumstances, including:

- The size of the Company’s voting rights relative to both the size and dispersion of other parties who hold voting rights;
- Substantive potential voting rights held by the Company and by other parties;
- Other contractual arrangements; and
- Historic patterns in voting attendance.

In assessing the IFRS 10 control criteria in respect of the Group’s private portfolio companies, direction of the relevant activities of the company is usually considered to be exercised by the company’s board, therefore the key control consideration is whether the Group currently has a majority of board seats on a given company's board, or is able to obtain a majority of board seats via the exercise of its voting rights. Control is reassessed whenever facts and circumstances indicate that there may be a change in any of these elements of control.

The consolidated financial statements present the results of the Company and its subsidiaries as if they formed a single entity. Intercompany transactions and balances between Group companies are therefore eliminated in full. The consolidated financial statements incorporate the results of business combinations using the acquisition method. In the statement of financial position, the acquiree's identifiable assets and liabilities are initially recognised at their fair values at the acquisition date. Contingent liabilities dependent on the disposed value of an associated investment are only recognised when the fair value is above the associated threshold. The results of acquired operations are included in the consolidated statement of comprehensive income from the date on which control is obtained. They are consolidated until the date on which control ceases.

(iii) Associates
Associates are portfolio companies over which the Group has significant influence, but does not control, generally accompanied by a shareholding of between 20% and 50% of the voting rights.

As permitted under IAS 28, the Group elects to hold such investments at fair value through profit and loss in accordance with IFRS 9. This treatment is specified by IAS 28 Investment in Associates and Joint Ventures, which permits investments held by a venture capital organisation or similar entity to be excluded from its measurement methodology requirements where those investments are designated, upon initial recognition, as at fair value through profit or loss and accounted for in accordance with IFRS 9 Financial Instruments. Therefore, No associates are presented on the consolidated statement of financial position.

Changes in fair value of associates are recognised in profit or loss in the period of the change. The Group has no interests in associates through which it carries on its business.

The disclosures required by Section 409 of the Companies Act 2006 for associated undertakings are included in note 10 of the Company financial statements. Similarly, those investments which may not have qualified as an Associate but fall within the wider scope of significant holdings and so are subject to Section 409 disclosure acts are also included in note 10 of the Company financial statements.

(iv) Limited Partnerships and Limited Liability Partnerships ("Limited Partnerships")
Group entities act as general partner and investment manager to the following Limited Partnerships:

Name	Interest in limited partnership %
IPG Cayman LP	87.0
IP Venture Fund II LP ("IPVFII")	33.3
IP Venture Fund LP ("IPVF")	10.0
The North East Technology Fund LP ("NETF")	—

The Group receives compensation for its role as investment manager to these Limited Partnerships, including fixed fees and performance fees. The directors consider that these amounts are in substance and form "normal market rate" compensation for its role as investment manager.

In order to determine whether these Limited Partnerships were required to be consolidated, the presence of the three elements of control noted in part (ii) was examined.

In the case of IPG Cayman LP and IPVFII, the Group has power over the entity as fund manager, and Group's significant stake in these funds creates an exposure to variable returns from those interests, and the Group can use its power to affect those variable returns. As such, IPG Cayman LP and IPVFII meet the criteria in IFRS 10 Consolidated Financial Statements and are consequently consolidated.

In the case of IPVF, the Directors consider that the minority Limited Partnership interest does not create an exposure of such significance that it indicates that the Group acts as anything other than an agent for the other Limited Partners in the arrangement. This is further supported by the presence of a strict investment policy and the inability for the general partner to change the restrictive terms of that policy other than with agreement of 100% of IPVF's Limited Partners.

Similarly, the lack of a stake in NETF indicates the Group's role as an agent for the limited partner. As a result, the directors consider that the Group does not have the power to govern the operations of these limited partnerships so as to obtain benefits from their activities and accordingly do not meet the definition of a subsidiary under IFRS 10 Consolidated Financial Statements. However, the Group does have the power to exercise significant influence over its limited partnerships and accordingly the Group's accounting treatment for the interest in IPVF is consistent with that of associates as described earlier in this report, i.e. in accordance with IFRS 9 Financial Instruments and designated as at fair value through profit or loss on initial recognition.

In addition to Limited Partnerships where Group entities act as general partner and investment manager, the Group has interests in three further entities which are all managed by third parties:

Name	Interest in limited partnership %
UCL Technology Fund LP ("UCL Fund")	46.4
Technikos LLP ("Technikos")	18.0
Apollo Therapeutics LLP ("Apollo Fund")	8.3

The Group has a 46.4% interest in the total capital commitments of the UCL Fund. The Group has committed £24.8m to the fund alongside the European Investment Fund ("EIF"), University College London and other investors. Participation in the UCL Fund provides the Group with the opportunity to generate financial returns and visibility of potential intellectual property from across University College London's research base.

The Group has an 18.0% interest in the total capital commitments of Technikos, a fund with an exclusive pipeline agreement with Oxford University's Institute of Biomedical Engineering.

The Group has an 8.3% interest in the total capital commitments of Apollo Therapeutics LLP ("Apollo"), a £40.0m venture between AstraZeneca, GlaxoSmithKline, Johnson & Johnson and the technology transfer offices of Imperial College London (via IP2IPO Innovations Limited), University College London (via UCL Business plc) and the University of Cambridge (via Cambridge Enterprise Limited). The venture supports the translation of academic therapeutic science into innovative new medicines by combining the skills of the university academics with industry expertise at an early stage.

Investments in these Limited and Limited Liability Partnerships are recognised at fair value through profit and loss in accordance with IFRS 9.

(v) Non-controlling interests
The total comprehensive income, assets and liabilities of non-wholly owned subsidiaries are attributed to owners of the parent and to the non-controlling interests in proportion to their relative ownership interests.

Portfolio return and revenue
Change in fair value
Change in fair value of equity and debt investments represents revaluation gains and losses on the Group's portfolio of investments. Gains on disposal of equity investments represent the difference between the fair value of consideration received and the carrying value at the start of the accounting period on the disposal of equity investments. Change in fair value of Limited Partnership investments represents revaluation gains and losses on the Group's investments in Limited Partnership funds. Changes in fair values of assets do not constitute revenue.

Revenue from services and other income
All revenue from services is generated primarily from within the United Kingdom and is stated exclusive of value added tax, with further revenue generated in the Group's Australian and US operations. Revenue is recognised when the Group satisfies its performance obligations, in line with IFRS 15. Revenue from services and other income comprises:

Advisory fees
Fees earned from the provision of business support services including IP Assist and IP Exec services and fees for IP Group representation on portfolio company boards are recognised as the related services are provided. Corporate finance advisory fees are generally earned as a fixed percentage of total funds raised and recognised at the time the related transaction is successfully concluded. In some instances, these fees are settled via the issue of equity in the company receiving the corporate finance services at the same price per share as equity issued as part the financing round to which the advisory fees apply.

Fund management services
Fund management fees include fiduciary fund management fees which are generally earned as a fixed percentage of total funds under management and are recognised as the related services are provided and performance fees payable from realisation of agreed returns to investors which are recognised as performance criterion are met.

Licence & Royalty income
The Group's IP licenses typically constitute separate performance obligations, being separate from other promised goods or services. Revenue is recognised in line with the performance obligations included in the license, which can include sales-based, usage-based on milestone-based royalties.

Dividends
Dividends receivable from equity shares are included within other portfolio income and recognised on the ex-dividend date or, where no ex-dividend date is quoted, are recognised when the Group's right to receive payment is established.

Intangible assets
Goodwill
Goodwill represents the excess of the cost of an acquisition over the fair value of the net identifiable assets of the acquired subsidiary at the date of acquisition. Goodwill on acquisitions of subsidiaries is included in intangible assets and allocated from the acquisition date to each of the Group's cash-generating units ("CGUs") that are expected to benefit from the business combination. Goodwill may be allocated to CGUs in both the acquired business and in the existing business.

Other intangible assets
Other intangible assets represent contractual arrangements and memorandums of understanding with UK universities acquired through acquisition of subsidiaries. At the date of acquisition, the cost of these intangibles as a share of the larger acquisition was calculated and subsequently the assets are held at amortised cost.

Impairment of intangible assets (including goodwill)
Goodwill is not subject to amortisation but is tested for impairment annually and whenever events or circumstances indicate that the carrying amount may not be recoverable. Assets that are subject to amortisation are tested for impairment when events or a change in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount exceeds its recoverable amount. The recoverable amount is the higher of the asset's fair value less costs to sell and the value in use. For the purposes of assessing impairments, assets are grouped at the lowest levels for which there are identifiable cash flows (i.e. CGUs).

Financial assets
In respect of regular way purchases or sales, the Group uses trade date accounting to recognise or derecognise financial assets.

Financial assets are derecognised when the rights to receive cash flows from the assets have expired or the Group has transferred substantially all risks and rewards of ownership.

The Group classifies its financial assets into one of the categories listed below, depending on the purpose for which the asset was acquired. None of the Group's financial assets are categorised as held to maturity or available for sale.

(i) At fair value through profit or loss
Held for trading and financial assets are recognised at fair value through profit and loss. This category includes equity investments, debt investments and investments in limited partnerships. Investments in associated undertakings, which are held by the Group with a view to the ultimate realisation of capital gains, are also categorised as at fair value through profit or loss. This measurement basis is consistent with the fact that the Group's performance in respect of investments in equity investments, limited partnerships and associated undertakings is evaluated on a fair value basis in accordance with an established investment strategy.

Financial assets at fair value through profit or loss are initially recognised at fair value and any gains or losses arising from subsequent changes in fair value are presented in profit or loss in the statement of comprehensive income in the period which they arise.

Fair value hierarchy
The Group classifies financial assets using a fair value hierarchy that reflects the significance of the inputs used in making the related fair value measurements. The level in the fair value hierarchy, within which a financial asset is classified, is determined on the basis of the lowest level input that is significant to that asset's fair value measurement. The fair value hierarchy has the following levels:

Level 1 — Quoted prices in active markets.
Level 2 — Inputs other than quoted prices that are observable, such as prices from market transactions.
Level 3 — One or more inputs that are not based on observable market data.

Previously, the Group's policy was to classify equity investments in unquoted spin-out companies as Level 3a where prices had been determined from recent investments in the last twelve months, and as Level 3b where prices had been determined from recent investments in more than twelve months and other valuation techniques. The Group has amended this policy to reflect revised IPEV guidelines which specify that the Price of a Recent Investment represents one of a number of inputs used to arrive at fair value, and now uses a single classification for all Level 3 equity investments. Comparative information had been represented accordingly for consistency.

Equity investments
Fair value is the underlying principle and is defined as "the price that would be received to sell an asset in an orderly transaction between market participants at the measurement date" (IPEV guidelines, December 2018).

Where the equity structure of a portfolio company involves different class rights in a sale or liquidity event, the Group takes these different rights into account when forming a view on the value of its investment.

Valuation techniques used

The fair value of unlisted securities is established using appropriate valuation techniques in line with IPEV guidelines. The selection of appropriate valuation techniques is considered on an individual basis in light of the nature, facts and circumstances of the investment and in the expected view of market participants. The Group selects valuation techniques which make maximum use of market-based inputs. Techniques are applied consistently from period to period, except where a change would result in better estimates of Fair Value. Multiple valuation techniques may be used so that the results of one technique may be used as a cross check/corroboration of an alternative technique.

Valuation techniques used include:

- Quoted investments: the fair values of quoted investments are based on bid prices in an active market at the reporting date.
- Milestone approach: an assessment is made as to whether there is an indication of change in Fair Value based on a consideration of the relevant milestones typically agreed at the time of making the investment decision.

- Scenario analysis: a forward-looking method that considers one or more possible future scenarios. These methods include simplified scenario analysis and relative value scenario analysis, which tie to the fully diluted (“post-money”) equity value, as well as full scenario analysis vie the use of the probability-weighted expected return method (PWERM).
- Current value method: the estimation and allocation of the equity value to the various equity interests in a business as though the business were to be sold on the Measurement Date.
- Discounted cash flows: deriving the value of a business by calculating the present value of expected future cash flows.
- Multiples: the application of an appropriate multiple to a performance measure (such as earnings or revenue) of the Investee Company in order to derive a value for the business.

The Fair Value indicated by a recent transaction is used to calibrate inputs used with valuation techniques including those noted above. At each measurement date, an assessment is made as to whether changes or events subsequent to the relevant transaction would imply a change in the investment’s fair value. The Price of a Recent Investment is not considered a standalone valuation technique (see further considerations below). Where the current fair value of an investment is unchanged from the price of a recent financing, the group refers to the valuation basis as ‘Recent Financing’.

Price of recent investment as an input in assessing Fair Value
The Group considers that fair value estimates which are based primarily on observable market data will be of greater reliability than those based on assumptions. Given the nature of the Group’s investments in seed, start-up and early-stage companies, where there are often no current and no short-term future earnings or positive cash flows, it can be difficult to gauge the probability and financial impact of the success or failure of development or research activities and to make reliable cash flow forecasts. Consequently, in many cases the most appropriate approach to fair value is a valuation technique which is based on market data such as the price of a recent investment, and market participant assumptions as to potential outcomes.

Calibrating such scenarios or milestones may result in a fair value equal to price of recent investment for a limited period of time. Often qualitative milestones provide a directional indication of the movement of fair value.

In applying a calibrated scenario or milestone approach to determine fair value consideration is given to performance against milestones that were set at the time of the original investment decision, as well as taking into consideration the key market drivers of the investee company and the overall economic environment. Factors that the Group considers include, inter alia, technical measures such as product development phases and patent approvals, financial measures such as cash burn rate and profitability expectations, and market and sales measures such as testing phases, product launches and market introduction.

Where the Group considers that there is an indication that the fair value has changed, an estimation is made of the required amount of any adjustment from the last price of recent investment.

Where a deterioration in value has occurred, the Group reduces the carrying value of the investment to reflect the estimated decrease. If there is evidence of value creation the Group may consider increasing the carrying value of the investment; however, in the absence of additional financing rounds or profit generation it can be difficult to determine the value that a market participant may place on positive developments given the potential outcome and the costs and risks to achieving that outcome and accordingly caution is applied.

Debt investments
Debt investments are generally unquoted debt instruments which are convertible to equity at a future point in time. Such instruments are considered to be hybrid instruments containing a fixed rate debt host contract with an embedded equity derivative. The Group designates the entire hybrid contract at fair value through profit or loss on initial recognition and, accordingly, the embedded derivative is not separated from the host contract and accounted for separately. The price at which the Debt Investment was made may be a reliable indicator of Fair Value at that date depending on facts and circumstances. Any subsequent remeasurement will be recognised as changes in fair value in the statement of comprehensive income.

(ii) At amortised cost
These assets are non-derivative financial assets with fixed and determinable payments that are not quoted in an active market. They arise principally through the provision of services to customers (trade receivables) and are carried at cost less provision for impairment.

Deposits
Deposits comprise longer-term deposits held with financial institutions with an original maturity of greater than three months and, in line with IAS 7 are not included within Cash and cash equivalents. Cash flows related to amounts held on deposit are presented within Investing activities in the Consolidated statement of cash flows.

Cash and cash equivalents
Cash and cash equivalents include cash in hand and short-term deposits held with financial institutions with an original maturity of three months or less.

Financial liabilities
Current financial liabilities are composed of trade payables and other short-term monetary liabilities, which are recognised at amortised cost.

Non-current liabilities are composed of loans from Limited Partners of consolidated funds, outstanding amounts drawn down from a debt facility provided by the European Investment Bank, carried interest plans liabilities, and revenue share liabilities arising as a result of the Group’s former Technology Pipeline Agreement with University College London.

Borrowings are recognised initially at fair value, net of transaction costs incurred. Borrowings are subsequently carried at amortised cost; any difference between the proceeds (net of transaction costs) and the redemption value is recognised in the consolidated statement of comprehensive income over the period of the borrowing using the effective interest rate method.

The Group consolidates the assets of two managed funds in which it has a significant economic interest, specifically co-investment fund IP Venture Fund II LP and IPG Cayman LP. The latter was created in late 2018 to facilitate third-party investment into the Group's US portfolio. Loans from third parties of consolidated funds represent third-party loans into these partnerships. These loans are repayable only upon these funds generating sufficient realisations to repay the Limited Partners. Management anticipates that the funds will generate the required returns and consequently recognises the full associated liabilities.

The Group operates a carried interest plan or Long-Term Incentive Carry Scheme ("LTICS") for eligible employees. Before any payment to a participant becomes due under the scheme, the Group must first have received back the amount of their investment in the relevant vintage together with a hurdle rate of 8% per annum compound on their investment. At the point at which the hurdle rate has been exceeded a liability is recognised for the unrealised gain due to members of the scheme vintage. The liability is measured by reference to the fair value of the relevant investments, with movements in the liability being recognised in the consolidated statement of comprehensive income.

The Group provides for liabilities in respect of revenue sharing obligations arising under the former Technology Pipeline Agreement with Imperial College London. Under this agreement, the Group received founder equity in spin out companies from Imperial College, and following a sale of such founder equity, a pre-specified 'revenue share' (typically 50%) is payable to Imperial College and other third parties. The liability for this revenue-share, based on fair value, is recognised as part of the movement in fair value through profit or loss (see note 15 for further details).

Unless otherwise indicated, the carrying amounts of the Group's financial liabilities are a reasonable approximation to their fair value. Non-current liabilities are recognised initially at fair value net of transaction costs incurred, and subsequently at amortised cost.

Share capital

Financial instruments issued by the Group are treated as equity if the holders have only a residual interest in the Group's assets after deducting all liabilities. The objective of the Group is to manage capital so as to provide shareholders with above- average returns through capital growth over the medium to long-term. The Group considers its capital to comprise its share capital, share premium, merger reserve and retained earnings.

Top Technology Ventures Limited, Parkwalk Advisors Ltd and Touchstone Investment Management Limited, are Group subsidiaries which are subject to external capital requirements imposed by the Financial Conduct Authority ("FCA") and as such must ensure that it has sufficient capital to satisfy these requirements. The Group ensures it remains compliant with these requirements as described in their respective financial statements.

Employee benefits

(i) Pension obligations

The Group operates a company defined contribution pension scheme for which all employees are eligible. The assets of the scheme are held separately from those of the Group in independently administered funds. The Group currently makes contributions on behalf of employees to this scheme or to employee personal pension schemes on an individual basis. The Group has no further payment obligations once the contributions have been paid. The contributions are recognised as employee benefit expenses when they are due.

(ii) Share-based payments

The Group engages in equity-settled share-based payment transactions in respect of services receivable from employees, by granting employees conditional awards of ordinary shares subject to certain vesting conditions.

Conditional awards of shares are made pursuant to the Group's Long-Term Incentive Plan ("LTIP") awards and/or the Group's Annual Incentive Scheme ("AIS"). The fair value of the shares is estimated at the date of grant, taking into account the terms and conditions of the award, including market-based performance conditions.

The fair value at the date of grant is recognised as an expense over the period that the employee provides services, generally the period between the start of the performance period and the vesting date of the shares. The corresponding credit is recognised in retained earnings within total equity. The fair value of services is calculated using the market value on the date of award and is adjusted for expected and actual levels of vesting. Where conditional awards of shares lapse the expense recognised to date is credited to the statement of comprehensive income in the year in which they lapse.

Where the terms for an equity-settled award are modified, and the modification increases the total fair value of the share-based payment, or is otherwise beneficial to the employee at the date of modification, the incremental fair value is amortised over the vesting period.

Deferred tax

Full provision is made for deferred tax on all temporary differences resulting from the carrying value of an asset or liability and its tax base. Deferred tax is determined using tax rates (and laws) that have been enacted or substantively enacted by the reporting date and are expected to apply when the related deferred tax asset is realised or deferred tax liability settled. Deferred tax assets are recognised to the extent that it is probable that the deferred tax asset will be recovered in the future.

Leases

Following the adoption of IFRS 16 all operating leases in excess of one year, where the Group is the lessee, are included on the Group's statement of financial position, and recognised as a right-of-use ("ROU") asset and a related lease liability representing the obligation to make lease payments. The ROU asset is amortised on a straight-line basis with the lease liability being amortised using the effective interest method. Short-term leases (lease terms less than 12 months) and small-value leases are exempt from IFRS 16 and are charged to the statement of comprehensive income on a straight-line basis over the term of the lease.

2. Financial Risk Management

As set out in the Principal risks and uncertainties section above, the Group is exposed, through its normal operations, to a number of financial risks, the most significant of which are market, liquidity and credit risks.

In general, risk management is carried out throughout the Group under policies approved by the Board of Directors. The following further describes the Group's objectives, policies and processes for managing those risks and the methods used to measure them. Further quantitative information in respect of these risks is presented throughout these financial statements.

(a) Market risk

(i) Price risk

The Group is exposed to equity securities price risk as a result of the equity and debt investments, and investments in Limited Partnerships held by the Group and categorised as at fair value through profit or loss.

The Group mitigates this risk by having established investment appraisal processes and asset monitoring procedures which are subject to overall review by the Board. The Group has also established corporate finance and communications teams dedicated to supporting portfolio companies with fundraising activities and investor relations.

The Group holds investments which are publicly traded on AIM (13 companies) and investments which are not traded on an active market.

The net portfolio loss in 2019 of £43.9m represents a 4.4% reduction against the opening balance (2018: net loss of £48.4m, a 4.3% reduction) and a similar increase or decrease in the prices of quoted and unquoted investments is considered to be reasonably possible. The table below summarises the impact of a 1% increase/decrease in the price of both quoted and unquoted investments on the Group's post-tax profit for the year and on equity.

	2019			2018		
	Quoted £m	**Unquoted £m**	**Total £m**	Quoted £m	Unquoted £m	Total £m
Equity and debt investments and investments in limited partnerships	**1.2**	**9.5**	**10.7**	1.3	10.1	11.4

(ii) Interest rate risk

The Group holds three EIB debt facilities with the overall balance as at 31 December 2019 amounting to £82.7m (2018: £97.8m) with £20.1m being subject to variable rate interest (2018: £24.0m) and £62.6m (2018: £73.8m) being subject to fixed rate interest of 3.2%.

The variable rate consists of two elements. A facility of £30m which bears interest at a fixed rate of 1.98% with an additional variable spread equal to the six-month GBP LIBOR rate as at the first date of each six-month interest period. The average floating interest rate (including the fixed element) for 2019 was 2.9% (2018: 2.69%). The second facility of £8.1m is based on a floating interest rate including LIBOR and the average interest in the year was 3.64% (2018: 3.42%). There are no hedging instruments in place to cover against interest rate fluctuation as exposure is deemed insignificant.

The other primary impact of interest rate risk to the Group is the impact on the income and operating cash flows as a result of the interest-bearing deposits and cash and cash equivalents held by the Group.

(iii) Concentrations of risk

The Group is exposed to concentration risk via the significant majority of the portfolio being UK-based companies and thus subject to the performance of the UK economy. The Group is increasing its operations in the US and the determination of the associated concentrations is determined by the number of investment opportunities that management believes represent a good investment.

The Group mitigates this risk, in co-ordination with liquidity risk, by managing its proportion of fixed to floating rate financial assets. The table below summarises the interest rate profile of the Group.

	2019				2018			
	Fixed rate £m	**Floating rate £m**	**Interest free £m**	**Total £m**	Fixed rate £m	Floating rate £m	Interest free £m	Total £m
Financial assets								
Equity investments	—	—	**1,021.9**	**1,021.9**	—	—	1,095.1	1,095.1
Debt investments	—	—	**23.7**	**23.7**	—	—	33.1	33.1
Limited and limited liability partnership interests	—	—	**21.4**	**21.4**	—	—	17.3	17.3
Deposits	**73.0**	—	—	**73.0**	90.0	—	—	90.0
Cash and cash equivalents	—	**121.9**	—	**121.9**	—	129.0	—	129.0
Trade receivables	—	—	**1.4**	**1.4**	—	—	4.3	4.3
Other receivables	—	—	**3.6**	**3.6**	—	—	1.5	1.5
Receivable on sale of debt and equity investments	—	—	**27.3**	**27.3**	—	—	—	—
	73.0	**121.9**	**1,099.3**	**1,294.2**	90.0	129.0	1,151.3	1,370.3
Financial liabilities								
Trade payables	—	—	**(1.5)**	**(1.5)**	—	—	(1.7)	(1.7)
Other accruals and deferred income	—	—	**(24.5)**	**(24.5)**	—	—	(14.7)	(14.7)
EIB debt facility	**(62.6)**	**(19.9)**	—	**(82.5)**	(73.8)	(24.0)	—	(97.8)
Carried interest plan liability	**—**	**—**	**(5.5)**	**(5.5)**	—	—	(6.8)	(6.8)
Revenue share liability	**—**	**—**	**(13.7)**	**(13.7)**	—	—	(11.0)	(11.0)
Loans from limited partners of consolidated funds	**—**	**—**	**(26.1)**	**(26.1)**	—	—	(23.0)	(23.0)
	(62.6)	**(19.9)**	**(71.3)**	**(164.0)**	(73.8)	(24.0)	(57.2)	(155.0)

At 31 December 2019, if interest rates had been 1% higher/lower, post-tax profit for the year, and other components of equity, would have been £1.6m (2018: £1.0m) higher/lower as a result of higher interest received on floating rate cash deposits.

(b) Liquidity risk

The Group seeks to manage liquidity risk, to ensure sufficient liquidity is available to meet foreseeable needs and to invest cash assets safely and profitably. The Group's Treasury Management Policy asserts that at any one point in time no more than 60% of the Group's cash and cash equivalents will be placed in fixed-term deposits with a holding period greater than three months. Accordingly, the Group only invests working capital in short-term instruments issued by reputable counterparties. The Group continually monitors rolling cash flow forecasts to ensure sufficient cash is available for anticipated cash requirements.

(c) Credit risk

The Group's credit risk is primarily attributable to its deposits, cash and cash equivalents, debt investments and trade receivables. The Group seeks to mitigate its credit risk on cash and cash equivalents by making short-term deposits with counterparties, or by investing in treasury funds with an "AA" credit rating or above managed by institutions. Short-term deposit counterparties are required to have most recently reported total assets in excess of £5bn and, where applicable, a prime short-term credit rating at the time of investment (ratings are generally determined by Moody's or Standard & Poor's). Moody's prime credit ratings of "P1", "P2" and "P3" indicate respectively that the rating agency considers the counterparty to have a "superior", "strong" or "acceptable" ability to repay short-term debt obligations (generally defined as having an original maturity not exceeding 13 months). An analysis of the Group's deposits and cash and cash equivalents balance analysed by credit rating as at the reporting date is shown in the table opposite. All other financial assets are unrated.

Credit rating	**2019 £m**	2018 £m
P1	**176.1**	64.1
P2	—	134.7
AAAMMF *	**13.2**	14.1
Other	**5.6**	6.1
Total deposits and cash and cash equivalents	**194.9**	219.0

*The Group holds £13.2m (2018: £14.1m) with JP Morgan GBP liquidity fund, which has a AAAMMF credit rating with Fitch

The Group holds £3.1m (2018 £6.1m) with Arbuthnot Latham, a private bank with no debt in issue and, accordingly, on which a credit rating is not applicable. Bloomberg assess Arbuthnot Latham's 1-year default probability at 0.1127% (2018: 0.0457%).

The Group has no significant concentration of credit risk, with exposure spread over a large number of counterparties and customers. The Group has detailed policies and strategies which seek to minimise these associated risks including defining maximum counterparty exposure limits for term deposits based on their perceived financial strength at the commencement of the deposit. The maximum single counterparty limit for fixed term deposits in excess of 3 months at 31 December 2019 was the greater of 25% of total group cash or £50.0m (2018: 25%, £50.0m). In addition, no single institution may hold greater than great then 50% of total cash or £50m. (2018: 50%, £50m)

The Group's exposure to credit risk on debt investments is managed in a similar way to equity price risk, as described earlier, through the Group's investment appraisal processes and asset monitoring procedures which are subject to overall review by the Board.

The maximum exposure to credit risk for debt investments, receivables and other financial assets is represented by their carrying amount.

3. Significant Accounting Estimates and Judgements
The directors make judgements and estimates concerning the future. Estimates and judgements are continually evaluated and are based on historical experience and other factors, such as expectations of future events, and are believed to be reasonable under the circumstances. Actual results may differ from these estimates. The estimates and assumptions which have the most significant effects on the carrying amounts of the assets and liabilities in the financial statements are discussed below.

(i) Valuation of unquoted equity and debt investments
The group's accounting policy in respect of the valuation of unquoted equity investments is set out in Note 1. In applying this policy, the key areas over which judgment are exercised include:

- Consideration of whether a funding round is sufficiently arm's length to be representative of fair value
- The relevance of the price of recent investment as an input to fair value
- In the case of companies with complex capital structures, the appropriate methodology for assigning value to different classes of equity based on their differential economic rights
- Where using valuation methods such as discounted cash flows, inputs including the probability of achieving milestones and the discount rate used.
- Debt investments typically represent convertible debt, in such cases judgment is exercised in respect of the estimated equity value received on conversion of the loan.

In all cases, valuations are based on the judgement of the Directors after consideration of the above and upon available information believed to be reliable, which may be affected by conditions in the financial markets. Due to the inherent uncertainty of the investment valuations, the estimated values may differ significantly from the values that would have been used had a ready market for the investments existed, and the differences could be material.

4. Revenue from Services
Revenue from services is derived from the provision of advisory and venture capital fund management services or from licensing activities, royalty revenues and patent cost recoveries.

5. Operating Segments

For both the year ended 31 December 2019 and the year ended 31 December 2018, the Group's revenue and loss before taxation were derived largely from its principal activities within the UK.

For management reporting purposes, the Group is currently organised into two operating segments:

i. the commercialisation of intellectual property via the formation of long-term partner relationships with universities;
ii. the management of venture capital funds focusing on early-stage UK technology companies;

Consideration has been given to whether the UK Life Sciences and Technology partnerships or the US and Australasian operations represent separate reporting segments. In light of the executive-level management of several strategic assets in the portfolio, the involvement of the Board in the investment approval process for larger investments, and following consideration of the criteria for aggregation of operating segments, we conclude that this is not the case.

Year ended 31 December 2019	University partnership business £m	Venture capital fund management £m	Consolidated £m
STATEMENT OF COMPREHENSIVE INCOME			
Portfolio return and revenue			
Change in fair value of equity and debt investments	**(70.6)**	—	**(70.6)**
Gain on disposal of equity investments	**16.1**	—	**16.1**
Gain on deconsolidation of subsidiary	**10.6**	—	**10.6**
Change in fair value of limited and limited liability partnership interests	**(0.7)**	—	**(0.7)**
Revenue from services and other income	**3.1**	**5.5**	**8.6**
	(41.5)	**5.5**	**(36.0)**
Administrative expenses			
Carried interest plan release	**1.3**	—	**1.3**
Share-based payment charge	**(2.3)**	—	**(2.3)**
Amortisation of intangible assets	**(0.3)**	—	**(0.3)**
Administrative expenses	**(35.0)**	**(4.1)**	**(39.1)**
Operating loss	**(77.8)**	**1.4**	**(76.4)**
Finance income	**1.1**	**0.1**	**1.2**
Finance costs	**(3.6)**	—	**(3.6)**
Loss before taxation	**(80.3)**	**1.5**	**(78.8)**
Taxation	**(0.1)**	—	**(0.1)**
Loss for the year	**(80.4)**	**1.5**	**(78.9)**
STATEMENT OF FINANCIAL POSITION			
Assets	**1,276.0**	**19.7**	**1,295.7**
Liabilities	**(146.2)**	**(7.6)**	**(153.8)**
Net assets	**1,129.8**	**12.1**	**1,141.9**
Other segment items			
Capital expenditure	**0.5**	**0.2**	**0.7**
Depreciation	**(1.1)**	**(0.1)**	**(1.2)**

Year ended 31 December 2019	UK £m	Non-UK £m	Consolidated £m
STATEMENT OF COMPREHENSIVE INCOME BY GEOGRAPHY			
Portfolio return and revenue	**(47.2)**	**11.2**	**(36.0)**
Administrative expenses	**(29.4)**	**(11.0)**	**(40.4)**
Operating (loss)/profit	**(76.6)**	**0.2**	**(76.4)**
Net interest	**(2.4)**	—	**(2.4)**
(Loss)/profit before taxation	**(79.0)**	**0.2**	**(78.8)**
Taxation	—	**(0.1)**	**(0.1)**
(Loss)/profit for the year	**(79.0)**	**0.1**	**(78.9)**

Year ended 31 December 2019	UK £m	Non-UK £m	Consolidated £m
STATEMENT OF FINANCIAL POSITION BY GEOGRAPHY			
Current assets	**220.2**	**7.0**	**227.2**
Non-current assets	**1,001.3**	**67.2**	**1,068.5**
Current liabilities	**(40.0)**	**(1.4)**	**(41.4)**
Non-current liabilities	**(103.0)**	**(9.4)**	**(112.4)**
Total equity	**1,078.5**	**63.4**	**1,141.9**

Year ended 31 December 2018	University partnership business £m	Venture capital fund management £m	Consolidated £m
STATEMENT OF COMPREHENSIVE INCOME			
Portfolio return and revenue			
Change in fair value of equity and debt investments	(50.4)	—	(50.4)
Gain on disposal of equity investments	2.0	—	2.0
Gain on deconsolidation of subsidiary	—	—	—
Change in fair value of limited and limited liability partnership interests	2.3	—	2.3
Revenue from services and other income	3.4	6.5	9.9
	(42.7)	6.5	(36.2)
Administrative expenses			
Carried interest plan charge	1.1	—	1.1
Share-based payment charge	(1.9)	—	(1.9)
Amortisation of intangible assets	(9.2)	(0.7)	(9.9)
Goodwill impairment	(201.1)	(2.1)	(203.2)
Administrative expenses	(34.3)	(7.5)	(41.8)
Operating loss	(288.1)	(3.8)	(291.9)
Finance income	1.2	—	1.2
Finance costs	(3.0)	—	(3.0)
Loss before taxation	(289.9)	(3.8)	(293.7)
Taxation	(0.1)	—	(0.1)
Loss for the year	(290.0)	(3.8)	(293.8)
STATEMENT OF FINANCIAL POSITION			
Assets	1,351.0	22.3	1,373.3
Liabilities	(145.2)	(9.9)	(155.1)
Net assets	1,205.8	12.4	1,218.2
Other segment items			
Capital expenditure	0.6	—	0.6
Depreciation	(1.2)	—	(1.2)

Year ended 31 December 2018	UK £m	Non-UK £m	Consolidated £m
STATEMENT OF COMPREHENSIVE INCOME BY GEOGRAPHY			
Portfolio return and revenue	(50.4)	14.2	(36.2)
Administrative expenses	(247.7)	(8.0)	(255.7)
Operating (loss)/profit	(298.1)	6.2	(291.9)
Net interest	(1.8)	—	(1.8)
(Loss)/profit before taxation	(299.9)	6.2	(293.7)
Taxation	(0.1)	—	(0.1)
(Loss)/profit for the year	(300.0)	6.2	(293.8)

Year ended 31 December 2018	UK £m	Non-UK £m	Consolidated £m
STATEMENT OF FINANCIAL POSITION BY GEOGRAPHY			
Current assets	207.4	18.2	225.6
Non-current assets	1,099.8	47.9	1,147.7
Current liabilities	(24.4)	(7.5)	(31.9)
Non-current liabilities	(107.5)	(15.7)	(123.2)
Total equity	1,175.3	42.9	1,218.2

6. Auditor's Remuneration

Details of the auditor's remuneration are set out below:

	2019 £'000s	2018 £'000s
Fees payable to the Company's auditor for the audit of the Company's annual accounts	**130**	129
The audit of the Company's subsidiaries, pursuant to legislation	**203**	115
Total fees for audit services	**333**	244
Audit-related assurance services	40	32
Total assurance services	**373**	276
All other services	**9**	9
Total non-assurance services	**9**	9

7. Operating Loss

Operating loss has been arrived at after (charging) or crediting:

	2019 £m	2018 £m
Amortisation of intangible assets	**(0.3)**	(9.9)
Goodwill impairment	—	(203.2)
Depreciation of tangible assets	**(1.2)**	(1.2)
Employee costs (see note 9)	**(19.6)**	(21.3)
Operating leases (see note 23)	—	(1.1)
Gain on deconsolidation of subsidiary (see note 17)	**10.6**	—

8. Other administrative expenses

Other administrative expenses comprise:

	2019 £m	2018 £m
Employee costs (see note 9)	**19.6**	21.3
IFRS 3 charge in respect of acquisition of subsidiary [1]	**2.5**	3.3
Professional services	**5.0**	7.5
Consolidated portfolio costs	**5.4**	2.6
Depreciation of tangible assets	**1.2**	1.2
Other expenses	**5.4**	5.9
	39.1	41.8

1. Costs of £2.5m (2018: £3.3m) were recognised in relation to contingent consideration payable to the sellers of Parkwalk Advisors Limited deemed under IFRS 3 to be a payment for post-acquisition services.

9. Employee Costs

Employee costs (including executive directors) comprise:

	2019 £m	2018 £m
Salaries	**13.0**	14.9
Defined contribution pension cost	**1.1**	1.3
Share-based payment charge (see note 24)	**2.3**	1.9
Other bonuses accrued in the year	**2.0**	1.4
Social security	**1.2**	1.8
	19.6	21.3

The average monthly number of persons (including executive directors) employed by the Group during the year was 130, all of whom were involved in management and administration activities (2018: 167).

10. Taxation

	2019 £m	2018 £m
Current tax		
UK corporation tax on losses for the year	**—**	—
Foreign tax	**0.1**	0.1
	0.1	0.1
Deferred tax	**—**	—
Total tax	**0.1**	0.1

The Group primarily seeks to generate capital gains from its holdings in spin-out companies over the longer-term but has historically made annual net operating losses from its operations from a UK tax perspective. Capital gains achieved by the Group would ordinarily be taxed upon realisation of such holdings. The directors continue to believe that the Group qualifies for the Substantial Shareholdings Exemption ("SSE").

The amount for the year can be reconciled to the loss per the statement of comprehensive income as follows:

	2019 £m	2018 £m
Loss before tax	**(78.8)**	(293.7)
Tax at the UK corporation tax rate of 19% (2018: 19.00%)	**(15.0)**	(55.8)
Expenses not deductible for tax purposes	**4.0**	0.2
Income not taxable	**(3.3)**	—
Amortisation on goodwill arising on consolidation	**0.1**	40.5
Non-taxable income on deconsolidation of Mobilion	**(2.0)**	—
Fair value movement on investments qualifying for SSE	**9.5**	8.8
Movement on share-based payments	**0.4**	0.3
Movement in tax losses arising not recognised	**6.3**	6.1
Rate change on foreign tax	**0.1**	—
Total tax charge	**0.1**	0.1

At 31 December 2019, deductible temporary differences and unused tax losses, for which no deferred tax asset has been recognised, totalled £285.4m (2018: £228.3m). An analysis is shown below:

	2019		2018	
	Amount £m	Deferred tax £m	Amount £m	Deferred tax £m
Accelerated capital allowances	**(0.7)**	**(0.1)**	—	—
Share-based payment costs and other temporary differences	**(13.8)**	**(2.3)**	4.6	0.8
Unused tax losses	**(270.9)**	**(46.1)**	223.7	38.0
	(285.4)	**(48.5)**	228.3	38.8

At 31 December 2019, deductible temporary differences and unused tax losses, for which a deferred tax asset/(liability) has been recognised, totalled £nil (2018: £nil). An analysis is shown below:

	2019		2018	
	Amount £m	Deferred tax £m	Amount £m	Deferred tax £m
Temporary timing differences	**6.1**	**1.0**	8.1	1.4
Unused tax losses	**(6.1)**	**(1.0)**	(8.1)	(1.4)
	—	**—**	—	—

11. Loss per Share

Loss	2019 £m	2018 £m
Loss for the purposes of basic and dilutive earnings per share	**(75.4)**	(293.8)

Number of shares	2019 Number of shares	2018 Number of shares
Weighted average number of ordinary shares for the purposes of basic earnings per share	**1,059,144,595**	1,058,678,987
Effect of dilutive potential ordinary shares:		
Options or contingently issuable shares	—	—
Weighted average number of ordinary shares for the purposes of diluted earnings per share	**1,059,144,595**	1,058,678,987

No adjustment has been made to the basic loss per share in the year ended 31 December 2019, as the exercise of share options would have the effect of reducing the loss per ordinary share, and therefore is not dilutive.

Potentially dilutive ordinary shares include contingently issuable shares arising under the Group's LTIP arrangements, and options issued as part of the Group's Sharesave schemes and Deferred Bonus Share Plan (for annual bonuses deferred under the terms of the Group's annual incentive scheme).

12. Goodwill

	2019 £m	2018 £m
At 1 January	**0.4**	202.5
Recognised on buyout of minority interest in US platform	—	1.1
Impairment of goodwill	—	(203.2)
At 31 December	**0.4**	0.4

Goodwill arising on business combinations is reviewed for impairment on an annual basis, or more frequently if there are indications that goodwill may be impaired. Recoverable amounts for CGUs are based on the higher of value in use and fair value less costs of disposal. Value in use is calculated from cashflow projections for the CGUs to which the goodwill has been allocated. The goodwill allocated to each CGU is summarised in the table below.

	2019 £m	2018 £m
Parkwalk Advisors CGU	**0.4**	0.4
	0.4	0.4

13. Intangible Assets

	£m
Cost	
At 1 January 2019	30.6
Additions acquired through business combinations	—
At 31 December 2019	**30.6**
Accumulated amortisation	
At 1 January 2019	30.3
Charge for the year	0.3
At 31 December 2019	**30.6**
Net book value	
At 31 December 2019	—
At 31 December 2018	0.3

The intangible assets represent contracts with customers and other contractual arrangements with UK universities acquired through acquisition of subsidiaries. The individual contractual arrangements are amortised in a straight line over the remainder of their terms with the expense being presented directly on the primary statements.

14. Categorisation of Financial Instruments

Financial assets	At fair value through profit or loss £m	Amortised cost £m	Total £m
At 31 December 2019			
Equity investments	**1,021.9**	—	**1,021.9**
Debt investments	**23.7**	—	**23.7**
Other financial assets	—	—	—
Limited and limited liability partnership interests	**21.4**	—	**21.4**
Trade and other receivables	—	**5.0**	**5.0**
Receivable on sale of debt and equity investments		**27.3**	**27.3**
Deposits	—	**73.0**	**73.0**
Cash and cash equivalents	—	**121.9**	**121.9**
Total	**1,067.0**	**227.2**	**1,294.2**
At 31 December 2018			
Equity investments	1,095.1	—	1,095.1
Debt investments	33.1	—	33.1
Limited and limited liability partnership interests	17.3	—	17.3
Trade and other receivables	—	5.8	5.8
Deposits	—	90.0	90.0
Cash and cash equivalents	—	129.0	129.0
Total	1,145.5	224.8	1,370.3

All financial liabilities are categorised as other financial liabilities and recognised at amortised cost.

In light of the credit ratings applicable to the Group's cash and cash equivalent and deposits, (see note 2 for further details), and given the nature of the Group's other significant receivable balance balances in respect of amounts receivable on sale of debt and equity investments which have either been received post year end or are bank guaranteed, we estimate expected credit losses on the Group's receivables to be under £0.1m and therefore not disclosed further (2018: less than £0.1m), similarly we have not presented an analysis of credit ratings of trade and other receivable and receivables on sale of debt and equity investments.

All net fair value gains in the year are attributable to financial assets designated at fair value through profit or loss on initial recognition (2018: all net fair value gains in the year are attributable to financial assets designated at fair value through profit or loss on initial recognition).

All interest income is attributable to financial assets not classified as fair value through profit and loss.

15. Net Investment Portfolio

Note 1 includes a description of the fair value hierarchy used.

	Level 1	Level 3		Total £m
	Equity investments in quoted spin-out companies £m	Unquoted debt investments in spin-out companies £m	Equity investments in unquoted spin-out companies £m	
At 1 January 2019	133.2	33.1	961.9	**1,128.2**
Investments during the year	6.3	22.2	36.2	**64.7**
Transaction-based reclassifications during the year	—	(10.3)	10.3	**—**
Other transfers between hierarchy levels during the year	—	(1.0)	1.0	**—**
Disposals	(9.0)	(0.1)	(81.6)	**(90.7)**
Fair value of investment in Mobilion recognised on deconsolidation	—	—	11.2	**11.2**
Change in revenue share[(ii)]	(0.6)	—	3.4	**2.8**
Change in fair value in the year[(i)]	(12.4)	(20.2)	(38.0)	**(70.6)**
At 31 December 2019	**117.5**	**23.7**	**904.4**	**1,045.6**
At 1 January 2018	225.0	42.3	832.5	1,099.8
Investments during the year	11.2	17.5	72.2	100.9
Transaction-based reclassifications during the year	4.7	(17.0)	12.3	—
Disposals	(7.9)	(8.0)	(11.6)	(27.5)
Fees settled via equity	—	—	0.2	0.2
Change in revenue share[(ii)]	—	—	5.2	5.2
Change in fair value in the year[(i)]	(99.8)	(1.7)	51.1	(50.4)
At 31 December 2018	**133.2**	**33.1**	**961.9**	**1,128.2**

(i) For description of revenue share arrangement see description below.
(ii) The change in fair value in the year includes a loss of £1.4m (2018: gain of £3.1m) in exchange differences on translating foreign currency investments. The total unrealised change in fair value in respect of Level 3 investments was a loss of £53.1m (2018: gain of £49.4m).

Previously, the Group's policy was to classify equity investments in unquoted spin-out companies as Level 3a where prices had been determined from recent investments in the last twelve months, and as Level 3b where prices had been determined from recent investments in more than twelve months and other valuation techniques. The Group has amended this policy to reflect revised IPEV guidelines which specify that the Price of a Recent Investment represents one of a number of inputs used to arrive at fair value, and now uses a single classification for all Level 3 equity investments. Comparative information had been represented accordingly for consistency.

Unquoted equity and debt investment are measured in accordance with IPEV guidelines with reference to the most appropriate information available at the time of measurement. In addition to recent financing transactions, significant unobservable inputs used in the fair value measurement include (inter alia) portfolio-company specific milestone analysis, estimated clinical trial success rates, exit ranges, scenario probabilities and discount factors. Where relevant, multiple valuation approaches may be used in arriving at an estimate of fair value for an individual asset. Such inputs are typically portfolio-company specific and therefore cannot be aggregated for the purposes of portfolio-level sensitivity analysis. For Level 3 companies where a DCF approach has been used, a 1% increase/decrease in the discount rate used would equate to a £11.8m increase/decrease in fair value.

For assets and liabilities that are recognised at fair value on a recurring basis, the Group determines whether transfers have occurred between levels in the hierarchy by re-assessing categorisation (based on the lowest level input that is significant to the fair value measurement as a whole) at the end of each reporting period. Transfers between levels are then made as if the transfer took place on the first day of the period in question, except in the cases of transfers between tiers based on an initial public offering ("IPO") of an investment wherein the changes in value prior to the IPO are calculated and reported in level 3, and those changes post are attributed to level 1.

Transfers between Level 3 and Level 1 occur when a previously unquoted investment undertakes an initial public offering, resulting in its equity becoming quoted on an active market. In the current period, transfers of this nature amounted to £nil (2018: £nil). Transfers between Level 1 and Level 3 would occur when a quoted investment's market becomes inactive, or the portfolio company elects to delist. There have been no such instances in the current period (2018: no such instances).

Transfers between Level 3 debt and Level 3 equity occur upon conversion of convertible debt into equity.

Within level 3 equity investments, the distribution by total portfolio company holding value is as follows: investments >£10m: £684.2m (2018: £700.3m), investments £5m-£10m: £104.9m (£147.4m), investments £1.5m-£5m: £88.0m (2018: £90.6m), investments < £1.5m: £27.2m (2018: £23.6m).

Within level 3 debt investments, the distribution by total portfolio company holding value is as follows: investments >£10m: £6.3m (2018: £10.5m), investments £5m-£10m: £2.0m (£7.5m), investments £1.5m-£5m: £11.8m (2018: £10.7), investments < £1.5m: £3.6m (2018: £4.4m).

Under the Group's former Technology Pipeline Agreement with Imperial College London, the Group received founder equity in spin out companies from Imperial College. Following a sale of such founder equity stakes, a pre-specified 'revenue share' (typically 50%) is payable to Imperial College and other third parties. As at 31 December 2019, equity investments which were subject to revenue sharing obligations totalled £13.8m (2018: £11.0m). A corresponding non-current liability is recognised in respect of these revenue sharing obligations.

Change in fair value in the year	**2019 £m**	2018 £m
Fair value gains	**86.3**	103.3
Fair value losses	**(156.9)**	(153.7)
	(70.6)	(50.4)

The Company's interests in subsidiary undertakings are listed in note 2 to the Company's financial statements.

16. Gain on disposal of equity investments

	2019 £m	2018 £m
Disposal proceeds	**79.5**	29.5
Amounts receivable on sale of debt and equity investments (see note 19)	**27.3**	—
Carrying value of investments	**(90.7)**	(27.5)
Profit on disposal	**16.1**	2.0

17. Gain on deconsolidation of subsidiary

During the first half of 2019, MOBILion completed a first close of its Series A investment of £2.9m which did not result in a loss of control by IP Group, and accordingly the proceeds of this issue of equity are disclosed within financing activities in the Group Consolidated Statement of Cash Flows.

Following a second close of the Series A fundraise, IP Group lost control of the board of MOBILion, resulting in its deconsolidation as a subsidiary and recognition as a portfolio company.

As part of this transaction, net assets including £2.5m of cash were deconsolidated from the Group Consolidated Statement of Financial Position, this movement is disclosed within investing activities in the Group Consolidated Statement of Cash Flows. The transaction resulted in a gain on deconsolidation of £10.6m, calculated as follows:

	2019 £m	2018 £m
Fair value of equity investment recognised	**11.2**	—
Fair value of subsidiary net assets disposed:		
Cash	**2.5**	—
Other net liabilities	**(3.1)**	—
	10.6	—

18. Trade and Other Receivables

	2019 £m	2018 £m
Trade debtors	**1.4**	4.3
Prepayments	**0.6**	0.8
Right of use asset	**2.1**	—
Other receivables	**0.9**	1.5
	5.0	6.6

The directors consider the carrying amount of trade and other receivables to approximate their fair value. All receivables are interest free, repayable on demand and unsecured.

19. Receivable on sale of debt and equity investments

	2019 £m	2018 £m
Deferred consideration	**5.3**	—
Short term receivables	**22.0**	—
	27.3	—

Deferred consideration relates to amounts receivable respect of the sale of Dukosi Limited (£5.0m) and Process Systems Enterprise Limited (£0.3m).

Short term receivables relates to £22.0m receivable in respect of shares in Oxford Nanopore Technology Limited sold on 31 December 2019 and for which payment was received in February 2020.

20. Trade and Other Payables

Current liabilities	**2019 £m**	2018 £m
Trade payables	**1.4**	1.7
Social security expenses	**0.5**	0.7
Bonus accrual	**2.1**	2.1
Lease Liability	**2.1**	—
Payable to Imperial College and other third parties under revenue share obligations	**11.2**	1.7
Current tax payable	**0.1**	0.1
Other accruals and deferred income	**8.6**	10.2
	26.0	16.5

Amounts payable to Imperial College and other third parties under revenue share obligations include £9.7m payable in respect of the disposal proceeds of Process Systems Enterprise Limited, which were settled in January 2020.

21. Borrowings

Non-current liabilities	**2019 £m**	2018 £m
Loans drawn down from the Limited Partners of consolidated funds	**26.0**	23.0
EIB debt facility	**67.1**	82.4
	93.1	105.4

Current liabilities	**2019 £m**	2018 £m
EIB debt facility	**15.4**	15.4
	15.4	15.4

Loans drawn down from the Limited Partners of consolidated funds

The loans from Limited Partners of consolidated funds are interest free and repayable only upon the applicable funds generating sufficient returns to repay the Limited Partners. Management anticipates that the funds will generate the required returns and consequently recognises the full associated liabilities. The classification of these loans as non-current reflects the forecast timing of returns and subsequent repayment of loans, which is not anticipated to occur within one year.

EIB debt facility

The Group has a number of debt facilities with the European Investment Bank which it has used to fund UK university spin-out companies as they develop and mature. The terms of the facilities are summarised below:

Description	Initial amount	Date drawn	Interest rate	Repayment terms	Repayment commencement date
IP Group Facility, tranche 1	£15m	Dec 2015	Floating, linked to LIBOR	5 years	Jan 2019
IP Group Facility, tranche 2	£15m	Dec 2017	Fixed 3.016%	5 years	Jan 2019
Touchstone Facility A	£30m	Jul 2013	Floating, linked to LIBOR	12 years	Jan 2015
Touchstone Facility B	£50m	Feb 2017	Fixed 3.026%	8 years	Jul 2018

The IP Group loans contain covenants requiring that the ratio between the value of the portfolio along with the value of the Group's cash net of any outstanding liabilities, and the outstanding debt facility does not fall below 6:1. The Group must maintain that the amount of unencumbered funds freely available to the Group is not less than £15.0m. The Group is also required to maintain a separate bank account which must at any date maintain a minimum balance equal to that of all payments due to the EIB in the forthcoming six months.

The Touchstone loans contain a debt covenant requiring that the ratio of the total fair value of investments plus cash and qualifying liquidity to debt should at no time fall below 4:1. The loan also stipulates that on any date, the aggregate of all amounts scheduled for payment to the EIB in the following six months should be kept in a separate bank account.

The Group closely monitors that the covenants are adhered to on an ongoing basis and has complied with these covenants throughout the year. The Group will continue to monitor the covenants' position against forecasts and budgets to ensure that it operates within the prescribed limits.

The maturity profile of the borrowings was as follows:	**2019 £m**	2018 £m
Due within 6 months	**7.7**	7.7
Due 6 to 12 months	**7.7**	7.7
Due 1 to 5 years	**64.2**	61.7
Due after 5 years	**3.1**	21.0
Total (i)	**82.7**	98.1

A reconciliation in the movement in debt is as follows:	**2019 £m**	2018 £m
At 1 January	**98.1**	104.4
Repayment of debt	**(15.4)**	(6.3)
At 31 December(i)	**82.7**	98.1

There were no non-cash movements in debt.

(i) These are gross amounts repayable and exclude costs of £0.2m (2018: £0.3m) incurred on obtaining the loans and amortised over the life of the loans.

22. Share Capital

Issued and fully paid:	2019 Number	2019 £m	2018 Number	2018 £m
Ordinary shares of 2p each				
At 1 January	**1,059,144,595**	**21.2**	1,057,383,601	21.1
Issued in respect of post-acquisition services	**—**	**—**	1,519,849	0.1
Issued under employee share plans	**—**	**—**	241,145	—
At 31 December	**1,059,144,595**	**21.2**	1,059,144,595	21.2

The Company has one class of ordinary shares with a par value of 2p ("Ordinary Shares") which carry equal voting rights, equal rights to income and distributions of assets on liquidation, or otherwise, and no right to fixed income.

23. Operating Lease Arrangements

The group leases office premises. Information about leases for which the Group is a lessee is presented below.

Right of use asset	2019 £m
At 1 January 2019	2.7
Additions	0.5
Depreciation charge for the year	(1.1)
At 31 December 2019	2.1

At the reporting date, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

Lease Liabilities

Maturity analysis - contractual undiscounted cash flows	2019 £m
Within one year	1.3
In the second to fifth years inclusive	0.9
More than five years	**—**
Total undiscounted lease liabilities at 31 December 2019	2.2

Statement of financial position	2019 £m
Current	1.2
Non-current	0.9
At 31 December 2019	2.1

Statement of comprehensive income	2019 £m
Interest on lease liabilities	0.1

Amounts recognised in the statement of cash flows	2019 £m
Total cash outflow for leases	1.2

	2018 £m
Payments under operating leases recognised in the statement of comprehensive income for the year	1.1

At the reporting date, the Group had outstanding commitments for future minimum lease payments under non-cancellable operating leases, which fall due as follows:

	2018 £m
Within one year	1.8
In the second to fifth years inclusive	3.4
	5.2

Operating lease payments represent rentals by the Group for its office properties. Leases are negotiated for an average term of five years and rentals are fixed for an average of one year.

24. Share-Based Payments

In 2018, the Group continued to incentivise employees through its LTIP and AIS.

Deferred Bonus Share Plan ("DBSP")

Awards made to employees under the Group's AIS above a certain threshold include 50% deferred into IP Group equity through the grant of nil-cost options under the Group's DBSP. The number of nil-cost options granted under the Group's DBSP is determined by the share price at the vesting date. The DBSP options are subject to further time-based vesting over two years (typically 50% after year one and 50% after year two).

An analysis of movements in the DBSP options outstanding is as follows:

	Number of options 2019	**Weighted -average exercise price 2019**	Number of options 2018	Weighted -average exercise price 2018
At 1 January	**605,641**	—	394,494	—
AIS deferral shares award during the year	**192,106**	—	468,901	—
Exercised during the year	**(63,370)**	—	(241,145)	—
Lapsed during the year	**(271,937)**	—	(16,609)	—
At 31 December	**462,440**	—	605,641	—
Exercisable at 31 December	**114,028**	—	153,349	—

The options outstanding at 31 December 2019 had an exercise price of £nil (2018: £nil) and a weighted-average remaining contractual life of 0.5 years (2018: 0.6 years).

The weighted average share price at the date of exercise for share options exercised in 2019 was 98.6p (2018: 127p).

As the 2018 AIS financial performance targets were met and as the number of DBSP options to be granted in order to defer such elements of the AIS payments as are required under our remuneration policy are based on a percentage of employees' salary, the share-based payments line includes the associated share-based payments expense incurred in 2018.

Long-Term Incentive Plan ("LTIP")

Awards under the LTIP take the form of conditional awards of ordinary shares of 2p each in the Group which vest over the prescribed performance period to the extent that performance conditions have been met. The Remuneration Committee imposes objective conditions on the vesting of awards and these take into consideration the guidance of the Group's institutional investors from time to time.

The 2019 LTIP awards were made on 26 April 2019. The awards will ordinarily vest on 31 March 2022, to the extent that the performance conditions have been met. The awards are based on the performance of the Group's Hard NAV and Total Shareholder Return ("TSR"). Both performance measures are combined into a matrix format to most appropriately measure performance relative to the business, as shown in the Directors' Remuneration Report within the Group's 2018 Annual Report and Accounts. The total award is subject to an underpin based on the relative performance of the Group's TSR to that of the FTSE 250 index, which can reduce the awards by up to 50%. The 2018 LTIP matrix is designed such that up to 100% of the award (prior to the application of the underpin) will vest in full in the event of both Hard NAV increasing by 15% per year on a cumulative basis, from 1 January 2019 to 31 December 2021, and TSR increasing by 15% per year on a cumulative basis from the date of award to 31 March 2022, using an industry-standard average price period at the beginning and end of the performance period. Further, the matrix is designed such that 30% of the award shall vest (again prior to the application of the underpin) if the cumulative increase is 8% per annum for both measures over their respective performance periods ("threshold performance"). A straight-line sliding scale is applied for performance between the distinct points on the matrix of vesting targets.

The 2018 LTIP awards were made on 10 May 2018. The awards will ordinarily vest on 31 March 2021, to the extent that the performance conditions have been met. The awards are based on the performance of the Group's Hard NAV and Total Shareholder Return ("TSR"). Both performance measures are combined into a matrix format to most appropriately measure performance relative to the business, as shown in the Directors' Remuneration Report within the Group's 2018 Annual Report and Accounts. The total award is subject to an underpin based on the relative performance of the Group's TSR to that of the FTSE 250 index, which can reduce the awards by up to 50%. The 2018 LTIP matrix is designed such that up to 100% of the award (prior to the application of the underpin) will vest in full in the event of both Hard NAV increasing by 15% per year on a cumulative basis, from 1 January 2018 to 31 December 2020, and TSR increasing by 15% per year on a cumulative basis from the date of award to 31 March 2021, using an industry-standard average price period at the beginning and end of the performance period. Further, the matrix is designed such that 30% of the award shall vest (again prior to the application of the underpin) if the cumulative increase is 8% per annum for both measures over their respective performance periods ("threshold performance"). A straight-line sliding scale is applied for performance between the distinct points on the matrix of vesting targets.

The 2017 LTIP awards were made on 29 August 2017. The awards will ordinarily vest on 31 March 2020, to the extent that the performance conditions have been met. The awards are based on the performance of the Group's Hard NAV and Total Shareholder Return ("TSR"). Both performance measures are combined into a matrix format to most appropriately measure performance relative to the business, as shown in the Directors' Remuneration Report within the Group's 2017 Annual Report and Accounts. The total award is subject to an underpin based on the relative performance of the Group's TSR to that of the FTSE 250 index, which can reduce the awards by up to 50%. The 2017 LTIP matrix is designed such that up to 100% of the award (prior to the application of the underpin) will vest in full in the event of both Hard NAV increasing by 15% per year on a cumulative basis, from 1 January 2017 to 31 December 2019, and TSR increasing by 15% per year on a cumulative basis from the date of award to 31 March 2020, using an industry-standard average price period at the beginning and end of the performance period. Further, the matrix is designed such that 30% of the award shall vest (again prior to the application of the underpin) if the cumulative increase is 8% per annum for both measures over their respective performance periods ("threshold performance"). A straight-line sliding scale is applied for performance between the distinct points on the matrix of vesting targets.

The 2016 LTIP awards did not meet the threshold performance target and lapsed on 31 March 2019.

The movement in the number of shares conditionally awarded under the LTIP is set out below:

	Number of options 2019	**Weighted-average exercise price 2019**	Number of options 2018	Weighted-average exercise price 2018
At 1 January	**12,376,238**	—	9,066,117	—
Lapsed during the year	**(2,971,286)**	—	(1,262,697)	—
Forfeited during the year	**(764,103)**	—	(452,484)	—
Vested during the year	—	—	—	—
Notionally awarded during the year	**7,018,906**	—	5,025,302	—
At 31 December	**15,659,755**	—	12,376,238	—
Exercisable at 31 December	—	—	—	—

The options outstanding at 31 December 2019 had an exercise price in the range of £nil (2018: £nil) and a weighted-average remaining contractual life of 1.4 years (2018: 1.3 years).

The fair value of LTIP shares notionally awarded during the year was calculated using Monte Carlo pricing models with the following key assumptions:

	2019	**2018**
Share price at date of award	**£0.991**	£1.355
Exercise price	**£nil**	£nil
Fair value at grant date	**£0.34**	£0.57
Expected volatility (median of historical 50-day moving average)	**37%**	36%
Expected life (years)	**3.0**	3.0
Expected dividend yield	**0%**	0%
Risk-free interest rate	**1.0%**	1.0%

Former Touchstone LTIP

Also in 2017, as a result of the combination with Touchstone, award holders under existing Touchstone long-term incentive share schemes were entitled to receive 2.2178 new IP Group shares in exchange for each Touchstone share, an exchange ratio set out in the Offer Document for the acquisition (the "exchange ratio").

2016 schemes:

It was proposed that, given the short period of time since grant, awards would not become exercisable in connection with the Offer and therefore that no progress towards meeting performance targets had been made. Instead award holders were offered the opportunity to release their awards in exchange for the grant of a replacement award of equivalent value over shares in IP Group and the exercise price was set at 3.33 pence divided by the exchange ratio. The vesting dates on the replacement awards remained the same as the original award, being 1 December 2020, 1 December 2021 and 1 December 2022. The replacement awards are subject to performance conditions adjusted from those attaching to the original Touchstone award as follows: a) the Net Asset Value ("NAV") condition will be adjusted to reflect Touchstone's portfolio being part of the enlarged group following the acquisition and b) the Total Shareholder Return ("TSR") condition will be adjusted so that TSR shall be measured by reference to the performance of IP Group shares over the performance period with the starting share price for such purpose being adjusted by dividing the existing starting share price of 290 pence by the exchange ratio detailed above. The TTO specific targets remain the same.

	Number of options 2019	**Weighted-average exercise price 2019**	Number of options 2018	Weighted-average exercise price 2018
At 1 January	**1,146,810**	—	2,875,606	—
Forfeited during the year	**(406,754)**	—	(1,728,796)	—
At 31 December	**740,056**	—	1,146,810	—
Exercisable at 31 December	—	—	—	—

The options outstanding at 31 December 2019 had an exercise price of £1.366 (2018: £1.366) and a weighted-average remaining contractual life of 1.9 years (2018: 2.9 years).

2006 schemes:
Holders of 2006 Touchstone awards were offered the opportunity to release each of their awards in exchange for the grant of a replacement award of equivalent value over shares in IP Group. The exercise period and time-based vesting provisions for the replacement awards remained the same as the original Touchstone awards but the shareholder return performance condition will be updated by reference to the exchange ratio. Awards under the 2006 scheme were exercisable to some extent at the time of the grant of replacement awards, subject to meeting the applicable vesting conditions.

	Number of options 2019	**Weighted-average exercise price 2019**	Number of options 2018	Weighted-average exercise price 2018
At 1 January	**1,278,834**	**—**	1,808,001	—
Forfeited during the year	**(200,735)**	**—**	(529,167)	—
At 31 December	**1,078,099**	**2.13**	1,278,834	2.14
Exercisable at 31 December	**1,078,099**	**2.13**	1,278,834	2.14

The options outstanding at 31 December 2019 had an exercise price of £2.13 (2018: £2.14) and a weighted-average remaining contractual life of 4.9 years (2018: 5.9 years).

The fair value charge recognised in the statement of comprehensive income during the year in respect of all share-based payments, including the DBSP, LTIP and Former Fusion IP LTIP, was £2.3m (2018: £1.9m).

25. Limited and Limited Liability Partnership Interests

	£m
At 1 January 2018	11.0
Additions during the year	4.8
Realisations in the year	(0.8)
Change in fair value during the year	2.3
At 1 January 2019	**17.3**
Additions during the year	**6.8**
Realisations in the year	**(2.0)**
Change in fair value during the year	**(0.7)**
At 31 December 2019	**21.4**

The Group considers interests in Limited and Limited Liability Partnerships to be Level 3 in the fair value hierarchy throughout the current and previous financial years. If the assumptions used in the valuation techniques for the Group's holding in each company are varied by using a range of possible alternatives, there is no material difference to the carrying value of the respective spin-out company. The effect on the consolidated statement of comprehensive income for the period is also not expected to be material.

26. Related Party Transactions

The Group has various related parties arising from its key management, subsidiaries, equity stakes in portfolio companies and management of certain Limited Partnership funds.

a) Limited Partnerships
The Group manages a number of investment funds structured as Limited Partnerships. Group entities have a Limited Partnership interest (see note 1) and act as the general partners of these Limited Partnerships. The Group therefore has power to exert significant influence over these Limited Partnerships. The following amounts have been included in respect of these Limited Partnerships:

Statement of comprehensive income	**2019 £m**	2018 £m
Revenue from services	**0.1**	0.5

Statement of financial position	**2019 £m**	2018 £m
Investment in limited partnerships	**5.6**	**5.8**
Amounts due from related parties	—	**1.2**

b) Key management transactions

The following key management held shares in the following spin-out companies as at 31 December 2019:

Director/ PDMR	Company name	Number of shares held at 1 January 2019	Number of shares acquired/ (disposed of) in the period	Number of shares held at 31 December 2019	%
Alan Aubrey	Accelercomm Limited	638	—	638	0.24%
	Alesi Surgical Limited	18	—	18	0.14%
	Amaethon Limited — A Shares	104	—	104	3.12%
	Amaethon Limited — B Shares	11,966	—	11,966	1.04%
	Amaethon Limited — Ordinary shares	21	—	21	0.32%
	Avacta Group plc	191,334	—	191,334	<0.1%
	Boxarr Limited	1,732	—	1,732	0.24%
	Capsant Neurotechnologies Limited	11,631	—	11,631	0.81%
	Crysalin Limited	1,447	—	1,447	0.13%
	Deep Matter Group plc	2,172,809	—	2,172,809	0.30%
	Ditto AI Limited – Ordinary Shares	72,092,028	1,025,820,000	1,097,912,028	12.41%
	Ditto AI Limited – B Shares	98,876,568	—	98,876,568	1.12%
	Diurnal Group plc	15,000	—	15,000	<0.1%
	EmDot Limited	15	—	15	0.87%
	Getech Group plc[2]	15,000	—	15,000	<0.1%
	hVivo plc	37,160	—	37,160	<0.1%
	Ilika plc[2]	14,476	—	14,476	<0.1%
	Istesso Limited	1,185,150	—	1,185,150	1.05%
	Itaconix plc	88,890	—	88,890	<0.1%
	Karus Therapeutics Limited	223	—	223	<0.1%
	Microbiotica Limited	10,000	—	10,000	<0.1%
	Mirriad Advertising plc	33,333	—	33,333	<0.1%
	Modern Water plc	519,269	—	519,269	0.42%
	Oxbotica Limited	16	13	29	<0.1%
	Oxford Advanced Surfaces Limited	1	—	1	<0.1%
	Oxford Nanopore Technologies Limited	101,208	(8,483)	92,725	0.31%
	Perachem Holdings plc	108,350	—	108,350	0.29%
	Salunda Limited	53,639	—	53,639	<0.1%
	Structure Vision Limited	212	(212)	0	0.00%
	Surrey Nanosystems Limited	453	—	453	0.22%
	Tissue Regenix Group plc	2,389,259	—	2,389,259	0.20%
	Xeros Technology Group plc	22,847	—	22,847	<0.1%
	Zeetta Networks Limited	424	—	424	0.13%
Mike Townend	Amaethon Limited — A Shares	104	—	104	3.12%
	Amaethon Limited — B Shares	11,966	—	11,966	1.04%
	Amaethon Limited — Ordinary shares	21	—	21	0.32%
	Applied Graphene Materials plc	22,619	—	22,619	<0.1%
	Avacta Group plc	20,001	—	20,001	<0.1%
	Capsant Neurotechnologies Limited	11,282	—	11,282	0.79%
	Creavo Technologies Limited	117	—	117	<0.1%
	Crysalin Limited	1,286	—	1,286	0.11%
	Deep Matter Group plc	932,944	—	932,944	0.13%
	Ditto AI Limited	613,048	—	613,048	<0.1%
	Diurnal Group plc	15,000	—	15,000	<0.1%
	EmDot Limited	14	—	14	0.81%
	Getech Group plc[2]	20,000	—	20,000	<0.1%
	Istesso Limited	1,185,150	—	1,185,150	1.05%
	Ilika plc[2]	10,000	—	10,000	<0.1%

Director/ PDMR	Company name	Number of shares held at 1 January 2019	Number of shares acquired/ (disposed of) in the period	Number of shares held at 31 December 2019	%
Mike Townend	Itaconix plc	64,940	—	64,940	<0.1%
	Mirriad Advertising plc	25,000	—	25,000	<0.1%
	Modern Water plc	575,000	—	575,000	0.46%
	Oxbotica Limited	—	26	26	<0.1%
	Oxford Advanced Surfaces Limited	1	—	1	<0.1%
	Oxford Nanopore Technologies Limited	30,967	(2,316)	28,651	<0.1%
	Perachem Holdings plc	113,222	—	113,222	0.30%
	Structure Vision Limited	212	(212)	0	0.00%
	Surrey Nanosystems Limited	404	—	404	0.20%
	Tissue Regenix Group plc	1,950,862	—	1,950,862	0.17%
	Ultraleap Holdings Limited[1]	1,224	—	1,224	<0.1%
	Xeros Technology Group plc	35,499	—	35,499	<0.1%
Greg Smith	Alesi Surgical Limited	2	—	2	<0.1%
	Avacta Group plc	3,904	—	3,904	<0.1%
	Capsant Neurotechnologies Limited	896	—	896	<0.1%
	Crysalin Limited	149	—	149	<0.1%
	Ditto AI Limited	144,246	—	144,246	<0.1%
	Diurnal Group plc	15,000	—	15,000	<0.1%
	EmDot Limited	4	—	4	0.23%
	Getech Group plc[2]	8,000	—	8,000	<0.1%
	hVivo plc	61,340	—	61,340	<0.1%
	Istesso Limited	313,425	—	313,425	0.28%
	Itaconix plc	4,500	—	4,500	<0.1%
	Perachem Holdings plc	4,830	—	4,830	<0.1%
	Mirriad Advertising plc	16,667	—	16,667	<0.1%
	Modern Water plc	7,250	—	7,250	<0.1%
	Oxbotica Limited	8	—	8	<0.1%
	Oxford Nanopore Technologies Limited	1,581	(44)	1,537	<0.1%
	Surrey Nanosystems Limited	88	—	88	<0.1%
	Tissue Regenix Group plc	50,000	—	50,000	<0.1%
	Xeros Technology Group plc	1,392	—	1,392	<0.1%
David Baynes	Alesi Surgical Limited	4	—	4	<0.1%
	Arkivum Limited	377	—	377	<0.1%
	Creavo Technologies Limited	46	—	46	<0.1%
	Diurnal Group plc	73,000	—	73,000	<0.1%
	Mirriad Advertising plc	16,667	—	16,667	<0.1%
	Oxford Nanopore Technologies Limited	174	—	174	<0.1%
	Ultrahaptics Holdings Limited[1]	2,600	—	2,600	<0.1%
	Zeetta Networks Limited	424	—	424	0.13%
Mark Reilly	Actual Experience plc	65,500	—	65,500	0.14%
	Ceres Power Holdings plc	5,697	—	5,697	<0.1%
	Diurnal Group plc	7,500	—	7,500	<0.1%
	Mirriad Advertising plc	33,333	33,333	66,666	<0.1%
	Oxbotica Limited	8	—	8	<0.1%
	Ultraleap Holdings Limited[1]	1,700	—	1,700	<0.1%
	Wave Optics Limited	308	—	308	<0.1%
Sam Williams	Accelercomm Limited	127	—	127	<0.1%
	Alesi Surgical Limited	1	—	1	<0.1%
	Avacta Group plc	19,537	—	19,537	<0.1%
	Creavo Medical Technologies Limited	23	—	23	<0.1%
	Diurnal Group plc	52,248	—	52,248	<0.1%

Director/ PDMR	Company name	Number of shares held at 1 January 2019	Number of shares acquired/ (disposed of) in the period	Number of shares held at 31 December 2019	%
Sam Williams	Genomics plc	333	—	333	<0.1%
	Istesso Limited	7,048,368	—	7,048,368	8.89%
	Microbiotica Limited	7,000	—	7,000	<0.1%
	Mirriad Advertising plc	3,333	—	3,333	<0.1%
	Oxehealth Limited	—	27	27	<0.1%
	Oxford Nanopore Technologies Limited	340	—	340	<0.1%
	Topivert Limited	—	1,000	1,000	<0.1%
	Ultraleap Holdings Limited[1]	558	—	558	<0.1%

1. Previously called Ultrahaptics Holdings Limited
2. No longer a portfolio company at the balance sheet date

ii) Key management personnel compensation

Key management personnel compensation comprised the following:

	2019 £m	2018 £m
Short-term employee benefits[(i)]	**2,776**	2,402
Post-employment benefits[(ii)]	**93**	114
Other long-term benefits	**—**	—
Termination benefits	**—**	—
Share-based payments[(iii)]	**1,195**	1,089
Total	**4,064**	3,605

(i) Represents key management personnel's base salaries, benefits including cash in lieu of pension where relevant, and the cash-settled element of the Annual Incentive Scheme.
(ii) Represents employer contributions to defined contribution pension and life assurance plans
(iii) Represents the accounting charge for share-based payments, reflecting LTIP and DBSP options currently in issue as part of these schemes. See note 24 for a detailed description of these schemes.

c) Portfolio companies

i) Services

The Group earns fees from the provision of business support services and corporate finance advisory services to portfolio companies in which the Group has an equity stake. Through the lack of control over portfolio companies these fees are considered arms-length transactions. The following amounts have been included in respect of these fees:

Statement of comprehensive income	2019 £m	2018 £m
Revenue from services	**0.5**	4.3

Statement of financial position	2019 £m	2018 £m
Trade receivables	**0.2**	0.9

ii) Investments

The Group makes investments in the equity and debt of unquoted and quoted investments where it does not have control but may be able to participate in the financial and operating policies of that company. It is presumed that it is possible to exert significant influence when the equity holding is greater than 20%. The Group has taken the Venture Capital Organisation exception as permitted by IAS 28 and not recognised these companies as associates, but they are related parties. The total amounts included for investments where the Group has significant influence but not control are as follows:

Statement of comprehensive income	2019 £m	2018 £m
Net portfolio losses	**(54.2)**	(20.5)

Statement of financial position	2019 £m	2018 £m
Equity and debt investments	**532.7**	618.1

d) Subsidiary companies

Subsidiary companies that are not 100% owned either directly or indirectly by the parent Company have intercompany balances with other Group companies totalling as follows:

Statement of financial position	2019 £m	2018 £m
Intercompany balances with other Group companies	**1.5**	**3.6**

These intercompany balances represent funding loans provided by Group companies that are interest free, repayable on demand and unsecured.

27. Capital Management

The Group's key objective when managing capital is to safeguard the Group's ability to continue as a going concern so that it can continue to provide returns for shareholders and benefits for other stakeholders.

The Group sets the amount of capital in proportion to risk. The Group manages the capital structure, and makes adjustments to it, in light of changes in economic conditions and the risk characteristics of its underlying assets. In order to maintain or adjust the capital structure, the Group may adjust the amount of issued new shares or dispose of interests in more mature portfolio companies.

During 2019, the Group's strategy, which was unchanged from 2018, was to maintain healthy cash and short-term deposit balances that enable it to provide capital to all portfolio companies, as determined by the Group's investment committee, whilst having sufficient cash reserves to meet all working capital requirements in the foreseeable future.

The Group has an external debt facility with associated covenants that are described in note 21.

28. Capital Commitments

Commitments to limited partnerships

Pursuant to the terms of their Limited Partnership agreements, the Group has committed to invest the following amounts into Limited Partnerships as at 31 December 2019:

Partnership	Year of commencement of partnership	Original commitment £m	Invested to date £m	Remaining commitment £m
IP Venture Fund	2006	3.1	3.1	—
IP Venture Fund II LP	2013	10.0	7.6	2.4
UCL Technology Fund LP	2016	24.8	10.2	14.6
Apollo Therapeutics LLP	2016	3.3	1.0	2.3
Total		**41.2**	**21.9**	**19.3**

29. Alternative Performance Measures ("APM")

IP Group management believes that the alternative performance measures included in this document provide valuable information to the readers of the financial statements as they enable the reader to identify a more consistent basis for comparing the business' performance between financial periods and provide more detail concerning the elements of performance which the managers of the Group are most directly able to influence or are relevant for an assessment of the Group. They also reflect an important aspect of the way in which operating targets are defined and performance is monitored by the directors. These measures are not defined by IFRS and therefore may not be directly comparable with other companies' APMs, including those in the Group's industry. APMs should be considered in addition to, and are not intended to be a substitute for, or superior to, IFRS measurements.

The directors believe that these APMs assist in providing additional useful information on the underlying trends, performance and position of the Group. Consequently, APMs are used by the directors and management for performance analysis, planning, reporting and incentive-setting purposes.

APM	Reference for reconciliation	Definition and purpose	Calculation	2019 £m	2018 £m
Hard NAV	Primary statements	Hard NAV is defined as the total equity of the Group less intangible assets. Excluding intangible assets highlights the Group's assets that management can be reasonably expected to influence in the short term and therefore reflects the short-term resources available to drive future performance. Additionally, excluding intangible assets allows better comparison with the Group's competitors, many of which operate under fund structures and therefore would not include intangible assets. The measure shows tangible assets managed by the Group. It is used as a performance metric for directors and employees as a part of annual incentives in the Group.	Total equity	**1,141.9**	1,218.2
			Excluding:		
			Goodwill	**0.4**	0.4
			Other intangible assets	—	0.3
			Hard NAV	**1,141.5**	1,217.5
Hard NAV per share	Primary statements Note 22	Hard NAV per share is defined as Hard NAV, as defined above, divided by the number of shares in issue. The measure shows tangible assets managed by the Group per share in issue. It is a useful measure to compare to the Group's share price.	Hard NAV	**£1,141.5m**	£1,217.5m
			Shares in issue	**1,059,144,595**	1,059,144,595
			Hard NAV per share	**107.8p**	115.0p
Return on Hard NAV	Primary statements, Note 8	Return on Hard NAV is defined as the total comprehensive income or loss for the year excluding charges which do not impact on Hard NAV, specifically amortisation of intangible assets, share-based payment charges and the charge in respect of consideration deemed to represent post-acquisition services under IFRS 3 which is anticipated to be a non-recurring item. Return on Hard NAV is defined as the total comprehensive income or loss for the year excluding charges which do not impact on Hard NAV, specifically amortisation of intangible assets, share-based payment charges and the charge in respect of consideration deemed to represent post-acquisition services under IFRS 3. The measure shows a summary of the income statement gains and losses which directly impact Hard NAV.	Total comprehensive income	**(78.8)**	(293.9)
			Excluding:		
			Amortisation of intangible assets	**0.3**	9.9
			Goodwill impairment	—	203.2
			Share-based payment charge	**2.3**	1.9
			IFRS 3 charge in respect of acquisition of subsidiary (note 8)	**2.5**	3.3
			Return on Hard NAV	**(73.7)**	(75.6)
Net portfolio gains/(losses)	Note 15	Net portfolio gains are defined as the movement in the value of holdings in the portfolio due to share price movements or impairments in value, gains or losses on realisation of investments and gains or losses on disposals of subsidiaries. The measure shows a summary of the income statement gains and losses which are directly attributable to the portfolio, which is a headline measure for the Group's performance. This is a key driver of the Return on Hard NAV which is a performance metric for directors' and employees' incentives.	Change in fair value of equity and debt investments	**(70.6)**	(50.4)
			Gain on disposal of equity investments	**16.1**	2.0
			Gain on deconsolidation of subsidiary	**10.6**	—
			Net portfolio (losses)/gains	**(43.9)**	(48.4)

APM	Reference for reconciliation	Definition and purpose	Calculation	2019 £m	2018 £m
Net overheads	Financial Review, Note 8	Net overheads are defined as the Group's core overheads less operating income. The measure reflects the Group's controllable net operating "cash-equivalent" central cost base and is used as a performance metric in the Group's annual incentive scheme. Core overheads exclude items such as share-based payments, amortisation of intangibles and consolidated portfolio company costs	Other income	**8.6**	9.9
			Other administrative expenses (see statement of comprehensive income)	**(39.1)**	(41.8)
			Excluding:		
			Administrative expenses – consolidated portfolio companies	**5.4**	2.6
			IFRS 3 charge in respect of acquisition of subsidiary (note 8)	**2.5**	3.3
			Net overheads	**(22.6)**	(26.0)
Cash and deposits	Primary statements	Cash is defined as cash and cash equivalents plus deposits. The measures gives a view of the Group's liquid resources on a short-term timeframe. The Group's Treasury Policy has a maximum maturity limit of 13 months for deposits.	Cash and cash equivalents	121.9	129.0
			Deposits	73.0	90.0
			Cash	**194.9**	**219.0**

The selection of the modified retrospective approach for adoption of IFRS 16 in which prior year comparative information is not restated has not resulted in any inconsistencies in the Group's APMs.

30. Post Balance Sheet Events

As of the reporting date, the Group has completed realisations of £55.4m in respect of the 2019 disposal of shares in Oxford Nanopore Technologies Limited, and other disposals including in Ceres Power Holdings plc.

As of the reporting date, realised and unrealised fair value gains in respect of the Group's quoted portfolio totalled £20m, largely in respect of Ceres Power Holdings plc, which has seen a overall fair value gain of £25m since 31 December 2019.