

Annual Report 2018

ICON plc and Subsidiaries



Directors' Report and Consolidated Financial Statements

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Directors' and Other Information

Directors	Ciaran Murray (Irish – Non-Executive Chairman) Dr. Steve Cutler (Australian – Chief Executive Officer) Prof. Hugh Brady (Irish – Non-Executive) Dr. John Climax (Irish – Non-Executive) Joan Garahy (Irish – Non-Executive) Prof. William Hall (Irish – Non-Executive) Prof. Dermot Kelleher (Irish – Non-Executive) Eugene McCague (Irish – Non-Executive) Declan McKeon (Irish – Non-Executive) Ronan Murphy (Irish – Non-Executive) Mary Pendergast (American – Non-Executive)
Company secretary	Diarmaid Cunningham
Registered office	South County Business Park Leopardstown Dublin 18
Auditor	KPMG Chartered Accountants 1 Stokes Place St. Stephen's Green Dublin 2
Solicitors	A & L Goodbody International Financial Services Centre North Wall Quay Dublin 1
	Cahill Gordon Reindel LLP 80 Pine Street NY 10005 USA
Registrars	Computershare Investor Services (Ireland) Limited 3100 Lake Drive Citywest Business Campus Dublin 24
Bankers	Citibank Canada Square Canary Warf London E14 5LB United Kingdom
	JP Morgan Chase Bank N.A. 4 New York Plaza New York NY 10004 USA

Directors' Report

The Directors present their report and audited Consolidated and Company Financial Statements of ICON plc ("the Company" or "ICON"), a public limited company incorporated in the Republic of Ireland, and its subsidiary undertakings ("the Subsidiaries", with the Company and the Subsidiaries being together "the Group") for the year ended 31 December 2018.

The Company's ordinary shares are traded on the NASDAQ market. The Company is considered a foreign private issuer in the US and accordingly it is not subject to the same ongoing regulatory requirements as a US registered company with a primary listing on the NASDAQ market.

These Consolidated and Company Financial Statements (together "the financial statements") for the year ended 31 December 2018 are prepared in accordance with IFRS as adopted by the EU and meet the reporting requirements pursuant to Irish Company Law. In addition to the Consolidated Financial Statements contained in this annual report, we also prepare separate consolidated financial statements on Form 20-F pursuant to the rules and regulations of the U.S. Securities and Exchange Commission ("SEC") and in accordance with accounting principles generally accepted in the United States (U.S. GAAP). The Form 20-F (under U.S. GAAP) is a separate document, a copy of which may be obtained from the Company's website www.iconplc.com. IFRS differs in certain respects from U.S. GAAP, details of which are set out on pages 139 to 141 of this annual report.

Principal activities, business review and future developments

The Group is a clinical research organisation ("CRO"), providing outsourced development services on a global basis to the pharmaceutical, biotechnology and medical device industries. The Group specialises in the strategic development, management and analysis of programmes that support all stages of the clinical development process - from compound selection to Phase I-IV clinical studies. The Group's mission is to accelerate the development of drugs and devices that save lives and improve the quality of life. Our vision is to be the Global CRO partner of choice in drug development by delivering best in class information, solutions and performance in clinical and outcomes research.

Headquartered in Dublin, Ireland, the Group began operations in 1990 and has expanded the business predominately through internal growth, together with a number of strategic acquisitions to enhance its capabilities and expertise in certain areas of the clinical development process. Its principal executive office is located at: South County Business Park, Leopardstown, Dublin 18, Republic of Ireland. The contact telephone number of this office is +353 1 291 2000.

The Group believes that it is one of a select number of CROs with the expertise and capability to conduct clinical trials in most major therapeutic areas on a global basis and has the operational flexibility to provide development services on a stand alone basis or as part of an integrated "full service" solution. At 31 December 2018, the Group had approximately 13,670 employees, in 89 locations in 37 countries. During the year ended 31 December 2018, the Group derived approximately 34.5%, 55.7% and 9.8% of its revenue in the United States, Europe and Rest of World, respectively.

To meet the evolving needs of our clients we continue to enhance our capabilities through both organic service development and targeted acquisitions. During 2018, we continued to enhance our scientific and therapeutic expertise to support our customers in specific areas including Oncology, Orphan and Rare Diseases, CNS, Dermatology, Infectious Disease and Womens' Health.

We have continued to invest in building our capabilities in the gathering, analysis and application of real world patient data within both the clinical trial and post-trial observational study environments. Alongside expanding internal capabilities, we continue to develop innovative partnerships with providers of real world data including EHR4CR and Trinetx. During 2018, we signed an agreement with Intel to deploy the Intel[®] Pharma Analytics Platform for use in clinical trials. The Intel platform is an artificial intelligence solution that enables remote monitoring and continuous capture of clinical data from study subjects using sensors and wearable devices and can apply machine learning techniques to objectively measure symptoms and quantify the impact of new therapies.

We also continued to enhance our site and patient recruitment capabilities during 2018 with the expansion of the PMG Research network through a partnership with the Du Page Medical Group. DuPage is the largest independent, multi-specialty physician group in the Chicagoland area with access to more than 700 physicians in over 50 clinical specialties ranging from primary to speciality care in areas such as cardiology and oncology. Through this agreement PMG assumed the research infrastructure

at DuPage providing expanded investigator and patient access and bringing clinical research as a care option to the communities served.

During 2018 we further developed the CNS Rating Scale Analytics leveraging our ICONIK platform. This is enabling a datadriven approach to rating surveillance that increases the consistency of both Clinicial and Patient Reported Outcomes in CNS studies. We have also grown our global network of investigative sites that have the capabilities and expertise to conduct biosimilar trials and we further strengthened our relationships with specialised Oncology sites whilst also extending our internal oncology expertise within our consulting and project management groups.

We also continue to build our positions in emerging markets and to expand our presence in regions such as Asia-Pacific, in particular in China and Japan, building on our acquisition of Niphix, the Japanese subsidiary of Aptiv Solutions. We also added scale and capabilities to our commercialisation and outcomes service offering in the US through the acquisition of Medimedia Pharma Solutions.

Principal activities of the Company

The principal activity of ICON plc ("the Company") is to act as a holding Company. The Company also operates branch offices, ICON Italy in Milan, ICON Poland in Warsaw, ICON Latvia in Riga and ICON Lithuania in Vilnius. These branches provide contract research services to the pharmaceutical industry.

Acquisition activity

On 27 July 2017, a subsidiary of the Company, ICON Clinicial Research Limited acquired Mapi Development SAS ('Mapi') and its subsidaries ("Mapi Group"). Mapi Group has over 40 years of experience supporting Life-Science companies as the world leading Patient-Centered Research Company in commercialising novel treatments through Real-World Evidence, Strategic Regulatory Services, Pharmacovigilance, Market Access and Language Services. Mapi Group is the premier provider of Health Research and Commercialisation services to Life-Science companies enabling Market Authorisation, Market Access and Market Adoption of novel therapeutics. Cash outflows on acquisition were \$145.8 million. The acquisition of Mapi Group strengthens ICON's existing commercialisation and outcomes research business adding significant commercialisation presence, analytics, real world evidence generation and strategic regulatory services.

On 15 September 2016, a subsidiary of the Company, ICON US Holdings Inc. acquired ICON Government & Public Health Solutions, Inc. ("GPHS") (formerly Clinical Research Management, Inc. ("ClinicalRM")) which resulted in initial net cash outflows of \$52.4 million (including certain payments made on behalf of GPHS totalling \$9.2 million). GPHS is a full-service CRO specialising in preclinical through Phase IV support of clinical research and clinical trial services for biologics, drugs and devices. The organisation helps customers progress their products to market faster, with a wide array of research, regulatory and sponsor services within the U.S. and around the globe. GPHS provide full service and functional research solutions to a broad range of US government agencies and commercial customers. Their extensive expertise extends across basic and applied research, infectious diseases, vaccines development and testing and the response to bio-threats. They have worked in collaboration with government and commercial customers to respond to the threat of global viral epidemics.

Share repurchase programme

On 3 October 2016, the Company commenced a previously announced share buyback programme of up to \$400 million. The Company can acquire up to 10% of its outstanding ordinary shares (by way of redemption), in accordance with Irish law, the United States securities laws and the Company's constitutional documents through open market share acquisitions. During the year ended 31 December 2018, the Company redeemed a total of 1,008,162 ordinary shares under this program for total consideration of \$129.0 million. At 31 December 2018 a total of 4,026,576 ordinary shares were redeemed by the Company under this buyback programme for a total consideration of \$372.1 million.

All ordinary shares that were redeemed under the buyback programme were cancelled in accordance with the constitutional documents of the Company and the nominal value of these shares transferred to other undenominated capital as required under Irish Company Law.

Financing

On 15 December 2015, the Company issued through its subsidiary ICON Investments Five Unlimited Company (the "Issuer") Senior Notes for aggregate gross proceeds of \$350 million through a private placement. The Senior Notes mature on 15 December 2020. Interest payable is fixed at 3.64% and is payable semi-annually on the Senior Notes. The Senior Notes are guaranteed by ICON plc. The Senior Notes may be redeemed, at the Issuer's option, at any time prior to maturity, at par plus a make whole premium, together with accrued and unpaid interest, if any, to the redemption date. The terms of the notes are set forth in the Note Purchase and Guarantee Agreement, dated as of 15 December 2015, by and among the Issuer, ICON plc and the purchasers named therein ("Note Purchase and Guarantee Agreement"). The Notes have not been, and will not be, registered under the Securities Act of 1933, as amended, and may not be offered or sold in the United States absent registration or an applicable exemption from registration requirements.

The Company entered into an interest rate hedge in respect of the planned issuance of the Senior Notes in December 2015. The interest rate hedge matured in November 2015 when the interest rate on the Senior Notes was fixed. During the year ended 31 December 2015, cash proceeds of \$4.6 million representing the realised gain on the interest rate hedge was received on maturity in November 2015 and recorded within Other Comprehensive Income. The realised gain is amortised to the Consolidated Statement of Profit and Loss over the term of the hedge.

Future developments

Please see note 31 Subsequent events for details of events in the period from year-end to the approval of the financial statements.

In 2019, the Group looks forward to continuing to expand through organic growth, together with strategic acquisitions to enhance its expertise and capabilities in certain areas of the clinical development process and to continue to deliver on the Company's mission to accelerate the development of drugs and devices that save lives and improve the quality of life.

Results and dividends

The results for the year are as shown on page 23 of these financial statements. The Directors do not propose the payment of a dividend for the year ended 31 December 2018.

The following table sets forth for the periods indicated certain financial data as a percentage of revenue and the percentage change in these items compared to the prior period, being the key performance indicators used by management. The trends illustrated in the following table may not be indicative of future results.

The Company adopted IFRS 15 'Revenue from Contracts with Customers' with a date of initial application of 1 January 2018. The new revenue recognition policies were applied in the preparation and presentation of the results for the twelve months ended 31 December 2018. As ICON adopted the standard using the cumulative effect transition method, there is no restatement of comparative amounts. The results for the year ended 31 December 2017 and previously therefore reflect the provisions of the previous accounting standard. The most significant impact of application of the new standard reflects the measurement of a clinical trial service as a single performance obligation recognised over time. We concluded that ICON is the contract principal in respect of both direct services and in the use of third parties (principally investigator services) that support the clinical trial. The progress towards completion for clinical service contracts is measured based on total project costs (direct costs are therefore inclusive of third party costs). Revenue is our primary measure of performance on adoption of IFRS 15. In common with others in the sector, our results previously separately identified that revenue stream which related to services provided by third parties. Those services were previously separately identified as reimbursable expenses and presented separately in our Statement of Operations. Reimbursable expenses are included within direct costs on adoption of IFRS 15. Throughout the document revenue as reported on adoption of IFRS 15 is referred to as revenue. Revenue as reported for the years ended 31 December 2017 and previously are gross revenues (inclusive of revenue from reimbursable expenses) or net revenues (excluding revenue from reimbursable expenses). This treatment is consistent with the adoption of IFRS 15 from 1 January 2018, without restatement of comparatives. See note 34 for impact of new accounting policy.

	Year ended 31 December 2018	Year ended 31 December 2017	Percentage change in period
	As a perce	ntage of revenue	
Revenue**	100%	100%	8.1 %
Direct costs (excluding exceptional items)**	70.0%	42.7%	76.9 %
Other operating expenses (excluding exceptional items)	15.0%	16.3%	(0.6)%
Operating profit (excluding exceptional items)	15.0%	14.2%**	14.7 %
Exceptional items (before taxation)	0.5%	0.3%	61.1 %
Operating profit (including exceptional items)	14.5%	13.9%	13.6 %

**Reimbursable expenses were \$643.9 million for the year-ended 31 December 2017 or 26.8% of revenue.

Twelve months ended 31 December 2018 compared to twelve months ended 31 December 2017

Revenue for the year increased by \$193.5 million, or 8.1%, from \$2,402.3 million (revenue including reimbursable expenses for the year ended 31 December 2017 to \$2,595.8 million for the year ended 31 December 2018). For the year ended 31 December 2018 we derived approximately 34.5%, 55.7% and 9.8% of our revenue in the United States, Europe and Rest of World, respectively.

Direct costs for the year ended 31 December 2018 increased by \$789.9 million, or 76.9%, from \$1,026.4 million for the year ended 31 December 2017 to \$1,816.3 million for the year ended 31 December 2018 (excluding exceptional items). Direct costs for the year ended 31 December 2018 include reimbursable expenses of \$702.8 million. Other direct costs increased by \$87.1 million, from \$1,026.4 million for the year ended 31 December 2017 to \$1,113.5 million for the year ended 31 December 2018 (excluding exceptional items). Other direct costs consist primarily of compensation, associated fringe benefits and share-based compensation expense for project-related employees and other direct project driven costs. The increase in direct costs during the period arose due to an increase in headcount and a corresponding increase in personnel related expenditure of \$81.3 million and an increase in travel related costs of \$1.0 million. As a percentage of gross revenue, direct costs have increased from 42.7% for the year ended 31 December 2017 to 70.0% for the year ended 31 December 2018 (excluding exceptional items).

Other operating expenses for the year ended 31 December 2018 decreased by \$2.4 million, or 0.6%, from \$392.3 million for the year ended 31 December 2018 (excluding exceptional items). Other operating costs are primarily comprised of compensation, related fringe benefits, share compensation for non project related employees, recruitment expenses, professional service costs and advertising costs. Personnel related costs increased by \$2.7 million in the year, facilities related costs increased by \$4.3 million, general overhead costs net of foreign exchange costs decreased by \$13.9 million and depreciation and amortisation costs increased by \$4.6 million. As a percentage of gross revenue, other operating expenses, decreased from 16.3% for the year ended 31 December 2017 to 15.0% for the year ended 31 December 2018 (excluding exceptional items).

During the year ended 31 December 2018 the Company implemented a restructuring plan to improve operating efficiencies resulting in recognition of a restructuring charge of \$12.5 million during 2018. The restructuring plan includes the cost of resource rationalisations in certain areas of the business to improve utilisation.

Operating profit increased by \$45.2 million, or 13.6%, from \$331.9 million for the year ended 31 December 2017 (\$339.7 million excluding exceptional items) to \$377.1 million for the year ended 31 December 2018 (\$389.6 million, or 14.7% excluding exceptional items). As a percentage of revenue, operating profit increased from 13.9% of gross revenues for year ended 31 December 2017 (14.2% excluding exceptional items) to 14.5% of revenues for year ended 31 December 2018 (15.0% excluding exceptional items).

Financing expense for the period increased from \$12.6 million for the year ended 31 December 2017 to \$13.5 million for the year ended 31 December 2018. Financing income for the year decreased from \$8.3 million for the year ended 31 December 2017 to \$4.8 million for the year ended 31 December 2018. During the year ended 31 December 2017, a credit of \$6.0 million was recorded being the reduction in the assessment of the fair value of contingent consideration liability relating to the acquisition of ICON Government & Public Health Solutions, Inc. ("GPHS") (formerly Clinical Research Management, Inc. ("ClinicalRM")) (see note 14 of the Financial Statements).

Income tax expense for the period decreased to \$45.6 million for the year ended 31 December 2018 from \$54.7 million for the year ended 31 December 2018 was 12.4% (12.3% excluding the effect of exceptional items) compared with 16.7% (16.6% excluding the effect of exceptional items) for the year ended 31 December 2017. The Group's effective tax rate is principally a function of the distribution of pre-tax profits in the territories in which it operates.

Risks and uncertainties

Under Irish Company Law (Section 327 of the Companies Act 2014 'the Companies Act'), the Directors are required to give a description of the principal risks and uncertainties which it faces. Details of the principal risks and uncertainties facing the Group are set out in Appendix A of this annual report and form an integral part of the Directors' Report.

Financial risk management

Group financial risk management is governed by policies and guidelines which are reviewed and approved annually by the Board of Directors. These policies and guidelines primarily cover foreign exchange risk, credit risk, liquidity risk and interest rate risk. The principal objective of these policies and guidelines is the minimisation of financial risk at reasonable cost. The Group's financial instruments comprise cash and cash equivalents, current asset investments, finance lease obligations and negotiated debt facilities. The main purpose of these financial instruments is to fund the working capital requirements of the Group, the cost of new acquisitions and continued growth. The Group also uses derivative financial instruments to reduce exposure to fluctuations in foreign exchange rates. The principal financial risk facing the Group is currency rate risk. Other financial risks include interest rate risk, credit risk and liquidity risk. Further details of which are set out in *note 26* to the Consolidated Financial Instruments nor does it enter into any leveraged derivative transactions. The Group treasury function centrally manages the Group's funding and liquidity requirements.

The Group maintains both committed and uncommitted credit lines with its relationship banks. On 15 December 2015, the Group entered into a Note Purchase Agreement in respect of aggregate gross proceeds of \$350 million. The interest rate on the Senior Notes was fixed at 3.64%. The Group entered into an interest rate hedge in anticipation of the drawdown of the Senior Notes the proceeds of which were received in November 2015. This interest rate hedge qualified for hedge accounting under IAS 39. The gain on the hedge is being amortised to the Consolidated Statement of Profit and Loss over the term of the Senior Notes, resulting in an offset to the interest payable expense on the notes. The effective rate on the 5 year Senior Notes is fixed at 3.37%.

Subsequent events

Details of subsequent events are set out in note 31 to the Consolidated Financial Statements.

Directors and Secretary

The members of the Board of Directors during the year are included in note 9 to the Consolidated Financial Statements.

The following table sets forth information concerning the composition of the Company's Board committees as of 31 December 2018:

Name	Position
Ciaran Murray	Non Executive Chairman and Director
Dr. Steve Cutler (1)(5)	Chief Executive Officer and Director
Professor Hugh Brady (3)	Director
Dr. John Climax	Director
Joan Garahy (2)(4)	Director
Professor William Hall (2)(4)	Director
Professor Dermot Kelleher	Director
Eugene McCague (3)	Director
Declan McKeon (3)(4)(5)	Lead Independent Director
Ronan Murphy (2)(3)	Director
Mary Pendergast (2)	Director
(1) Executive Officer of the Company.	

(1) Executive Onler of the Company.(2) Member of Compensation and Organisation Committee.

(3) Member of Audit Committee.

(4) Member of Nominating and Governance Committee.

(5) Member of Execution Committee.

Details required by Companies Act 2014, section 329, of Directors' interests in the Group's shares are set out in note 9 to the Consolidated Financial Statements. Dr. Ronan Lambe resigned as a director on 24 July 2018. All other Directors served for the entire year.

Directors' remuneration

Details of the Directors' remuneration and interests are set out in notes 3 and 9 to the Consolidated Financial Statements.

Directors' power to purchase and allot company shares

Subject to the provisions of the Companies Act 2014, the Company may purchase any of its own shares. Every contract for the purchase of shares, or under which the Company may become entitled or obliged to purchase shares in the Company shall be authorised by a special resolution of the Company. The Company may cancel any shares so purchased or may hold them as treasury shares or re-issue them.

On 3 October 2016, the Company commenced a previously announced share buyback programme of up to \$400 million. The Company can acquire up to 10% of its outstanding ordinary shares (by way of redemption), in accordance with Irish law, the United States securities laws and the Company's constitutional documents through open market share acquisitions. Further details of the share repurchase programmes are included in *note 24* to the Consolidated Financial Statements.

On 8 January 2019, the Company announced a share buyback program of up to 1 million shares to be executed opportunistically during 2019 depending on cash commitments. All ordinary shares that are redeemed under the buyback program will be cancelled in accordance with the constitutional documents of the Company and the nominal value of these shares transferred to an undenominated capital fund as required under Irish Company law.

Rights and Obligations attaching to the Company's shares

The authorised share capital of the Company is 66,000,000 divided into 100,000,000 ordinary shares of 60.06 at December 31, 2018. Holders of ordinary shares will be entitled to receive such dividends as may be recommended by the Board of Directors of the Company and approved by the shareholders and/or such interim dividends as the Board of Directors of the Company may decide. On liquidation or a winding up of the Company, the par value of the ordinary shares will be repaid out of the assets available for distribution among the holders of the Company's ordinary shares. Holders of ordinary shares have no conversion or redemption rights. On a show of hands, every holder of an ordinary share present in person or proxy at a general meeting of shareholders shall have one vote with no individual having more than one vote.

Change of control

Certain of the Group's customer contracts allow the customer to terminate the contract in the event of a change in control of the Company.

The Group has negotiated a banking facility with a number of financial institutions, details of which are set out in *note 23* to the Consolidated Financial Statements. This facility requires repayment in the event that the Company becomes controlled by any person or persons acting in concert by whom it was not controlled at the date the facility was entered into.

Furthermore certain Group companies have entered capital grant agreements with the Irish government agency, Enterprise Ireland, whereby the Group covenants that the controlling interest in the Company will not change without Enterprise Ireland's prior written consent, which will not be unreasonably withheld.

Additionally, the Company's share option and restricted share unit plans contain change in control provisions which provide for the acceleration of the vesting and exercisability of outstanding options and awards of restricted share units in the event that a change in control occurs with respect to the Company.

Corporate Governance

The Company is listed on the NASDAQ Global Select Market. The Company complies with the corporate governance listing requirements under the NASDAQ marketplace rules. NASDAQ may provide exemptions from certain NASDAQ corporate governance standards to a foreign private issuer in certain circumstances provided that the foreign private issuer properly notifies NASDAQ and makes the required disclosure except to the extent that such exemptions would be contrary to United States federal securities laws.

The exemptions that the Company relies on, and the practices the Company adheres to, are as follows:

- The Company is exempt from provisions set forth in NASDAQ Rule 5620(c), which requires each issuer (other than limited partnerships) to provide for a quorum in its by-laws for any meeting of the holders of common stock, which shall in no case be less than 33.33% of the outstanding shares of the issuer's common voting stock. The Company's Constitution requires that only 3 members be present, in person or by proxy, at a shareholder meeting to constitute a quorum. This quorum requirement is in accordance with Irish law and generally accepted business practices in Ireland.
- The Company is exempt from provisions set forth in NASDAQ Rule 5635(c) which requires (other than for certain specified exceptions) shareholder approval prior to the establishment or material amendment of a stock option or purchase plan or other equity compensation arrangement made or materially amended, pursuant to which stock may be acquired by officers, directors, employees or consultants. Irish law does not require shareholder approval with respect to equity compensation arrangements. Accordingly, the 2013 Employees Restricted Share Unit Plan and the amendments to the Employee Share Option Plan 2008 and Consultants Share Option Plan 2008 were adopted by the Board of Directors without shareholder approval.
- The Company is exempt from provisions set forth in NASDAQ Rule 5605(b)(2), which requires independent Directors to hold regularly scheduled meetings at which only independent Directors are present. Irish law does not require independent directors to hold regularly scheduled meetings at which only independent Directors are present. The Company holds regularly scheduled meetings which all of the Directors may attend and the Lead Independent Director may call meetings of the independent directors and non-employee directors of the Board, as appropriate, in accordance with the Lead Independent Director Charter.

The Company's practices with regard to these requirements are not prohibited by Irish law.

Audit Committee

The Audit Committee meets a minimum of four times a year. It reviews the quarterly and annual financial statements, the effectiveness of the system of internal control (including the arrangement for the Company's employees to raise concerns in confidence about financial inappropriateness) and recommends the appointment and removal of the external auditors. It monitors the adequacy of internal accounting practices and addresses all issues raised and recommendations made by the external auditors. The Audit Committee pre-approves all audit and non-audit services provided to the Company by its external auditors on a quarterly basis. The Audit Committee, on a case by case basis, may approve additional services not covered by the quarterly pre-approval, as the need for such services arises. The Audit Committee reviews all services which are provided by the external auditor to review the independence and objectivity of the external auditor, taking into consideration relevant professional and regulatory requirements. The Chief Financial Officer, the Head of Internal Audit, the General Counsel and the external auditors normally attend all meetings of the Audit Committee and have direct access to the Committee Chairman at all times. At 31 December 2018, the Audit Committee was comprised of four independent Directors: Declan McKeon (Chairperson), Ronan Murphy, Professor Hugh Brady and Eugene McCague. Professor Dermot Kelleher and Professor William Hall served as members of the Committee during 2018 and stepped down on 1 May 2018. Professor Hugh Brady and Eugene McCague joined the Committee on 1 May 2018. Mr Declan McKeon acted as Audit Committee Chairperson until February 2019 when Mr Ronan Murphy was appointed Chairperson.

Significant shareholdings

The Company has been notified of the following shareholdings in excess of 3% of the issued share capital of the Company as at 31 December 2018:

Name	%	Number of Shares
WCM Investment Management	9.77	5,272,086
Wellington Management Company LLP	6.91	3,728,130
AllianceBernstein LP	4.35	2,348,321
ClearBridge Investments, LLC	4.12	2,222,081
Acadian Asset Management LLC	4.01	2,165,463
EARNEST Partners LLC	3.94	2,126,617
Renaissance Technologies LLC	3.51	1,895,300
All Directors and Officers as a group ⁽¹⁾	2.93	1,578,677

(1) Includes 633,915 ordinary shares issuable upon the exercise of stock options granted by the Company, 40,172 restricted stock units ("RSUs") awarded by the Company to directors, officers and other key employees and 169,956 performance share units ("PSUs") awarded by the Company to Directors, officers and other key employees. Of the issued PSUs, performance conditions will determine how many of them vest and, if performance targets are exceeded, additional PSUs will be issued and vest in accordance with the terms of the relevant PSU award.

Subsidiary undertakings

The information required by the Companies Act in relation to subsidiary undertakings is presented in *note 32* to the Consolidated Financial Statements.

Political donations

The Group made no disclosable political donations in the period.

Going concern

The Directors have a reasonable expectation that the Group has adequate resources to continue in operation for the foreseeable future. For this reason, the Group continues to adopt the going concern basis in preparing the financial statements.

Accounting records

The Directors are responsible for ensuring that adequate accounting records as outlined in Section 281-285 of the Companies Act, are kept by the Company. The Directors are also responsible for the preparation of the Annual Report. The Directors have appointed professionally qualified accounting personnel with appropriate expertise and have provided adequate resources to the finance function in order to ensure that those requirements are met. The accounting records of the Company are maintained at the Group's principal executive offices at its registered office at Leopardstown, Dublin 18.

Statement of relevant audit information

The Directors believe that they have taken all steps necessary to make themselves aware of any relevant audit information and have established that the Company's statutory auditors are aware of that information. In so far as they are aware, there is no relevant audit information of which the Company's statutory auditors are unaware.

Disclosure of non-financial information

The European Union (Disclosure of Non-Financial and Diversity Information by certain large undertakings and groups) Regulations 2017 require disclosure of certain non-financial information by certain large undertakings and groups.

We have sought to address the requirements of the legislation in the sections following.

Business Model

Our mission is to help our customers accelerate the development of drugs and devices that save lives and improve the quality of life. We help our customers deliver life-changing medicines by being innovative in our solutions, collaborative in how we work as teams, accountable for the results we achieve and committed to doing the right thing for our customers and the patients they serve.

Our business model is described in the 'Principal activities, business review and future developments' section of the Directors' Report.

Our core values underpin our mission and drive a culture and mind-set of ownership at ICON. "Own it @ ICON" is how we define our culture. Our culture of ownership connects us to the core values at the heart of the Company and helps us differentiate how we work with our customers to achieve their goals.

Our values are:

- Accountability & delivery: We take pride in what we do
- Collaboration: We are one team
- Partnership: We partner with our customers
- Integrity: We do the right thing

Our values underpin how we work together to deliver on our mission to help our customers accelerate the development of drugs and devices that save lives and improve the quality of life. These values and our Code of Ethical Conduct, which underpins these values, form the core of everything we do. It applies to all officers, directors, employees, consultants and agents globally. All employees and temporary workers are mandated to complete global ethics training.

1. Environmental matters

ICON is committed to delivering excellence and care to the communities in which we operate

This includes conducting our business in an environmentally sustainable manner as set out in our Global Code of Ethical Conduct. We achieve this by managing and improving our environmental performance across all business activities. Our employees, directors, officers, contractors, and temporary workers are expected to support our sustainability objectives.

As a Clinical Research Organisation, we recognise the impact of how we operate on the environment in the following key areas:

- energy use;
- waste generation;
- emissions to air/water;
- water use;
- transport; and
- procurement.

Our Global Environmental Management Policy and Environmental Management Plan were approved during 2018

Our Environmental Management Plan and Performance Statement sets out the environmental actions and targets we will carry out to ensure compliance with our Global Environmental Management Policy and to engage our employees in supporting our objectives for continued improvement. Our Environmental Performance Statement is available to employees and our customers. The plan sets out our commitment to conducting our business in an environmentally sustainable manner by managing and improving our environmental performance across all business activities. Our plan sets out our initiatives and goals for the next four years.

Responsibilities for the implementation of our objectives and co-ordination of our sustainability efforts and reporting on progress to the executive leadership is led by our facilities team, reporting to our Global Chief Administrative Officer and General Counsel, with input from our procurement, global legal, corporate communications and human resources teams.

We track, calculate and report our carbon footprint and use the information available to continue to improve our processes and reduce our impact. We follow the Greenhouse Gas (GHG) Protocol Corporate Standard, which is the global corporate accounting and reporting standard for calculating carbon emissions. We have more than 80 facilities globally which operate in office buildings, where the primary energy consumption is electricity for light and heating, ventilation and air conditioning systems. Our central laboratories also operate laboratory instruments.

Where we have direct control over the buildings we operate, we ensure energy efficient lighting solutions. Where we do not have direct control over our facilities, we work with our landlords and other stakeholders to encourage energy efficient lighting solutions. We also work hard to extend the useful life of our equipment and ensure appropriate disposal of assets when decommissioned.

Our people are expected to support our waste management and disposal programs and one of the goals of our environmental management policy is to reduce our impact. During 2018 we commenced the development of a global waste management system.

Reflecting our continued commitment to sustainable practices, we have included an annual 'sustainability month' in our calendar since 2017. The focus of the month is to promote best practices and highlight sustainable activities across all of our offices and locations. This focus together with the introduction of increased recycling facilities at our key sites contributed to our objectives to reduce waste during 2018. We continue to work to increase the number of our offices engaging in waste reduction strategies in all areas. We have replaced disposable coffee cups with reusable alternatives and developed objectives relating to reduced paper consumption through the use of electronic documents and signatures.

We actively promote the use of technology and teleconferencing facilities in our efforts to reduce travel and commuting activities. During sustainability month, our people were encouraged to car share and utilize public transport. We include air travel miles in our carbon footprint monitoring.

Our internal portals include a MyICON page on Environment and Sustainability which reflects policy, practice, promotions and updates on our commitment to sustainability.

We also require our suppliers to abide by our Global Supplier Code of Conduct which includes a commitment to comply with applicable environmental laws and regulations, our expectations around waste management and sustainable use of resources.

Principal risks

Although the risks associated with environmental matters are actively monitored, ICON does not believe these risks meet the threshold of a principal risk for our business.

2. Social and Employee matters

Our Corporate Social Responsibility ('CSR') initiatives are aligned with ICON's values

ICON supports a variety of CSR programmes. Our programmes aim to make a positive difference to the communities in which we work and live and also recognise the enthusiasm and creativity of our people in their efforts to give something back to their communities.

Our CSR activities are focused on two core areas:

- Supporting education & building closer ties between industry & academia; and
- Improving the welfare of people in the communities in which we live.

Supporting education & building closer ties between industry & academia

ICON is a strong supporter of bridging the ties between industry and academia and inspiring the next generation of business and scientific leaders.

- Strategic Partnership with University College Dublin. ICON has been engaged in a strategic partnership with UCD since 2012, which has been heralded as a model for industry-academia collaboration. ICON was a lead benefactor of UCD's new Science Centre, which is home to over 5,200 science students. ICON's partnership also includes the ICON Chair of Business Analytics as well as scholarships for Masters and Doctorate degrees to attract science graduates into careers in clinical research. In addition, ICON and UCD developed an industry-tailored Graduate Certificate in Clinical Research in UCD's School of Medicine and Medical Science in 2013.
- Scholarships supporting female GAA players. ICON has a partnership with the Women's Gaelic Players Association, whereby we provide ICON-GPA Life Sciences Scholarships to inter-county football and camogie players engaged in undergraduate and post-graduate life sciences courses. ICON also provides mentoring to players to help them on their career journeys.
- **Partnership with Junior Achievement to inspire schoolchildren.** ICON supports our people who take time out of their working day over a period of 5 weeks to deliver Junior Achievement educational programmes. Junior Achievement encourages young people to remain in education and teaches them the skills they need to succeed in a changing world. Our volunteers teach primary and secondary level students valuable business, STEM and entrepreneurship skills that will stand them in good stead as they progress through education and beyond.
- Science Gallery Founding Partner. ICON has been a lead corporate supporter of the Science Gallery at Trinity College Dublin since its inception in 2008. Science Gallery aims to inspire and transform curious minds through engagement with science.

Improving the welfare of people in the communities in which we live

ICON employees across the world are making a positive difference to their communities. We support causes that are important to our employees and have a number of programmes that support the welfare of people in our local communities. These include:

• Corporate donations to employee-nominated charities. In 2018, ICON supported over 20 charities across the world which are supporting people living in poverty, who are suffering from a variety of diseases, are the victims of domestic violence, or natural disasters.

- **Donations in support of employee fundraising**. ICON employees raise significant amounts for a variety of charities each year through in-house fundraising events. ICON recognises the enormous effort and creativity of our employees who fundraise for causes that are important to them by supplementing monies raised through ICON's Charitable Donation Programme.
- **Corporate philanthropic partnership with the Ireland Funds.** Over the past 3 years, ICON has partnered with the Ireland Funds, a global philanthropic network that has benefited more than 3,200 different charitable organisations.

At the core of our strategy is our people

Within ICON we have highly qualified and experienced teams, the majority of whom have third level educational qualifications. The need to develop and retain this expertise and talent within the organisation is fundamental in enabling us to be the global CRO partner of choice for our customers.

The training and development of our staff is a key focus for us

We have a comprehensive curriculum in place to support our people in their roles. We have invested in creating an innovative learning environment delivered through ICON's training and development group.

All of our people are required to complete mandatory training in key areas which support our values and our way of working. They include (but are not limited to) the following areas:

- Global ethics compliance;
- Data protection and procedures;
- IT security;
- Confidentiality and maintaining communications; and
- Social media usage.

We have a well-established Graduate Development Programme for our clinical teams, which now runs in the US, China, Japan, Korea and also Australia where we take recent graduates and prepare them for careers in clinical monitoring and data management.

We also have formed collaboration with University College Dublin which enables ICON to provide customised management and development programmes for global employees. These programmes are focused on leadership development for those people in management roles and specific technical training in competencies that are core to our business, such as project and programme management and clinical research associate development.

We have also created a Clinical Research Academy and a unique Graduate Certificate in Clinical Trial Management which is enhancing the quality of graduate training in clinical research and increasing the pool of talent available to ICON that can support our customers' drug development programmes.

Our learning and development programmes are complemented by advanced people development practices which incorporate rigorous analytics based screening in the hiring process, global career frameworks, pay for performance aligned to our strategy, and on-going talent review and succession planning.

Our leadership and talent programmes contribute to the enhanced retention of our employees, better project deliverables for our customers and the enhanced financial performance of the business.

Individual development is supported through formal learning with our personal effectiveness series and via access to our Career Hub portal. Our people can access a wealth of learning materials including courses, resources, toolkits, library items and blogs to support the development of key competencies and improving their eligibility for future roles through these tools. Career Hub also allows employees to understand and explore possible career paths and career opportunities available to them across the organization and provides full transparency to all levels, skills and capabilities required for every role in ICON.

ICON is proud of this investment in our people. This investment translated to approximately four days training for each person during 2018.

We are also committed to supporting the career aspirations of our people. Approximately 25% of all roles are filled internally.

As an organisation we are keen to hear directly from our employees

Bi-annually we conduct a global employee engagement survey. Our most recent survey was conducted in October 2018 and had an 88% response rate. There are two key measures which we track closely. The first is Employee Engagement which scored well at 70%, and was on par with the General Industry benchmark. The second is Employee Enablement, which also scored at 70%, 3% above the General Industry benchmark. After each survey we engage in action planning with our people to address areas they have highlighted as important for improvement. The last five years have shown a positive trend for both our engagement and enablement scores.

Difference drives innovative thinking and is critical to our success

We believe difference drives innovative thinking, which is critical to our customers, and as a global company with almost 14,000 employees in 40 countries, we encourage diversity of all kinds. We have grown rapidly, almost doubling our headcount globally over the past 7 years. As a truly global operation, we are deliberately structured as international teams so that we can support the delivery of our customers' clinical development programmes across multiple geographies. Recruitment, selection and promotion decisions are merit-based and in line with the principles of reaching a wider talent pool and equal opportunity.

We have made significant investment in organisation design structures, tools and communications which ensures that we have a gender neutral approach to pay decisions. We pay male and female employees equally for the same or equivalent work. We have worked hard to structure our pay principles to ensure that gender is not a factor in how we deliver rewards.

The information relating to pay decisions is hosted through core technology, enabling our people leaders and employees direct access to information which informs and supports equitable and consistent decision making.

Our immediate areas of focus around driving inclusion and diversity include:

- **Training and Development** Under our Diversity and Inclusion Program, we will be training all our people leaders to understand unconscious bias and similarity bias and also how to encourage diversity of thought and foster inclusion in their teams. These fundamentals will be embedded into all people leader programmes, and reflect the values upon which we assess performance behaviours.
- **Talent** We recognise that more diversity in senior leadership increases organisational performance. In 2019 we are launching our global NextGen Leadership programme for those who have been identified as a High Performing & High Potential Leader. This programme will focus on core organisational skills that will enable these individuals to increase their readiness for promotion, as well as create a strong internal network of senior leaders who feel empowered to take hold of their careers and aim for the top. This programme will help build and support our development of future leaders from within and complements existing senior level High Potential programmes already inexistence in the organisation.
- **Recruitment** We continue to strive to source the best talent in our industry from across the world to fill the highly specialised roles required to help bring new drugs to market. Our most senior roles are truly global in nature. In 2018, we mandated gender balanced short lists for senior leadership appointments across the organisation in all markets in which we are located.
- **Retention** we offer flexible working arrangements that help our people achieve balance. Approximately 45% of our employees work remotely. We also support and facilitate part time working arrangements. Approximately 16% of our people work part-time. We have a bonus programme for all employees linked to individual and company performance and also operate a global recognition programme where peer to peer recognition and awards take place for employees who go the extra mile. We also recognise and reward employees who reach significant service milestones within the company

Principal risks

For further details on risks relating to employee matters refer to Appendix A: Risk Factors.

3. Human rights

ICON is committed to acting ethically and with integrity in all our business dealings

We are committed to human rights and the adoption and pursuit of compliance with the United Nations Guiding Principles on Human Rights. Our business model and our policies are intended to fully comply with applicable human rights legislation in the countries in which we operate. ICON's Global Supplier Code of Conduct also addresses our zero tolerance stance to slavery and human trafficking. ICON is completely opposed to slavery and human trafficking and will not knowingly support or conduct business with any organisation involved in such activities. ICON does not employ anyone below the minimum employment age in the jurisdictions in which we operate.

In our Anti-Slavery and Human Trafficking Statement, we set out the measures we are taking to prevent modern slavery in our supply chains, in addition to our own operations. A copy of our Anti-Slavery and Human Trafficking Statement is available on our website at https://investor.iconplc.com.

Principal Risks

Although the risks associated with human rights abuses are actively monitored, ICON does not believe these risks meet the threshold of a principal risk for our business.

4. Anti-bribery and Corruption

Our anti-bribery/anti-corruption programme ('ABAC Programme') is a key element of our compliance policy framework, with principles and requirements based on the underlying principal that we do not tolerate bribery or any other form of corruption or fraud. ICON and all ICON directors, employees, consultants and agents ("Covered Persons") must act in compliance with international laws and regulations relating to bribery, corruption and illicit payments including, the US Foreign Corrupt Practices Act and the UK Bribery Act 2010.

In April 2018, ICON was awarded the ISO 37001:2016 certification for its Anti-Bribery Management System having established, implemented, maintained, reviewed and improved an Anti-Bribery Management System that can prevent, detect and mitigate the risk of bribery. Our programme is designed to ensure our compliance with anti-corruption laws, including due diligence, training, policies, procedures, and internal controls.

There are a number of policies and codes that make up the ABAC Management system including the Global Code of Ethical Conduct, the Global Anti Corruption Compliance Policy, the Ethics Line Charter and the Global Supplier Code of Conduct (together "the Codes"). The Codes are available on our website at https://investor.iconplc.com. All ICON employees are required to complete ICON's annual Ethics online training, which incorporates the key principles of each of the Codes. The Global Code of Ethical Conduct addresses the core principles underpinning the behaviour required of all Covered Persons in our internal interactions with each other and our external dealings with patients, clients, health care professionals, regulators, investors, vendors and other third parties. Violations of the Codes may result in a variety of corrective actions and in some cases may result in disciplinary action up to and including termination of employment.

Bribery and corruption remains a business risk as we conduct our business across the globe and enter into partnerships and collaborations. There is no certainty that all employees and third party business partners (including our vendors, suppliers, agents, contractors, and other partners) will comply with anti-bribery laws. When working with third parties, we are committed to working with only those who embrace high standards of ethical behaviour consistent with our own. Bribery and corruption risks are a focus of our third-party diligence and management process. We hold our suppliers accountable for meeting their contractual obligations with ICON, including commitments that are made with regard to our Global Supplier Code of Conduct and regulatory compliance. Contract non-compliance can result in termination of the business relationship with the supplier and exclusion from future business with ICON.

Suspected violations of the Codes may be reported on a confidential (or anonymous, where permitted) basis in accordance with our Ethics Line Charter through ICON's Ethics Line. ICON has open door, anti-retaliation policies in place to encourage and protect individuals who raise a concern. Ethics line reports are reported to the Board of ICON plc as appropriate. The Internal Audit team conducts ABAC programme audits. Internal Audits focus on testing for compliance and design effectiveness of the overall ABAC programme, Internal Audit incorporates an assessment of ABAC measures in all audits, as appropriate. In this approach, bribery and corruption risks are incorporated into the risk assessment and scoping process of each audit.

Principal risks

For further details on risks relating to anti-corruption refer to Appendix A: Risk Factors.

Directors' compliance statement

The Directors, in accordance with Section 225(2) of the Companies Act 2014, acknowledge that they are responsible for securing the Company's compliance with its relevant obligations as defined within the Companies Act, 2014 (hereinafter called the relevant obligations).

The Directors confirm that:

- a compliance policy statement has been drawn up setting out the Company's policies with regard to such compliance;
- appropriate arrangements and structures that, in their opinion, are designed to secure material compliance with the Company's relevant obligations, have been put in place; and
- a review has been conducted, during the financial year, of the arrangements and structures that have been put in place to secure the Company's compliance with the relevant obligations.

Auditor

In accordance with Section 383(2) of the Companies Act 2014, KPMG, Chartered Accountants, will continue in office.

On behalf of the Board

Steve Cutler	Ronan Murphy
Chief Executive Officer	Director

30 April 2019

Statement of Directors' Responsibilities in respect of the Directors' report and the financial statements

The directors are responsible for preparing the Directors' report and the Group and Company Financial Statements in accordance with applicable law and regulations.

Company law requires the directors to prepare Group and Company Financial Statements for each financial year. The directors have elected to prepare the Company Financial Statements in accordance with IFRS as adopted by the EU and as applied in accordance with the Companies Act 2014.

Under company law the directors must not approve the Group and Company Financial Statements unless they are satisfied that they give a true and fair view of the assets, liabilities and financial position of the Group and Company and of the Group's profit or loss for that year. In preparing the Group and Company Financial Statements, the directors are required to:

- select suitable accounting policies and then apply them consistently;
- make judgements and estimates that are reasonable and prudent;
- state whether they have been prepared in accordance with IFRS as adopted by the EU; and
- prepare the financial statements on the going concern basis unless it is inappropriate to presume that the Company will continue in business.

The directors are responsible for keeping adequate accounting records which disclose with reasonable accuracy at any time the assets, liabilities, financial position and profit or loss of the Company and which enable them to ensure that the financial statements comply with the provision of the Companies Act 2014. They are also responsible for safeguarding the assets of the Group and Company, and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities. The directors are also responsible for preparing a directors' report that complies with the requirements of the Companies Act 2014.

The directors are responsible for the maintenance and integrity of the corporate and financial information included on the Company's website. Legislation in the Republic of Ireland governing the preparation and dissemination of financial statements may differ from legislation in other jurisdictions.

On behalf of the Board

Steve Cutler Chief Executive Officer Ronan Murphy Director

Opinion

We have audited the financial statements of ICON plc ("the Company") and subsidiaries (together, "the Group") for the year ended 31 December 2018, which comprise the Consolidated Statement of Profit and Loss, Consolidated Statement of Comprehensive Income, Consolidated and Company Statements of Financial Position, Consolidated and Company Statements of Cash Flows, and related notes, including the summary of significant accounting policies set out in note 1. The financial reporting framework that has been applied in their preparation is Irish Law and International Financial Reporting Standards ("IFRS") as adopted by the European Union.

In our opinion:

- the Consolidated Financial Statements give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2018 and of the Group's profit for the year then ended;
- the Company Statement of Financial Position gives a true and fair view of the assets, liabilities and financial position of the Company as at 31 December 2018;
- the Consolidated Financial Statements have been properly prepared in accordance with IFRS as adopted by the European Union;
- the Company Financial Statements have been properly prepared in accordance with IFRS as adopted by the European Union, as applied in accordance with the provisions of the Companies Act 2014; and
- the Consolidated Financial Statements and Company Financial Statements have been properly prepared in accordance with the requirements of the Companies Act 2014 and, as regards the Group financial statements, Article 4 of the IAS Regulation.

Basis for opinion

We conducted our audit in accordance with International Standards on Auditing (Ireland) (ISAs (Ireland)) and applicable law. Our responsibilities under those standards are further described in the auditor's responsibilities for the audit of the financial statements section of our report. We have fulfilled our ethical responsibilities under, and we remained independent of the Company in accordance with ethical requirements that are relevant to our audit of financial statements in Ireland, including the Ethical Standard issued by the Irish Auditing and Accounting Supervisory Authority (IAASA), as applied to listed entities.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Key audit matters: our assessment of risks of material misstatement

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

In arriving at our audit opinion above, the key audit matter, in decreasing order of audit significance, was as follows:

Revenue Recognition

As described in note 1, significant accounting policies, and in note 2, segmental information, the Group's revenues were US \$2.596 million for the year ended 31 December 2018 (2017: US\$2.402 million).

The key audit matter

Significant management judgements and estimates are made Our audit procedures included, amongst others, testing the in connection with the recognition of revenue, in particular design and operating effectiveness of management's key clinical trial service revenue, in any accounting period. A clinical trial service contract, including services performed by third parties, represents a single performance obligation, percentage of completion on clinical trials contracts and satisfied over time. Clinical trial service revenue is recognised realisable contract values. on a percentage of completion basis, as the single performance obligation is satisfied. The progress towards completion is measured based on an input measure, being total project costs (inclusive of third party costs) incurred at each reporting period as a percentage of total estimated project costs to completion.

We focussed on this area because measurement of the progress towards completion involves judgement and estimation. Assessment of completion requires an evaluation of labour and related time cost incurred, and third party costs incurred, at the reporting date. Given the typically long-term nature and complexity of clinical trials, the forecast costs to complete (being internal direct costs and costs that will be incurred by third parties (principally investigators)) is judgemental. Furthermore, judgement and estimation is involved in determining the transaction price, which is based on the total contract or change order value, adjusted to reflect the realisable contract value.

The Group adopted IFRS 15 Revenue from Contracts with Customers effective 1 January 2018. The most significant impact of the application of the new standard was on clinical trial service revenue.

How the matter was addressed in our audit

controls over the revenue recognition process, including, in particular, those controls over the measurement of the

On a sample basis, we performed tests of detail over revenue recognised. We considered the terms of the applicable contracts and change orders. We recalculated the amounts and validated inputs to the revenue calculation including time, cost, estimated costs to complete and realisable contract values.

We enquired of key personnel, independent of the revenue team, to understand the stage of completion, time incurred and forecast time to complete studies, on sampled contracts, and we independently confirmed contractual terms and accounts receivable balances with a sample of customers.

We performed tests of detail over third party costs incurred by vouching to invoices, on a sample basis, as well as determining the completeness of the year-end accrual for third party (principally investigator) costs.

Our procedures in respect of this risk were performed as planned. We found that the estimates and judgements used in the recognition of revenue were appropriate.

Parent Company key audit matters

Due to the nature of the Parent Company's activities, there are no key audit matters that we are required to communicate in accordance with ISAs (Ireland).

Our application of materiality and an overview of the scope of our audit

Materiality for the Group Financial Statements as a whole was set at US\$17.5 million (2017: US\$15.5 million). Materiality for the Company Financial Statements was set at US\$8.0 million (2017: US\$7.3 million).

Our application of materiality and an overview of the scope of our audit (continued)

For the Group, materiality has been calculated as 5% of the benchmark of expected Group profit before tax (this estimated amount was based on earnings guidance available at the planning stage of the audit), which we have determined in our professional judgement, to be one of the principal benchmarks within the financial statements relevant to members of the Company in assessing the financial performance of the Group. For the Parent Company, materiality has been calculated based on 1% of the benchmark of total assets.

We report to the Audit Committee all corrected and uncorrected audit misstatements we identified through our audit in excess of US\$875,000 (Group) and US\$400,000 (Company), in addition to other audit misstatements below that threshold that we believe warranted reporting on qualitative grounds.

The structure of the Group's finance function is such that the majority of transactions and balances are accounted for by the central Group finance team. We performed comprehensive audit procedures, including those in relation to the significant risk set out above, on those transactions accounted for at Group level. Our audit covered 98% of total Group revenue and 98% of total Group assets, including 100% of the Parent Company's revenue and total assets.

All audit procedures were undertaken by the Group audit team.

We have nothing to report on going concern

We are required to report to you if we have concluded that the use of the going concern basis of accounting is inappropriate or there is an undisclosed material uncertainty that may cast significant doubt over the use of that basis for a period of at least twelve months from the date of approval of the financial statements. We have nothing to report in these respects.

Other information

The directors are responsible for the other information presented in the Annual Report together with the financial statements. The other information comprises the information included in the directors' report. The financial statements and our auditor's report thereon do not comprise part of the other information. Our opinion on the financial statements does not cover the other information and, accordingly, we do not express an audit opinion or, except as explicitly stated below, any form of assurance conclusion thereon.

Our responsibility is to read the other information and, in doing so, consider whether, based on our financial statements audit work, the information therein is materially misstated or inconsistent with the financial statements or our audit knowledge. Based solely on that work we have not identified material misstatements in the other information.

Based solely on our work on the other information, we report that, in those parts of the directors' report specified for our consideration:

- we have not identified material misstatements in the directors' report;
- in our opinion, the information given in the directors' report is consistent with the financial statements;
- in our opinion, the directors' report has been prepared in accordance with the Companies Act 2014.

Our opinions on other matters prescribed by the Companies Act 2014 are unmodified

We have obtained all the information and explanations which we consider necessary for the purpose of our audit.

In our opinion, the accounting records of the Company were sufficient to permit the financial statements to be readily and properly audited and the Company's financial statements are in agreement with the accounting records.

We have nothing to report on other matters on which we are required to report by exception

The Companies Act 2014 requires us to report to you if, in our opinion, the disclosures of directors' remuneration and transactions required by Sections 305 to 312 of the Act are not made.

The Companies Act 2014 also requires us to report to you if, in our opinion, the Company has not provided the information required by section 5(2) to (7) of the European Union (Disclosure of Non-Financial and Diversity Information by certain large undertakings and groups) Regulations 2017 for the year ended 31 December 2018 as required by the European Union (Disclosure of Non-Financial and Diversity Information by certain large undertakings and groups) (amendment) Regulations 2018.

Respective responsibilities and restrictions on use

Directors' responsibilities

As explained more fully in their statement set out on page 18, the directors are responsible for: the preparation of the financial statements including being satisfied that they give a true and fair view; such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error; assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern; and using the going concern basis of accounting unless they either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

Auditor's responsibilities for the audit of the financial statements

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

A fuller description of our responsibilities is provided on IAASA's website at <u>https://www.iaasa.ie/getmedia/</u> <u>b2389013-1cf6-458b-9b8f-a98202dc9c3a/Description_of_auditors_responsibilities_for_audit.pdf.</u>

The purpose of our audit work and to whom we owe our responsibilities

Our report is made solely to the Company's members, as a body, in accordance with Section 391 of the Companies Act 2014. Our audit work has been undertaken so that we might state to the Company's members those matters we are required to state to them in an auditor's report and for no other purpose. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the Company and the Company's members, as a body, for our audit work, for our report, or for the opinions we have formed.

Emer McGrath for and on behalf of KPMG Chartered Accountants, Statutory Audit Firm 1 Stokes Place St. Stephen's Green Dublin 2 Ireland 30 April 2019

Consolidated Statement of Profit and Loss

for the year ended 31 December 2018

		31 December 2018	31 December 2018	31 December 2018	31 December 2017	31 December 2017	31 December 2017
Continuing Operations	Note	Excluding Exceptional items \$'000	(Note 8) Exceptional items \$'000	Including Exceptional items \$'000	Excluding Exceptional items \$'000	(Note 8) Exceptional items \$'000	Including Exceptional items \$'000
Revenue/Gross revenue	2	2,595,777	_	2,595,777	2,402,321	_	2,402,321
Reimbursable expenses		_	_	_	(643,882)	_	(643,882)
		2,595,777	_	2,595,777	1,758,439		1,758,439
Direct costs		(1,816,270)	(10,017)	(1,826,287)	(1,026,438)	(5,038)	(1,031,476)
Other operating expenses		(389,899)	(2,473)	(392,372)	(392,302)	(2,715)	(395,017)
Operating profit		389,608	(12,490)	377,118	339,699	(7,753)	331,946
Financing income	4	4,759	—	4,759	8,346		8,346
Financing expense	5	(13,502)	—	(13,502)	(12,627)	—	(12,627)
Profit before taxation	3	380,865	(12,490)	368,375	335,418	(7,753)	327,665
Income tax expense	6	(47,011)	1,453	(45,558)	(55,690)	969	(54,721)
Profit for the financial ye	ar	333,854	(11,037)	322,817	279,728	(6,784)	272,944
Attributable to:							
Owners of the Company	25	333,854	(11,037)	322,817	279,728	(6,784)	272,944
Earnings per ordinary sh	are						
Basic	7			5.96			5.04
Diluted	7			5.90			4.98

On behalf of the Board

Steve Cutler Chief Executive Officer Ronan Murphy Director

Consolidated Statement of Comprehensive Income

for the year ended 31 December 2018

	Note	31 December 2018 \$'000	31 December 2017 \$'000
Other Comprehensive Income			
Items that will not be reclassified to profit or loss:			
Re-measurement of defined benefit liability	10	2,640	(105)
Tax benefit on defined benefit pension contributions	25		754
Total items that will not be reclassified to profit or loss		2,640	649
Items that are or may be reclassified subsequently to profit or loss, net of tax:			
Currency translation differences	25	(26,522)	33,966
Currency impact on long-term funding	25	(4,834)	13,730
Unrealised capital loss on investments	25	(155)	(272)
Amortisation of interest rate hedge	25	(923)	(923)
Cash flow hedges - effective portion of changes in fair value	25	(1,036)	1,036
Total items that are or may be reclassified to profit or loss		(33,470)	47,537
Other comprehensive (loss)/gain for the year, net of tax		(30,830)	48,186
Profit for the financial year		322,817	272,944
Total comprehensive income for the financial year		291,987	321,130
Attributable to:			
Equity holders of the Company		291,987	321,130
Total comprehensive income for the financial year		291,987	321,130

On behalf of the Board

Steve Cutler Chief Executive Officer Ronan Murphy Director

Consolidated Statement of Financial Position

as at 31 December 2018

	Note	31 December 2018	31 December 2017
ASSETS		\$'000	\$'000
Non-current assets			
Property, plant and equipment	12	103,710	105,100
Intangible assets – goodwill and other	13	879,283	912,646
Other non-current assets	17	20,778	22,364
Financial assets	18	6,963	
Deferred tax assets	6	31,665	33,332
Total non-current assets		1,042,399	1,073,442
Current assets			
Inventories	15	2,274	2,236
Accounts receivable	16	414,791	379,501
Unbilled revenue		362,926	268,509
Other current assets	17	68,734	58,957
Current taxes receivable		39,468	42,781
Current asset investments	18	59,910	77,589
Cash and cash equivalents	19	395,851	282,859
Total current assets		1,343,954	1,112,432
Total assets		2,386,353	2,185,874
EQUITY			
Share capital	24	4,658	4,664
Share premium		283,629	266,852
Other undenominated capital	25	983	912
Share-based payment reserve	25	173,326	187,840
Other reserves	25	11,868	11,029
Foreign currency translation reserve	25	(67,469)	(35,077)
Current asset investments - fair value reserve	25	(450)	(295)
Retained earnings	25	979,834	794,331
Total equity attributable to the owners of the company		1,386,379	1,230,256
LIABILITIES			
Non-current liabilities		• 10 • 4 4	
Non-current bank credit lines and loan facilities	23	349,264	348,888
Non-current other liabilities	20	13,022	17,645
Non-current provisions	21	1,301	432
Deferred tax liabilities	6	8,213	7,716
Total non-current liabilities		371,800	374,681
Current liabilities		12 200	10 -00
Accounts payable		13,288	18,590
Payments on account		274,468	298,992
Accrued and other liabilities	20	309,943	230,321
Provisions	21	7,200	3,182
Current tax payable		23,275	29,852
Total current liabilities		628,174	580,937
Total liabilities		999,974	955,618
Total equity and liabilities		2,386,353	2,185,874

On behalf of the Board

Steve Cutler *Chief Executive Officer* Ronan Murphy *Director*

				Other	Share-based			assets at fair value through other		
	Number of shares	Share Capital \$'000	Share Premium \$'000	Share Undenominated mium Capital \$'000 \$'000	Payment Reserve \$'000	Other Reserves \$'000	Currency con Reserve inco \$'000	comprehensive income reserve \$^000	Retained Earnings \$*000	Total \$'000
Balance at 31 December 2017	54,081,601	4,664	266,852	912	187,840	11,029	(35,077)	(295)	794,331	1,230,256
Cumulative effect adjustment from adoption of IFRS 15			1				1	1	(48,104)	(48,104)
Balance at 1 January 2018	54,081,601	4,664	266,852	912	187,840	11,029	(35,077)	(295)	746,227	1,182,152
Profit for the year									322,817	322,817
Other Comprehensive Income:										
Foreign currency translation							(26,522)			(26,522)
Currency impact on long-term funding							(4,834)			(4,834)
Cash flow hedge							(1,036)			(1,036)
Unrealised fair value movements on investments								(155)		(155)
Re-measurement of defined benefit liability									2,640	2,640
Tax benefit on defined benefit pension contributions										
Amortisation of interest rate hedge			I			(923)		I	I	(923)
Total other comprehensive income						(923)	(32,392)	(155)	2,640	(30, 830)
Total comprehensive income for the year						(923)	(32,392)	(155)	325,457	291,987
Transactions with owners, recorded directly in equity										
Share-based payment					28,009					28,009
Exercise of share options	408,699	29	16,777							16,806
Transfer of exercised and expired share-based awards		I	Ι		(38,954)			I	38,954	
Issue of restricted share units/ performance share units	489,568	36	Ι					I	I	36
Share issue costs									(16)	(16)
Repurchase of ordinary shares	(1,008,162)	(11)		71					(128,960)	(128,960)
Share repurchase costs									(99)	(99)
Tax benefit excess on exercise of options					4,626					4,626
Deferred tax movement on unexercised options					(8,195)					(8,195)
Non-distributable reserves			Ι			1,762		I	(1,762)	
Total contributions by and distributions to owners	(109,895)	(9)	16,777	71	(14,514)	1,762		Ι	(91,850)	(87,760)
Balance at 31 December 2018	53,971,706	4,658	283,629	983	173,326	11,868	(67,469)	(450)	979,834	1.386.379

Consolidated Statement of Changes in Equity for the year ended 31 December 2018

	Number of shares	Share Capital	Share U Premium	Other Share Undenominated mium Capital	Share-based Payment Reserve	Other Reserves	Currency Reserve	Current Asset Investment Fair value Reserve	Retained Earnings	Total
		S'000	2.000	S'000	S'000	S'000	S*000	000.8	8.000	S*000
Balance at 1 January 2017	54,530,843	4,692	252,977	809	141,890	10,348	(83,809)	(23)	650,583	977,467
Total comprehensive income for the year:										
Profit for the year	I								272,944	272,944
Other Comprehensive Income:										
Foreign currency translation							33,966			33,966
Currency impact on long-term funding		I	I	I	Ι	I	13,730	I	I	13,730
Cash flow hedge							1,036			1,036
Unrealised fair value movements on investments								(272)		(272)
Re-measurement of defined benefit liability		I	I	I	Ι	I	I	I	(105)	(105)
Tax benefit on defined benefit pension contributions						754				754
Amortisation of interest rate hedge						(923)				(923)
Total other comprehensive income	1					(169)	48,732	(272)	(105)	48,186
Total comprehensive income for the year						(169)	48,732	(272)	272,839	321,130
Transactions with owners, recorded directly in equity										
Share-based payment		Ι	Ι	I	29,898	I	I	Ι	Ι	29,898
Exercise of share options	458,243	31	13,875				Ι	I		13,906
Transfer of exercised and expired share-based awards			I		(4,986)			I	4,986	I
Issue of restricted share units/ performance share units	681,742	44	Ι	I	I	I	I	Ι	Ι	44
Share issue costs		Ι	I	I	I	I		Ι	(15)	(15)
Repurchase of ordinary shares	(1,589,227)	(103)		103					(133, 106)	(133, 106)
Share repurchase costs		Ι	I	Ι	Ι	Ι	I	Ι	(106)	(106)
Tax benefit excess on exercise of options		Ι	I	I	14,196	I		Ι	I	14,196
Deferred tax movement on unexercised options					6,842					6,842
Non-distributable reserves		Ι	Ι			850		-	(850)	Ι
Total contributions by and distributions to owners	(449,242)	(28)	13,875	103	45,950	850		Ι	(129,091)	(68,341)
Balance at 31 December 2017	54,081,601	4,664	266,852	912	187,840	11,029	(35,077)	(295)	794,331	1,230,256

Further details of the reserves above are detailed in note 25

Consolidated Statement of Changes in Equity for the year ended 31 December 2017

Consolidated Statement of Cash Flows

for the year ended 31 December 2018

	Note	Year ended 31 December 2018	Year ended 31 December 2017
		\$'000	\$'000
Profit for the financial year		322,817	272,944
Adjustments to reconcile net income to net cash generated from operating activities		,	- ,-
Loss on disposal of property, plant and equipment		70	228
Depreciation	12	19,996	19,876
Amortisation of intangible assets	13	45,920	41,421
Amortisation of grants	22	(47)	(44)
Interest on short term investments	18	(1,329)	(1,088)
Realised gain on sale of current asset investments	18	(56)	(112)
Gain on re-measurement of long-term financial assets	18	(800)	
Amortisation of gain on interest rate hedge	5	(923)	(923)
Amortisation of deferred financing costs	5	812	556
Share based payment	11	28,059	31,120
Financing income	4	(4,759)	(2,346)
Financing expense	5	13,613	12,627
Defined benefit pension service costs	10	263	355
Defined benefit pension finance costs	10	137	181
Defined benefit past service cost	10	(8)	
Defined benefit expenses	10	_	(8)
Income tax expense	6	45,558	54,721
Operating cash inflow before changes in working capital		469,323	429,508
(Increase)/decrease in accounts receivable		(37,557)	57,747
Increase in unbilled revenue		(98,510)	(62,491)
Decrease in other current assets		342	5,947
Decrease/(increase) in other non current assets		856	(1,524)
(Increase)/decrease in inventory		(38)	183
(Decrease)/increase in accounts payable		(5,067)	7,014
Decrease in payments on account		(6,253)	(7,174)
Decrease in accrued and other liabilities and provisions		(29,613)	(21,169)
Decrease in non current other liabilities and provisions		(1,813)	(4,657)
Cash provided by operations		291,670	403,384
Income taxes paid		(18,558)	(12,305)
Employer contribution defined benefit pension scheme	10	(263)	(4,165)
Interest received		4,224	1,743
Interest paid		(13,060)	(13,094)
Net cash inflow from operating activities		264,013	375,563
Investing activities			
Purchase of property, plant and equipment		(20,760)	(19,798)
Purchase of intangible assets		(27,637)	(24,919)
Purchase of subsidiary undertakings		(1,645)	(144,131)
Cash acquired with subsidiary undertakings		—	19,649
Sale/maturity of current asset investments		99,865	33,086
Purchase of current asset investments		(80,956)	(41,701)
Purchase of investments in equity - long term		(6,163)	
Net cash used in investing activities		(37,296)	(177,814)
Financing activities			
Financing costs		(823)	_
Tax benefit from the exercise of share options		4,626	7,519
Proceeds from exercise of share options, RSUs and PSUs		16,842	13,950
Share issuance costs		(16)	(15)
Repurchase of ordinary shares		(128,960)	(133,106)
Share repurchase costs		(66)	(106)
Net cash used in financing activities		(108,397)	(111,758)
Net increase in cash and cash equivalents		118,320	85,991
Effect of exchange rate changes		(5,328)	4,327
Cash and cash equivalents at start of year		282,859	192,541
Cash and cash equivalents at end of year		395,851	282,859

Notes to Consolidated Financial Statements

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies

Statement of compliance

The Group Financial Statements have been prepared in accordance with International Financial Reporting Standards ("IFRS") issued by the International Accounting Standards Board ("IASB") as adopted by the European Union ("EU") that are effective for financial year ending 31 December 2018. The Company Financial Statements have been prepared in accordance with IFRS as adopted by the EU and those parts of the Companies Act 2014 applicable to companies reporting under IFRS. IFRS adopted by the EU differs in certain respects from IFRS issued by the IASB. Reference to the IFRS hereafter refers to IFRS adopted by the EU. A Company that publishes its Group and Company Financial Statements together, can take advantage of the exemption in Section 304 of the Companies Act 2014 from presenting to its members a Company Statement of Profit and Loss and Company Statement of Comprehensive Income and related notes.

Basis of preparation

The Group and Company Financial Statements are presented in United States dollars ("U.S. dollars") and all values are rounded to the nearest thousand (\$'000), except where otherwise indicated. They are prepared on the historical cost basis, except for the measurement at fair value on date of grant of share options, the pension plan assets, other investments and financial assets. Other than the new and amended standard adopted by the group, accounting policies are applied consistently with the prior year.

New and amended standards adopted by the group

The Group has applied the following standards and amendments for the first time for the annual reporting period commencing 1 January 2018:

- IFRS 9 Financial instruments
- IFRS 15 *Revenue from Contracts with Customers*
- Classification and Measurement of Share-based Payment Transactions Amendments to IFRS 2
- Annual improvements 2014-2016 cycle
- Interpretation 22 Foreign Currency Transactions and Advance Consideration.

The Group changed its accounting policies following the adoption of IFRS 9 and IFRS 15. Certain adjustments were made following the adoption of IFRS 15. The impact of these changes are disclosed in *note 34 Impact of New Accounting Policy*. The other amendments (including IFRS 9) listed did not have any impact on the amounts recognised in prior periods or the current period. See the section following for accounting policies applied for these areas in the year ended 31 December 2018 (IFRS 15 and IFRS 9) and accounting policies applied in the years ended 31 December 2017 and previously.

Key accounting policies which involve significant estimates and judgements

The preparation of Consolidated Financial Statements requires management to make estimates and judgements that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reported period.

Estimates and judgements are based on historical experience and on other factors that are reasonable under current circumstances. Actual results may differ from these estimates if these assumptions prove to be incorrect or if conditions develop other than as assumed for the purposes of such estimates. The following are the critical areas requiring estimates and judgements by management.

Revenue Recognition

The Company primarily earns revenues by providing a number of different services to its customers. These services, which are integral elements of the clinical development process, include clinical trials management, consulting, contract staffing, and laboratory services. Contracts range in duration from a number of months to several years.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

IFRS 15 - Revenue from Contracts with Customers (year-ended December 31, 2018)

ICON adopted IFRS 15 using the cumulative effect transition method. Under this transition method, ICON has applied the new standard as at the date of initial application (i.e. 1 January 2018), without restatement of comparative amounts. The cumulative effect of initially applying the new standard (to revenue, costs and tax) is recorded as an adjustment to the opening balance of equity at the date of initial application. The comparative information has not been adjusted and therefore continues to be reported in accordance with previous accounting policies. See *note 34 Impact of change in accounting policies* for details of the impact of adoption of the new accounting policy. The new standard requires application of five steps: (1) identify the contract(s) with a customer; (2) identify the performance obligation in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognise revenue when (or as) the entity satisfies the performance obligation.

Clinical trial service revenue

The most significant impact of application of the standard relates to our assessment of performance obligations and percentage of completion in respect of our clinical trial service revenue. Prior to application of IFRS 15, the revenue attributable to performance was determined based on both input and output methods of measurement on a percentage of completion basis. We have concluded that under the new standard, a clinical trial service is a single performance obligation satisfied over time i.e. the full service obligation in respect of a clinical trial (including those services performed by investigators and other parties) is considered a single performance obligation. Promises offered to the customer are not distinct within the context of the contract. We have concluded that ICON is the contract principal in respect of both direct services and in the use of third parties (principally investigator services) that support the clinical research project. The transaction price is determined by reference to the contract or change order value (total service revenue and pass-through/reimbursable expenses) adjusted downwards to reflect a realisable contract value. Revenue is recognised as the single performance obligation is satisfied. The progress towards completion for clinical service contracts is measured based on an input measure being project costs incurred as a proportion of total project costs (inclusive of third party costs) at each reporting period.

Contracting services revenue

On evaluation of the principles at (1) - (5) set-out above in respect of IFRS 15, the Company has availed of the practical expedient which results in recognition of revenue on a right to invoice basis. Application of the practical expedient reflects the right to consideration from the customer in an amount that corresponds directly with the value to the customer of the performance completion to date. This reflects hours performed by contract staff.

Consulting services revenue

On application of the IFRS 15 principles at (1) - (5) set-out above, we have concluded that our consulting services contracts represent a single performance obligation satisfied over time. The transaction price is determined by reference to contract or change order value. Revenue is recognised as the performance obligation is satisfied. The progress towards completion for consulting contracts is measured based on total project inputs (time) at each reporting period.

Laboratory services revenue

Revenue is recognised when, or as, obligations under the terms of a contract are satisfied, which occurs when control of the products or services are transferred to the customer. Revenue for laboratory services is measured as the amount of consideration we expect to receive in exchange for transferring products or services. Where contracts with customers contain multiple performance obligations, the transaction price is allocated to each performance obligation based on the estimated relative selling price of the promised good or service. Service revenue is recognised over time as the services are delivered to the customer based on the extent of progress towards completion of the parformance obligation. The determination of the methodology to measure progress requires judgement and is based on the nature of services provided. This requires an assessment of the transfer of value to the customer. The right to invoice measure of progress is generally related to rate per unit contracts, as the extent of progress towards completion is measured based on discrete service or time-based increments, such as samples tested or labour hours incurred. Revenue is recorded in the amount invoiced since that amounts corresponds to the value of the Company's performance and the transfer of value to the customer.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Revenue recognition (years ended 31 December 2017 and previously)

Revenue for services, as rendered, is recognised only after persuasive evidence of an arrangement exists, the sales price is fixed or determinable and collectability is reasonably assured.

Clinical trials management revenue is recognised on a proportional performance method. Depending on the contractual terms revenue is either recognised on the percentage of completion method based on the relationship between hours incurred and the total estimated hours of the trial or on the unit of delivery method. Contract costs equate to the product of labour hours incurred and compensation rates. For the percentage of completion method, the input (effort expended) method has been used to measure progress towards completion as there is a direct relationship between input and productivity. Contract revenue is the product of the aggregated labour hours required to complete the specified contract tasks at the agreed contract rates. The Company regularly reviews the estimate of total contract time to ensure such estimates remain appropriate taking into account actual contract stage of completion, remaining time to complete and any identified changes to the contract scope. Remaining time to complete depends on the specific contract tasks, the complexity of the contract and can include geographical site selection and initiation, patient enrolment, patient testing and level of results analysis required. While the Company may routinely adjust time estimates, the Company's estimates and assumptions historically have been accurate in all material respects in the aggregate. Where revenue is recognised on the unit of delivery method, the basis applied is the number of units completed as a percentage of the total number of contractual units.

Consulting revenue is recognised on a fee-for-service basis as each hour of the related service is performed.

Contract staffing revenue is recognised on a fee-for-service basis, over the time the related service is performed, or in the case of permanent placement, once the candidate has been placed with the client.

Laboratory service revenue is recognised on a fee-for-service basis. The Company accounts for laboratory service contracts as multiple element arrangements, with contractual elements comprising laboratory kits and laboratory testing, each of which can be sold separately. Sales prices for contractual elements are determined by reference to objective and reliable evidence of their sales price. Revenues for contractual elements are recognised on the basis of the number of deliverable units completed in the period.

Informatics revenue is recognised on a fee-for-service basis. Informatics contracts are treated as multiple element arrangements, with contractual elements comprising license fee revenue, support fee revenue and revenue from software services, each of which can be sold separately. Sales prices for contractual elements are determined by reference to objective and reliable evidence of their sales price.

License and support fee revenues are recognised rateably over the period of the related agreement. Revenue from software services is recognised using the percentage of completion method based on the relationship between hours incurred and the total estimated hours required to perform the service.

Contracts generally contain provisions for renegotiation in the event of changes in the scope, nature, duration, or volume of services of the contract. Renegotiated amounts are recognised as revenue by revision to the total contract value arising as a result of an authorised customer change order.

Third party costs (Reimbursable expenses)

Reimbursable expenses comprise investigator payments and certain other costs which are reimbursed by clients under terms specific to each contract to the investigators. Third party costs (reimbursable expenses) and the related revenue were separately presented on the face of the Consolidated Statement of Operations for periods up to and including the year-ended 31 December 2017.

IFRS 9 (year-ended 31 December 2018)

IFRS 9 - Financial Instruments replaces IAS 39 Financial instruments: Recognition and Measurement effective from 1 January 2018. It addresses the classification, measurement and de-recognition of financial assets and financial liabilities, introduces

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

a new impairment model for financial assets and new rules for hedge accounting. Adoption of IFRS 9 did not have any impact on the amounts recognised in prior periods or the current period. See *note 34 Impact of change in accounting policies*.

The Group assessed the business models and contractual cash flows which apply to its financial assets and classified the assets into the appropriate IFRS 9 categories accordingly.

Financial asset category	Classification and measurement under IAS 39	Classification and measurement under IFRS 9	Classification test outcomes
Cash and cash equivalents Trade receivables	Loans and receivables at fair value (initial recognition) followed by amortised cost (subsequent measurement).	Financial assets at fair value (initial recognition) followed by amortised cost net of impairments (subsequent measurement).	Business model test result: hold to collect contractual cash flows. Cash flow characteristics test result: solely payments of principal and interest.
Current asset investments	Short-term financial investments at fair value through OCI	Short-term financial assets at fair value (initial recognition) either through OCI or profit or loss	
Non-current financial assets	Long-term financial assets at fair value through profit or loss	Long-term financial assets at fair value through profit or loss	
Contingent consideration	Fair value through profit or loss.	Fair value through profit or loss.	Business model test result: hold to collect contractual cash flows. Cash flow characteristics test result: potential variability in future payments results in changes to fair value.

As outlined above, the classification requirements under IFRS 9 did not impact the measurement or carrying amount of financial assets at 1 January 2018. See *note 34 Impact of change in accounting policies*.

(a) Cash and cash equivalents (IFRS 9 - year ended 31 December 2018, IAS 39 - years ended 31 December 2017 and previously)

Cash and cash equivalents include cash and highly liquid investments with original maturities of three months or less and are stated at fair value on initial recognition followed by amortised cost, which approximates fair value. This classification is applied under both IFRS 9 and IAS 39.

(b) Trade receivables

IFRS 9 - year ended 31 December 2018

The Group's financial assets measured at amortised cost, the most significant of which are trade receivables and unbilled receivables, are subject to IFRS 9's new expected credit loss model. The Group's impairment methodology has been revised in line with the requirements of IFRS 9.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

For trade receivables and unbilled revenue, the Group applies the simplified approach permitted by IFRS 9, which requires expected lifetime losses to be recognised from initial recognition of the receivables. See notes 16, 26 and 34 for further details. As part of the IFRS 9 transition, the Group assessed its existing trade and unbilled receivables for impairment, using reasonable and supportable information that is available without undue cost or effort, to determine the credit risk of the receivables at the date on which they were initially recognised and compared that to the credit risk as at 1 January 2018. This assessment has not resulted in a material adjustment to trade and unbilled receivables. See *note 34 Impact of change in accounting policies*.

IAS 39 - years ended 31 December 2017 and previously

Under IAS 39, impairment of trade receivables was assessed based on the incurred loss model. Individual receivables which were known to be uncollectible were written off by reducing the carrying amount directly. The other receivables were assessed collectively to determine whether there was objective evidence that an impairment had been incurred but not yet identified. The estimated impairment losses were recognised as a provision for impairment. Receivables were written off against the provision when there was no expectation of recovering cash.

(c) Current asset investments and non-current financial assets

IFRS 9 - year ended 31 December 2018

From 1 January 2018, the Group classifies its financial assets in the following measurement categories:

- those to be measured subsequently at fair value through OCI
- those to be measured subsequently at fair value through profit or loss and
- those to be measured at amortised cost.

The classification depends on the entity's business model for managing financial assets and the contractual terms of the cash flows.

At initial recognition, the Group measures a financial asset at its fair value plus, in the case of a financial asset not at fair value through profit or loss (FVPL), transaction costs that are directly attributable to the acquisition of the financial asset. Transaction costs of financial assets carried at FVPL are expensed in profit or loss.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or OCI. For investments in equity instruments that are not held for trading, this will depend on whether the Group has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income (FVOCI). The Group reclassifies debt investments when and only when its business model for managing those assets changes.

Purchases or sales of financial assets are recognised on trade date, the date the Group commits to purchase or sell the asset. Financial assets are de-recognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the group has transferred substantially all the risks and rewards of ownership.

Subsequent measurement of debt instruments depends on the Group's business model for managing the asset and the cash flow characteristics of the asset.

There are three measurement categories into which the Group classifies its financial instruments:

- Amortised cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains/(losses) together with foreign exchange gains and losses.
- FVOCI: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

carrying amount are taken through OCI, except for the recognition of impairment gains or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method.

• FVPL: Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FPL is recognised in profit or loss.

From 1 January 2018, the Group assesses on a forward looking basis the expected credit losses associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

IAS 39 - years ended 31 December 2017 and previously

Until 31 December 2017, the Group classified financial assets in the following categories;

- financial assets at fair value through profit or loss, (none existed at 31 December 2017)
- loans and receivables,
- held-to-maturity investments, and
- available-for-sale financial assets (current asset investments).

The classification depended on the purpose for which the investments were acquired. The Group determined the classification of its investments at initial recognition and, in the case of assets classified as held-to-maturity, re-evaluated this designation at the end of each reporting period.

The measurement at initial recognition did not change on adoption of IFRS 9, see description above. Subsequent to the initial recognition, loans and receivables were carried at amortised cost.

(d) Interest bearing loans and borrowings

IFRS 9 - year ended 31 December 2018

Borrowings are initially recognised at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortised costs. Subsequent to initial recognition, current and non-current interest bearing loans and borrowings are measured at amortised cost with any difference between cost and redemption value being recognised in the Consolidated Statement of Profit and Loss over the period of the borrowings on an effective interest basis. Fees paid on the establishment of loan facilities are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. In this case, the fee is deferred until draw down will occur. Where there is no evidence that it is probable that some or all of the facility will be drawn down, the fee is capitalised as a prepayment and amortised over the period of the facility to which it relates.

Borrowings are classified as current liabilities unless the Group has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

Borrowings are removed from the balance sheet when the obligation specified in the contract is discharged, cancelled or expired. The difference between the carrying amount of a financial liability that has been extinguished or transferred to another party and the consideration paid, including any non-cash assets transferred or liabilities assumed, is recognised in profit or loss as other income or finance costs.

(e) Hedge accounting

IFRS 9 - year ended 31 December 2018

The Group's hedge relationships at 1 January 2018 qualify as continuing hedges on the adoption of IFRS 9. As a result, there has not been an impact to the financial position of the Group as a result of adopting IFRS 9.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Derivative financial instruments and hedging

Derivatives are initially recognised at fair value on the date a derivative contract is entered into and are subsequently remeasured to their fair value at the end of each reporting period. The accounting for subsequent changes in fair value depends on whether the derivative is designated as a hedging instrument, and if so, the nature of the item being hedged. The Group designates certain derivatives as either:

- hedges of the fair value of recognised assets or liabilities or a firm commitment (fair value hedges)
- hedges of a particular risk associated with the cash flows of recognised assets and liabilities and highly probable forecast transactions (cash flow hedges), or
- hedges of a net investment in a foreign operation (net investment hedges).

At inception of the hedge relationship, the Group documents the economic relationship between hedging instruments and hedged items including whether changes in the cash flows of the hedging instruments are expected to offset changes in the cash flows of hedged items. The Group documents its risk management objective and strategy for undertaking its hedge transactions.

The fair value of derivative financial instruments designated in hedge relationships are disclosed in note 26. Movements in the hedging reserve in shareholders' equity are shown in shareholders' equity. The full fair value of a hedging derivative is classified as a non-current asset or liability when the remaining maturity of the hedged item is more than 12 months. It is classified as a current asset or liability when the remaining maturity of the hedged item is less than 12 months.

Cash flow hedges that qualify for hedge accounting

The effective portion of changes in the fair value of derivatives that are designated and qualify as cash flow hedges is recognised in the cash flow hedge reserve within equity. The gain or loss relating to the ineffective portion is recognised immediately in profit or loss, within other gains/(losses).

Gains or losses relating to the effective portion of the change in intrinsic value of the options are recognised in the cash flow hedge reserve within equity. The changes in the time value of the options that relate to the hedged item are recognised within OCI in the costs of hedging reserve within equity.

When a hedging instrument expires or is sold or terminated, or when a hedge no longer meets the criteria for hedge accounting, any cumulative deferred gain or loss and deferred costs of hedging in equity at that time remains in equity until the forecast transaction occurs.

Changes in the fair value of any derivative instrument that does not qualify for hedge accounting are recognised immediately in profit or loss.

There were no open derivative transactions at 31 December 2018.

In October 2015, the Group entered into an interest rate hedge in respect of the planned issuance of the Senior Notes in December 2015. The interest rate hedge matured in November 2015 when the interest rate on the Senior Notes was fixed. The interest rate hedge was considered an effective hedge on application of the provisions of IAS 39 and continues to be considered effective on application of the provisions of IFRS 9. The cash proceeds, representing the realised gain on the interest rate hedge were received on maturity in November 2015. The gain, representing the instrument's fair value at maturity was recorded in Other Comprehensive Income and is being amortised to the Consolidated Statement of Profit and Loss over the term of the Senior Notes.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

IAS 39 - years ended 31 December 2017 and previously

For the purposes of hedge accounting, hedges are designated either as fair value hedges (which hedge the exposure to movements in the fair value of recognised assets or liabilities or firm commitments that are attributable to hedge risks) or cash flow hedges (which hedge exposures to fluctuations in future cash flows derived from a particular risk associated with recognised assets or liabilities or highly probable forecast transactions).

On entering into a hedging instrument, the Group documents, at inception of the transaction, the relationship between the hedging instrument and the hedged item, as well as its risk management objectives and strategy for undertaking the hedging transaction.

The Group also documents its assessment, at the inception of the hedge transaction, whether the derivative used is highly effective in offsetting the change in fair value or cash flows of the hedged item.

Derivative financial instruments are recognised at fair value. Where a derivative financial instrument is designated as a hedge of a highly probable forecasted transaction, the effective part of changes in the fair value of the derivative financial instrument is recognised directly in the Consolidated Statement of Comprehensive Income. The associated cumulative gain or loss is removed from other comprehensive income and recognised in the Consolidated Statement of Profit and Loss in the same period or periods during which the hedged item affects profit or loss. The ineffective part of any gain or loss is recognised immediately in the Consolidated Statement of Profit and Loss.

Some of the Group's operational costs are settled in foreign currencies. In order to manage its exposure to changes in Euro exchange rates, the Group hedges part of its monthly forecasted Euro denominated cash outflows for operating costs using foreign currency forward contracts. During the years ended 31 December 2017 and 31 December 2018, the Group entered into forward currency contracts in respect of identified exposure arising from euro payments. All contracts expired during the year ended 31 December 2018.

(f) Investments in subsidiaries - Company

IFRS 9 - year ended 31 December 2018

Investments in subsidiary undertakings are stated at cost less any accumulated impairment and are reviewed for impairment if there are indicators that the carrying value may not be recoverable.

Intercompany loans receivable and payable are initially recognised at fair value. These are subsequently measured at amortised cost, less any loss allowance.

IAS 39 - years ended 31 December 2017 and previously

Investments in subsidiary undertakings are stated at cost less provision for impairment in the Company's Statement of Financial Position. Loans to subsidiary undertakings which are deemed long term investments in nature are initially recorded at fair value in the Company Statement of Financial Position and subsequently at amortised cost using an effective interest rate methodology.

New and amended standards and interpretations effective after 2018

Certain new accounting standards and interpretations have been published that are not mandatory for 31 December 2018 reporting periods and have not been early adopted by the Group. The Group's assessment of the impact of these new standards and interpretations is set out below.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Leases

IFRS 16, *Leases* issued in January 2018 by the IASB replaces IAS 17 *Leases* and related interpretations. IFRS 16 sets out the principles for the recognition, measurement, presentation and disclosure of leases for both the lessee and the lessor. For lessees, IFRS 16 eliminates the classification of leases as either operating leases or finance leases and introduces a single lessee accounting model whereby all leases are accounted for as finance leases, with some exemptions. For lessors, IFRS 16 substantially carried forward the accounting requirement in IAS 17. IFRS 16 is effective for annual periods beginning on or after 1 January 2019. The Group will apply IFRS 16 from the effective date. See *note 28 Commitments and contingencies* for details of operating leases held during year ended 31 December 2018. A lease liability and right-of-use asset will be recorded on the Consolidated Statement of Financial Position at 1 January 2019. We estimate the impact of adoption of IFRS 16 will be the recognition of a right-of-use asset and of lease liabilities in the range of \$100 million to \$110 million. Under the new standard we expect an insignificant change in net result due to the replacement of operating leases expenses with amortisation of the lease asset and the interest expense.

Other changes to IFRS have been issued; however, they are either not expected to have a material effect on the Consolidated Financial Statements or they are not currently relevant for the Group.

Accounting policies

The following accounting policies have been applied consistently in dealing with items which are considered material in relation to the Group's Financial Statements.

Basis of consolidation

The Group Financial Statements consolidate the financial statements of ICON plc and its subsidiaries. Subsidiaries are consolidated from the date on which control is transferred to the Group and cease to be consolidated from the date on which control is transferred out of the Group. The Group controls an entity when it is exposed to, or has rights to, variable returns from its involvement with the entity and has the ability to affect those returns through its power over the entity. Financial statements of subsidiaries are prepared for the same reporting year as the Company and where necessary, adjustments are made to the results of subsidiaries to bring their accounting policies into line with those used by the Group. The Group will continue to prepare the individual statutory financial statements of subsidiary companies under GAAP applicable in their country of incorporation but adjustments have been made to the results and financial position of such companies to bring their accounting policies into line with those of the Group.

All intercompany balances and transactions, including unrealised profits arising from inter-group transactions, have been eliminated in full. Unrealised losses are eliminated in the same manner as unrealised gains except to the extent that there is evidence of impairment.

Foreign currency translation

The presentation and functional currency of the Group and Company is US dollars (\$). The determination of the USD as the functional currency of the Company reflects consideration of the primary and secondary indicators as set out in IAS 21. The directors considered in particular the currency in which funds from financing activities are generated (debt and equity) and the currency in which receipts from operating activities are usually retained. This assessment is consistent with the assessment that the functional currencies of the main subsidiary trading entities are USD. The change in functional currency was accounted for prospectively from the date of change. All items were translated using the exchange rate at the date of change and the resulting translated amounts for non-monetary items were recorded at their historical cost from 1 August 2015. The Company Financial Statements continue to be presented in US dollars. Results and cash flows of non-dollar denominated undertakings are translated into dollars at the actual exchange rates at the transaction dates or average exchange rates for the year where this is a reasonable approximation.

The related statements of financial position are translated at the rates of exchange ruling at the reporting date. Goodwill and fair value adjustments arising on acquisition of a foreign operation are regarded as assets and liabilities of the foreign operation, are expressed in the functional currency of the foreign operation and are recorded at the exchange rate at the date of the transaction, and subsequently retranslated at the applicable closing rates. Adjustments arising on translation of the results of

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

non-dollar undertakings at average rates, and on the restatement of the opening net assets at closing rates, are dealt with in a separate translation reserve within equity.

Transactions in currencies different to the functional currencies of operations are recorded at the rate of exchange ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies are retranslated into the functional currency at the rate of exchange at the reporting date. All translation differences, with the exception of translation differences on long term intercompany balances in the Consolidated Financial Statements where repayment is not foreseen, are taken to the Consolidated Statement of Profit and Loss. Translation differences on long term intercompany balances, in the Consolidated Financial Statements, where repayment is not foreseen are treated as other comprehensive income in the Statement of Comprehensive Income.

The principal exchange rates used for the translation of results, cash flows and statements of financial position into US dollars were as follows:

	Average		Year end	
	31 December 2018	31 December 2017	31 December 2018	31 December 2017
Euro 1:\$	1.1846	1.1229	1.1467	1.2005
Pound Sterling 1:\$	1.3401	1.2883	1.2754	1.3513

On disposal of a foreign operation, accumulated currency translation differences, together with any exchange differences on foreign currency borrowings that provide a hedge of the net investment are recognised in the Consolidated Statement of Profit and Loss as part of the overall gain or loss on disposal; the cumulative currency translation differences arising prior to the transition date to IFRS have been set to zero for the purposes of ascertaining the gain or loss on disposal of a foreign operation subsequent to 1 June 2004.

Property, plant and equipment

Items of property, plant and equipment are stated at cost less accumulated depreciation and any provisions for impairment losses.

Depreciation is calculated to write off the original cost of property, plant and equipment less its estimated residual value over its expected useful life on a straight line basis. Residual values and useful lives of property, plant and equipment are reviewed and adjusted if appropriate at each reporting date. At present it is estimated that all items of property, plant and equipment have no residual value. The estimated useful lives applied in determining the charge to depreciation are as follows:

	Years
Buildings	40
Computer equipment	2-8
Office furniture and fixtures	8
Laboratory equipment	5
Motor vehicles	5

Leasehold improvements are amortised using the straight-line method over the estimated useful life of the asset or the lease term, whichever is shorter.

On disposal of property, plant and equipment the cost and related accumulated depreciation and impairments are removed from the financial statements and the net amount, less any proceeds, is taken to the Consolidated Statement of Profit and Loss.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

The carrying amounts of the Group's property, plant and equipment are reviewed at each reporting date to determine whether there is any indication of impairment. Where such an indication exists an impairment review is carried out. An impairment loss is recognised whenever the carrying amount of an asset or its cash generation unit exceeds its recoverable amount. Impairment losses are recognised in the Consolidated Statement of Profit and Loss unless the asset is recorded at a revalued amount in which case it is firstly dealt with through the revaluation reserve with any residual amount being transferred to the Consolidated Statement of Profit and Loss.

Subsequent costs are included in an asset's carrying amount or recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to the Group and the cost of the replaced item can be measured reliably. All other repair and maintenance costs are charged to the Consolidated Statement of Profit and Loss during the financial period in which they are incurred.

Leased assets – as lessee

Leases where the lessor retains substantially all the risks and benefits of ownership of the assets are classified as operating leases. Operating lease payments are recognised as an expense in the Consolidated Statement of Profit and Loss on a straight line basis over the lease term. Lease incentives are recognised over the term of the lease as an integral part of the total lease expense.

Finance leases, where the Group has substantially all the risks and benefits of ownership of the leased asset, are capitalised at the inception of the lease at the lower of the fair value of the leased asset or the present value of the minimum lease payments. The corresponding liability to the lessor is included in the Consolidated Statement of Financial Position as a finance lease obligation. Lease payments are allocated between the lease obligation and the finance charges resulting in a reduction of the lease obligation to ensure a constant rate of interest on the remaining balance of the liability. Finance charges are charged to the Consolidated Statement of Profit and Loss as part of finance costs.

Capitalised leased assets are depreciated over the shorter of the estimated useful life of the asset or the lease term.

Business combinations

Business combinations are accounted for using the acquisition method when control is transferred to the Group. The consideration transferred is measured at fair value, as are the identifiable assets acquired and liabilities assumed. Where a business combination agreement provides for an adjustment to the cost of the acquisition which is contingent upon future events, the amount of the estimated adjustment is recognised on the acquisition date at the acquisition date fair value of this contingent consideration. The accounting treatment of any changes to this estimate in subsequent periods will depend on the classification of the contingent consideration. If the contingent consideration is classified as equity it shall not be re-measured and the settlement shall be accounted for within equity. If the contingent consideration is classified as a liability any adjustments to the assessment of contingent consideration determined as at acquisition date will be accounted for through the Consolidated Statement of Profit and Loss, as the liability is measured at fair value at each reporting date.

The assets, liabilities and contingent liabilities of businesses acquired are measured at their fair values at the date of acquisition. In the case of a business combination which is completed in stages, the fair values of the identifiable assets, liabilities and contingent liabilities are re-determined at the date of each transaction until control is obtained. When the initial accounting for a business combination is determined provisionally, any subsequent adjustments to the provisional values allocated to the identifiable assets, liabilities and contingent liabilities are made within twelve months of the acquisition date and presented as adjustments to the original acquisition accounting. Acquisition costs are expensed as incurred.

Goodwill

The Group measures goodwill at the acquisition date as the fair value of the consideration transferred plus the recognised amount of any non-controlling interests in the acquiree, if the business combination is achieved in stages, the fair value of the pre-existing equity interest in the acquiree, less the net recognised amount (generally fair value) of the identifiable assets acquired and liabilities assumed. Goodwill on the acquisition of subsidiaries is included in 'intangible assets – goodwill and other'.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

At the acquisition date, any goodwill acquired is allocated to the cash-generating units expected to benefit from the combination's synergies. Impairment is determined by assessing the recoverable amount of the cash-generating unit to which the goodwill relates. Where goodwill forms part of a cash-generating unit and part of the operation within that unit is disposed of, the goodwill associated with the operation disposed of is included in the carrying amount of the operation when determining the gain or loss on disposal of the operation. Goodwill disposed of in this circumstance is measured on the basis of the relative values of the operation disposed of and the proportion of the cash-generating unit retained.

Following initial recognition, goodwill is measured at cost less any accumulated impairment losses. Goodwill is reviewed for impairment annually or more frequently if events or changes in circumstances indicate that the carrying value may be impaired.

Intangible assets

Other intangible assets are stated at cost less accumulated amortisation and impairment losses. Useful lives of intangibles are reviewed and adjusted if appropriate at each reporting date. Amortisation is charged to the Consolidated Statement of Profit and Loss on a straight line basis over the estimated useful lives of intangible assets, currently estimated as follows:

	Years
Computer software	2-8
Customer relationships	7-11
Order backlog	2-9
Brand	5
Technology Asset	8
Non-compete arrangements	5

Impairment

The Group previously assessed at the end of each reporting period whether there was objective evidence that a financial asset or group of financial assets was impaired. A financial asset or a group of financial assets was impaired and impairment losses were incurred only if there was objective evidence of impairment as a result of one or more events that occurred after the initial recognition of the asset (a 'loss event') and that loss event (or events) had an impact on the estimated future cash flows of the financial asset or group of financial assets that could be reliably estimated.

Impairment losses in respect of other non-financial assets, other than goodwill, are reversed if there has been a change in the estimates used to determine recoverable amount. Impairment losses are reversed only to the extent that the carrying amount of the asset does not exceed the carrying value that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised. Impairment losses in respect of goodwill are not reversed.

Inventories

Inventories, which comprise laboratory inventories, are stated at the lower of cost and net realisable value. Cost is based on the first-in, first-out principle and includes all expenditure incurred in acquiring the inventories and bringing them to their present location and condition. Cost in the case of raw materials comprises the purchase price and attributable costs, less trade discounts. Net realisable value is the estimated selling price in the ordinary course of business, less selling expenses.

Accounts payable

Trade and other payables are presented as current liabilities unless payment is not due within 12 months after the reporting period. They are recognised initially at fair value and subsequently measured at amortised cost using the effective interest rate method.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Government grants

Government grants received that compensate the Group for the cost of an asset are recognised in the Consolidated Statement of Financial Position initially as deferred income when there is reasonable assurance that it will be received and that the Group will comply with the conditions attaching to it. Such grants are recognised in the Consolidated Statement of Profit and Loss over the useful economic life of the asset which is consistent with the depreciation policy of the relevant asset.

Grants that compensate the Group for expenses incurred are recognised in the Consolidated Statement of Profit and Loss in the same periods in which the expenditure to which they relate is charged.

Under grant agreements amounts received may become repayable in full or in part should certain circumstances specified within the grant agreements occur, including downsizing by the Group, disposing of the related assets, ceasing to carry on its business or the appointment of a receiver over any of its assets. The Group has not recognised any such loss contingency having assessed as remote the likelihood of these events arising.

Provisions

A provision is recognised in the Consolidated Statement of Financial Position when the Group has a present or legal or constructive obligation as a result of a past event, and it is probable that an outflow of economic benefits will be required to settle the obligation. If the effect of the time value of money is material, provisions are determined by discounting the expected future cash flows at a pre-tax rate that reflects the time value of money and, where appropriate, the risks specific to the liability. Where discounting is used, the increase in the provision due to the passage of time is recognised as a finance cost.

A provision for restructuring is recognised when the Group has approved a detailed and formal restructuring plan, and the restructuring has either commenced or has been announced publicly. Future operating costs are not provided for.

A provision for onerous contracts is recognised when the expected benefits to be derived by the Group from a contract are lower than the unavoidable cost of meeting its obligations under the contract.

Share capital

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

Where ordinary shares are re-purchased by the Company they are cancelled and the nominal value of the shares is transferred to other un-denominated capital within equity.

Employee benefits

(a) Pension and other post-employment benefits

Certain companies within the Group operate defined contribution pension plans. A defined contribution plan is a pension plan under which the Group pays fixed contributions into a separate entity. The Group has no legal or constructive obligations to pay further contributions if the fund does not hold sufficient assets to pay all employees the benefits relating to employee service in the current and prior periods. Contributions to defined contribution pension plans are expensed as incurred.

The Group operates defined benefit pension plans for certain of its United Kingdom and Swiss employees through subsidiary companies. A defined benefit plan is a pension plan that is not a defined contribution plan. Typically defined benefit plans define the amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation. Obligations for contributions to defined benefit contribution plans are recognised as an expense in the Consolidated Statement of Profit and Loss as service is received from the relevant employees.

The Group's net obligation in respect of the defined benefit pension plans is calculated separately by estimating the amount of future benefit that employees have earned in return for their service in the current and prior periods. This benefit is discounted to determine its present value, and the fair value of plan assets deducted. The discount rate used in respect of the UK scheme

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

is the yield at the reporting date on the iboxx corporate bond over 15 years plus 10 basis points. The discount rate used in respect of the Swiss scheme is determined by the Swiss corporate bond yields at the reporting date. The calculation is performed by a qualified actuary using the projected unit credit method. The net finance income/cost are recorded in operating costs in the Consolidated Statement of Profit and Loss. When benefits of a plan are improved, the portion of the increased benefit relating to the past service by employees is recognised as an expense in the Consolidated Statement of Profit and Loss on a straight line basis over the average period until the benefits become vested. To the extent that the benefits vest immediately, the expense is recognised immediately in the Consolidated Statement of Profit and Loss.

(b) Share-based payments

Share-based payments comprise options to acquire ordinary shares in the Company, RSUs and PSUs in the form of ordinary share entitlements after a certain period of time. These are awarded to certain key employees and Directors of the Group based on service conditions such as term of employment and individual performance. The fair value of options, RSUs and PSUs granted is recognised as an employee expense with a corresponding increase in equity. The fair value is measured at grant date and spread over the period during which the Directors and other employees become unconditionally entitled to the options, RSUs or PSUs. The fair value of options granted is measured using a binomial lattice model, taking into account the terms and conditions upon which the options were granted. The fair value of RSUs and PSUs is equal to the market price of a share at date of grant. The total amount to be expensed is determined by reference to the fair value of the options, RSUs or PSUs granted, excluding the impact of any non-market service and performance vesting conditions (for example profitability, sales growth targets). There are no such non-market vesting conditions during the year ended 31 December 2018 in relation to options, RSUs or PSUs that are expected to vest. The amount recognised as an expense is adjusted to reflect the actual number of share options, RSUs or PSUs that vest.

Forfeitures are estimated on the date of grant and revised if actual or expected forfeiture activity differs materially from original estimates.

Share-based payment expense is recognised over the requisite service period for awards of equity instruments to employees based on the grant date fair value of those awards expected to ultimately vest.

Share-based payments – Company

The Company operates a number of share-based payment plans the details of which are presented in *note 11 Share-based Payments* to the Consolidated Financial Statements. The share-based payment expense associated with the share-based payment plans is recognised by the entity which receives services in exchange for the share-based compensation.

The Statement of Profit and Loss of the Company is charged with the expense related to the services received by the Company. The remaining portions of the share-based payments represent a contribution to Company's subsidiaries and are added to the carrying amount of those investments. Under an agreement, the subsidiaries pay on date of exercise to the Company an amount equal to the fair value of the ordinary shares issued that is in excess of the award exercise price with such amount reducing the Company's investment in its subsidiaries. The net effect of the grant date fair value of the Company's share-based compensation to employees of the Company's subsidiaries and recharges received from those subsidiaries is presented as a movement in financial fixed assets (see *note 3 Investment in subsidiaries*, to the Company only financial statements).

Direct costs

Direct costs consist of compensation, associated employee benefits and share-based payments for project-related employees and other direct project-related costs. Reimbursable expenses are included within direct costs on adoption of IFRS 15.

Other operating expenses

Other operating expenses consist of compensation, associated employee benefits and share-based payments for non-projectrelated employees and other indirect costs associated with the business. Other operating expenses also include depreciation expense and the amortisation of intangible assets.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Exceptional items

The Company has used the term "exceptional" to describe certain items which, in management's view, warrant separate disclosure by virtue of their size or incidence, or due to the fact that certain gains or losses are determined to be non-recurring in nature. Exceptional items may include restructuring, significant impairments, and material changes in estimates.

Research and development credits

Research and development credits that are provided under the income tax law of the jurisdictions in which the Group operates generally are recognised as a reduction of income tax expense. However, certain tax jurisdictions provide refundable credits that are not dependent on the Group's ongoing tax status or tax position. In these circumstances the credits are recognised in the Consolidated Statement of Profit and Loss in the same periods in which the expenditure to which they relate to is charged as a deduction against the related expense.

Financing income

Interest income is recognised in the Consolidated Statement of Profit and Loss as it accrues using the effective interest rate method and includes interest receivable on investments.

Financing expense

Financing expense comprises interest payable on borrowings calculated using the effective interest rate method, finance charges on finance leases, foreign exchange gains and losses on bank loans, non-cash finance charges in respect of contingent consideration and gains and losses on hedging instruments that are recognised in the Consolidated Statement of Profit and Loss.

Financing expense also includes fees paid on the establishment of loan facilities which are recognised as transaction costs of the loan to the extent that it is probable that some or all of the facility will be drawn down. These fees are deferred and recognised in the Statement of Financial Position and are then amortised to the Consolidated Statement of Profit and Loss over the term the facility is available to the Group.

Income tax

Income tax expense in the Consolidated Statement of Profit and Loss represents the sum of income tax currently payable and deferred income tax.

Income tax currently payable is based on taxable profit for the year. Taxable profit differs from net profit as reported in the Consolidated Statement of Profit and Loss because it excludes items of income or expense that are taxable or deductible in other years and further excludes items that are not taxable or deductible. The Group's liability for income tax is calculated using rates that have been enacted or substantively enacted at the reporting date. Income tax is recognised in the Consolidated Statement of Profit and Loss except to the extent that it relates to items recognised directly in equity.

Deferred income tax is provided, using the liability method, on all differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes except those arising from non-deductible goodwill or on initial recognition of an asset or liability which affects neither accounting nor taxable profit.

Deferred income tax assets and liabilities are measured at the tax rates that are expected to apply in the year when the asset is expected to be realised or the liability to be settled.

Deferred tax assets are recognised for all deductible differences, carry forward of unused tax credits and unused tax losses, to the extent that it is probable that taxable profit will be available against which the deductible temporary differences and the carry forward of unused tax credits and unused tax losses can be utilised. The carrying amount of deferred income tax assets is reviewed at each reporting date and reduced to the extent that it is no longer probable that sufficient taxable profit would be available to allow all or part of the deferred income tax asset to be utilised.

for the year ended 31 December 2018

1. Basis of preparation and statement of accounting policies (continued)

Earnings per ordinary share

Basic earnings per share is computed by dividing the profit for the financial year attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares outstanding during the financial period.

Diluted earnings per share is computed by dividing the profit for the financial year attributable to ordinary shareholders of the Company by the weighted average number of ordinary shares in issue after adjusting for the effects of all potential dilutive ordinary shares that were outstanding during the financial period.

Segment reporting

An operating segment is a component of the Group that engages in business activities from which it may earn revenues and incur expenses, including revenues and expenses that relate to transactions with any of the Group's other components. The Group determines and presents operating segments based on the information that internally is provided to the Chief Executive Officer (CEO), Chief Financial Officer (CFO) and Chief Operating Officer (COO) who together are considered the Group's chief operating decision makers, the 'CODM' in the period up to and including 1 March 2017. On 1 March 2017, Mr Ciaran Murray transitioned from his role as Chief Executive Officer. As of 1 March 2017, the Company determined that the CODM was comprised of the Chief Executive Officer and the Chief Financial Officer. An operating segment's operating results are reviewed regularly by the CODM to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available.

Segment results that are reported to the CODM include items directly attributable to a segment as well as those that can be allocated on a reasonable basis. Segment capital expenditure is the total cost incurred during the period to acquire property, plant and equipment and intangible assets other than goodwill.

2. Segmental information

The Group is a clinical research organisation ("CRO"), providing outsourced development services on a global basis to the pharmaceutical, biotechnology and medical device industries. It specialises in the strategic development, management and analysis of programmes that support all stages of the clinical development process - from compound selection to Phase I-IV clinical studies. The Group has expanded predominately through internal growth, together with a number of strategic acquisitions to enhance its expertise and capabilities in certain areas of the clinical development process. The Group has the expertise and capabilities in most major therapeutic areas on a global basis and has the operational flexibility to provide development services on a stand-alone basis or as part of an integrated "full service" solution. These services, which are integral elements of the clinical development process, include clinical trials management, biometric activities, consulting, imaging, contract staffing, informatics and laboratory services.

The Company determines and presents operating segments based on the information that is internally provided to the chief operating decision maker, together the ('CODM') in accordance with IFRS 8 *Operating Segments*. The Chief Executive Officer, Chief Financial Officer and Chief Operating Officer, were together considered the Company's CODM in the period up to and including 1 March 2017. On 1 March 2017, Mr Ciaran Murray transitioned from his role as Chief Executive Officer to the role of Executive Chairman of the Board of Directors and Dr. Steve Cutler was appointed as Chief Executive Officer. As of 1 March 2017, the Company determined that the CODM was comprised of the Chief Executive Officer and the Chief Financial Officer in accordance with the requirements of IFRS 8 *Operating Segments*.

The Company operates as one business segment, which is the provision of outsourced development services on a global basis to the pharmaceutical, biotechnology and medical devices industries.

The Group's listing for its shares is the NASDAQ market in the United States. Consequently, information reviewed by the chief operating decision makers is prepared in accordance with US generally accepted accounting principles ("US GAAP") however the information presented below is prepared in accordance with IFRS reporting standards. Reconciliations of the Group's profit for the financial year and shareholders' equity from US GAAP to IFRS are set out on pages 139 to 141 of this report. The Company's areas of operation outside of Ireland include the United States, United Kingdom, Belgium, France, Germany, Italy, Spain, The Netherlands, Sweden, Turkey, Poland, Czech Republic, Latvia, Russia, Ukraine, Hungary, Israel,

for the year ended 31 December 2018

2. Segmental information (continued)

Romania, Canada, Mexico, Brazil, Colombia, Argentina, Chile, Peru, India, China (including Hong Kong), South Korea, Japan, Thailand, Taiwan, Singapore, The Philippines, Australia, New Zealand, and South Africa.

Geographical segment information

	Year ended 31 December 2018	Year ended 31 December 2017*
	\$'000	\$'000
External revenue		
Ireland (1)**	1,066,200	944,130
Rest of Europe (17)**	379,883	355,552
United States (1)**	894,978	881,829
Rest of World (18)**	254,716	220,810
Total	2,595,777	2,402,321

* 2017 restated to reflect gross revenue.

**denotes number of countries

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Non-current assets		
Ireland	241,309	244,964
Europe	305,786	315,944
United States	445,569	463,957
Rest of World	49,735	48,577
Total	1,042,399	1,073,442

Major customers

During the year ended 31 December 2018, 14% (2017: 21%) of the Group's revenues were derived from its top customer which is the only customer which represents in excess of 10% of the Group's revenue.

for the year ended 31 December 2018

3. Profit before taxation

Profit before taxation is stated after charging the following:

	Year ended 31 December 2018		Year ended 31 December 2017		r 2017	
	Statutory auditor	Affiliated firms	Total	Statutory auditor	Affiliated firms	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Auditor's remuneration:						
Audit fees ⁽¹⁾⁽²⁾	1,515	—	1,515	1,447	—	1,447
Other assurance fees ⁽³⁾	53	93	146	_	109	109
Tax advisory fees ⁽⁴⁾	500	142	642	495	355	850
Other non-audit fees ⁽⁵⁾	40	—	40	1,297		1,297
Total fees	2,108	235	2,343	3,239	464	3,703

(1) Audit fees include annual audit fees for ICON plc.

(2) Audit fees for the Company for the year are set at \$30,000 (2017: \$30,000)

(3) Other assurance fees principally consist of fees for the audit of remaining subsidiaries and fees for the audit of the financial statements of employee benefit plans.

(4) Tax advisory fees are for tax compliance and tax advisory services.

(5) Other non-audit fees principally consist of fees for financial due diligence. The higher level of other non-audit fees in 2017 compared to 2018 relates specifically to additional financial due diligence services (\$1.1 million) provided in connection with a proposed significant one-time potential acquisition transaction by the company in 2017.

Directors' remuneration disclosures as required by Section 305 of the Companies Act 2014 are set out below:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Directors' emoluments		
Emoluments	3,618	4,905
Benefits under long-term incentive schemes	1,730	9,423
Gain on exercise of share options	20,798	17,632
Pension contributions (defined contribution)	203	110

Further details regarding Directors' shareholdings, share options and compensation are shown in *note 9 – Payroll and related benefits*.

Retirement benefits accrue to two Directors (2017: one Director) under a defined contribution scheme. In 2017, additional amounts of \$140,000 were paid to the second director in lieu of of a contribution to a defined contribution scheme.

Included in the benefits under long-term incentive scheme are amounts relating to share entitlements, the calculation of which was based on the share-based payment charge calculated under IFRS 2 *Share Based Payments*.

for the year ended 31 December 2018

3. Profit before taxation (continued)

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Depreciation and amortisation		
Depreciation of property, plant and equipment	19,996	19,876
Amortisation of intangible assets	45,920	41,421
Total depreciation and amortisation	65,916	61,297
Loss on sale of property, plant & equipment	70	228
	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Operating lease rentals		
Premises	36,383	39,950
Motor vehicles	3,227	3,544
Plant and equipment	680	551
Total operating lease rentals *	40,290	44,045
* Operating lease rentals includes rate expenses incurred during the year.		
4. Financing income		
	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Interest receivable	4,759	2,346
Release of contingent liability *		6,000
Total finance income	4,759	8,346

*During the year ended 31 December 2017, a credit of \$6.0 million was recorded being the reduction in the assessment of the fair value of contingent consideration liability relating to the acquisition of GPHS (see note 14 of the Financial Statements).

All of the above relate to items not at fair value through profit and loss.

Notes to Consolidated Financial Statements

for the year ended 31 December 2018

5. Financing expense

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Interest and facility fees on bank overdraft and Senior Notes		
- repayable within 5 years, not by installments*	13,613	12,994
Facility fees (including amortisation)	812	556
Amortisation of gain on interest rate hedge	(923)	(923)
Total finance expense	13,502	12,627

*The interest rate on the Senior Notes is fixed at 3.64%. Costs directly related to the Senior Notes are amortised over the term of the Senior Notes.

All of the above relate to items not at fair value through profit and loss.

for the year ended 31 December 2018

6. Income tax expense

The components of the current and deferred tax expense for the years ended 31 December 2018 and 2017 were as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Current tax expense		
Current year		
- Ireland	26,898	21,418
- Other	17,127	22,431
	44,025	43,849
Deferred tax expense/ (credit)		
Origination and reversal of temporary differences	2,584	11,217
Over provided in prior years	(1,051)	(345)
Total income tax expense in profit and loss	45,558	54,721
Tax recognised directly in equity		
Deferred tax recognised directly in equity	8,195	(6,842)
Current tax recognised directly in equity	(4,626)	(7,519)
Total tax recognised in equity	3,569	(14,361)
Income tax recognised in other comprehensive income		
Fair value of cash flow hedge	(148)	148
Tax impact of pension contributions	_	(754)
Tax on currency impact on long term funding	119	973
Total income tax recognised in other comprehensive income	(29)	367

The total tax expense of \$45.6 million and \$54.7 million for the years ended 31 December 2018 and 31 December 2017 respectively, reflects tax at standard rates on taxable profits in the jurisdictions in which the Group operates, foreign withholding tax and the availability of tax losses.

The deferred tax charge of \$2.6 million for the year ended 31 December 2018 and the deferred tax charge of \$11.2 million for the year ended 31 December 2017, relates to deferred tax arising in respect of net operating losses and temporary differences in capital items, the timing of certain goodwill amortisation on US acquisitions and the timing of tax deductions available relating to the Group's share-based compensation schemes. No deferred tax asset has been recognised on the defined benefit pension scheme as it is not probable that sufficient taxable profit will be available against which the deductible temporary difference can be utilised, with the exception of pension contributions made in the UK during 2017, the tax benefit for which has been recognised in other comprehensive income.

for the year ended 31 December 2018

6. Income tax expense (*continued*)

A reconciliation of the expected tax expense, computed by applying the standard Irish tax rate to income before tax to the actual tax expense, is as follows:

	Year ended 31 December 2018 \$'000	Year ended 31 December 2017 \$'000
Profit before tax	368,375	327,665
Irish standard tax rate	12.5%	12.5%
Taxes at Irish standard tax rate	46,047	40,958
Reversal of prior year over provision in respect of current foreign taxes	(1,051)	(345)
Foreign and other income taxed at higher rates	10,922	7,088
Effect of change in tax rates	(147)	2,984
Increase/(decrease) in unrecognised tax benefits	(5,423)	933
Non taxable income and non tax deductible expenses	(5,036)	(3,846)
Losses for which no benefit has been recognised	5,667	2,083
Impact of mandatory repatriation	—	7,694
Research and development tax incentives	(1,243)	(830)
Impact of stock compensation	(3,675)	(2,398)
Other	(503)	400
Tax expense on profit for the year	45,558	54,721

The net deferred tax asset at 31 December 2018 and 31 December 2017 was as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Deferred taxation assets		
Net operating losses carried forward	3,615	3,402
Accrued expenses	23,754	23,627
Property, plant and equipment	4,855	3,989
Deferred revenue	5,681	
Deferred compensation	2,197	2,548
Share-based payment	24,578	31,044
Other	2	740
Total deferred taxation assets	64,682	65,350
Less: offset against deferred tax liabilities	(33,017)	(32,018)
Deferred tax asset disclosed on Consolidated Statement of Financial Position	31,665	33,332

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

6. Income tax expense (continued)

	Year ended 31 December 2018	Year ended 31 December 2017
Deferred taxation liabilities	\$'000	\$'000
Property, plant and equipment	981	1,139
Goodwill and related assets	25,149	22,655
Other intangible assets	9,397	11,801
Accruals to cash method adjustment	5,703	4,139
Total deferred taxation liabilities	41,230	39,734
Less: offset against deferred tax assets	(33,017)	(32,018)
Deferred tax liability disclosed on Consolidated Statement of Financial Position	8,213	7,716
Net deferred taxation asset	23,452	25,616

The movement in temporary differences during the year ended 31 December 2018 was as follows:

	Balance 1 January 2018 \$'000	Recognised in Income \$'000	Recognised on Acquisition \$'000	Recognised in Other Comprehensive Income \$'000	Recognised in Equity \$'000	Balance 31 December 2018 \$'000
Deferred taxation assets						
Net operating loss carry forwards	3,402	407	_	(194)	_	3,615
Accrued expenses	23,627	127	_	—	_	23,754
Property, plant and equipment	3,989	866	_		_	4,855
Deferred compensation	2,548	(351)	_		_	2,197
Share-based payment	31,044	1,729	_		(8,195)	24,578
Deferred revenue	6,872*	(1,191)	_	_	_	5,681
Other	740	(738)	_			2
Total deferred taxation assets	72,222	849		(194)	(8,195)	64,682
Deferred taxation liabilities						
Property, plant and equipment	1,139	(158)	_		_	981
Goodwill on acquisition	22,655	2,494	_		_	25,149
Accruals to cash method adjustment	4,139	1,349	_		215**	5,703
Other intangible assets	11,801	(2,404)	_	—	_	9,397
Total deferred taxation liabilities	39,734	1,281	_	_	215	41,230
Net deferred taxation asset/ (liability)	32,488	(432)	_	(194)	(8,410)	23,452

*The balance at 1 January 2018 includes the effect of initially applying IFRS 15.

**These adjustments relate to foreign currency translation on the deferred tax liabilities.

for the year ended 31 December 2018

6. Income tax expense (continued)

The movement in temporary differences during the year ended 31 December 2017 was as follows:

	Balance 1 January 2017	Recognised in Income	Recognised on Acquisition	Recognised in Other Comprehensive Income	in Ĕquity	Balance 31 December 2017
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Deferred taxation assets						
Net operating loss carry forwards	4,089	(1,613)	366	560		3,402
Accrued expenses	27,445	(4,148)	330	_	_	23,627
Property, plant and equipment	2,859	1,094	36		_	3,989
Deferred compensation	3,327	(779)	_		_	2,548
Share-based payment	31,355	(14,672)	_		14,361	31,044
Other	15	(387)	1,112			740
Total deferred taxation assets	69,090	(20,505)	1,844	560	14,361	65,350
Deferred taxation liabilities						
Property, plant and equipment	979	103	57	_	_	1,139
Goodwill on acquisition	26,617	(3,962)	_	_	_	22,655
Accruals to cash method adjustment	1,440	2,829	(517)		387*	,
Other intangible assets	6,700	(6,232)	11,333	_	_	11,801
Other		(2,075)	2,075			
Total deferred taxation liabilities	35,736	(9,337)	12,948		387	39,734
	35,/30	(3,337)	12,948		38/	39,734
Net deferred taxation asset/ (liability)	33,354	(11,168)	(11,104)	560	13,974	25,616

*These adjustments relate to foreign currency translation on the deferred tax liabilities.

Unrecognised deferred tax assets

Deferred tax assets relating to the following net operating losses have not been recognised to the extent that it is considered unlikely that a benefit will be received in the future.

At 31 December 2018, non-US subsidiaries had operating loss carry-forwards for income tax purposes that may be carried forward indefinitely, available to offset against future taxable income, if any, of approximately \$70.0 million (31 December 2017: \$75.8 million). At 31 December 2018, non–US subsidiaries also had additional operating loss carry forwards of \$4.6 million which are due to expire between 2019 and 2021 and operating loss carry forwards of \$2.8 million which are due to expire between 2019.

At 31 December 2018, U.S. subsidiaries also had excess disallowed interest carry-forwards of \$21.9 million. These carry-forwards are available for offset against future taxable income in the event that the U.S. subsidiaries have excess capacity for interest deduction in future tax years.

In total, the Group has unrecognised deferred tax assets of \$27.4 million at 31 December 2018 and \$22.8 million at 31 December 2017. The Group has not recognised these remaining deferred tax assets because it believes that it is more likely than not that the losses and other deferred tax assets will not be utilised given their history of operating losses.

for the year ended 31 December 2018

6. Income tax expense (continued)

Unrecognised deferred tax liabilities

The Company has recognised a deferred tax liability of \$4.9 million (2017: \$3.1 million) for investments in foreign subsidiaries where the Company does not consider the earnings to be indefinitely reinvested. For the deferred tax liability not recognised in respect of temporary differences related to investments in foreign subsidiaries which are considered to be indefinitely reinvested, it is not practicable to calculate the exact unrecognised deferred tax liability, however it is not expected to be material as Ireland allows a tax credit in respect of distributions from foreign subsidiaries at the statutory tax rate in the jurisdiction of the subsidiary so that no material tax liability would be expected to arise in the event these earnings were ever remitted. In addition, withholding taxes applicable to remittances from foreign subsidiaries would not be expected to be material given Ireland's tax treaty network and the EU parent subsidiary directive.

7. Earnings per share

The following table sets forth the computation for basic and diluted net earnings per share for the year ended 31 December 2018:

	31 December 2018 \$'000 Excluding Exceptional items	31 December 2018 \$'000 Exceptional items	31 December 2018 \$'000 Including Exceptional items	31 December 2017 \$'000 Excluding Exceptional items	31 December 2017 \$'000 Exceptional items	31 December 2017 \$'000 Including Exceptional items
Numerator computations						
Basic and diluted earnings per share						
Profit for the period	333,854	(11,037)	322,817	279,728	(6,784)	272,944
Profit attributable to equity holders	333,854	(11,037)	322,817	279,728	(6,784)	272,944
Denominator computations			Number o	f Shares		
Weighted average number of ordinary shares outstanding – basic	54,118,764	54,118,764	54,118,764	54,129,439	54,129,439	54,129,439
Effect of dilutive potential	620,574	620,574	620,574	740,058	740,058	740,058
ordinary shares		,	020,071		,	,
	54,739,338	54,739,338	54,739,338	54,869,497	54,869,497	54,869,497
ordinary shares Weighted average number of ordinary shares outstanding -	,	54,739,338 \$,	,	,	
ordinary shares Weighted average number of ordinary shares outstanding - diluted	54,739,338	, ,	54,739,338	54,869,497	54,869,497	54,869,497

The Company had 204,553 anti-dilutive shares in issue at 31 December 2018 comprised of 167,557 options, 35,953 PSUs and 1,043 RSUs (31 December 2017: 258,487).

for the year ended 31 December 2018

8. Exceptional items

Exceptional items are comprised of the following:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Restructuring charges	12,490	7,753
Income tax	(1,453)	(969)
Exceptional items (net)	11,037	6,784

A restructuring charge of \$12.5 million was recognised during the year ended 31 December 2018, under a restructuring plan adopted following a review of operations. The restructuring plan reflected resource rationalisation across the business to improve resource utilisation resulting in a charge of \$9.7 million and office consolidation resulting in the recognition of an onerous lease obligation of \$2.8 million.

	Workforce reductions	Onerous Lease	Total
	\$'000	\$'000	\$'000
Total provision recognised	9,684	2,806	12,490
Utilisation	(5,399)	(672)	(6,071)
Provision at 31 December 2018	4,285	2,134	6,419

Prior Period Restructuring Charges

A restructuring charge of \$7.8 million was recognised during the year ended 31 December 2017, under a restructuring plan adopted following a review of operations. The restructuring plan reflected resource rationalisation across the business to improve resource utilisation. No additional charge was recorded during the twelve months ended 31 December 2018.

	Workforce reductions
	\$'000
Restructuring charges	7,753
Utilisation	(4,656)
Provision at 31 December 2017	3,097
Utilisation	(1,015)
Provision at 31 December 2018	2,082

A restructuring charge of \$8.2 million was recognised during the year ended 31 December 2016, under a restructuring plan adopted following a review by the Group of its operations. The restructuring plan reflected resource rationalisation in certain area of the business to improve resource utilisation, resulting in a charge of \$6.2 million and office consolidation resulting in the recognition of an onerous lease of \$2.0 million during the twelve months ended 31 December 2016. No additional charge was recorded during the twelve months ended 31 December 2018.

for the year ended 31 December 2018

8. Exceptional items (continued)

	Workforce Reductions	Onerous Lease	Total	
	\$'000	\$'000	\$'000	
Total provision recognised	6,190	1,969	8,159	
Utilisation	(5,734)	(571)	(6,305)	
Foreign exchange	(63)	_	(63)	
Provision at 31 December 2016	393	1,398	1,791	
Utilisation	(393)	(1,081)	(1,474)	
Provision at 31 December 2017		317	317	
Utilisation		(317)	(317)	
Provision at 31 December 2018		_		

9. Payroll and related benefits

Payroll costs

The aggregate payroll costs of employees of the Group for the year ended 31 December 2018 were as follows:

	Note	Year ended 31 December 2018 \$'000	Year ended 31 December 2017 \$'000
Wages and salaries		994,169	931,682
Social welfare costs		141,906	126,940
Pension costs for defined contribution pension schemes	10	40,773	35,301
Pension costs for defined benefit pension schemes	10	392	875
Termination benefits	8	9,684	7,753
Share-based payment*	11	28,059	31,120
Total charge to income		1,214,983	1,133,671
Re-measurement of post-employment benefit obligations	10	(2,640)	105
Total payroll and related benefit costs		1,212,343	1,133,776

* IFRS 2 requires that the fair value of share options and restricted share units is calculated and amortised over the vesting period of the related share option, restricted share unit or performance share unit.

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Average employee numbers

The average number of employees, including executive Directors, employed by the Group during the year ended 31 December 2018 was as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
Marketing	192	190
Administration	1,578	1,566
Clinical research	11,249	10,465
Laboratory	557	534
Total	13,576	12,755

Directors' remuneration

Remuneration policy

The Compensation and Organisation Committee seeks to achieve the following goals with the Company's executive compensation programmes: to attract, motivate and retain key executives and to reward executives for value creation. The Committee seeks to foster a performance-oriented environment by ensuring that a significant portion of each executive's cash and equity compensation is based on the achievement of performance targets that are important to the Company and its shareholders.

The Company's executive compensation programme has three main elements: base salary, a bonus plan and equity incentives in the form of share related awards granted under the Company's equity incentive plans. All elements of key executives' compensation are determined by the Compensation and Organisation Committee based on the achievement of the Group's and individual performance objectives.

Non-Executive Directors' remuneration

Non-Executive Directors are remunerated by way of Directors' fees and are also eligible for participation in the share option scheme. During 2018, each Non-Executive Director (excluding the Board Chairman) was paid an annual retainer of \$65,000 and additional fees for Board Committee service.

Mr. Murray's Executive Chairman term expired on 12 May 2018 and he transitioned to the Non-Executive Director role of Non-Executive Chairman. The arrangements with the Non-Executive Chairman of the Board provide for payment of €300,000 (translated at average rate for the year: \$355,380) annually. During 2018, Mr. Declan McKeon served as Lead Independent Director and received an additional fee of \$25,000 for this role. Mr. Ronan Murphy was appointed as Lead Independent Director with effect from 1 January 2019. He will receive an additional fee of \$25,000 for this role.

Non-Executive Directors are not eligible for performance related cash bonuses and no pension contributions are made on their behalf. The Compensation and Organisation Committee sets non-Executive remuneration.

Executive Directors' and Key Executive Officers' remuneration

Total cash compensation is divided into a base salary portion and a bonus incentive portion. The Committee targets total cash compensation with regard to healthcare/ biopharmaceutical companies of similar market capitalisation and peer CRO companies, adjusted upward or downward based on individual performance and experience and level of responsibility. The Compensation and Organisation Committee believes that the higher the executive's level of responsibility within the Company, the greater the percentage of the executive's compensation that should be tied to the Company's performance. Target bonus incentive for executive officers range between 50% and 100% with actual pay outs ranging from 25% to 100% of salary based on group and individual performance.

A total bonus of \$1.4 million was awarded to the following individuals; Dr. Steve Cutler, Chief Executive Officer (\$1.1 million) and Mr. Brendan Brennan, Chief Financial Officer (\$0.3 million) to reflect their contribution to the performance of the

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Company during 2018. These amounts were approved by the Compensation and Organisation Committee and have been paid during the year ended 31 December 2019.

The Company's executives are eligible to receive equity incentives, including stock options, restricted share units and performance share units, granted under the Company's equity incentive plans. If executives receive equity incentive grants, they are normally approved annually at the first scheduled meeting of the Committee in the fiscal year. The grant date is determined by the Committee, and grants are awarded at the closing price on the day of grant. Newly hired executives may receive sign-on grants. In addition, the Committee may, in its discretion, issue additional equity incentive awards to executives if the Committee determines such awards are necessary to ensure appropriate incentives are in place. The number of equity awards granted to each participant is determined primarily by the Committee at the start of each year based on peer groups and advice from independent compensation consultants.

All executive officers are eligible to participate in pension plans. The Company's contributions are generally a fixed percentage of their annual compensation, supplementing contributions by the executive. The Company has the discretion to make additional contributions if deemed appropriate by the Committee. Contributions to this plan are recorded as an expense in the Consolidated Statement of Operations.

The Directors, Executive Officers and Company Secretary have the following interests, all of which are beneficial, other than as stated, in the shares and share options of the Company or other Group companies at the following dates:

		Interest at 31 December 2018		Intere 31 Decem	
Name	Name of company and description of shares	Number of shares	Options	Number of shares	Options
Ciaran Murray	ICON plc				
	Ordinary Shares €0.06		133,259	4,063	206,127
Brendan Brennan	ICON plc				
	Ordinary Shares €0.06	9,199	73,472	—	64,133
Dr. Steve Cutler	ICON plc				
	Ordinary Shares €0.06	40,424	165,328	26,911	202,147
Dr. John Climax	ICON plc				
	Ordinary Shares €0.06	685,011	47,755	765,011	44,750
Prof. Dermot Kelleher	ICON plc				
	Ordinary Shares €0.06	—	23,495	—	42,250

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

9. Payroll and related benefits (continued)

		Intere 31 Decem		Interes 31 Decemb	
Name	Name of company and description of shares	Number of shares	Options	Number of shares	Options
Declan McKeon	ICON plc				
	Ordinary Shares €0.06		23,495		33,650
Prof. William Hall	ICON plc Ordinary Shares €0.06	_	23,495		37,250
Mary Pendergast	ICON plc Ordinary Shares €0.06		43,255		38,250
Prof. Hugh Brady	ICON plc Ordinary Shares €0.06	_	43,255	_	38,250
Ronan Murphy	ICON plc Ordinary Shares €0.06	_	12,698	_	7,693
Eugene McCague	ICON plc Ordinary Shares €0.06	_	5,005	_	_
Joan Garahy	ICON plc Ordinary Shares €0.06	_	5,005		
Diarmaid Cunningham	ICON plc Ordinary Shares €0.06		34,398	1,440	36,203

Further details regarding the above share options are as follows:

		Exercise		
Name	Options	price	Grant date	Expiry date
Ciaran Murray*	12,540	\$47.03	3 March 2014	3 March 2022
	26,916	\$48.67	17 March 2014	17 March 2022
	35,157	\$68.39	18 March 2015	18 March 2023
	45,948	\$71.95	4 March 2016	4 March 2024
	7,693	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026
Brendan Brennan	15,813	\$32.37	1 May 2013	1 May 2021
	1,006	\$47.03	3 March 2014	3 March 2022
	6,967	\$48.67	17 March 2014	17 March 2022
	10,285	\$68.39	18 March 2015	18 March 2023
	13,611	\$71.95	4 March 2016	4 March 2024
	14,206	\$83.47	3 March 2017	3 March 2025
	11,584	\$115.11	3 March 2018	3 March 2026

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

9. Payroll and related benefits (*continued*)

Nome	Options	Exercise	Cuent data	Expiry date
Name	Options	price	Grant date	
Dr. Steve Cutler	3,167	\$47.03	3 March 2014	3 March 2022
	6,789	\$48.67	17 March 2014	17 March 2022
	12,500	\$68.39	18 March 2015	18 March 2023
	30,632	\$71.95	4 March 2016	4 March 2024
	62,887	\$83.47	3 March 2017	3 March 2025
	49,353	\$115.11	3 March 2018	3 March 2026
Dr. John Climax	2,000	\$22.30	27 April 2012	27 April 2020
	2,500	\$32.37	1 May 2013	1 May 2021
	10,000	\$40.83	23 May 2014	23 May 2022
	10,000	\$68.39	18 March 2015	18 March 2023
	10,557	\$65.60	20 May 2016	20 May 2024
	7,693	\$90.03	19 May 2017	19 May 2024
	5,005	\$125.74	18 May 2018	18 May 2026
	2 000	¢ 40, 0 2	22.14 2014	22.14 2022
Prof. Dermot Kelleher	2,000	\$40.83	23 May 2014	23 May 2022
	4,000	\$68.39	18 March 2015	18 March 2023
	6,335	\$65.60	20 May 2016	20 May 2024
	6,155	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026
Declan McKeon	2,000	\$40.83	23 May 2014	23 May 2022
	4,000	\$68.39	18 March 2015	18 March 2023
	6,335	\$65.60	20 May 2016	20 May 2024
	6,155	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026
Professor William Hall	2,000	\$40.83	23 May 2014	23 May 2022
	4,000	\$68.39	18 March 2015	18 March 2023
	6,335	\$65.60	20 May 2016	20 May 2024
	6,155	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026
Mary Pendergast	10,000	\$40.83	23 May 2014	23 May 2022
what y T endergast	10,000	\$68.39	18 March 2015	18 March 2023
	10,557	\$65.60	20 May 2016	20 May 2024
	7,693	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2025
	10.000	¢40.02		22.14 2022
Professor Hugh Brady	10,000	\$40.83 \$68.20	23 May 2014	23 May 2022
	10,000	\$68.39	18 March 2015	18 March 2023
	10,557	\$65.60	20 May 2016	20 May 2024
	7,693	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026
Ronan Murphy	7,693	\$90.03	19 May 2017	19 May 2025
	5,005	\$125.74	18 May 2018	18 May 2026

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Name	Options	Exercise price	Grant date	Expiry date
Lean Cambra	5 005	¢125.74	10 Marc 2010	19 14 2026
Joan Garahy	5,005	\$125.74	18 May 2018	18 May 2026
Diarmaid Cunningham	1,255	\$32.37	1 May 2013	1 May 2021
	519	\$47.03	3 March 2014	3 March 2022
	1,115	\$48.67	17 March 2014	17 March 2022
	4,875	\$68.39	18 March 2015	18 March 2023
	9,189	\$71.95	4 March 2016	4 March 2024
	10,234	\$83.47	3 March 2017	3 March 2025
	7,211	\$115.11	3 March 2018	3 March 2026

* In February 2018, the Board approved the appointment of Mr. Murray as non-Executive Chairman of the Board of Directors with effect from 12 May 2018. Mr. Murray ceased to be an employee of the Company as of this date. Mr. Murray was granted and held ordinary share options, Restricted Share units and Performance Share units as Chief Financial Officer, Chief Executive Officer and Executive Chairman. The vesting of the Ordinary Share Options and Restricted Share Units which were unvested on Mr. Murray ceasing to be an ICON plc employee (12 May 2018) were accelerated and the outstanding Ordinary Share Options and Restricted Share Units vested on that date. The unvested Performance Share Units with vesting dates between 12 May 2018 and March 2019 were forfeit on Mr. Murray ceasing to be an ICON plc employee on 12 May 2018.

Name	RSUs	Award date	Vesting Date	PSUs ⁽¹⁾	Award Date	Vesting date
Dr. Steve Cutler	5,271	3 March 2017	3 March 2019	22,117	4 March 2016	4 March 2019
	4,299	3 March 2018	3 March 2019	18,449	3 March 2017	3 March 2020
	4,424	4 March 2016	4 March 2019	15,050	3 March 2018	3 March 2021
	5,272	3 March 2017	3 March 2020			
	4,299	3 March 2018	3 March 2020			
	4,302	3 March 2018	3 March 2021			
Brendan Brennan	1,190	3 March 2017	3 March 2019	9,827	4 March 2016	4 March 2019
	1,009	3 March 2018	3 March 2019	4,167	3 March 2017	3 March 2020
	1,966	4 March 2016	4 March 2019	3,532	3 March 2018	3 March 2021
	1,192	3 March 2017	3 March 2020			
	1,009	3 March 2018	3 March 2020			
	1,010	3 March 2018	3 March 2021			
Diarmaid Cunningham	857	3 March 2017	3 March 2019	6,635	4 March 2016	4 March 2019
	627	3 March 2018	3 March 2019	3,002	3 March 2017	3 March 2020
	1,329	4 March 2016	4 March 2019	2,199	3 March 2018	3 March 2021
	859	3 March 2017	3 March 2020	_,,	2 2012010	
	627	3 March 2018	3 March 2020			
	630	3 March 2018	3 March 2020			

The following Restricted Share Units ("RSUs") and Performance Share Units ("PSUs") have been awarded to the Directors, Executive Officer and Company Secretary:

(1) Of the issued PSUs, performance conditions will determine how many of them vest and, if performance targets are exceeded, additional PSUs will be issued and vest in accordance with the terms of the relevant PSU award.

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Details of transactions entered into by the Directors, Executive Officers and Company Secretary in shares and share options of the Company during the year ended 31 December 2018 were as follows:

Share options exercised and sold

Number of Share Options	Average exercise price	Average Vest price
86,172	\$44.58	\$125.44
2,245	\$47.03	\$138.91
77,873	\$32.37	\$146.85
15,160	\$58.94	\$138.71
2,000	\$20.28	\$142.87
23,760	\$53.04	\$137.96
18,760	\$57.90	\$134.90
9,016	\$58.14	\$132.55
	Share Options 86,172 2,245 77,873 15,160 2,000 23,760 18,760	Number of Share Options exercise price 86,172 \$44.58 2,245 \$47.03 77,873 \$32.37 15,160 \$58.94 2,000 \$20.28 23,760 \$53.04 18,760 \$57.90

Shares sold

	Number of Shares	Average Sales Price
Dr. John Climax	80,000	\$129.27

RSUs vested

		Average
	Number	Vest
	of Shares	Price
Dr. Steve Cutler	59,396	\$121.70
Brendan Brennan	19,514	\$121.71
Ciaran Murray	109,777	\$118.49
Diarmaid Cunningham	17,093	\$121.97

Shares (vested RSUs) sold

		Average
	Number	Sales
	of Shares	Price
Dr. Steve Cutler	45,883	\$119.28
Brendan Brennan	10,315	\$120.41
Ciaran Murray	113,840	\$121.90
Diarmaid Cunningham	18,533	\$121.12

The market price of the Company's ordinary shares during the year ended 31 December 2018 moved in the range of \$101.22 to \$155.33 (year ended 31 December 2017: in the range of \$74.30 to \$124.48). The closing share price at 31 December 2018 was \$129.21 (at 31 December 2017 \$112.15).

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Summary compensation table - Year ended 31 December 2018

Name	Year	Salary	Company pension contribution	Performance related compensation	All other compensation	Subtotal	Share- based payments ***	Directors' fees	Total compensation
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Ciaran Murray*	2018	135	17	_	5	157	(1,450)	232	(1,061)
Declan McKeon	2018	_	_	—		_	173	127	300
John Climax	2018	_	_	_		_	173	65	238
Ronan Lambe**	2018	_	—			_	249	36	285
Dermot Kelleher	2018	_	—			_	173	69	242
William Hall	2018			_		—	174	102	276
Mary Pendergast	2018	_	—			_	173	78	251
Hugh Brady	2018	_	_	_		_	173	73	246
Steve Cutler	2018	1,100	186	1,100	195	2,581	5,258	44	7,883
Ronan Murphy	2018	_	—	_		_	105	102	207
Eugene McCague	2018	_		—	—	_	45	73	118
Joan Garahy	2018		—	—	—	—	45	82	127
Total	2018	1,235	203	1,100	200	2,738	5,291	1,083	9,112

*Appointed as Executive Chairman on 1 March 2017 and non-Executive Chairman from 12 May 2018. The vesting of the Ordinary Share Options and Restricted Share Units which were unvested on Mr. Murray ceasing to be an ICON plc employee (12 May 2018) were accelerated and the outstanding Ordinary Share Options and Restricted Share Units vested on that date. The unvested Performance Share Units with vesting dates between 12 May 2018 and March 2019 were forfeit on Mr. Murray ceasing to be an ICON plc employee on 12 May 2018.

**Retired from the Board at the AGM on 24 July 2018

***Share-based payments is the IFRS 2 expense related to share options, RSUs and PSUs. The aggregate amount of the gains earned by the Directors on the exercise of share options during the financial year is disclosed in *Note 3* under '*Directors' emoluments*'.

for the year ended 31 December 2018

9. Payroll and related benefits (continued)

Summary compensation table - Year ended 31 December 2017

Name	Year	Salary	Company pension contribution	Performance related compensation	All other compensation	Subtotal	Share- based payments *****	Directors' fees	Total compensation
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Ciaran Murray*	2017	1,119	140	339	35	1,633	6,279	_	7,912
Declan McKeon**	2017	—	—	_	_		169	169	338
John Climax	2017	—	_			—	169	69	238
Ronan Lambe	2017		_	—	—	—	169	69	238
Dermot Kelleher	2017	_	—	—		_	169	83	252
William Hall	2017	—		_	_	—	172	113	285
Mary Pendergast	2017		—				167	81	248
Hugh Brady	2017	—		_	_	—	167	65	232
Steve Cutler	2017	1,045	110	1,210	235	2,600	4,953	37	7,590
Ronan Murphy	2017	_	—	—		_	50	110	160
Eugene McCague ***	2017	_	—	—	_		_	16	16
Joan Garahy ****	2017			—	—	—	_	8	8
Total	2017	2,164	250	1,549	270	4,233	12,464	820	17,517

* Appointed as Executive Chairman on 1 March 2017.

** Appointed as Lead Independent Director on 1 March 2017. Acting Chairman until 1 March 2017.

*** Appointed to the Board on 3 October 2017.

**** Appointed to the Board on 16 November 2017.

*****Share-based payments is the IFRS 2 expense related to share options, RSUs and PSUs. The aggregate amount of the gains earned by the Directors on the exercise of share options during the financial year is disclosed in *Note 3* under *'Directors' emoluments'*.

10. Retirement benefit obligations

The Group operates a number of defined contribution schemes and two defined benefit pension schemes. The Group accounts for pensions in accordance with IAS 19R *Employee Benefits* ("IAS 19R").

(i) Defined Contribution Schemes

Certain employees of the Group are eligible to participate in a defined contribution plan (the "Plan"). Participants in the Plan may elect to defer a portion of their pre-tax earnings into a pension plan, which is run by an independent party. The Group matches each participant's contributions typically at 8% of the participant's annual compensation. Contributions to this plan are recorded as a remuneration expense in the Consolidated Statement of Profit and Loss. Contributions for the year ended 31 December 2018 and year ended 31 December 2017 were \$25,241,000 and \$20,355,000 respectively.

The Group's United States operations maintain a retirement plan (the "U.S. Plan") that qualifies as a deferred salary arrangement under Section 401(k) of the Internal Revenue Code. Participants in the U.S. Plan may elect to defer a portion of their pre-tax earnings, up to the Internal Revenue Service annual contribution limit. The Group matches participant's contributions up to 3% and matches 50% of participant's contributions thereafter to a maximum Company contribution of 4.5% of the participant's annual compensation. Contributions to the U.S. Plan are recorded, in the year contributed, as an expense in the Consolidated Statement of Profit and Loss. Contributions for the year ended 31 December 2018 and year ended 31 December 2017 were \$15,532,000 and \$14,946,000 respectively.

for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

(ii) Defined Benefit Plans

ICON Development Solutions Limited defined benefit pension plan

One of the Group's subsidiaries, ICON Development Solutions Limited, which was acquired by the Group in 2003, operates a defined benefit pension plan in the United Kingdom for certain of its employees, which is now closed to new members.

The plan is managed externally and the related pension costs and liabilities are assessed in accordance with the advice of a professionally qualified actuary. Plan assets at 31 December 2018 and 31 December 2017 consist of units held in independently administered funds.

Financial assumptions

The following assumptions were used in determining the fair value of the plan assets and the present value of the projected benefit obligation at 31 December 2018:

	31 December 2018	31 December 2017
Discount rate	2.90%	2.50%
Inflation rate	3.20%	3.20%
Future pension increases	3.10%	3.10%
Future salary increases	3.70%	3.70%

The discount rate is determined by reference to UK long dated government and corporate bond yields at the reporting date. This is represented by the iboxx corporate bond over 15 year index plus 10 basis points.

The following assumptions were used at the commencement of the year in determining the net periodic pension cost for the year ended 31 December 2018:

	31 December 2018	31 December 2017
Discount rate	2.50%	2.70%
Future salary increases	3.70%	3.90%

Mortality assumptions

Assumptions regarding mortality experience are set based on actuarial advice in accordance with published statistics and experience. The mortality assumptions adopted at 31 December 2018 are 100% of the standard tables S2PxA, Year of Birth, no age rating for males and females, projected using CMI_2017 converging to 1.25% p.a.. These imply the following life expectancies, for persons retiring at age 62:

	31 December 2018	31 December 2017
Male retiring in 2018	24.7 years	24.8 years
Female retiring in 2018	26.7 years	26.7 years
Male retiring in 2038	26.2 years	26.3 years
Female retiring in 2038	28.3 years	28.3 years

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

Funding status

	Year ended 31 December 2018	Year ended 31 December 2017
Projected benefit obligation	(30,045)	(37,759)
Fair value of plan assets	27,297	32,423
Non-current other liabilities (note 20)	(2,748)	(5,336)

Movement in the net benefit obligation recognised in non-current other liabilities was as follows:

	Present Value of Obligations \$'000	Fair Value of Plan Assets \$'000	Total \$'000
At 1 January 2018	(37,759)	32,423	(5,336)
Current service costs	(125)		(125)
Interest expense/(income)	(899)	768	(131)
Past service cost	—	—	_
Expenses	—		—
	(38,783)	33,191	(5,592)
Re-measurements			
Experience adjustment	—	(1,355)	(1,355)
Gain or loss from change in demographic assumptions	200	—	200
Gain or loss from change in financial assumptions	3,313	—	3,313
Experience gain or loss	350	—	350
	3,863	(1,355)	2,508
Exchange differences	1,836	(1,654)	182
Contributions:			
- Employers	—	154	154
- Plan participants	(24)	24	
Benefit payments	3,063	(3,063)	—
	3,039	(2,885)	154
At 31 December 2018	(30,045)	27,297	(2,748)

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

	Present Value of Obligations \$'000	Fair Value of Plan Assets \$'000	Total \$'000
At 1 January 2017	(32,906)	24,876	(8,030)
Current service costs	(112)		(112)
Interest expense/(income)	(929)	755	(174)
Past service cost	—	—	—
Expenses	8		8
	(33,939)	25,631	(8,308)
Re-measurements			
Experience adjustment	—	224	224
Gain or loss from change in demographic assumptions	957		957
Gain or loss from change in financial assumptions	(1,497)		(1,497)
Experience gain or loss	(119)		(119)
	(659)	224	(435)
Exchange differences	(3,207)	2,606	(601)
Contributions:			
- Employers	—	4,008	4,008
- Plan participants	(22)	22	—
Benefit payments	68	(68)	_
	46	3,962	4,008
At 31 December 2017	(37,759)	32,423	(5,336)

Re-measurements are recognised in the Consolidated Statement of Comprehensive Income as follows:

	Year ended 31 December 2018 \$'000	Year ended 31 December 2017 \$'000
Return on plan assets (excl. amounts included in interest income/expense)	(1,355)	224
Gain or loss from change in demographic assumptions	200	957
Gain or loss from change in financial assumptions	3,313	(1,497)
Experience gain or loss	350	(119)
Comprehensive income at end of year	2,508	(435)

Defined benefit pension expense recognised in the Consolidated Statement of Profit and Loss was as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Current service cost recognised in profit or loss	125	112
Net interest expense recognised in profit or loss	131	174
Expenses		(8)
Net periodic pension cost	256	278

for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

Plan Assets Fair Value

The fair value of plan assets at 31 December 2018 is analysed as follows:

	31 December 2018	31 December 2017
	\$'000	\$'000
Unit funds	27,297	32,423

The plan's assets do not include any of the Group's own financial instruments, nor any property occupied by, or other assets used by the Group.

At 31 December 2018 the long-term expected return on corporate bonds and gilts (fixed interest and index linked) was determined by reference to bond yields and gilt yields.

The underlying asset split of the funds at 31 December 2018 and 31 December 2017 was as follows:

	31 December 2018	31 December 2017
Equities	_	_
Corporate Bonds	25.00 %	22.00%
Gilts	71.00%	65.00%
Cash	4.00%	13.00%

The assets of the scheme are invested with Legal and General and held in a combination of the Active Corporate Bond over 10 Year fund, Gilt, and Index Linked Gilt funds. The overall investment strategy is that approximately 75% of investments are in government bonds (both fixed interest and index linked) and approximately 25% of investments are held in corporate bonds. This results in a concentration of investments in bond type assets, although invested in a number of different bond funds.

Sensitivity assumptions

The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Change in Assumption	Change in Liabilities
Discount Rate	Decrease of 0.25% p.a.	Increase by 6.3%
Rate of Inflation	Increase of 0.25% p.a.	Increase by 1.6%
Rate of Salary Growth	Increase of 0.25% p.a.	Increase by 0.2%
Rate of Mortality	Increase in life expectancy of 1 year	Increase by 3.3%

The sensitivities shown above are approximate. Each sensitivity considers one change in isolation. The inflation sensitivity includes the impact of changes to the assumptions for revaluation, pension increases and salary growth.

The plan typically exposes the Company to actuarial risks such as investment risk, interest rate risk, salary growth risk, mortality risk and longevity risk. A decrease in corporate bond yields, a rise in inflation or an increase in life expectancy would result in an increase to plan liabilities. This would detrimentally impact the balance sheet position and may give rise to increased charges in future income statements. This effect would be partially offset by an increase in the value of the plan's bond holdings, and in qualifying death in service insurance policies that cover mortality risk. Additionally, caps on inflationary increases are in place to protect the plan against extreme inflation.

for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

Cash flows and Maturity Profiles

The Group expects to contribute approximately \$0.2 million of normal contribution to the defined benefit pension scheme for the year ended 31 December 2019. The average duration of the defined benefit obligation at the period ending 31 December 2018 is 26 years.

Aptiv Solutions Pension Scheme

On 7 May 2014, the Company acquired 100% of the common stock of Aptiv Solutions ("Aptiv"). The acquisition of Aptiv was accounted for as a business combination in accordance with IFRS 3 Business Combinations. The Company has a defined benefit plan covering its employees in Switzerland as mandated by the Swiss government. Benefits are based on the employee's years of service and compensation. Benefits are paid directly by the Company when they become due, in conformity with the funding requirements of applicable government regulations. The plan is managed externally and the related pension costs and liabilities are assessed in accordance with the advice of a professionally qualified actuary. Plan assets at 31 December 2018 and 31 December 2017 consist of units held in independently administered funds.

Financial assumptions

The following assumptions were used in determining the fair value of the plan assets and the present value of the projected benefit obligation at 31 December 2018:

	31 December 2018	31 December 2017
Discount rate	0.80%	0.80%
Inflation rate	1.00%	1.00%
Future pension increases	0.00%	0.00%
Future salary increases	2.00%	2.00%

The discount rate is determined by reference to Swiss corporate bond yields at the reporting date.

The following assumptions were used at the commencement of the year in determining the net periodic pension cost for the year ended 31 December 2018:

	31 December 2018	31 December 2017
Discount rate	0.80%	0.75%
Future salary increases	2.00%	2.00%

Mortality assumptions

Assumptions regarding mortality experience are set based on actuarial advice in accordance with published statistics and experience. The mortality assumptions adopted at 31 December 2018 are determined using the BVG 2015 generational table, where the mortality rates are projected forward for each individual based on their date of birth to reflect expected future mortality improvements. These tables imply the following life expectancies, for males retiring at age 65 and females retiring at age 64:

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

	31 December 2018	31 December 2017
Male retiring in 2018	21.5 years	22.4 years
Female retiring in 2018	23.7 years	25.3 years
Male retiring in 2038	22.8 years	24.3 years
Female retiring in 2038	25.3 years	27.2 years

Funding status

	31 December 2018	31 December 2017
Projected benefit obligation	(5,279)	(5,927)
Fair value of plan assets	4,707	5,202
Non-current other liabilities (note 20)	(572)	(725)

Movement in the net benefit obligation recognised in non-current other liabilities was as follows:

	Present Value of Obligations	Fair Value of Plan Assets	Total
	\$'000	\$'000	\$'000
At 1 January 2018	(5,927)	5,202	(725)
Current service costs	(138)	_	(138)
Interest expense/(income)	(47)	41	(6)
Past service cost	8	_	8
	(6,104)	5,243	(861)
Re-measurements			
Experience adjustment	_	(240)	(240)
Gain or loss from change in demographic assumptions	360	_	360
Gain or loss from change in financial assumptions	_	_	_
Experience gain or loss	12	_	12
	372	(240)	132
Exchange differences	50	(2)	48
Contributions:			
- Employers	_	109	109
- Plan participants	(83)	83	
Benefit payments	486	(486)	
	403	(294)	109
At 31 December 2018	(5,279)	4,707	(572)

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

	Present Value of Obligations \$'000	Fair Value of Plan Assets \$'000	Total \$'000
At 1 January 2017	(6,928)	6,006	(922)
Current service costs	(243)		(243)
Interest expense/(income)	(54)	47	(7)
Past service cost	—		
	(7,225)	6,053	(1,172)
Re-measurements			
Experience adjustment	_	(296)	(296)
Gain or loss from change in demographic assumptions	_		_
Gain or loss from change in financial assumptions	577		577
Experience gain or loss	49		49
	626	(296)	330
Exchange differences	(303)	263	(40)
Contributions:			
- Employers	_	157	157
- Plan participants	(120)	120	—
Benefit payments	1,095	(1,095)	—
	975	(818)	157
At 31 December 2017	(5,927)	5,202	(725)

Re-measurements are recognised in the Consolidated Statement of Comprehensive Income as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Return on Plan Assets (excl. amounts included in interest income/expense)	(240)	(296)
Gain or loss from change in demographic assumptions	360	
Gain or loss from change in financial assumptions		577
Experience gain or loss	12	49
Comprehensive income at end of year	132	330

for the year ended 31 December 2018

10. Retirement benefit obligations (continued)

Defined benefit pension expense recognised in the Consolidated Statement of Profit and Loss was as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Current service cost recognised in profit or loss	138	243
Net interest expense recognised in profit or loss	6	7
Past service cost	(8)	
Net periodic pension cost	136	250

Plan Assets Fair Value

The fair value of plan assets at 31 December 2018 is analysed as follows:

31 December 2018	31 December 2017
\$'000	\$'000
Unit funds 4,707	5,202

The assets of the scheme are invested in an insured plan with Swiss Life and held in a combination of debt securities, equity securities and in real estate. There is no self-investment in employer related assets.

Sensitivity assumptions

The sensitivity of the defined benefit obligation to changes in the weighted principal assumptions is:

	Change in Assumption	Change in Liabilities
Discount Rate	Decrease of 0.25% p.a.	Increase by 3.7%
Rate of Salary Growth	Increase of 0.25% p.a.	Increase by 0.4%
Rate of Mortality	Decrease in mortality rate of 1.00% p.a.	Increase by 0.3%

The sensitivities shown above are approximate. Each sensitivity considers one change in isolation. The inflation sensitivity includes the impact of changes to the assumptions for revaluation, pension increases and salary growth. The average duration of the defined benefit obligation at the period ending 31 December 2018 is 14 years.

The plan typically exposes the Company to actuarial risks such as investment risk, interest rate risk, salary growth risk, mortality risk and longevity risk. A decrease in corporate bond yields, a rise in inflation or an increase in life expectancy would result in an increase to plan liabilities. This would detrimentally impact the balance sheet position and may give rise to increased charges in future income statements. This effect would be partially offset by an increase in the value of the plan's bond holdings, and in qualifying death in service insurance policies that cover mortality risk. Additionally, caps on inflationary increases are in place to protect the plan against extreme inflation.

for the year ended 31 December 2018

11. Share-based payment

Share Options

On 21 July 2008 the Company adopted the Employee Share Option Plan 2008 (the "2008 Employee Plan") pursuant to which the Compensation and Organisation Committee of the Company's Board of Directors may grant options to any employee, or any director holding a salaried office or employment with the Company or a Subsidiary for the purchase of ordinary shares. On the same date, the Company also adopted the Consultants Share Option Plan 2008 (the "2008 Consultants Plan"), pursuant to which the Compensation and Organisation Committee of the Company's Board of Directors may grant options to any consultant, adviser or non-Executive Director retained by the Company or any Subsidiary for the purchase of ordinary shares.

On 14 February 2017 both the 2008 Employee Plan and the 2008 Consultants Plan (together the "2008 Option Plans") were amended and restated in order to increase the number of options that can be issued under the 2008 Consultants Plan from 400,000 to 1 million and to extend the date for options to be granted under the 2008 Option Plans.

An aggregate of 6.0 million ordinary shares have been reserved under the 2008 Employee Plan, as reduced by any shares issued or to be issued pursuant to options granted under the 2008 Consultants Plan, under which a limit of 1 million shares applies. Further, the maximum number of ordinary shares with respect to which options may be granted under the 2008 Employee Option Plan, during any calendar year to any employee shall be 400,000 ordinary shares. There is no individual limit under the 2008 Consultants Plan. No options may be granted under the 2008 Option Plans after 14 February 2027.

Each option granted under the 2008 Employees Plan or the 2008 Consultants Plan (together the "2008 Option plans") will be evidenced by a Stock Option Agreement between the optionee and the Company. The exercise price will be specified in each Stock Option Agreement, however option prices will not be less than 100% of the fair market value of an ordinary share on the date the option is granted.

On 17 January 2003 the Company adopted the Share Option Plan 2003 ("the 2003 Plan"), pursuant to which the Compensation and Organisation Committee of the Company's Board of Directors could grant options to employees of the Company or its subsidiaries for the purchase of ordinary shares. Each grant of an option under the 2003 Plan was to be evidenced by a Stock Option Agreement between the individual and the Company. The exercise price was to be specified in each Stock Option Agreement; however option prices could not be less than 100% of the fair market value of an ordinary share on the date the option was granted.

An aggregate of 6.0 million ordinary shares were reserved under the 2003 Plan; and, in no event could the number of ordinary shares that may be issued pursuant to options awarded under the 2003 Plan exceed 10% of the outstanding shares, as defined in the 2003 Plan, at the time of the grant. Further, the maximum number of ordinary shares with respect to which options could be granted under the 2003 Plan during any calendar year to any employee was 400,000 ordinary shares. The 2003 Share Option Plan expired on 17 January 2013. No new options may be granted under this plan.

Share option awards are granted with an exercise price equal to the market price of the Company's ordinary shares at date of grant. Share options typically vest over a period of five years from date of grant and expire eight years from date of grant. Share options granted to non-executive directors during 2018 vest over 12 months and expire eight years from the date of grant. The maximum contractual term of options outstanding at 31 December 2018 is eight years.

for the year ended 31 December 2018

11. Share-based payments (continued)

Set out below is a summary of the total number of options outstanding and number of options available to grant under each plan as at 31 December 2018:

	Outsta	nding	Available to Grant		
	31 December 2018	31 December 2017	31 December 2018	31 December 2017	
2003 Stock Option Plan	28,939	58,088	_	_	
2008 Stock Option Plans	891,807	1,113,305	3,187,397	3,347,896	
Total	920,746	1,171,393	3,187,397	3,347,896	

The 1998 Long Term Incentive Plan expired on 14 January 2008 and no further options may be granted under this plan. The 2003 Share Option Plan expired on 17 January 2013 and no further options may be granted under this plan.

The total number of share options outstanding and exercisable at 31 December 2018 is as follows:

	Number of Wei Options	ghted Average Exercise Price
		¢ 42, 45
Outstanding at 31 December 2016	1,466,444	\$43.45
Granted	219,113	\$85.98
Exercised	(458,243)	\$30.35
Forfeited	(55,921)	\$54.35
Outstanding at 31 December 2017	1,171,393	\$56.02
Granted	167,557	\$118.90
Exercised	(408,699)	\$41.12
Forfeited	(9,505)	\$32.35
Outstanding at 31 December 2018	920,746	\$74.32
Exercisable at 31 December 2018	397,923	\$56.10

The weighted average intrinsic value of the Company's shares on date of exercise of share options during the year ended 31 December 2018 was \$93.36 (31 December 2017: \$69.33).

At 31 December 2018, the range of exercise prices and weighted average remaining contractual life of outstanding and exercisable options was as follows:

for the year ended 31 December 2018

11. Share-based payments (continued)

Options Outstanding

Options Exercisable

Range Exercise Price	Number of Shares	Weighted Average Remaining Contractual Life	Weighted Average Exercise Price	Number of Shares	Weighted Average Exercise Price
\$ 20.28	18,190	0.16		18,190	
\$ 22.30	52,811	1.32		52,811	
\$ 23.66	1,161	1.57		1,161	
\$ 26.71	450	1.69		450	
\$ 32.37	20,848	2.33		20,848	
\$ 36.22	2,141	2.46		2,141	
\$ 37.90	920	2.93		920	
\$ 40.83	40,502	3.39		25,360	
\$ 47.03	22,685	3.17		14,020	
\$ 48.67	50,896	3.21		34,906	
\$ 51.35	2,030	3.60		1,224	
\$ 65.60	66,752	5.38		24,543	
\$ 66.47	4,267	4.39		1,572	
\$ 66.97	1,249	4.45		_	
\$ 68.39	135,400	4.18		79,069	
\$ 71.95	127,905	5.17		74,473	
\$ 83.47	127,136	6.17		22,461	
\$ 90.03	77,846	6.38		23,774	
\$ 115.11	107,794	7.17			
\$ 125.74	59,763	7.38		—	
 \$20.28 - \$125.74	920,746	5.01	\$ 74.32	397,923	\$ 56.10

Share option fair values

The weighted average grant date fair value of share options granted by the Company during the year ended 31 December 2018 was \$31.74 based on the following grants:

Grant Date	Number of Shares	Weighted Average Exercise Price
3 Mar 18	107,794	\$115.11
18 May 18	59,763	\$125.74
	167,557	\$118.90

Share option fair values

The weighted average grant date fair value of share options granted by the Company during the year ended 31 December 2017 was \$23.36 based on the following grants:

Grant Date	Number of Shares	Weighted Average Exercise Price
3 Mar 17	135,243	\$83.47
19 May 17	83,870	\$90.03
	219,113	\$85.98

for the year ended 31 December 2018

11. Share-based payments (continued)

Fair value of share options – Assumptions

The fair values of options granted during the year ended 31 December 2018 and the year ended 31 December 2017 were calculated using a binomial option-pricing-model, using the following assumptions:

	Year ended	Year ended
	31 December 2018	31 December 2017
Weighted average share price	\$118.90	\$85.98
Weighted average exercise price	\$118.90	\$85.98
Expected volatility ⁽¹⁾	25.0%	25.0%
Expected dividend yield		_
Risk-free rate ⁽²⁾	2.8%-3.0%	2.0%-2.3%
Rate of forced early exercise	10% p.a.	10% p.a.
Minimum gain for voluntary early exercise	25% of exercise price	25% of exercise price
Rate of voluntary early exercise at minimum gain	75% per annum	75% per annum

(1) Expected volatility has been determined based upon the volatility of the Company's share price over a period which is commensurate with the expected term of the options granted.

(2) Risk-free rate is dependent on the grant date.

Restricted share units

On 21 July 2008 the Company adopted the 2008 Employees Restricted Share Unit Plan (the "2008 RSU Plan") pursuant to which the Compensation and Organisation Committee of the Company's Board of Directors may select any employee, or any director holding a salaried office or employment with the Company or a Subsidiary to receive an award under the plan. An aggregate of 1.0 million ordinary shares have been reserved for issuance under the 2008 RSU Plan. The shares are awarded at zero cost and vest over a service period. Awards under the 2008 RSU Plan may be settled in cash or shares at the option of the Company.

On 23 April 2013 the Company adopted the 2013 Employees Restricted Share Unit and Performance Share Unit Plan (the "2013 RSU Plan") pursuant to which the Compensation and Organisation Committee of the Company's Board of Directors may select any employee, or any Director holding a salaried office or employment with the Company, or a Subsidiary to receive an award under the plan. On 11 May 2015 the 2013 RSU Plan was amended and restated in order to increase the number of shares that can be issued under the RSU Plan by 2.5 million shares. Accordingly, an aggregate of 4.1 million ordinary shares have been reserved for issuance under the 2013 RSU Plan. The shares are awarded at zero cost and vest over a service period. Awards under the 2013 RSU Plan may be settled in cash or shares at the option of the Company.

The Company has awarded RSUs and PSUs to certain key individuals of the Group. The fair value of RSUs is based on the share price at the date of grant, with the expense spread over the vesting period. The following table summarises RSU and PSU activity for the year ended 31 December 2018:

	RSU Outstanding Number of Shares	Weighted Average Grant Date Fair Value	PSU Outstanding Number of Shares	Weighted Average Grant Date Fair Value
Outstanding at 31 December 2017	715,970	\$72.65	511,026	\$72.07
Awarded	160,113	\$123.42	71,906	\$116.02
Shares Vested	(276,495)	\$67.99	(215,826)	\$68.28
Forfeited	(64,911)	\$78.92	(116,053)	\$70.89
Outstanding at 31 December 2018	534,677	\$89.50	251,053	\$85.95

for the year ended 31 December 2018

11. Share-based payments (continued)

The PSUs vest based on service and specified EPS targets over the period 2015 - 2018, 2016 - 2019, 2017 - 2020 and 2018 - 2021. Further PSUs up to a total of 103,423 PSUs may also be awarded depending upon actual EPS outturn from 2015 to 2021.

Share-based payment expense

Operating profit for the year ended 31 December 2018 is stated after charging \$28.1 million in respect of share-based payment expense. Share-based payment expense has been allocated as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Direct costs	15,460	17,147
Other operating expenses	12,599	13,973
Total	28,059	31,120

	Land \$*000	Buildings \$*000	Leasehold improvements \$'000	Computer equipment \$'000	Office furniture & fixtures \$*000	Laboratory equipment \$*000	Motor vehicles \$*000	Total \$'000
Cost								
At 1 January 2018	4,402	71,009	34,805	113,498	68,934	23,742	16	316,406
Additions		49	451	12,828	5,780	1,652		20,760
Disposals			(38)	(1,443)	(202)	(116)		(1, 799)
Prior period acquisition		1,462	[l			1,462
Foreign exchange movement	172	(2,409)	(1,743)	(2,733)	(1,863)	(361)	(8)	(8,945)
At 31 December 2018	4,574	70,111	33,475	122,150	72,649	24,917	œ	327,884
Depreciation								
At 1 January 2018		18,486	26,812	96,947	52,735	16,324	2	211,306
Charge for year		1,484	2,078	10,409	3,898	2,127		19,996
Eliminated on disposal			(26)	(1, 174)	(158)	(116)		(1, 474)
Foreign exchange movement		(658)	(1,133)	(2,251)	(1,259)	(351)	(2)	(5,654)
At 31 December 2018	I	19,312	27,731	103,931	55,216	17,984	Ι	224,174
Net book value								
At 31 December 2018	4,574	50,799	5,744	18,219	17,433	6,933	8	103,710
At 31 December 2017	4,402	52,523	7,993	16,551	16,199	7,418	14	105,100
Darraiation arrange of \$30.0 million (21 Darrahar 2017, \$10.0 million) has been abreed to "ether arrange or the Carolidated Statement of Darft and	(31 December)	017. \$10.0 mil	roho need sod (noil	and to "other on	"."	in the Consolidate.	d Statement of Dr.	ofit and

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

12. Property, Plant and Equipment

Notes to Consolidated Financial Statements (continued)	131 December 2018
Notes to Consolidate	for the year ended 31 Decem

(continued)
Equipment
Plant and
Property,
12.

	Land \$7000	Buildings \$*000	Leasehold improvements \$'000	Computer equipment \$'000	Office furniture & fixtures \$*000	Laboratory equipment \$`000	Motor vehicles \$*000	Total \$'000
Cost								
At 1 January 2017	4,990	60,888	30,734	101,046	61,506	20,310	15	279,489
Additions		1,699	2,421	10,102	5,510	65	1	19,798
Disposals			(1,057)	(1,250)	(1, 137)	(502)		(3,946)
Arising on acquisition		944	882	349	133			2,308
Foreign exchange movement	(588)	7,478	1,825	3,251	2,922	3,869		18,757
At 31 December 2017	4,402	71,009	34,805	113,498	68,934	23,742	16	316,406
Depreciation								
At 1 January 2017		15,453	23,912	85,518	47,277	13,845	2	186,007
Charge for year		1,419	2,370	10,221	3,713	2,153		19,876
Eliminated on disposal			(983)	(1,634)	(494)	(607)		(3,718)
Foreign exchange movement		1,614	1,513	2,842	2,239	933	Ι	9,141
At 31 December 2017	I	18,486	26,812	96,947	52,735	16,324	7	211,306
Net book value At 31 December 2017	4,402	52,523	7,993	16,551	16,199	7,418	14	105,100
At 31 December 2016	4,990	45,435	6,822	15,528	14,229	6,465	13	93,482
Depreciation expense of \$19.9 million (31 December 2016: \$1 Loss.	1 December 2	016: \$19.6 mil	lion) has been cha	rged to "other op	erating expenses'	9.6 million) has been charged to "other operating expenses" in the Consolidated Statement of Profit and	ed Statement of P1	ofit and

						Trade Name and		
	Computer Software \$2000	Customer Relationships \$`000	Volunteer List \$2000	Order Backlog \$`000	Technology Asset S'000	Competes S'000	Goodwill \$2000	Total \$2000
Cost	•	1 1 1	1 1 1	2 2 7	•	• •	1 1 7	1 1 1
At 1 January 2018	217,722	121,288	1,325	24,442	9,404	3,044	783,066	1,160,291
Additions	27,637							27,637
Disposal	(466)							(466)
Prior period acquisition		(7,775)		6,874			1,048	147
Foreign exchange movement	(655)	(1,520)		(707)	(422)	(56)	(13,845)	(17,205)
At 31 December 2018	244,238	111,993	1,325	30,609	8,982	2,988	770,269	1,170,404
Amortisation								
At 1 January 2018	159,772	56,935	1,325	19,467	8,143	2,003		247,645
Amortised in the year	30,564	11,738		1,342	1,243	1,033		45,920
Disposal	(466)							(466)
Foreign exchange movement	(591)	(727)		(200)	(404)	(56)		(1,978)
At 31 December 2018	189,279	67,946	1,325	20,609	8,982	2,980	I	291,121
Net book value								
At 31 December 2018	54,959	44,047	I	10,000	I	8	770,269	879,283
At 31 December 2017	57,950	64,353		4,975	1,261	1,041	783,066	912,646

13. Intangible assets - goodwill and other

Notes to Consolidated Financial Statements (continued) for the year ended 31 December 2018

0 0 2 2	Computer Software \$*000	Customer Relationships \$'000	Volunteer List \$^000	Order Backlog \$'000	Technology Asset \$^000	Trade Name and Non- Competes \$`000	Goodwill \$'000	Total \$'000
At 1 January 2017	191,363	92,916	1,325	17,531	8,233	1,487	630,096	945,951
Additions	24,919							24,919
Disposal	(421)							(421)
Arising on acquisition	1,103	25,844		6,461			129,222	162,630
Prior period acquisition		(2,903)		(61)		1,409	1,393	(162)
Foreign exchange movement	758	2,431		511	1,171	148	22,355	27,374
At 31 December 2017	217,722	121,288	1,325	24,442	9,404	3,044	783,066	1,160,291
Amortisation								
At 1 January 2017	135,877	44,118	1,325	14,930	6,031	1,478		203,759
Amortised in the year	23,560	11,921		4,385	1,178	377		41,421
Disposal	(368)							(368)
Foreign exchange movement	703	896		152	934	148		2,833
At 31 December 2017	159,772	56,935	1,325	19,467	8,143	2,003	I	247,645
Net book value At 31 December 2017	57,950	64,353	l	4,975	1,261	1,041	783,066	912,646
At 31 December 2016	55,486	51,798		2,601	2,202	6	630,096	742,192
Amortisation expense of \$45.9 million (31 December 2017: \$41.4 million) has been charged to 'other operating expenses' in the Consolidated Statement of Profit and Loss.	1 December 2017	: \$41.4 million) ha	s been charged to 'oth	er operating expe	nses' in the Consol	lidated Statement of	Profit and Loss.	

Notes to Consolidated Financial Statements *(continued)* for the year ended 31 December 2018 13. Intangible assets - goodwill and other *(continued)*

for the year ended 31 December 2018

13. Intangible assets - goodwill and other (continued)

Impairment review of goodwill

Goodwill acquired through business combinations has been allocated to the Group's clinical research cash-generating unit ("CGU"). The CGU identified represents the lowest level within the Group at which goodwill is monitored and are not larger than the operating segment determined in accordance with IFRS 8 *Operating Segments*.

The Group has identified one CGU in accordance with the provisions of IAS 36 Impairment of Assets as follows:

	31 December 2018	31 December 2017
	\$'000	\$'000
<u>Goodwill</u>		
Clinical research	770,269	783,066
	770,269	783,066

Impairment testing methodology and results

Goodwill is subject to impairment testing on an annual basis or more frequently if facts or circumstances warrant such a review.

The recoverable amount of the CGU is determined using a value-in-use computation based upon discounted net present value cash flow projections for the CGU. The cash flow projections are for a period of five years forward together with a terminal value calculated in accordance with the Gordon growth model. In calculating the terminal value a long-term growth rate of 2% has been applied to the estimated maintainable cash flow in the terminal year.

Management's estimates of future cash flows are based upon current budgets and strategic plans and are reflective of anticipated growth rates within the CRO industry, expected growth in the Group's market share and reflective of past experience. Key assumptions applied in determining expected future cash flows for these plans include management's estimate of future profitability, replacement capital expenditure requirements, trade working capital investment needs and tax considerations. The Group's cash flow projections are adjusted each year for actual and expected changes in performance.

The following assumptions were applied in determining the five year projected cash flows of the Clinical Research CGU at 31 December 2018:

	31 December 2018	31 December 2017
Expected revenue growth rate	6%	6%
Expected growth rate for operating costs	5.5%	5.5%
Expected effective tax rate	12%	12%
Expected movement in creditors	5.5%	5.5%
Expected days sales outstanding	67 days	49 days
Expected capital expenditure growth rate	2%	2%
Discount rate	10%	10%

*Days sales outstanding (DSO) is a a measure of the number of days in the period that the company takes to collect revenue. DSO is calculated based on trade debtors less payments on account divided by gross revenue multiplied by number of days in the period.

Expected revenue growth and the expected growth in operating costs are determined based upon the expected growth rates used in preparing the Group's budgets and strategic plans. In estimating budget revenue, consideration is given to current

for the year ended 31 December 2018

13. Intangible assets - goodwill and other (continued)

levels of backlog (i.e. the value of new business awards not yet recognised in revenue) and the estimated timeframe over which this is expected to be recognised within revenue, together with an estimate of revenue expected to be generated from new awards not currently within backlog. In estimating revenue from new awards consideration is given to current RFP (request for proposals) volumes, expected growth rates in both the CRO industry and the Group's market share, and of past experience. In estimating budgeted operating costs, consideration is given to required staffing levels, project related costs, facility and information technology costs and other costs. Staff costs and project related costs generally increase in line with revenue and are therefore estimated based on revenue growth expectations, while facility and information costs are relatively fixed and are therefore projected based upon a lower growth rate. An expected long term average tax rate of 12% has been applied in determining the projected after tax cash flows.

Working capital investment needs are determined based upon anticipated increases in the Group's debtors and creditors. Debtors are expected to increase in line with increases in the Group's DSO. DSO is generally a function of both the timing of contract fee instalments over a study or trial duration and credit terms afforded to individual customers. The DSO used in conducting the impairment review is reflective of current and anticipated trends in the Group's DSO. Expected long term DSOs for the Group are anticipated to be in the range of 50 to 60 days. Creditors are expected to increase in line with operating costs. Capital expenditure is expected to increase in line with the Group's projected capital expenditure investment targets.

A pre-tax discount rate of 10% (2017: 10%) has been applied to the projected cash flows of the CGU in determining its value-in-use. This rate is reflective of both the time value of money and risks specific to the CGU. The discount rate is based upon the Group's weighted average cost of capital which has been determined by applying the Group's long term optimal capital structure to its costs of debt and cost of equity. The Group's cost of debt has been calculated by applying an appropriate margin over the risk free interest rate. The Group's cost of equity has been calculated using the capital asset pricing model and includes an appropriate equity risk premium over the available risk free interest rate.

The excess of the value-in-use of the CGU at 31 December 2018, based on the assumptions above, has been calculated as follows:

follows:	31 December	31 December
	2018	2017
	\$'m	\$'m
Value-in use (present value of future cash flows)	5,506	5,150
Carrying amount of the Clinical Research CGU	(1,736)	(1,230)
Excess of value-in-use over carrying value	3,770	3,920

Sensitivity Analysis

A sensitivity analysis to determine if reasonable changes in key assumptions could lead to an impairment was conducted at 31 December 2018 using the following revised assumptions:

	31 December	31 December
	2018	2017
Expected revenue growth rate	4%	4%
Expected growth rate for operating costs	3.5%	3.5%
Expected capital expenditure growth rate	1%	1%
Discount rate	13%	13%

*All other inputs remained constant.

The revised excess of the value-in-use of the CGU at 31 December 2018, using the alternative assumptions above, has been calculated as follows:

for the year ended 31 December 2018

13. Intangible assets - goodwill and other (continued)

	31 December 2018	31 December 2017
	\$'m	\$'m
Revised value-in use (present value of future cash flows)	3,866	3,696
Carrying amount of the Clinical Research CGU	(1,736)	(1,230)
Revised excess of value-in-use over carrying value	2,130	2,466

As the excess of the recoverable amount over the carrying value of the cash generating unit was maintained despite changes in key assumptions, management have concluded that no reasonable change in key assumptions would result in an impairment of the CGU.

14. Business combinations

The acquisitions below have been accounted for as business combinations in accordance with the revised IFRS 3 *Business Combinations*:

(a) Acquisition of Mapi Group

On 27 July 2017, a subsidiary of the Company, ICON Clinical Research Limited, acquired Mapi Group. Mapi Group is a leading patient-centred health outcomes research and commercialisation company. Cash outflows on acquisition were \$145.8 million.

The acquisition of Mapi has been accounted for as a business combination in accordance with IFRS 3 *Business Combinations*. The following table summarises the provisional estimates of the fair values of the assets acquired and liabilities assumed:

for the year ended 31 December 2018

14. Business combinations (continued)

	27 July 2017 \$'000
Cash	19,649
Property, plant and equipment	4,872
Goodwill*	130,270
Order Book	13,012
Customer Lists	18,392
Accounts receivable	15,874
Unbilled revenue	6,984
Prepayments and other current assets	2,587
Other receivables	1,430
Income taxes receivable	4,262
Accounts payable	(2,994)
Payments on account	(31,445)
Other liabilities	(24,952)
Non-current other liabilities	(1,061)
Non-current deferred tax liability	(11,104)
Net assets acquired	145,776
Cash consideration	144,131
Working capital adjustment	1,645
Total consideration	145,776

*Goodwill represents the acquisition of an established workforce with experience in late phase commercialisation, analytics, real world evidence generation and strategic regulatory services in clinical trial services for biologics, drugs and devices. Goodwill related to the business acquired is not tax deductible. In finalising the goodwill on acquisition of Mapi in the twelve month period from acquisition, fair value adjustments were made which resulted in increases in other liabilities (\$3.9 million), plant and equipment (\$1.7 million), accounts receivable (\$1.7 million) and income taxes receivable (\$1.5 million) and decreases in unbilled revenue (\$4.8 million), prepayments and other current assets (\$1.9 million), other receivables (\$1.0 million), payments on account (\$2.6 million) and non-current deferred tax liability (\$9.1 million). Customer list and order backlog assets were also finalised.

The carrying values of accounts receivable, prepayments and other current assets above are carried at amortised cost and assumed to be approximate to their fair values due to the short term nature of these balances. There is no evidence that the Group will not be able to collect all amounts due.

The proforma effect of the Mapi acquisition if completed on 1 January 2016 would have resulted in net revenue and net income for the fiscal years ending 31 December 2017 and 31 December 2016 as follows:

for the year ended 31 December 2018

14. Business combinations (continued)

	Year ended 31 December 2017	Year ended 31 December 2016
	\$'000	\$'000
Net revenue	1,811,018	1,750,643
Profit for the year	276,359	268,882

The impact of the acquisition of Mapi on 27 July 2017 was to increase revenue by \$42.5 million and loss before tax by \$0.6 million in the period since acquisition.

(b) Acquisition of ClincalRM

On 15 September 2016, a subsidiary of the Company, ICON US Holdings Inc. acquired ICON Government & Public Health Solutions, Inc. ("GPHS") (formerly Clinical Research Management, Inc. ("ClinicalRM")) which resulted in initial net cash outflows of \$52.4 million (including certain payments made on behalf of GPHS totalling \$9.2 million). GPHS is a full-service CRO specialising in preclinical through Phase IV support of clinical research and clinical trial services for biologics, drugs and devices. The organisation helps customers progress their products to market faster with a wide array of research, regulatory and sponsor services within the U.S. and around the globe. GPHS provide full service and functional research solutions to a broad range of US government agencies. Their extensive expertise extends across basic and applied research, infectious diseases, vaccines development, testing and the response to bio-threats. They have worked in collaboration with government and commercial customers to respond to the threat of global viral epidemics. Further consideration of up to \$12.0 million was payable if certain performance milestones are achieved in respect of periods up to 31 December 2017. The fair value of the contingent consideration on acquisition and at 31 March 2017, was estimated at \$6.0 million. The evaluation of the performance and forecast performance of GPHS against performance milestones was updated as required at 30 June 2017. Arising from that evaluation, the fair value of the contingent consideration liability was determined as \$Nil, resulting in a net credit of \$6.0 million being recorded within selling, general & administrative expenses in the Consolidated Statement of Profit and Loss.

The acquisition of GPHS has been accounted for as a business combination in accordance with IFRS 3 *Business Combinations*. The following table summarises the provisional estimates of the fair values of the assets acquired and the liabilities assumed:

for the year ended 31 December 2018

14. Business combinations (continued)

	15 September 2016
	\$'000
Cash	3,168
Property, plant and equipment	939
Goodwill*	35,969
Customer list	4,012
Order backlog	1,668
Brand	1,409
Accounts receivable	11,431
Unbilled revenue	3,868
Prepayments and other current assets	1,673
Accounts payable	(165)
Other liabilities	(5,569)
Non-current other liabilities	(7)
Net assets acquired	58,396
Cash consideration	52,396
Contingent consideration	6,000
Total consideration	58,396

* Goodwill represents the acquisition of an established workforce with experience in preclinical through Phase IV support of clinical research and clinical trial services for biologics, drugs and devices. Goodwill related to the US portion of the business acquired is tax deductible. In finalising the goodwill on acquisition of GPHS in the twelve month period from acquisition, fair value adjustments were made which resulted in an increase to unbilled revenue (\$1.1 million) and other liabilities (\$1.1 million) and in a decrease to accounts receivable (\$0.3 million) and accounts payable (\$0.5 million). Customer list, order backlog and brand intangible asset values were also finalised.

The carrying values of accounts receivable, prepayments and other current assets above are carried at amortised cost and assumed to be approximate to their fair values due to the short term nature of these balances. There is no evidence that the Group will not be able to collect all amounts due.

The pro forma effect of the GPHS acquisition if completed on 1 January 2015 would have resulted in net revenue and profit for the financial years ended 31 December 2016 and 31 December 2015 as follows:

	Year ended 31 December 2016	Year ended 31 December 2015
	\$'000	\$'000
Net revenue	1,713,245	1,639,085
Profit for the year	271,929	244,652

The impact of the acquisition of GPHS on 15 September 2016 was to increase revenue by \$16.2 million and profit before tax by \$0.4 million.

Notes to Consolidated Financial Statements

for the year ended 31 December 2018

15. Inventories

31 December 2018	31 December 2017
\$'000	\$'000
Laboratory inventories 2,274	2,236

The cost of inventories is recognised as an expense and included in direct costs in the Consolidated Statement of Profit and Loss. \$33.8 million (2017: \$29.6 million) was charged to the Consolidated Statement of Profit and Loss for the year ended 31 December 2018.

16. Accounts receivable, unbilled services (contract assets) and payments on account (contract liabilities)

	31 December 2018	31 December 2017
	\$'000	\$'000
Accounts receivable	423,680	388,431
Less amounts provided for doubtful debts	(8,889)	(8,930)
Accounts receivable, net	414,791	379,501

Accounts receivables are amounts due from customers for services performed in the ordinary course of business. They are generally due for settlement within 30-90 days and therefore are all classified as current. Accounts receivable are recognised initially at the amount of consideration that is unconditional. Accounts receivable balances do not contain significant financing components. The Group holds the accounts receivable with the objective to collect the contractual cash flows and therefore measures them subsequently at amortised cost.

Due to the short-term nature of the current receivables, their carrying amount is considered to be the same as their fair value.

Impairment of financial assets

The closing loss allowance for trade receivables and contract assets as at 31 December 2018 reconcile to the opening loss allowances as follows:

	31 December 2018 \$'000	31 December 2017 \$'000
	4 000	\$ 000
Balance at start of year - calculated under IAS 39	8,930	9,450
Adjustment to loss allowance as at 1 January 2018 - calculated under IFRS 9*	—	_
Receivables written off during the year as uncollectible	(995)	(2,733)
Increase in loss allowance recognised in profit or loss during the year	3,083	5,116
Unused amount reversed	(2,355)	(3,106)
Foreign currency translation	226	203
Balance at end of year	8,889	8,930

*The restatement on transition to IFRS 9 as a result of applying the expected credit risk model was immaterial.

for the year ended 31 December 2018

16. Accounts receivable and contract balances (continued)

Previous accounting policy for impairment of trade receivables

In the prior year, a provision for impairment was assessed based on the incurred loss model. A provision for a receivable was recognised where there is objective evidence that the Group will not be able to collect all amounts due according to the original terms of the receivable.

The Group considered that there was evidence of impairment if any of the following indicators were present:

- significant financial difficulties of the debtor
- probability that the debtor will enter a financial restructuring process, and
- default or late payment

Receivables for which an impairment provision was recognised were written off against the provision when there was no expectation of recovering additional cash.

At 31 December 2018, the Group maintained an impairment provision of \$8.9 million (2017: \$8.9 million).

All receivables are due within twelve months of the year ended 31 December 2018.

Further analysis of Group's accounts receivable balances at 31 December 2018 is as follows:

	Gross accounts receivable	Gross accounts receivable
	2018	2017
	\$'000	\$'000
Not past due	319,190	317,554
Past due 0 to 30 days	54,656	34,703
Past due 31 to 60 days	15,422	18,424
Past due 61+ days	34,412	17,750
Accounts receivable	423,680	388,431

The carrying amounts of the Group's accounts receivables are denominated in the following currencies:

	31 December 2018	31 December 2017
	\$'000	\$'000
Currency		
US Dollar	306,819	302,056
Euro	82,320	48,493
Sterling	9,584	12,537
Other currencies	16,068	16,415
Total	414,791	379,501

for the year ended 31 December 2018

16. Accounts receivable and contract balances (continued)

Accounts receivables and unbilled revenue are as follows:

	31 December 2018 \$'000	31 December 2017 \$'000
Billed services (accounts receivable)	423,680	388,431
Unbilled services (unbilled revenue)	362,926	268,509
Trade accounts receivable and unbilled revenue	786,606	656,940
Allowance for doubtful accounts	(8,889)	(8,930)
Trade accounts receivable and unbilled revenue, net	777,717	648,010

Unbilled services and payments on account (contract assets and liabilities) were as follows:

31 December 2018	31 December 2017	\$ Change	% Change
\$'000	\$'000	<u> </u>	
362,926	268,509	94,417	35.2 %
(274,468)	(298,992)	24,524	(8.2)%
88 458	(30.483)	118 941	390.2 %
	2018 \$'000 362,926	2018 2017 \$'000 \$'000 362,926 268,509 (274,468) (298,992)	2018 2017 \$ Change \$'000 \$'000 362,926 268,509 94,417 (274,468) (298,992) 24,524

Timing may differ between the satisfaction of performance obligations and the invoicing and collection of amounts related to our contracts with customers. We record assets for amounts related to performance obligations that are satisfied but not yet billed and/or collected. These assets are recorded as unbilled receivables and therefore contract assets rather than accounts receivables when receipt of the consideration is conditional on something other than the passage of time. Liabilities are recorded for amounts that are collected in advance of the satisfaction of performance obligations.

Unbilled services/ revenue balances arise where invoicing or billing is based on the timing of agreed milestones related to service contracts for clinical research. Contractual billing arrangements in respect of certain reimbursable expenses (principally investigators) require billing by the investigator to the Company prior to billing by the Company to the customer.

The most significant impact of application of IFRS 15 is the measurement of a clinical trial service as a single performance obligation recognised over time. We concluded that ICON is the contract principal in respect of both direct services and in the use of third parties (principally investigator services) that support a clinical trial. The progress towards completion for clinical service contracts is measured based on total project costs (including reimbursable costs). Reimbursable expenses are included within direct costs on adoption of IFRS 15 and are recorded based on activity undertaken by the third party. Amounts owed to investigators and others in respect of reimbursable expenses at 31 December 2018 were \$85.6 million (see *note 20 Accrued and Other liabilities*).

Payments on account decreased by \$24.5 million resulting in an increased of \$118.9 million in the net balance of unbilled services and payments on account between 31 December 2017 and 31 December 2018. These fluctuations are primarily due to timing of payments and invoicing related to the Group's clinical trial management contracts. Billings and payments are established by contractual provisions including predetermined payment schedules which may or may not correspond to the timing of the transfer of control of the Company's services under the contract. Unbilled services arise from long-term contract when a cost-based input method of revenue recognition is applied and revenue recognised exceeds the amount billed to the customer.

for the year ended 31 December 2018

16. Accounts receivable and contract balances (continued)

The credit loss expense recognised on the Group's receivables and unbilled services was \$0.7 million for the twelve months ended 31 December 2018.

As of 31 December 2018 approximately \$5.3 billion of revenue is expected to be recognised in the future in respect of unsatisfied performance obligations. The Company expects to recognise revenue on approximately 40% of the unrealised performance obligation over the next 12 months, with the remainder recognised thereafter over the duration of the customer contracts.

17. Other assets

	31 December 2018	31 December 2017
	\$'000	\$'000
Non-current other assets		
Lease deposits	7,706	8,190
Deferred employee savings scheme assets	13,072	14,174
Total	20,778	22,364

Lease deposits paid in respect of certain premises leased by the Group are refundable on expiry of the related leases. Discounting of the non-current element has not been applied because the discount would be immaterial. However, discounting may apply in the future if the non-current element becomes significant such that the discounting impact would be material.

	31 December 2018	31 December 2017
	\$'000	\$'000
Other current assets		
Personnel related prepayments	431	465
Facility and information system related prepayments	20,632	18,841
General overhead prepayments	8,863	9,486
Sales tax recoverable	16,289	19,567
Other receivables	22,519	10,598
Total	68,734	58,957

Other current assets do not contain any impaired assets. The maximum exposure to credit risk at the reporting date is the carrying value of each receivable, other than prepayments which do not have credit risk. The Group does not hold any collateral as security.

for the year ended 31 December 2018

18. Financial asset investments

(a) Current asset investments - fair value through OCI

	31 December 2018	31 December 2017
	\$'000	\$'000
At start of year	77,589	68,046
Additions	80,956	41,701
Disposals/maturities	(99,865)	(33,086)
Interest on short term investments	1,329	1,088
Loss on investments	(99)	(160)
At end of year	59,910	77,589

Current asset investments are reported at fair value, with gains or losses recorded in other comprehensive income. During the year ended 31 December 2018 an unrealised loss of \$0.2 million (2017: unrealised loss of \$0.3 million) was recorded. Current asset investments comprise highly liquid investments with maturities of greater than three months and minimum "A-" rated fixed and floating rate securities.

(b) Non-current financial assets - fair value through profit or loss

The Company entered into subscription agreements with a number of funds. Capital totalling \$6.2 million had been advanced under the terms of the subscription agreements at 31 December 2018. The Company determined that the interests in the funds meet the definition of equity securities without readily determinable fair values. An increase in fair value of \$0.8 million was recognised in net income during the period bringing the carrying value of the subscriptions to \$7.0 million at 31 December 2018. The Company had committed to future investments of \$21.3 million in respect of these funds.

19. Cash and cash equivalents

31	December 2018	31 December 2017
	\$'000	\$'000
Cash at bank and in hand	160,378	142,233
Short term deposits	235,473	140,626
Cash and cash equivalents	395,851	282,859

for the year ended 31 December 2018

20. Accrued and other liabilities

	31 December 2018	31 December 2017
	\$'000	\$'000
Non-current other liabilities		
Personnel related liabilities	333	377
Deferred government grants (note 22)	877	966
Retirement benefit plan net obligation (note 10)	3,320	6,061
Deferred employee savings scheme liabilities	8,061	9,510
Other liabilities	431	731
Total	13,022	17,645

Deferred employee savings scheme liabilities are payable more than 5 years from the reporting date (see *note 26*). Discounting of the non-current element has not been applied because the impact would be immaterial. However, discounting may apply in the future if the non-current element becomes significant such that the discounting impact would be material.

	31 December 2018	31 December 2017
	\$'000	\$'000
Current accrued and other liabilities		
Personnel related liabilities	171,866	168,964
Facility and information system related liabilities	14,012	13,061
General overhead liabilities*	118,844	41,791
Other liabilities	5,179	6,470
Short term government grants (note 22)	42	35
Total	309,943	230,321

*includes amounts due to third parties in respect of reimbursable expenses of \$85.6 million at 31 December 2018.

for the year ended 31 December 2018

21. Provisions

	31 December 2018	31 December 2017
	\$'000	\$'000
Non-current other liabilities		
Restructuring provision (note 8)	1,301	432
Total	1,301	432
	31 December 2018	31 December 2017
		-
Current liabilities	2018	2017
Current liabilities Restructuring provision (note 8)	2018	2017

22. Deferred government grants

	31 December 2018 \$'000	31 December 2017 \$'000
At beginning of year	1,001	941
Repayment		_
Amortised during the year	(47)	(44)
Foreign exchange movement	(35)	104
At end of year	919	1,001
Current (note 20)	42	35
Non-current (note 20)	877	966
Total	919	1,001

Under grant agreements amounts received may become repayable in full or in part should certain circumstances specified within the grant agreements occur, including downsizing by the Group, disposing of the related assets, ceasing to carry on its business or the appointment of a receiver over any of its assets.

for the year ended 31 December 2018

23. Bank credit lines and loan facilities

Reconciliation of opening to closing net debt:

	Balance 1 Jan 2018	Drawn down	Repaid	Net cash inflow	Other non-cash adjustments	Balance 31 Dec 2018
Net cash and cash equivalents	282,859	_		118,320	(5,328)	395,851
Financial assets at fair value through other comprehensive income	77,589	_	_	(18,909)	1,230	59,910
Private placement notes	(348,888)		_	—	(376)	(349,264)
	11,560		_	99,411	(4,474)	106,497

On 15 December 2015 the Company issued, through its subsidiary ICON Investment Five Unlimited Company (the "Issuer"), Senior Notes for aggregate gross proceeds of \$350 million. The Senior Notes will mature on 15 December 2020. Interest payable is fixed at 3.64% and is payable semi-annually on the Senior Notes on each 15 June and 15 December commencing 15 June 2016. The Senior Notes are guaranteed by ICON plc. The Senior Notes may be redeemed, at the Issuer's option, at any time prior to maturity, at par plus a make whole premium, together with accrued and unpaid interest, if any, to the redemption date. The terms of the notes are set forth in the Note Purchase and Guarantee Agreement, dated as of 15 December 2015, by and among the Issuer, ICON plc and the purchasers named therein ("Note Purchase and Guarantee Agreement"). The Issuer used the proceeds from the sale of the Senior Notes to repay the existing \$350 million bridge facility. The Senior Notes are presented net of related financing costs on the Consolidated Statement of Financial Position (\$349.3 million at 31 December 2018).

On 12 March 2018, the Company entered into a five year committed multi-currency Revolving Credit Facility for \$150.0 million with Citibank, JP Morgan, Santander, HSBC Bank and Morgan Stanley International ("Revolving Credit Facility"). Each bank subject to the agreement has committed \$30.0 million to the facility, with equal terms and conditions in place with all institutions. The facility is guaranteed by ICON plc. The facility replaces the \$100.0 million facility which was entered into in June 2014 due to mature in June 2019. The facility bears interest at LIBOR plus a margin. No amounts were drawn at 31 December 2018, or at 31 December 2017, in respect of the Revolving Credit Facility. Amounts available to the Group under the facility at 31 December 2018 were \$150.0 million and at 31 December 2017 were \$100.0 million.

The Note Purchase and Guarantee Agreement includes certain financial covenants that require compliance with a consolidated leverage ratio, a minimum EBIT to consolidated net interest charge ratio and a maximum amount of priority debt. The financial covenants are defined in the Note Purchase and Guarantee Agreement.

The Senior Notes and the Revolving Credit Facility credit agreements also include certain customary covenants that restrict the Group's ability to enter into certain transactions or events including:

- incur or assume liens or additional debt;
- dispose of assets;
- engage in mergers or reorganisations; or
- enter into certain types of transactions with affiliates.

for the year ended 31 December 2018

24. Share capital

Group and Company

Authorised share capital:	No. of Ordinary Shares
---------------------------	------------------------

Ordinary shares of par value €0.06		100,000,000
	31 December	31 December

	31 December 2018	31 December 2017
	\$'000	\$'000
Allotted, called up and fully paid		
53,971,706 (31 December 2017: 54,081,601) ordinary shares of €0.06 each	4,658	4,664
Issued, fully paid share capital		
At beginning of year	4,664	4,692
Employee share options exercised	29	31
Restricted share units/ performance share units	36	44
Repurchase of ordinary shares	(71)	(103)
At end of year	4,658	4,664

Holders of ordinary shares will be entitled to receive such dividends as may be recommended by the Board of Directors of the Company and approved by the Shareholders and/or such interim dividends as the Board of Directors of the Company may decide. On liquidation or a winding up of the Company, the par value of the ordinary shares will be repaid out of the assets available for distribution among the holders of the ordinary shares of the Company. Holders of ordinary shares have no conversion or redemption rights. On a show of hands, every holder of an ordinary share present in person or proxy at a general meeting of shareholders shall have one vote, for each ordinary share held with no individual having more than one vote.

During the year ended 31 December 2018, 408,699 options were exercised by employees at an average exercise price of \$41.12 per share for total proceeds of \$16.8 million. During the year ended 31 December 2018, 273,742 ordinary shares were issued in respect of certain RSUs and 215,826 ordinary shares were issued in respect of PSUs previously awarded by the Company.

During the year ended 31 December 2017, 458,243 options were exercised by employees at an average exercise price of \$30.35 per share for total proceeds of \$13.9 million. During the year ended 31 December 2017, 361,102 ordinary shares were issued in respect of certain RSUs and 320,640 ordinary shares were issued in respect of PSUs previously awarded by the Company.

Share repurchase programme

On 3 October 2016 the Company commenced a previously announced share buyback programme of up to \$400 million. The Company can acquire up to 10% of its outstanding ordinary shares (by way of redemption), in accordance with Irish law, the United States securities laws and the Company's constitutional documents through open market share acquisitions. At 31 December 2018 a total of 4,026,576 ordinary shares were redeemed by the Company under this buyback programme for a total consideration of \$372.1 million. All ordinary shares that were redeemed under the buyback programme were cancelled in accordance with the Company and the nominal value of these shares transferred to other undenominated capital as required under Irish Company Law.

Under the repurchase programme, a broker purchased the Company's shares from time to time on the open market or in privately negotiated transactions in accordance with agreed terms and limitations. The programme was designed to allow

for the year ended 31 December 2018

24. Share capital (continued)

share repurchases during periods when the Company would ordinarily not be permitted to do so because it may be in possession of material non-public or price-sensitive information, applicable insider trading laws or self-imposed trading blackout periods. The Company's instructions to the broker were irrevocable and the trading decisions in respect of the repurchase programme were made independently of and uninfluenced by the Company. The Company confirms that on entering the share repurchase plans it had no material non-public, price-sensitive or inside information regarding the Company or its securities. Furthermore, the Company will not enter into additional plans whilst in possession of such information. The timing and actual number of shares acquired by way of the redemption will be dependent on market conditions, legal and regulatory requirements and the other terms and limitations contained in the programme. In addition, acquisitions under the programme may be suspended or discontinued in certain circumstances in accordance with the agreed terms. Therefore, there can be no assurance as to the timing or number of shares that may be acquired under the programme.

25. Capital and reserves

	31 December 2018	31 December 2017
	\$'000	\$'000
Share-based payment reserve	173,326	187,840
Other undenominated capital	983	912
Other reserves	11,868	11,029
Foreign currency translation reserve	(67,469)	(35,077)
Current asset investment – fair value reserve	(450)	(295)
Retained earnings	979,834	794,331
Total	1,098,092	958,740

Share-based payment reserve

The share-based payment reserve is used to account for share-based payments. The fair value of share-based payments is expensed to the Consolidated Statement of Profit and Loss over the period the related services are received, with a corresponding increase in equity. At 31 December 2018 the Group has recognised a cumulative charge for share-based payments of \$238.5 million net of deferred tax (2017: \$218.6 million). The Group has also recognised a cumulative charge of \$40.6 million (2017: \$36.0 million) in reserves for the current and deferred tax effects of the tax benefits relating to the exercise of employee share options in excess of related cumulative compensation expense. The Group has reclassified a cumulative credit of \$105.8 million (2017: \$66.8 million) to retained earnings in respect of exercised and expired share-based awards.

Other undenominated capital

Other undenominated capital comprises the nominal value of shares repurchased and cancelled by the Group and transferred from share capital to other undenominated capital as required under Irish Company Law. During the year ended 31 December 2018, 1,008,162 (31 December 2017: 1,589,227) ordinary shares were repurchased and cancelled by the Group.

Other reserves

The Group has recognised a non-distributable reserve of \$3.2 million in accordance with agreements made between the Group and Enterprise Ireland, an Irish government agency. The requirement for these non-distributable reserves will expire between the period 2022 and 2023. In 2005 the Group also recognised a capital contribution of \$6.1 million being the fair value of outstanding ordinary shares transferred to Mr Peter Gray, formerly Vice Chairman of the Board of Directors and formerly Chief Executive Officer, by founding Directors, Dr. John Climax and Dr. Ronan Lambe.

On 5 October 2015, the Company entered into an interest rate hedge in respect of the planned issuance of the Senior Notes in December 2015. The interest rate hedge matured on 17 November 2015 when the interest rate on the Senior Notes was fixed. The cash proceeds (\$4.6 million), representing the realised gain on the interest rate hedge was received on maturity in November 2015 and is recorded in Other Reserves. The realised gain will be amortised to the Consolidated Statement of Profit

for the year ended 31 December 2018

25. Capital and reserves (continued)

and Loss, net against interest payable, over the period of the Senior Notes. As of 31 December 2018, \$2.8 million was amortised to the Consolidated Statement of Profit and Loss (2017: \$1.8 million).

During the year ended 31 December 2017, the company also recognised a credit for the tax benefit on defined pension contributions of \$0.7 million.

Currency reserve

The currency reserve comprises all foreign exchange differences arising from the translation of the financial statements of foreign currency denominated operations of the Group since 1 June 2004, the date of transition to IFRS. As at 31 December 2018, this amounted to a cumulative loss of \$62.4 million (2017: loss of \$35.8 million). In addition the Group has recognised a cumulative loss for the currency impact of long term funding amounting to \$1.7 million at 31 December 2018 (2017: gain of \$3.0 million) and a cumulative charge of \$3.4 million (2017: charge \$3.3 million) for the related tax on the currency impact on long term funding.

During the year ended 31 December 2017, we entered into forward foreign currency contracts in respect of identified exposure arising from euro payments. At 31 December 2018, \$Nil was recognised in reserves in respect of the value of the contracts.

Current asset investments – fair value reserve

The current asset investment – fair value reserve comprises unrealised fair value gains and losses on current asset investments held as available-for-sale. The Group has recognised a cumulative loss during the year ended 31 December 2018 of \$0.5 million (2017: loss of \$0.3 million). Unrealised gains and losses are reclassified to the Consolidated Statement of Profit and Loss on disposal or impairment of the related asset.

Share premium

Share premium is the difference between the norminal value of shares and the value of consideration for shares issued.

Retained earnings

In addition to the profit for the financial year the Group has also recognised the re-measurement of the defined benefit pension scheme of \$2.6 million (31 December 2017: a re-measurement of \$(0.1) million). In 2018, the Group recognised share issue costs of \$(0.1) million in this reserve. The Group has recognised a credit of \$39.0 million (2017: credit of \$5.0 million) in respect of exercised and expired share-based awards that have been transferred from the share based payment reserve. During the year, the Group also participated in a share buyback programme. During the year ended 31 December 2018, the Group redeemed a total of 1,008,162 ordinary shares for total consideration of \$129.0 million (2017: 1,589,227 ordinary shares were redeemed by the Group for a total consideration of \$133.1 million), see *note 24 Share Capital* for further detail.

26. Financial instruments

The Board of Directors have overall responsibility for the establishment and oversight of the Group's risk management framework. The Group is exposed to various financial risks in the normal course of its business. The principle financial risks to which it is exposed include credit risks related to the creditworthiness of its customers and counterparties, with which it invests surplus cash funds, liquidity risk associated with the availability of sufficient capital resources, foreign currency risks, including both translation and transaction risk, and interest rate risk.

The Group's risk management policies are established to identify and analyse the risks faced by the Group, to set appropriate risk limits and controls, and to monitor risks and adherence to limits. Risk management policies and systems are reviewed regularly to reflect changes in market conditions and the Group's activities. The Group, through its training and management standards and procedures, aims to develop a disciplined and constructive control environment in which all employees understand their roles and obligations. The Audit Committee of the Board oversees how management monitors compliance with the Group's risk management policies and procedures and reviews the adequacy of the risk management framework in relation to the risks faced by the Group.

for the year ended 31 December 2018

26. Financial instruments *(continued)*

Credit risk

Credit risk arises from cash and cash equivalents, contractual cash flows of debt investments carried at fair value through other comprehensive income and at fair value through profit or loss, favourable derivative financial instruments and deposits with banks and financial institutions, as well as credit exposures to customers, including outstanding accounts receivable and unbilled receivables.

Credit risk is managed on a group basis. For banks and financial institutions, only independently rated parties with a minimum rating of BB+ for overnight maturities and a minimum of A- for any bank deposits greater than overnight and up to three months.

Current asset investments (recorded at fair value through other comprehensive income) comprise investments with maturities of greater than three months. The minimum ratings required for investment are as follows: bank deposits (A-), money market funds (AAA), liquidity funds (AAA) and fixed rate corporate bonds or floating rate notes (A- non-financial, AA- financial).

The Group's exposure to credit risk arises predominately in respect of the credit risk assessment of customers. Customer credit risk is managed through application of credit procedures, in particular through risk assessment of new customers, through assessment of credit quality, taking into account its financial position, past experience and other factors. The compliance with credit terms is regularly monitored by line management.

Contract terms may range from several weeks to several years depending on the nature of the work to be performed. Contracts are generally fixed price or unit based. In most cases, a portion of the contract fee is paid at the time the study or trial is started. The balance of the contract fee is generally billable in instalments over the study or trial duration and may be based on the delivery of certain performance targets or "milestones" or, based on units delivered, or on a fixed monthly payment schedule such as patient enrolment or database delivery.

Where customers request changes in the scope of a trial or in the services to be provided, a change order or amendment is issued which may result either in an increase or decrease in the contract value.

The Group also contracts on a "fee-for-service" or "time and materials" basis.

During the course of a study, the Group will generally incur reimbursable expenses. Reimbursable expenses are typically estimated and budgeted within the contract and are generally invoiced on a monthly basis based on actual expenses incurred. Reimbursable expenses include payments to investigators, travel and accommodation costs and various other expenses incurred over the course of the clinical trial which are fully reimbursable by the client.

Most of the Group's contracts are terminable immediately by the customer with justifiable cause or with 30 to 90 days notice without cause. In the event of termination, the Group is usually entitled to all sums owed for work performed through the notice of termination and certain costs associated with termination of the study. Termination or delay in the performance of a contract occurs for various reasons, including, but not limited to, unexpected or undesired results, production problems resulting in shortages of the drug, adverse patient reactions to the drug, the client's decision to de-emphasise a particular trial, inadequate patient enrollment or investigator recruitment.

The Group's top five customers accounted for approximately 40% and 42% of revenue during the years ended 31 December 2018 and 31 December 2017. During the year ended 31 December 2018 14% of the Group's revenues were derived from its top customer (2017: 21%). With the exception of this customer, no customer contributed more than 10% of net revenues during the current or prior year.

The maximum exposure of credit risk pertaining to customers is the carrying value of accounts receivable and unbilled revenue balances. The carrying value of accounts receivable and unbilled revenue balances, by geographic region, at 31 December 2018 was as follows:

for the year ended 31 December 2018

26. Financial instruments (continued)

	Accounts Receivable		Unbilled Revenue	
	31 December 2018	31 December 2017	31 December 2018	31 December 2017
	\$'000	\$'000	\$'000	\$'000
Europe	336,141	289,282	283,595	179,766
United States	71,321	80,174	71,537	77,182
Rest of World	7,329	10,045	7,794	11,561
Total	414,791	379,501	362,926	268,509

The Group has four types of financial assets that are subject to the expected credit loss model:

- trade receivables (billed amounts) for services provided to customers
- unbilled receivables (contract assets) for services provided to customers
- debt instruments carried at FVOCI
- cash and cash equivalents

Trade receivables and contract assets

The Group applies the IFRS 9 simplified approach to measuring expected credit losses which uses a lifetime expected loss allowance for all trade receivables and contract assets.

To measure the expected credit losses, trade receivables and contract assets have been grouped based on shared credit risk characteristics and the days past due. The contract assets relate to unbilled work in progress and have substantially the same risk characteristics as the trade receivables for the same types of contracts. The Group has therefore concluded that the expected loss rates for trade receivables are a reasonable approximation for the loss rates for the contract assets.

The expected loss rates are based on the payment profiles of revenue over a period of 36 months before 31 December 2018 or 1 January 2018 respectively and the corresponding historical credit losses experienced within this period. The historical loss rates are adjusted to reflect current and forward looking information on macroeconomic factors affecting the ability of the customers to settle receivables. See *note 16-Accounts receivable and contract balances* for assessment of the loss allowance as at 1 January 2018 and 31 December 2018 (on adoption of IFRS 9) for both trade receivables and contract assets.

Trade receivables and contract assets are written off when there is no reasonable expectation of recovery. Indicators that there is no reasonable expectation of recovery include, amongst others, the failure of a debtor to engage in a repayment plan with the group, and a failure to make contractual payments for a period of greater than 120 days past due. Impairment losses on trade receivables and contract assets are presented as net impairment losses within operating profit. Subsequent recoveries of amounts previously written off are credited against the same line item.

Previous accounting policy for impairment of trade receivables

In the prior year, impairment of trade receivables was assessed based on the incurred loss model. Individual receivables which were known to be uncollectible were written off by reducing the carrying amount directly. The other receivables were assessed collectively to determine whether there was objective evidence that an impairment had been incurred but not yet identified. The estimated impairment losses were recognised as a provision for impairment. Receivables were written off against the provision when there was no expectation of recovering cash.

Liquid and capital resources

The Group's liquid and capital resources at 31 December 2018 were as follows:

for the year ended 31 December 2018

26. Financial instruments (continued)

	31 December 2018	31 December 2017
	\$'000	\$'000
Current asset investments (note 18)	59,910	77,589
Cash and cash equivalents (note 19)	395,851	282,859
Total liquid resources	455,761	360,448
Shareholders' equity	1,386,379	1,230,256

The principal operating cash requirements of the Group include payment of salaries, office rents, travel expenditures and payments to investigators. Other cash requirements include capital expenditures for facilities and information system enhancements and cash required to fund acquisitions and other growth opportunities. The CRO industry is generally not capital intensive. The Group primarily finances its operations and growth through cash flows from operations, together with amounts drawn under negotiated facilities as required.

The Group's primary objectives in managing its liquid and capital resources are as follows:

- to maintain adequate resources to fund its continued operations,
- to ensure availability of sufficient resources to sustain future development and growth of the business,
- to maintain sufficient resources to mitigate risks and unforeseen events which may arise.

The Group manages risks associated with liquid and capital resources through ongoing monitoring of actual and forecast cash balances and by reviewing the existing and future cash requirements of the business. It ensures that sufficient headroom is available under the Group's existing negotiated facilities and negotiates additional facilities as required. Details of the Group's negotiated facilities are set out in *note 23 Bank Credit Lines and Loan Facilities*. There were no funds drawn under the Revolving Credit Facility at 31 December 2018. The Group may raise additional finance through the issuance of ordinary shares or debt as required.

The Revolving Credit Facility bears interest at LIBOR plus a margin. There were no amounts drawn on the Revolving Credit Facility at 31 December 2018. The Company is therefore subject to interest rate volatility in respect of any future draw down on the Revolving Credit Facility or in respect of any future issuances of debt. The interest rate in respect of the \$350 million Senior Notes is fixed at 3.64% for the five year term of the agreement.

The following table sets out details of the maturity of the Group's financial liabilities into the relevant maturity groupings based on the remaining period from the financial year end date to contractual maturity date:

Year ended 31 December 2018

	Carrying amount \$'000	Contractual cash flows \$'000	6 months or less \$'000	6-12 months \$'000	1-2 years \$'000	2-5 years \$'000	More than 5 years \$'000
Senior Notes	(349,264)	(350,000)			(350,000)		
Interest on Senior Notes	(566)	(25,480)	(6,370)	(6,370)	(12,740)		_
Non-current other liabilities*	(8,818)	(8,818)	(414)		(9)		(8,395)
Accounts payable	(13,288)	(13,288)	(13,288)	_	_		_
Accrued and other liabilities*	(309,901)	(309,901)	(309,901)				
	(681,837)	(707,487)	(329,973)	(6,370)	(362,749)	_	(8,395)

for the year ended 31 December 2018

26. Financial instruments (continued)

Year ended 31 December 2017

	Carrying amount \$'000	Contractual cash flows \$'000	6 months or less \$'000	6-12 months \$'000	1-2 years \$'000	2-5 years \$'000	More than 5 years \$'000
Senior Notes	(348,888)	(350,000)	—		_	(350,000)	
Interest on Senior Notes	(566)	(38,220)	(6,370)	(6,370)	(12,740)	(12,740)	_
Non-current other liabilities*	(10,619)	(10,619)	(333)	(108)	(291)	_	(9,887)
Accounts payable	(18,590)	(18,590)	(18,590)	_	—	_	_
Accrued and other liabilities*	(230,286)	(230,286)	(230,286)				
	(608,949)	(647,715)	(255,579)	(6,478)	(13,031)	(362,740)	(9,887)

*Non-current other liabilities above excludes retirement plan net benefit obligation (2018: \$3.3 million and 2017: \$6.1 million) and deferred government grants (2018: \$0.9 million and 2017: \$1.0 million). Accrued and other liabilities exclude deferred government grants (2018: \$42,000 and 2017: \$35,000).

Foreign currency risk

The Group is subject to a number of foreign currency risks given the global nature of its operations. The principal foreign currency risks to which the business is subject includes both foreign currency translation risk and foreign currency transaction risk. Although domiciled in Ireland, the Group presents its results in U.S. dollars. As a consequence the results of non-U.S. based operations, when translated into U.S. dollars, could be affected by fluctuations in exchange rates between the U.S. dollar and the currencies of those operations.

The Group is also subject to foreign currency transaction exposures as the currency in which contracts are priced can be different from the currencies in which costs relating to those contracts are incurred. The Group's operations in the United States are not materially exposed to such currency differences as the majority of revenues and costs are in U.S. dollars. However, outside the United States the multinational nature of the Group's activities means that contracts are usually priced in a single currency, most often U.S. dollars, Euros or pounds Sterling, while costs arise in a number of currencies, depending on, among other things, which of the Group's offices provide staff for the contract and the location of investigator sites.

Although many such contracts benefit from some degree of natural hedging due to the matching of contract revenues and costs in the same currency, where costs are incurred in currencies other than those in which contracts are priced, fluctuations in the relative value of those currencies could have a material effect on the results of the Group's operations. The Group regularly reviews its foreign currency exposures and usually negotiates currency fluctuation clauses in its contracts which allow for price negotiation if certain exchange rate triggers occur.

for the year ended 31 December 2018

26. Financial instruments (continued)

The following table sets out the Group's transaction risk in relation to financial assets and liabilities at 31 December 2018:

	U.S. Dollar 2018 \$'000	Sterling 2018 \$'000	Euro 2018 \$'000	Other 2018 \$'000	Total 2018 \$'000
Accounts receivable	40	6,087	31,357	8,318	45,802
Unbilled revenue/payments on account	391	7,033	41,971	(3,746)	45,649
Cash and cash equivalents	1,463	3,240	183	20,908	25,794
Other current assets	(714)	1,840	5,859	(284)	6,701
Other non-current assets	62			4	66
Accounts payable	81	(374)	(2,350)	(357)	(3,000)
Accrued and other liabilities	(366)	2,153	(2,473)	(14,716)	(15,402)
Current tax payable			(1,241)		(1,241)
Intergroup transactions	(5,118)	(6,037)	(51,762)	(14,998)	(77,915)
Total transaction risk	(4,161)	13,942	21,544	(4,871)	26,454

Foreign exchange gains and losses recognised on the above balances are recorded in "other operating expenses". The total foreign exchange loss incurred during the year ending 31 December 2018 amounted to a credit of \$(3.9) million (2017: \$7.8 million charge).

The following table sets out the Group's transaction risk in relation to financial assets and liabilities at 31 December 2017:

	U.S. Dollar 2017 \$'000	Sterling 2017 \$'000	Euro 2017 \$'000	Other 2017 \$'000	Total 2017 \$'000
Accounts receivable	19,840	12,532	29,963	7,933	70,268
Unbilled revenue/payments on account	6,913	4,721	3,597	2,837	18,068
Cash and cash equivalents	14,710	1,082	29,042	10,242	55,076
Other current assets	472	1,704	14,255	(408)	16,023
Other non-current assets	62			4	66
Accounts payable	177	(583)	(4,197)	(213)	(4,816)
Accrued and other liabilities	(8,598)	(1,697)	(5,346)	(15,839)	(31,480)
Current tax payable		_	(2,133)		(2,133)
Intergroup transactions	(37,849)	(3,345)	(85,132)	(26,147)	(152,473)
Total transaction risk	(4,273)	14,414	(19,951)	(21,591)	(31,401)

Foreign exchange gains and losses recognised on the above balances are recorded in "other operating expenses". The total foreign exchange gain incurred during the year ending 31 December 2017 amounted to \$7.8 million (2016: \$2.1 million gain).

The following significant exchange rates applied during the year:

	Average R	Average Rate		ate
	2018	2017	2018	2017
Euro 1:\$	1.1846	1.1229	1.1467	1.2005
Pound Sterling 1:\$	1.3401	1.2883	1.2754	1.3513

for the year ended 31 December 2018

26. Financial instruments (continued)

A simultaneous ten percent strengthening or weakening of the US Dollar, Euro and Sterling against all other currencies (which remained constant) would have increased or decreased profit and equity by \$0.9 million, \$1.9 million and \$0.2 million respectively (31 December 2017: \$0.4 million, \$1.8 million and \$1.3 million respectively) as a consequence of the retranslation of foreign currency denominated financial assets and liabilities at those dates. This change in profit and equity is excluding the effect of foreign currency denominated long term loans.

Interest rate risk

The Group is exposed to interest rate risk in respect of its cash and cash equivalents, current asset investments and amounts drawn under negotiated facilities which are subject to variable rates of interest. Funds drawn under the private placement bond are subject to fixed rates until 2020. As the Group does not account for these fixed rate liabilities at fair value through profit or loss, any change in market interest rates has no effect on the profit or loss. The Group's treasury function actively manages its available cash resources and invests significant cash balances in various financial instruments to try to ensure optimum returns for the Group's surplus cash balances. Financial instruments are classified either as cash and cash equivalents or current asset investments depending upon the maturity of the related investment. Funds may be invested in the form of floating rate notes and medium term minimum "A-" rated corporate securities. The Group may be subject to interest rate risk in respect of interest rate changes on amounts invested. The Group manages interest rate risk in respect of these balances by monitoring the composition of the Group's investment portfolio on an ongoing basis having regard to current market interest rates and future trends.

In addition to interest rate risk on surplus cash balances invested, the Group may also be subject to interest rate risk on amounts drawn under negotiated facilities which are subject to variable rates of interest. Details of the Group's negotiated facility are set out in *note 23 Bank Credit Lines and Loan Facilities* at 31 December 2018. The Group manages interest rate risk in respect of amounts under negotiated facilities through ongoing monitoring of actual and forecast cash balances, reviewing existing and future cash requirements of the business and by reviewing existing levels of borrowings having regard to current market interest rates and future trends. There are no amounts drawn under the Group's revolving credit facility at 31 December 2018.

In December 2015 the Group issued \$350m in the private placement market, the rate on these Senior Notes is fixed at 3.64% for the five year term. The interest rate is further reduced by an interest rate cash flow hedge which was entered into in advance of the rate fixing date. This cash flow hedge was deemed to be fully effective in accordance with IAS 39 *Financial Instruments: Recognition and Measurement* (it is also considered to be effective in accordance with IFRS 9 at 1 January 2018). The realised gain related to this derivative is recorded within comprehensive income and is amortised over the life of the Senior Notes. The effective rate, reflecting the benefit of the gain on the cash flow hedge, on our 5 year Senior Notes is fixed at 3.37%.

The sensitivity analysis below represents the revised amount following the hypothetical change in our interest income and interest expense based on an immediate 1% movement in market interest rates.

	Interest Inc	Interest Income		oense
	2018	2017	2018	2017
	\$'000	\$'000	\$'000	\$'000
As reported	4,759	2,346	13,502	12,627
1% Increase	8,155	5,441	13,502*	12,627
1% Decrease	1,372		13,502*	12,627

*No variable debt drawn down during the year ended 31 December 2018 or 31 December 2017.

for the year ended 31 December 2018

26. Financial instruments (continued)

Fair values

Certain financial instruments are measured in the Statement of Financial Position at fair value using a fair value hierarchy of valuation inputs. The hierarchy prioritises the inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels, which is determined by the lowest level input that is significant to the fair value measurement in its entirety. These levels are:

- Level 1: Inputs are based upon unadjusted quoted prices for identical instruments traded in active markets.
- Level 2: Inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

The fair value of financial assets together with the carrying amounts shown in the Statement of Financial Position is as follows:

	31 December 2018	31 December 2018	31 December 2018	31 December 2017	31 December 2017	31 December 2017
	Carrying		Fair Value	Carrying	Fair	Fair
	Amount	Value Level 1	Level 3	Amount	Value Level 1	Value Level 2
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Financial assets measured at fair value						
Financial assets at fair value through other comprehensive income	59,910	59,910	_	77,589	77,589	_
Financial assets at fair value through profit and loss	6,963	—	6,963	_	—	—
Foreign currency forward contracts	—	—		1,184	—	1,184
	66,873	59,910	6,963	78,773	77,589	1,184

The carrying values of accounts receivable (less provision for loss), unbilled revenue (contract assets), other current assets, cash and cash equivalents and other non-current assets are carried at amortised cost and assumed to be approximate to their fair values due to the short term nature of these balances. As such their fair values have not been disclosed.

Current asset investments carried at fair value result in gains or losses being recognised in the Consolidated Statement of Comprehensive Income. The fair value of current asset investments is their market price at the financial year end date. They are measured on the basis of Level 1 inputs.

Long-term financial assets carried at fair value result in gains or losses being recognised in the Consolidated Statement of Comprehensive Income. The fair value of long-term financial assets meet the definition of equity securities without readily determinable fair values.

Foreign currency forward contracts are stated at fair value, with changes in the fair value recognised in the Consolidated Statement of Comprehensive Income. The associated cumulative gain or loss is removed from equity and recognised in the Consolidated Statement of Profit and Loss in the same period or periods during which the hedged item affects profit or loss. The forward contracts are measured on the basis of Level 2 inputs. As the Group's forward contracts are not traded in active

for the year ended 31 December 2018

26. Financial instruments (continued)

markets, the instruments have been fair valued using observable forward exchange rates and interest rates corresponding to the maturities of the contract.

The Group's Senior Notes (private placement debt) is carried at \$350.0 million (prior to related financing costs). The carrying value at 31 December 2018, closely approximates fair value.

The carrying values of accounts payable, accrued and other liabilities and provisions (excluding contingent consideration) and other non-current liabilities are carried at amortised cost and assumed to be approximate to their fair values.

Each category of asset and liability has remained within the same level of hierarchy as the prior year as there has been no change in the extent to which the inputs used in measuring fair value are or are not observable within the market.

The following table shows reconciliation from the opening balances to the closing balances for Level 3 fair values:

	Long-term financial assets	Contingent Consideration
	2018	2017
	\$'000	\$'000
Opening balance	_	6,000
Additions/payments made during the year	6,163	—
Credit/release to the profit and loss	800	(6,000)
Closing balance	6,963	

The following table shows the valuation techniques used in measuring Level 3 fair values, as well as significant unobservable inputs used:

Туре	Valuation Technique	Significant Unobservable Inputs	Inter-relationship between significant unobservable inputs and fair value measurement
Contingent Consideration	The valuation model considers the estimated future cash flows of the entity.	Forecast future cash flows Forecast annual growth rate	The estimated fair value would increase (decrease) if the forecasted future cash flows were higher (lower) or if the entity missed agreed targets.
Long-term financial assets	The valuation model is based on the NAV of the fund as prepared by an independent appraiser to prepare a fair value assessment of investment assets each year.	The interest on the fund are not traded on an exchange, or data is not published in respect of the funds.	The valuation is based on the NAV of the fund as prepared by an independent appraiser.

27. Lease commitments

The Group has several non-cancellable operating leases, primarily for facilities, that expire over the next 10 years. These leases generally contain renewal options and require the Group to pay all executory costs such as maintenance and insurance. Future minimum rental commitments for operating leases with non-cancellable terms are as follows:

for the year ended 31 December 2018

27. Lease commitments (continued)

	31 December 2018	31 December 2017
	\$'000	\$'000
Less than one year	32,634	38,111
Between one and two years	26,839	32,575
Between two and three years	21,306	26,336
Between three and four years	15,781	19,079
Between four and five years	10,829	13,389
More than five years	19,194	36,692
Total	126,583	166,182

28. Commitments and contingencies

(a) Capital commitments

The following capital commitments for the purchase of property, plant and equipment were authorised by the Group at 31 December 2018:

	31 December 2018	31 December 2017
	\$'000	\$'000
Contracted for	11,057	12,312
Total	11,057	12,312

(b) Guarantees

Where the Group enters into financial guarantee contracts to guarantee the indebtedness of other companies within the Group, the Group considers these to be insurance arrangements and accounts for them as such. The Group treats the guarantee contract as a contingent liability until such time as it becomes probable that the Group will be required to make a payment under that guarantee. As set out in *note 23 Bank credit lines and loan facilities*, the Senior Notes are guaranteed by ICON plc.

The Company has guaranteed all of the commitments and liabilities referred to in Section 357(1) (b) of the Companies Act 2014 in respect of the whole of the financial year ending 31 December 2018 for the subsidiary companies listed below. These subsidiaries are availing of the exemption under Section 357 of the Companies Act 2014 not to file statutory financial statements.

- ICON Clinical Research Limited
- DOCS Resourcing Limited
- ICON Holdings Unlimited Company
- Timpani Unlimited Company
- ICON Clinical Research Property Holdings (Ireland) Limited
- ICON Clinical Research Property Development (Ireland) Limited
- ICON Holdings Clinical Research International Limited
- ICON Clinical International Unlimited Company
- ICON Investments One Limited
- ICON Investments Two Limited
- ICON Investments Three Limited

Notes to Consolidated Financial Statements (continued)

for the year ended 31 December 2018

28. Commitments and contingencies (continued)

- ICON Investments Four Unlimited Company
- ICON Investments Five Unlimited Company

(c) Contractual obligations

The following represents Group contractual obligations and commercial commitments as at 31 December 2018:

	Payments due by period			
	Total	Less than 1 year	1 to 5 years	More than 5 years
	\$'000	\$'000	\$'000	\$'000
Operating lease commitments	126,583	32,634	74,755	19,194
Capital commitments	11,057	11,057		_
Senior Notes	350,000	_	350,000	
Interest on Senior Notes	25,480	12,740	12,740	
Total contractual obligations	513,120	56,431	437,495	19,194
Contracted sub-lease agreements	(5,867)	(1,728)	(3,845)	(294)
Net contractual obligations	507,253	54,703	433,650	18,900

The Group expects to spend approximately \$55 million in the next 12 months on further investments in information technology, the expansion of existing facilities and the addition of new offices. The Group believes that it will be able to fund additional foreseeable cash needs for the next twelve months from cash flow from operations and existing cash balances. In the future, the Group may consider acquiring businesses to enhance service offerings and global presence. Any such acquisitions may require additional external financing and the Group may, from time to time, seek to obtain funds from public or private issues of equity or debt securities. There can be no assurance that such financing will be available on terms acceptable to the Group.

The Company entered into subscription agreements with a number of funds (see *note 18 Financial asset investments*). Capital totalling \$6.2 million had been advanced under the terms of the subscription agreements at 31 December 2018. The Company had committed to future investments of \$21.3 million in respect of these funds. The timing of the commitment is not specified in the subscription agreements.

29. Litigation

The Group is not party to any litigation or other legal proceedings that the Group believes could reasonably be expected to have a material adverse effect on the Group's business, results of operations and financial position.

30. Related parties

(i) Transactions with Directors and Executive Officers

The total compensation of the Directors and Executive Officers (key management remuneration) for the years ended 31 December 2018 and 2017 was as follows:

Notes to Consolidated Financial Statements (continued)

for the year ended 31 December 2018

30. Related parties (*continued*)

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Salary and fees	2,876	3,472
Bonus	1,423	1,942
Other benefits	228	296
Pension contributions	273	316
Share-based payments	6,849	13,929
Total	11,649	19,955

Details of ordinary shares, share options, RSUs and PSUs held by the Directors and Executive Officers and details of transactions entered into by Directors and Key Executive Officers in shares and share options of the Company during the year ended 31 December 2018 are set out in *note 9*.

(ii) Other related party transactions

Subsidiaries of the Company earned revenue of \$633,000 (2017: \$743,000) from DS Biopharma Limited (formerly Dignity Sciences Limited) during the year. Dr. John Climax is Chief Executive Officer and both Dr. John Climax and Dr. Ronan Lambe are Directors and shareholders of DS Biopharma Limited. \$338,000 was recorded as due from DS Biopharma Limited at 31 December 2018. The contract terms were agreed on an arm's length basis.

During the year ended 31 December 2017, personal expenses totaling \$178,000 were settled by the Company on behalf of Mr Ciaran Murray. Payment was received in advance from Mr Murray in respect of these expenses. The Company transferred ownership of an asset at fair value (\$77,000) to Mr Ciaran Murray effective 1 November 2017. Payment was received in full in January 2018.

On 22 July 2016, Mr. Thomas Lynch retired as a Director of the Company, having previously resigned as Chairman of the Company in March 2016. A charge of €231,750 was recorded during the year in respect of consultancy services provided by a company controlled by Mr. Lynch. \$64,000 was recorded as due to Mr. Lynch under the terms of the agreement at 31 December 2018.

31. Subsequent events

The Group has evaluated subsequent events from the balance sheet date through 30 April 2019, the date at which the Consolidated Financial Statements were approved. The following items were identified;

On 8 January 2019 the Company announced a share buyback program of up to 1 million shares to be executed opportunistically during 2019 depending on cash commitments. All ordinary shares that are redeemed under the buyback program will be cancelled in accordance with the constitutional documents of the Company and the nominal value of these shares transferred to an undenominated capital fund as required under Irish Company law.

On 25 January 2019 a subsidiary of the Company, ICON Laboratory Services Inc. acquired 100% of the equity share capital of MolecularMD Corp. The initial consideration on acquisition is \$42 million.

The Company has determined that there are no other items to disclose.

32. Subsidiary undertakings

As at 31 December 2018 the Group had the following principal subsidiary undertakings:

Name	Registered Office	Nature of business	Proportion held by Group
ICON Clinical Research, S.A.	Cecilia Grierson 255, Floor 6 City of Buenos Aires C1107CPE Argentina	Clinical research services	100%
ICON Clinical Research PTY Limited	Suite 201, Level 2, 2-4 Lyon Park Road, North Ryde, NSW 2113 Australia	Clinical research services	100%*
ICON Clinical Research Austria GmbH	Pyrkergasse 10/6, 1190 Vienna, Austria	Clinical research services	100%
DOCS International Belgium N.V.	Interleuvenlaan 62, 3001 Heverlee, Belgium	Clinical research services	100%
ICON Pesquisas Clínicas LTDA.	Av. Ibirapuera 2332, Torre II 4º Andar, São Paulo, SP, Brazil CEP 04028-003	Clinical research services	100%*
ICON Clinical Research EOOD	2A, Saborna Str., 4th floor, Sofia – 1000, Republic of Bulgaria	Clinical research services	100%
ICON Clinical Research (Canada) Inc.	7405 Trans-Canada Highway, Suite 300 Saint-Laurent, Quebec, H4T 1Z2 Canada	Clinical research services	100%
Oxford Outcomes LTD.	19th Floor, 885 West Georgia Street, Vancouver BC, V6C 3H4 Canada	Clinical research services	100%
Mapi Life Sciences Canada Inc.	4 Innovation Drive, Dundas, Ontario L9H 7P3, Canada	Clinical research services	100%
ICON Chile Limitada	Huerfanos 770, Piso 4, Oficina 402, Santiago, Chile	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
ICON Clinical Research (Beijing No.2) Co., Ltd	Room 335, No.8, An Ning Zhuang East Road, Haidian District, Beijing, China	Clinical research services	100%
ICON Clinical Research (Beijing) Co., Ltd	Room B1101, Tower No. 1, No. 36 North 3rd Ring Road East, Dong Cheng District, Beijing, 100013 China	Clinical research services	100%
Ispitivanja ICON d.o.o (ICON Research Ltd.)	Zagreb, Radnicka cesta 80, Croatia	Clinical research services	100%
ICON Clinical Research s.r.o.	V parku 2335/20, Praha 4 - Chodov, PSC 148 00 Czech Republic	Clinical research services	100%
DOCS International Nordic Countries A/S	Havnegade 29, 1058 København K, Denmark	Clinical research services	100%
DOCS International Finland Oy	Mannerheimintie 12B, 00100 Helsinki, Finland	Clinical research services	100%
DOCS International France S.A.S.	55 Avenue des Champs Pierreux, Immeuble le Capitole, 92000 Nanterre, France	Clinical research services	100%
ICON Clinical Research S.A.R.L.	55 Avenue des Champs Pierreux, Immeuble le Capitole, 92000 Nanterre, France	Clinical research services	100%
Mapi Développement SAS	27 rue de la Villette, 69003 Lyon, France	Clinical research services	100%
Mapi Research Trust	27 rue de la Villette, 69003 Lyon, France	Clinical research services	100%
Mapi SAS	27 rue de la Villette, 69003 Lyon, France	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
DOCS International Germany GmbH	Konrad-Zuse-Platz 11 81829 München Germany	Clinical research services	100%
ICON Clinical Research GmbH	Heinrich-Hertz-Straße 26, 63225, Langen, Hessen, Germany	Clinical research services	100%
ICON Clinical Research Hong Kong Limited	Level 43, A/A Tower, 183 Electric Road, North Point, Hong Kong	Clinical research services	100%
ICON Klinikai Kutató Korlátolt Felelősségű Társaság (ICON Clinical Research Limited Liability Company)	1037 Budapest, Szépvölgyi út 39., Hungary	Clinical research services	100%
ICON Clinical Research India Private Limited	CHENNAI ONE IT PARK ITE/ ITES SEZ North Block Block B, 4th Floor, Thoraipakkam Chennai Tamil Nadu-TN 600097 India	Clinical research services	100%
DOCS Resourcing Limited	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Clinical research services	100%
ICON (LR) Limited	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Clinical research services	100%
ICON Clinical International Unlimited Company	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Clinical research services	100%
ICON Clinical Research Limited	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Clinical research services	100%*
ICON Clinical Research Property Development (Ireland) Limited	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Property management company	100%*
ICON Holdings Unlimited Company	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Investment holding company	100%*

Name	Registered Office	Nature of business	Proportion held by Group
ICON Holdings Clinical Research International Limited	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Investment holding company	100%
ICON Investments Five Unlimited Company	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Investment holding and financing company	100%*
ICON Investments Four Unlimited Company	South County Business Park, Leopardstown, Dublin 18, Republic of Ireland	Investment holding and financing company	100%*
ICON Clinical Research Israel LTD.	6 Haba'al Shem Tov st., North Industrial Area, Lod, Israel, 7128906	Clinical research services	100%
DOCS Italia S.R.L.	Via Benigno Crespi, 23, 20159 Milano, Italy	Clinical research services	100%
ICON Japan K.K.	6F-7F MD Kanda Building, 9-1 Kanda-Mitoshirocho, Chiyoda-Ku, Tokyo, 101-0053 Japan	Clinical research services	100%*
ICON Investments Limited	SG Hambros House 18 Esplanade St Helier JE4 8RT Jersey	Investment holding company	100%*
ICON Clinical Research Korea Yuhan Hoesa	142 Taeheran-ro Gangnam-gu, 18th Floor (Yeoksam-dong, Capital Tower) Seoul Republic of Korea	Clinical research services	100%
ICON CRO Malaysia SDN. BHD.	Level 11, 1 Sentral, Jalan Travers, Kuala Lumpur Sentral, 50470 Kuala Lumpur, Malaysia	Clinical research services	100%
ICON Clinical Research México, S.A. de C.V.	Av. Barranca del Muerto 329 3rd Floor, Col. San Jose Insugentes, 03900 Mexico D.F.	Clinical research services	100%
DOCS Insourcing B.V.	Boeing Avenue 62-68, 1119PE Schiphol-Rijk, Netherlands	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
DOCS International B.V.	Boeing Avenue 62-68, 1119PE Schiphol-Rijk, Netherlands	Clinical research services	100%
ICON Contracting Solutions Holdings B.V.	Boeing Avenue 62-68 1119PE Schiphol-Rijk The Netherlands	Clinical research services	100%
ICON Clinical Research (New Zealand) Limited	Plaza Level, 41 Shortland Street, Auckland, New Zealand 1010	Clinical research services	100%
ICON Clinical Research Peru S.A.	Av. Paseo de la Republica 5895, Oficina 606, Miraflores, Lima 18, Peru	Clinical research services	100%
ICON Clinical Research Services Philippines, Inc.	24th Floor Salcedo Towers, 169 H.V. Dela Costa Street, Salcedo Village, Makati City, Philippines 1227	Clinical research services	100%
DOCS International Poland Sp. z o.o.	Ul. Grojecka 5, 02-019 Warsaw, Poland	Clinical research services	100%
ICON Clinical Research Sp. z o.o.	Al. Jerozolimskie 56C, 00-803, Warsaw, Poland	Clinical research services	100%*
ICON Clinical Research S.R.L.	Calea Floreasca, Nr 133-137, Et. 3, Bucuruesti, Sector 1, Romania	Clinical research services	100%
ICON Clinical Research (Rus) LLC	24D Smolnaya Street, Moscow, 125445, Russian Federation	Clinical research services	100%
ICON Clinical Research d.o.o. Beograd	4th Floor, Bulevar Zorana Djindjica 64a, 11070 Belgrade, Serbia	Clinical research services	100%
ICON Clinical Research (Pte) Limited	24 Raffles Place #24-03, Clifford Centre, Singapore 048621	Clinical research services	100%
ICON Clinical Research Slovakia, s.r.o.	Suché mýto 1, 811 03 Bratislava, Slovak Republic	Clinical research services	100%

Name ICON Clinical Research España, S.L.	Registered Office Calle Josep Pla, Numero 2, Torre Diagonal Mar, Piso 11, Modulo 1, Barcelona, Spain	Nature of business Clinical research services	Proportion held by Group 100%
DOCS International Sweden AB	Building B, Floor 10 Klarabergsviadukten 90 111 64 Stockholm Sweden	Clinical research services	100%
DOCS International Switzerland GmbH	c/o Experfina AG Picassoplatz 8 4052 Basel Switzerland	Clinical research services	100%
ICON Clinical Research (Switzerland) GmbH	c/o Experfina AG Picassoplatz 8 4052 Basel Switzerland	Clinical research services	100%
ICON Clinical Research Taiwan Limited	2F, No. 96, Sec. 1, Chien Kou North Road, Taipei 10495, Taiwan, R.O.C.	Clinical research services	100%
ICON Clinical Research (Thailand) Limited	1 Empire Tower, 24th Floor, Unit 2408, South Sathorn Road, Yannawa, Sathorn, Bangkok, 10120 Thailand	Clinical research services	100%
ICON Ankara Klinik Arastirma Dis Ticaret Anonim Sirketi	Sogutozu mah, Eskisehir Yolu Cad.2176., SK No.9, Posta Kodu: 06510, Cankaya Ankara, Turkey	Clinical research services	100%
DOCS International UK Limited	Concept House, 6 Stoneycroft Rise, Chandlers Ford, Eastleigh, Hampshire, SO53 3LD United Kingdom	Clinical research services	100%
ICON Development Solutions Limited	Concept House, 6 Stoneycroft Rise, Chandlers Ford, Eastleigh, Hampshire, SO53 3LD United Kingdom	Clinical research services	100%
DOCS Ukraine LLC	4th Floor, St. Poleva 24, Kiev, Ukraine, 03056	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
ICON Clinical Research LLC	4th Floor, St. Poleva 24, Kiev, Ukraine, 03056	Clinical research services	100%
ICON Clinical Research (U.K.) Limited	Concept House, 6 Stoneycroft Rise Chandlers Ford, Eastleigh, Hampshire, SO53 3LD United Kingdom	Clinical research services	100%
Mapi Life Sciences UK Limited	Concept House, 6 Stoneycroft Rise Chandlers Ford, Eastleigh, Hampshire, SO53 3LD United Kingdom	Clinical research services	100%
ICON Early Phase Services, LLC	8307 Gault Lane, San Antonio, TX 78209-1015 USA	Clinical research services	100%
Beacon Bioscience, Inc	2100 Pennbrook Parkway, North Wales, PA 19454 USA	Clinical research services	100%
C4 MedSolutions, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
CHC Group, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
Global Pharmaceutical Strategies Group, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
ICON Clinical Research LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
ICON Laboratory Services, Inc.	123 Smith Street, Farmingdale, NY 11735 USA	Clinical research services	100%
ICON US Holdings Inc.	2100 Pennbrook Parkway, North Wales, PA 19454 USA	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
Mapi USA, Inc.	2343 Alexandria Drive, Suite 100, Lexington, Kentucky 40504	Clinical research services	100%
MMMM Group, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
MMMM Consulting, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
PriceSpective LLC	2100 Pennbrook Parkway, North Wales, PA 19454 USA	Clinical research services	100%
PubsHub LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
PMG Research of Christie Clinic, LLC	101 West University Avenue, Champaign, IL 61820 USA	Clinical research services	100%
DOCS Global, Inc.	2100 Pennbrook Parkway, North Wales, PA 19454 USA	Clinical research services	100%
Managed Care Strategic Solutions, L.L.C.	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
PMG Research of Charlotte, LLC	1700 Abbey Place, Suite 201, Charlotte, North Carolina 28209 USA	Clinical research services	100%
PMG Research of Hickory, LLC	221 13th Ave Place NW Suite 201 Hickory North Carolina 28601 United States	Clinical research services	100%
PMG Research of Raleigh, LLC	3521 Haworth Drive, Suite 100, Raleigh, North Carolina 27609 USA	Clinical research services	100%

Name	Registered Office	Nature of business	Proportion held by Group
PMG Research of Rocky Mount, LLC	901 N. Winstead Avenue, Rocky Mount, North Carolina 27804 USA	Clinical research services	100%
PMG Research of Salisbury, LLC	410 Mocksville Avenue, Salisbury, North Carolina 28144 USA	Clinical research services	100%
PMG Research of Wilmington, LLC	1907 Tradd Court, Wilmington, North Carolina 28401 USA	Clinical research services	100%
PMG Research of Winston-Salem, LLC	1901 S. Hawthorne Road, Suite 306, Winston-Salem, North Carolina 27103 USA	Clinical research services	100%
PMG Research, Inc.	4505 Country Club Rd., Suite 110, Winston-Salem, NC 27104 USA	Clinical research services	100%
Complete Healthcare Communications LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
Complete Publication Solutions, LLC	19 West College Ave Suite 100 Yardley, PA 19067	Clinical research services	100%
PMG Research of Charleston, LLC	180 Wingo Way, Suite 203, Mt. Pleasant, South Carolina 29464 USA	Clinical research services	100%
PMG Research of Bristol, LLC	1958 West State Street, Bristol, Tennessee 37620 USA	Clinical research services	100%
Addplan Inc	2100 Pennbrook Parkway, North Wales, Montgomery County, PA 19454 United States	Clinical research services	100%

for the year ended 31 December 2018

Name	Registered Office	Nature of business	Proportion held by Group
ICON Government and Public Health Solutions, Inc.	1265 Ridge Road, Hinckley, OH 44233 United States	Clinical research services	100%
w · · · · · · · · · · · · · · · · ·			

* majority of which is held directly

33. Disaggregation of Revenue

Revenue disaggregated by customer profile is as follows:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Top client	352,335	503,875
Clients 2-5	671,723	505,818
Clients 6-10	385,741	348,841
Clients 11-25	461,351	421,759
Other	724,627	622,028
Total	2,595,777	2,402,321

Revenue for the year ended 31 December 2018 reflects revenue as reported on adoption of IFRS 15.

Our customers have similar profiles and economic characteristics, and therefore have similar degrees of risk and growth opportunities.

Notes to Consolidated Financial Statements (continued)

for the year ended 31 December 2018

34. Impact of change in accounting policies

Adoption of IFRS 15

The Group adopted IFRS 15 with a date of initial application of 1 January 2018. The revenue recognition accounting policy applied in preparation of the results for the twelve months ended 31 December 2018 therefore reflects application of IFRS 15. ICON has elected to adopt the standard using the cumulative effect transition method. Under this transition method, ICON has applied the new standard as at the date of initial application (i.e. 1 January 2018), without restatement of comparative amounts. The cumulative effect of initially applying the new standard (to revenue, costs and tax) is recorded as an adjustment to the opening balance of equity at the date of initial application. The comparative information has not been adjusted and therefore continues to be reported under the previous accounting standard.

The new standard requires application of five steps: (1) identify the contract(s) with a customer; (2) identify the performance obligation in the contract; (3) determine the transaction price; (4) allocate the transaction price to the performance obligations in the contract; and (5) recognise revenue when (or as) the entity satisfies the performance obligation.

The most significant impact of application of the standard relates to our assessment of performance and percentage of completion in respect of our clinical trial service revenue. Prior to application of IFRS 15, the revenue attributable to performance was determined based on both input and output methods of measurement. We have concluded that under the new standard, a clinical trial service is a single performance obligation satisfied over time i.e. the full service obligation in respect of a clinical trial (including those services performed by investigators and other parties) is considered a single performance obligation. Promises offered to the customer are not distinct within the context of the contract. We have concluded that ICON is the contract principal in respect of both direct services and in the use of third parties (principally investigator services) that support the clinical research project. The transaction price is determined by reference to the contract or change order value (total service revenue and pass-through/reimbursable expenses) adjusted downwards to reflect a realisable contract value. Revenue is recognised as the single performance obligation is satisfied. The progress towards completion for clinical service contracts is measured based on an input measure being total project costs (inclusive of third party costs) incurred as a percentage of total project costs, at each reporting period.

Incremental costs of obtaining a contract were also considered on adoption of IFRS 15. Commission costs of \$12 million were recognised as an asset on the Consolidated Statement of Financial Position in respect of those contracts that exceed one year. Where commission costs relate to contracts that are less than one year, the practical expedient is applied as the amortisation period of the asset which would arise on deferral would be one year or less.

A deferred tax asset of \$6.9 million was recognised in respect of the timing differences arising from the cumulative impact of non tax adjustments recorded on adoption of IFRS 15. These are expected to reverse in future periods.

Adoption of IFRS 15 resulted in a net reduction in unbilled revenue of \$42.0 million, a net reduction in payments on account of \$59.0 million and an increase in accruals relating to reimbursable expenses of \$84.3 million. Commission costs of \$12 million were recognised as an asset on the Consolidated Statement of Financial Position and a deferred tax asset of \$6.9 million was recognised in respect of the timing differences arising from the cumulative impact of non-tax adjustments recorded on adoption of IFRS 15. The tables on the pages following summarise the impact of adopting IFRS 15 on the consolidated financial statements for the twelve months ended 31 December 2018.

Adoption of IFRS 9

IFRS 9 was adopted with effect from 1 January 2018. IFRS 9 was adopted without restating comparative information. Adoption of IFRS 9 (including the new impairment rules) did not give rise to a material impact on balances reported at 31 December 2017 and therefore on adoption at 1 January 2018. The primary statements on the pages following therefore do not reflect changes arising on adoption of IFRS 9.

The Group's primary statements reflect the changes in classification required by IFRS 9 including:

- Current asset investments are classified as financial assets at FVOCI reflecting the measurement basis;
- Long-term equity investments are classified as financial assets at fair value through profit or loss;
- Expected credit loss assessment in respect of trade and other receivables are identified in Note 16 and Note 26. The identified impairment loss was immaterial;
- While cash and cash equivalents are also subject to the impairment requirements of IFRS 9, the identified impairment loss was immaterial; and

Notes to Consolidated Financial Statements (continued)

for the year ended 31 December 2018

34. Impact of change in accounting policies (continued)

• The impairment loss identified on application of the expected credit risk model to debt instruments was immaterial.

Accounting policy changes identified on adoption of IFRS 9 are reflected in note 1.

There was no impact on the designation of open hedging arrangements at 1 January 2018 arising on adoption of IFRS 9.

Consolidated Statement of Profit and Loss

	31 December 2018	31 December 2018	31 December 2018
	As reported	Adjustments	Balance without adoption of IFRS 15
Continuing Operations	\$'000	\$'000	\$'000
Revenue/ Gross revenue	2,595,777	4,657	2,600,434
Reimbursable expenses	_	(702,812)	(702,812)
	2,595,777	(698,155)	
Direct costs	(1,826,287)	702,812	(1,123,475)
Other operating expenses	(392,372)	(472)	(392,844)
Operating profit	377,118	4,185	381,303
Financing income	4,759	_	4,759
Financing expense	(13,502)		(13,502)
Profit before taxation	368,375	4,185	372,560
Income tax expense	(45,558)	(476)	(46,034)
Profit for the financial year	322,817	3,709	326,526
Attributable to:			
Owners of the Company	322,817	3,709	326,526

Consolidated Statement of Financial Position

as at 31 December 2018

	Note	31	December 2018	
				Balance
				without
		As Reported	Adjustment	adoption of IFRS 15
ASSETS		As Reported \$'000	S'000	\$'000
ASSE 15 Non-current assets		2,000	\$ 000	2,000
Property, plant and equipment	12	103,710		103,710
Intangible assets – goodwill and other	12	879,283		879,283
Other non-current assets	13 17	20,778		20,778
Financial assets	17	6,963		6,963
Deferred tax assets	18 6	31,665	(5,680)	25,985
Total non-current assets	0	1,042,399	(5,680)	1,036,719
		1,042,399	(5,080)	1,030,719
Current assets Inventories	15	2,274		2,274
Accounts receivable	15	414,791		414,791
Unbilled revenue	10	362,926	46,642	409,568
Other current assets	17	68,734	(12,580)	56,154
Current taxes receivable	17	39,468	(12,300)	39,468
Current asset investments	18	59,910		59,910
Cash and cash equivalents	18 19	395,851		395,851
Total current assets		1,343,954	34,062	1,378,016
		· · · · · · · · · · · · · · · · · · ·	·	
Total assets		2,386,353	28,382	2,414,735
EQUITY				
Share capital	24	4,658		4,658
Share premium		283,629		283,629
Other undenominated capital	25	983		983
Share-based payment reserve	25	173,326		173,326
Other reserves	25	11,868		11,868
Foreign currency translation reserve	25	(67,469)	—	(67,469)
Current asset investment - fair value reserve	25	(450)	—	(450)
Retained earnings	25	979,834	51,813	1,031,647
Total equity attributable to the owners of the company		1,386,379	51,813	1,438,192
LIABILITIES				
Non-current liabilities				
Non-current bank credit lines and loan facilities	23	349,264		349,264
Non-current other liabilities	20	13,022		13,022
Non-current provisions	21	1,301		1,301
Deferred tax liabilities	6	8,213	_	8,213
Total non-current liabilities		371,800		371,800
Current liabilities				· · · · · · · · · · · · · · · · · · ·
Accounts payable		13,288	_	13,288
Payments on account		274,468	59,242	333,710
Accrued and other liabilities	20	309,943	(84,342)	225,601
Provisions	21	7,200		7,200
Current tax payable		23,275	1,669	24,944
Total current liabilities		628,174	(23,431)	604,743
Total liabilities		999,974	(23,431)	976,543
Total equity and liabilities		2,386,353	28,382	2,414,735
	1			_,,

	Number of shares	Share Capital	Share Premium	Other Undenominated Capital	Share-based Payment Reserve	Other Reserves	Currency Reserve	Current Asset Investment Fair value Reserve	Retained Earnings	Total
		\$2000	\$,000	\$,000	\$2000	\$2000	\$2000	\$2000	8,000	\$,000
Balance at 31 December 2017	54,081,601	4,664	266,852	912	187,840	11,029	(35,077)	(295)	794,331	1,230,256
Profit for the year									322,817	322,817
Other Comprehensive Income:										
Impact of change in accounting policy									3,709	3,709
Foreign currency translation	I		I	Ι	I	Ι	(26,522)	Ι	Ι	(26,522)
Currency impact on long-term funding	I		I	Ι	I	Ι	(4,834)		Ι	(4,834)
Cash flow hedge							(1,036)			(1,036)
Unrealised fair value movements on investments								(155)		(155)
Re-measurement of defined benefit liability									2,640	2,640
Tax benefit on defined benefit pension contributions										
Amortisation of interest rate hedge	I	I		Ι		(923)	I			(923)
Total other comprehensive income						(923)	(32,392)	(155)	6,349	(27,121)
Total comprehensive income for the year						(923)	(32,392)	(155)	329,166	295,696
Transactions with owners, recorded directly in equity										
Share-based payment					28,009					28,009
Exercise of share options	408,699	29	16,777							16,806
Transfer of exercised and expired share-based awards					(38,954)				38,954	
Issue of restricted share units/ performance share units	489,568	36								36
Share issue costs	I		I	Ι	I	Ι		Ι	(16)	(16)
Repurchase of ordinary shares	(1,008,162)	(71)		71		I		I	(128,960)	(128,960)
Share repurchase costs									(99)	(99)
Tax benefit excess on exercise of options					4,626					4,626
Deferred tax movement on unexercised options	I				(8,195)					(8,195)
Non-distributable reserves	Ι					1,762			(1,762)	
Total contributions by and distributions to owners	(109, 895)	(9)	16,777	71	(14,514)	1,762			(91, 850)	(87,760)
Balance at 31 December 2018	53,971,706	4,658	283,629	983	173,326	11,868	(67,469)	(450)	1,031,647	1,438,192

Consolidated Statement of Cash Flows

	Note	31	December 2018	
		As reported	Adjustment	Balance without adoption of IFRS 15
		\$'000	2 500	\$'000
Profit for the financial year		322,817	3,709	326,526
Adjustments to reconcile net income to net cash generated from operating activities				
Loss on disposal of property, plant and equipment		70		70
Depreciation	12	19,996		19,996
Amortisation of intangible assets	13	45,920		45,920
Amortisation of grants	22	(47)		(47)
Interest on short term investments	18	(1,329)		(1,329)
Realised gain on sale of short term investments	18	(56)		(56)
Gain on re-measurement of financial assets		(800)		(800)
Amortisation of gain on interest rate hedge		(923)	—	(923)
Amortisation of deferred financing costs Share based payment	11	812 28,059	_	812 28,059
Financing income	4	(4,759)		(4,759)
Financing expense	4 5	13,613	_	13,613
Defined benefit pension service costs	10	263		263
Defined benefit pension finance costs	10	137		137
Defined benefit past service cost	10	(8)		(8)
Defined benefit expenses	10			
Income tax expense	6	45,558	5,680	51,238
Operating cash inflow before changes in working capital		469,323	9,389	478,712
Increase in accounts receivable		(37,557)	_	(37,557)
Increase in unbilled revenue		(98,510)	1,462	(97,048)
Decrease in other current assets		342	12,580	12,922
Decrease in other non current assets		856	—	856
Increase in inventory		(38)		(38)
Decrease in accounts payable		(5,067)		(5,067)
(Decrease)/increase in payments on account		(6,253)	59,242	52,989
Decrease in accrued and other liabilities and provisions		(29,613)	(82,673)	(112,286)
Decrease in non current other liabilities and provisions		(1,813) 291,670		(1,813) 291,670
Cash provided by operations Income taxes paid		(18,558)		(18,558)
Employer contribution defined benefit pension scheme	10	(18,558) (263)		(18,538)
Interest received	10	4,224	_	4,224
Interest paid		(13,060)	_	(13,060)
Net cash inflow from operating activities		264,013		264,013
Investing activities		-)		
Purchase of property, plant and equipment		(20,760)		(20,760)
Purchase of intangible assets		(27,637)		(27,637)
Purchase of subsidiary undertakings		(1,645)		(1,645)
Cash acquired with subsidiary undertakings		_		_
Sale/maturity of current asset investments		99,865		99,865
Purchase of current asset investments		(80,956)		(80,956)
Purchase of investments in equity - long term		(6,163)		(6,163)
Net cash used in investing activities		(37,296)	—	(37,296)
Financing activities				
Financing costs		(823)	_	(823)
Tax benefit from the exercise of share options		4,626		4,626
Proceeds from exercise of share options, RSUs and PSUs		16,842	—	16,842
Share issuance costs		(16)	_	(16)
Repurchase of ordinary shares		(128,960)	—	(128,960)
Share repurchase costs		(66)		(66)
Net cash used in financing activities		(108,397)		(108,397)
Net increase in cash and cash equivalents		118,320		118,320
Effect of exchange rate changes		(5,328)	—	(5,328)
Cash and cash equivalents at start of year		282,859		282,859
Cash and cash equivalents at end of year		395,851		395,851

for the year ended 31 December 2018

35. Approval of financial statements

The Board of Directors approved these financial statements on 30 April 2019.

Company Statement of Financial Position *for the year ended 31 December 2018*

	Note	31 December 2018 \$'000	31 December 2017 \$'000
ASSETS		\$ 000	\$ 000
Non-current assets			
Property, plant and equipment	1	691	251
Intangible assets	2	102	26
Investment in subsidiaries	3	264,347	293,934
Other non-current assets		37	,
Deferred tax asset	4	451	393
Total non-current assets		265,628	294,604
Current assets		· · · · ·	
Other current assets	5	2,138	1,996
Amounts due from subsidiary undertakings	6	430,810	368,030
Current taxes receivable		673	609
Cash and cash equivalents		100,048	51,529
Total current assets		533,669	422,164
Total assets		799,297	716,768
EQUITY		,	· · · · ·
Share capital		4,658	4,664
Share premium		283,629	266,852
Other undenominated capital		983	912
Share based payment reserve		134,208	145,153
Other reserves		(107,464)	(107,332)
Retained earnings		465,110	389,286
Attributable to equity holders		781,124	699,535
Total equity		781,124	699,535
LIABILITIES			
Non-current liabilities			
Non-current other liabilities	7	2,533	
Total non-current liabilities		2,533	
Current liabilities			
Accounts payable		56	5
Amounts due to subsidiary undertakings	6	2,969	3,944
Accrued and other liabilities	7	11,907	13,238
Current taxes payable		708	46
		15,640	17,233
Total liabilities		18,173	17,233
Total equity and liabilities		799,297	716,768

On behalf of the Board

Steve Cutler Chief Executive Officer

Ronan Murphy Director

	Number of shares	Share Capital ¢2000	Share Premium	Other Undenominated Capital evoloo	Share Based Payment Reserve	Other Reserve vano	Currency Reserve	Retained Earnings \$2000	Total Equity \$2000
				000 0					
Balance at 1 January 2018	54,081,601	4,664	266,852	912	145,153	6,071	(113,403)	389,286	699,535
Total comprehensive income for the year									
Profit for the year								165,912	165,912
Other comprehensive income									
Foreign currency translation							(132)		(132)
Total other comprehensive income							(132)		(132)
Total comprehensive income for the year							(132)	165,912	165,780
Transactions with owners, recorded directly in equity									
Share based payment					28,009				28,009
Exercise of share options	408,699	29	16,777						16,806
Share issue costs								(16)	(16)
Issue of restricted share units	489,568	36							36
Repurchase of ordinary shares	(1,008,162)	(71)		71				(128,960)	(128,960)
Share repurchase costs								(99)	(99)
Transfer of exercised and expired share based awards					(38,954)			38,954	
Total contributions by and distributions to owners	(109,895)	(9)	16,777	71	(10,945)			(90,088)	(84, 191)
Balance at 31 December 2018	53,971,706	4,658	283,629	983	134,208	6,071	(113,535)	465,110	781,124

As permitted by section 504 of the Companies Act 2014, the Company has not presented a Company Statement of Profit and Loss. The profit for the 2018 financial year of the Company amounted to \$165,912,000 (2017: profit \$24,233,000)

Company Statement of Changes in Equity for the year ended 31 December 2018

	Number of shares	Share Capital \$'000	Share Premium \$'000	Other Undenominated Capital \$'000	Share- based Payment Reserve \$'000	Other Reserve \$'000	Currency Reserve \$'000	Retained Earnings \$'000	Total Equity \$*000
Balance at 1 January 2017	54,530,843	4,692	252,977	809	120,241	6,071	(113,462)	493,294	764,622
Total comprehensive income for the year Profit for the year								24,233	24,233
Other comprehensive income Foreign currency translation							59		59
Total other comprehensive income							59		59
Total comprehensive income for the year							59	24,233	24,292
Transactions with owners, recorded directly in equity									
Share-based payment					29,898				29,898
Exercise of share options	458,243	31	13,875						13,906
Share issue costs								(15)	(15)
Issue of restricted share units	681,742	44							44
Repurchase of ordinary shares	(1,589,227)	(103)		103				(133, 106)	(133, 106)
Share repurchase costs								(106)	(106)
Transfer of exercised and expired share-based awards					(4,986)			4,986	
Total contributions by and distributions to owners	(449,242)	(28)	13,875	103	24,912			(128,241)	(89,379)
Balance at 31 December 2017	54,081,601	4,664	266,852	912	145,153	6,071	(113,403)	389,286	699,535

Company Statement of Cash Flows for the year ended 31 December 2018

	Note	Year ended 31 December 2018	Year ended 31 December 2017
		\$'000	\$'000
Profit for the financial year		165,912	24,233
Adjustments to reconcile net income to net cash generated from operating activities			
Depreciation	1	355	141
Amortisation of intangible assets	2	54	50
Share-based payment		7,405	21,632
Operating cash inflow before changes in working capital		173,726	46,056
(Increase)/decrease in other current assets		(141)	1,398
Increase in non-current assets		(37)	_
(Decrease)/increase in accounts payable and accrued and other liabilities		(1,324)	2,532
Decrease/(increase) in income taxes receivable		1,503	(1,245)
Increase in non-current liabilities		2,533	
Cash provided by operations		176,260	48,741
Interest paid			
Income taxes paid		(963)	—
Net cash inflow from operating activities		175,297	48,741
Investing activities			
Purchase of computer software		(122)	—
Purchase of property, plant and equipment		(832)	(28)
(Increase)/decrease in amounts due from/to subsidiary undertakings		(13,954)	92,835
(Increase)/decrease in investment in subsidiaries		330	(3,036)
Net cash used by investing activities		(14,578)	89,771
Financing activities			
Proceeds from exercise of share options		16,842	13,950
Share issuance costs		(16)	(15)
Repurchase of ordinary shares		(128,960)	(133,106)
Share repurchase costs		(66)	(106)
Net cash used in financing activities		(112,200)	(119,277)
Net increase in cash and cash equivalents		48,519	19,235
Effect of exchange rate changes			
Cash and cash equivalents at start of year		51,529	32,294
Cash and cash equivalents at end of year		100,048	51,529

Notes to Company Financial Statements for the year ended 31 December 2018

1. Property, plant and equipment

	Leasehold improvements \$'000	Computer equipment \$'000	Office furniture & fixtures \$'000	Total \$'000
Cost	\$ 000	\$ 000	\$ 000	\$ 000
At 1 January 2018	855	1,901	1,317	4,073
Additions	189	132	511	832
Foreign currency movement	(54)	(100)	(85)	(239)
At 31 December 2018	990	1,933	1,743	4,666
Depreciation				
At 1 January 2018	842	1,804	1,176	3,822
Charge for the year	152	116	87	355
Foreign currency movement	(52)	(98)	(52)	(202)
At 31 December 2018	942	1,822	1,211	3,975
Net book value				<i>co</i> 1
At 31 December 2018	48	111	532	691
At 31 December 2017	13	97	141	251
	Leasehold improvements	Computer equipment	Office furniture & fixtures	Total
	\$'000	\$'000	\$'000	\$'000
Cost	501	1 (25	1.010	2 505
At 1 January 2017	731	1,635	1,219	3,585
Additions	_	2	26	28
Foreign currency movement	124	264	72	460
At 31 December 2017	855	1,901	1,317	4,073
Depreciation				
At 1 January 2017	696	1,490	1,070	3,256
Charge for the year	25	63	53	141
Foreign currency movement	121	251	53	425
At 31 December 2017	842	1,804	1,176	3,822
Net book value				
At 31 December 2017	13	97	141	251
At 31 December 2016	35	145	149	329

Notes to Company Financial Statements (continued) for the year ended 31 December 2018

2. Intangible assets

	Computer Software \$'000
Cost	
At 1 January 2017	1,052
Additions	_
Foreign exchange movement	154
At 31 December 2017	1,206
Additions	122
Foreign exchange movement	(100)
At 31 December 2018	1,228
Amortisation	
At 1 January 2017	990
Charge during the year	50
Foreign exchange movement	140
At 31 December 2017	1,180
Charge during the year	54
Foreign exchange movement	(108)
At 31 December 2018	1,126
Net book value At 31 December 2018	102
At 31 December 2017	26

Notes to Company Financial Statements (continued) for the year ended 31 December 2018

3. Investment in subsidiaries

	Investment in Subsidiary
	Undertakings \$'000
	\$ 000
Cost	
At 1 January 2017	346,406
Additions	3,036
Share-based payment	9,489
Share subscription payment from subsidiary companies	(64,997)
At 31 December 2017	293,934
Disposals	(329)
Share-based payment	20,650
Share subscription payment from subsidiary companies	(49,908)
At 31 December 2018	264,347

Notes to Company Financial Statements (continued) for the year ended 31 December 2018

4. Deferred taxation

The net deferred tax asset at 31 December 2018 and 31 December 2017 was as follows:

	31 December 2018	31 December 2017
	\$'000	\$'000
Deferred taxation assets:		
Accrued expenses and payments on account	392	318
Property, plant and equipment	39	36
Loans to subsidiaries	50	50
Total deferred taxation assets	481	404
Deferred taxation liabilities:		
Property, plant and equipment	(11)	(11)
Accrued expenses and payments on account	(19)	
Total deferred taxation liabilities	(30)	(11)
Net deferred taxation asset	451	393

	Balance 1 January 2018	Recognised in Income	Balance 31 December 2018	
	\$'000	\$'000	\$'000	
Deferred taxation assets				
Accrued expenses and payments on account	318	74	392	
Property plant and equipment	36	3	39	
Loans to subsidiaries	50		50	
Total deferred taxation assets	404	77	481	
Deferred taxation liabilities				
Property, plant and equipment	(11)	_	(11)	
Accrued expenses and payments on account	—	(19)	(19)	
Total deferred taxation liabilities	(11)	(19)	(30)	
Net deferred taxation asset	393	58	451	

for the year ended 31 December 2018

4. Deferred taxation (*continued*)

	Balance 1 January 2017 \$'000	Recognised in Income \$'000	Balance 31 December 2017 \$'000
Deferred taxation assets			
Accrued expenses and payments on account	404	(86)	318
Property, plant and equipment	104	(68)	36
Loans to subsidiaries	50		50
Total deferred taxation assets	558	(154)	404
Deferred taxation liabilities			
Property, plant and equipment	(10)	(1)	(11)
Accrued expenses and payments on account			
Total deferred taxation liabilities	(10)	(1)	(11)
Net deferred taxation asset	548	(155)	393

At 31 December 2018 and 31 December 2017 the Company had no operating loss carry forwards for income tax purposes. At 31 December 2018 the Company had an unrecognised deferred tax asset in respect of unutilised foreign tax credits carried forward of \$3.1 million (2017: \$3.3 million).

5. Other current assets

	31 December 2018	31 December 2017
	\$'000	\$'000
Prepayments	821	524
Other receivables	1,317	1,472
Total	2,138	1,996

6. Amounts due from/to subsidiary undertakings

	31 December 2018	31 December 2017
	\$'000	\$'000
Amounts due from subsidiary undertakings	430,810	368,030
Amounts due to subsidiary undertakings	(2,969)	(3,944)

Amounts owed by subsidiary undertakings are non-interest bearing and repayable on demand. All amounts fall due within one year.

for the year ended 31 December 2018

7. Accrued and other liabilities

	31 December 2018	31 December 2017
	\$'000	\$'000
Non-current other liabilities		
Non-current other liabilities	2,533	
Total	2,533	
	31 December 2018	31 December 2017
	\$'000	\$'000
Current liabilities		
Accruals and other liabilities	11,907	13,238
Total	11,907	13,238

8. Related parties

The Company entered into the following transactions with subsidiary companies during the period:

	Year ended 31 December 2018	Year ended 31 December 2017
	\$'000	\$'000
Statement of Profit and Loss		
Expenses recharged to subsidiary companies	6,984	11,424
Dividend received from subsidiary company (a)	172,275	43,524
Total	179,259	54,948
Statement of Cash Flows		
(Increase)/decrease in intercompany debtors and investments	(13,954)	92,835
Total	(13,954)	92,835

(a) During 2018, the Company received dividends of \$172.3 million (2017: \$43.5 million) from its subsidiary undertakings ICON Clinical Research Limited (\$100.9 million), ICON Holdings Unlimited Company (\$62.6 million) and ICON Investments Four Unlimited Company (\$8.8 million).

Directors and Executive Officers of the Parent Company are the same as those for the Group. For information on transactions with Directors and Executive Officers see *note 30* to the Consolidated Financial Statements, and for information on Directors' remuneration see *note 9*.

for the year ended 31 December 2018

9. Commitments and contingencies

Operating leases

The Company has several non-cancellable operating leases that expire over the next 6 years. These leases generally contain renewal options and require the Company to pay all executory costs such as maintenance and insurance. The Company recognised \$2.1 million and \$2.0 million in rental expense (including rates) for the years ended 31 December 2018 and 31 December 2017 respectively. Future minimum rental commitments for operating leases with non-cancellable terms in excess of one year are as follows:

	Minimum rental payments
	\$'000
2019	2,077
2020	2,044
2021	1,833
2022	1,709
Thereafter	1,172
Total	8,835

10. Litigation

The Company is not party to any litigation or other legal proceedings that the Company believes could reasonably be expected to have a material adverse effect on the Company's business, results of operations and financial position.

11. Financial instruments

The Company is exposed to various financial risks in the normal course of the business. The Company's financial instruments typically comprise cash and accounts payable. The main purpose of these financial instruments is to provide finance for the Company's operations. The main risks arising from the Company's financial instruments are credit risk, liquidity risk, interest rate risk, and foreign exchange risk.

Credit risk

Intercompany loans receivable and payable are initially recognised at fair value. These are subsequently measured at amortised cost, less any loss allowance. An expected credit loss assessment was performed in respect of the receivables at 1 January 2018. The identified impairment loss was immaterial.

Credit risk is the risk of financial loss to the Company if a customer or counterparty to a financial instrument fails to meet its contractual obligations. Credit risk in respect of the Company arises on balances due from group companies, and as the Group is financially sound and the subsidiary entities that ICON plc the company trades with are in a position to make payments as and when they fall due, the Company has assessed the exposure to credit risk as low.

Liquidity risk

Liquidity risk is the risk that the Company will not be able to meet its financial obligations as they fall due. The Company's liquidity risk arises from the repayment of short term debt and other obligations as they fall due. The Company minimises liquidity risk by ensuring that sufficient cash balances and committed bank lines of credit are available to meet its obligations as they fall due. The Company's bank credit lines and facilities are the same as Group. Details of the Group's bank credit lines and facilities are set out in *note 23*.

The following table sets out details of the maturity of the Company's financial liabilities into the relevant maturity groupings based on the remaining period from the financial year end date to the contractual maturity date:

for the year ended 31 December 2018

11. Financial instruments (continued)

At 31 December 2018

	Carrying Amount \$'000	Contractual Cashflows \$'000	6 mths or less \$'000	6 to 12 mths \$'000	1 to 2 years \$'000	2 to 5 years \$'000	More than 5 years \$'000
Accounts payable	56	56			_		_
Accruals and other liabilities	14,440	8,715	1,943	1,249	1,023	1,510	
	14,496	8,771	1,943	1,249	1,023	1,510	_
At 31 December 2017	Carrying Amount \$'000	Contractual Cashflows \$'000	6 mths or less \$'000	6 to 12 mths \$'000	1 to 2 years \$'000	2 to 5 years \$'000	More than 5 years \$'000
Accounts payable	(5)	(5)	(5)	—			
Accruals and other liabilities	(13,238)	(13,238)	(9,133)	(667)	(1,076)	(840)	(1,522)
	(13,243)	(13,243)	(9,138)	(667)	(1,076)	(840)	(1,522)

Foreign currency risk

While the functional currency of the Company is USD, the functional currency of the branches is Euro. As a consequence, the results, when translated into U.S. dollars, could be affected by fluctuations in exchange rates against the U.S. dollar. At 31 December 2018 the Company had \$Nil US dollar denominated bank loans (2017: \$Nil).

Interest rate risk

The Company finances its operations through a mixture of shareholders' funds, borrowings and working capital. The Company borrows in required currencies at both fixed and floating interest rates. In general the Company borrows at floating rates of interest but may borrow at fixed rates depending on rates available having regard to current market rates and future trends. The Company has no external borrowings.

Fair values

Financial instruments are measured in the Statement of Financial Position at fair value using a fair value hierarchy of valuation inputs. The hierarchy prioritises the inputs into three levels based on the extent to which inputs used in measuring fair value are observable in the market. Each fair value measurement is reported in one of three levels, which is determined by the lowest level input that is significant to the fair value measurement in its entirety. These levels are:

- Level 2: Inputs are based upon quoted prices for similar instruments in active markets, quoted prices for identical or similar instruments in markets that are not active and model-based valuation techniques for which all significant assumptions are observable in the market or can be corroborated by observable market data for substantially the full term of the assets or liabilities.
- Level 3: Inputs are generally unobservable and typically reflect management's estimates of assumptions that market participants would use in pricing the asset or liability.

for the year ended 31 December 2018

11. Financial instruments (continued)

The carrying values of amounts due from subsidiary undertakings, cash and cash equivalents, other current assets, accounts payable and accruals and other liabilities are carried at amortised cost and assumed to be approximate to their fair values due to the short term nature of these balances.

Amounts owed by subsidiary undertakings are non-interest bearing and repayable on demand. All amounts are therefore recorded as due within one year. Fair value is deemed to equal carrying value on this basis.

Each category of asset and liability has remained within the same level of hierarchy as the prior year as there has been no change in the extent to which the inputs used in measuring fair value are or are not observable within the market.

12. Approval of financial statements

The Board of Directors approved the Company Financial Statements on 30 April 2019.

Reconciliation from IFRS to US Accounting Policies

The Consolidated Financial Statements set out on pages 23 to 125 have been prepared in accordance with International Financial Reporting Standards ("IFRS"), as adopted by the European Union ("EU IFRS"), which differ in certain significant respects from generally accepted accounting principles applicable in the U.S. ("U.S. GAAP"). The material differences as they apply to the Consolidated Financial Statements are as follows:

(a) Financial statement format

The format of the financial statements and certain note disclosures differ under U.S. GAAP from those under EU IFRS. The Group prepared a U.S. Securities and Exchange Commission Form 20-F Report which was made available to all shareholders in March 2019. The financial statements included in such Form 20-F are prepared in accordance with U.S. GAAP.

(b) Merger with PRAI

The Group accounts for business combinations under EU IFRS in accordance with the IFRS 3 *Business Combinations*. As permitted by IFRS 1 *First Time Adoption of International Financial Reporting Standards* the Group has only restated business combinations from 1 June 2001 onwards. Business combinations prior to this date have not been restated. In addition, goodwill has no longer been amortised since 1 June 2001, but rather is tested annually for impairment. U.S. GAAP adopts different criteria to EU IFRS for establishing the method of accounting to be adopted for business combinations. On 28 January 2000 the Group completed a transaction with Pacific Research Associates Inc. ("PRAI"), a Group specialising in data management, statistical analysis and medical and regulatory consulting based in San Francisco, USA. The merger with PRAI was accounted for using acquisition accounting principles in accordance with EU IFRS whilst U.S. GAAP required that the merger be accounted for using the pooling-of-interest method of accounting. U.S. GAAP pooling-of-interest accounting has resulted in a number of adjustments. Most significantly:

- (i) the Group's historic U.S. GAAP financial statements have been restated to reflect the combined results of ICON and PRAI;
- (ii) the costs of the merger were expensed for U.S. GAAP purposes and included in the cost of acquisition for IFRS;
- (iii) goodwill arising on IFRS has been amortised over its expected useful life up to 31 May 2001. No goodwill arose on the merger under U.S. GAAP;
- (iv) the tax charge arising on the conversion of PRAI from an S-Corporation to a C-Corporation is treated as a pre-acquisition charge under IFRS.

(c) Share-based payment expense

IFRS requires that the fair value of share-based payments be expensed to the Consolidated Statement of Profit and Loss over the period the related services are received, with a corresponding increase in equity. In the year ending 31 December 2018, the Group has accounted for share-based payments under U.S. GAAP in accordance with *FASB ASC 718, Compensation* – *Stock Compensation*, which also requires that the fair value of share-based payments be expensed to the Consolidated Statement of Profit and Loss over the period the related services are received, with a corresponding increase in equity.

There is a difference in recorded expense because firstly different periods are in scope for both treatments due to the different effective dates under both standards and secondly due to different models used to calculate the fair value of options. Under U.S. GAAP the Black-Scholes model was used for the calculation of the expense, whereas under IFRS the binomial model has been used.

U.S. GAAP requires that the accelerated graded vesting attribution approach is applied in respect of awards with straight line graded vesting. IFRS requires that each instalment of an award where there is graded vesting is treated as a separate grant with a different fair value. Each instalment is therefore separately measured and charged to the Consolidated Statement of Profit and Loss over the related vesting period. This results in accelerated expense recognition under IFRS.

Reconciliation from IFRS to US Accounting Policies (continued)

(d) IAS 19R Defined Benefit Pensions

The Group has recognised the net interest expense of the defined benefit pension scheme within payroll costs (operating expenses) in the Consolidated Statement of Profit and Loss under IAS19R which is consistent with the U.S. GAAP treatment of this cost. Additional net credits related to the defined benefit pension schemes refer to the adjustment required to reverse the application of the corridor approach permitted under U.S. GAAP (\$161k) and the different net interest expense recorded under IFRS and U.S. GAAP (\$(387k)).

(e) Current tax and deferred tax assets

U.S. GAAP, ASC 740, Income Taxes requires recognition of a deferred tax asset in respect of the cumulative amount of compensation cost recognised in the financial statements in respect of unexercised options that will give rise to a future tax deduction. The tax deduction is based on the intrinsic value of the options, with the full tax deduction recorded in profit or loss in the year of exercise.

IFRS also requires that a deferred tax asset is recognised in respect of options not yet exercised where a tax deduction will arise. IAS 12 Income taxes requires that the tax deduction is estimated. The fair value estimate is based on the share price at the exercise date.

U.S. GAAP, ASC 740, Income Taxes requires recognition of a current tax benefit of certain tax deductions arising from Share based payment windfall gains in the Consolidated Statement of Operations. IFRS requires that the current tax benefit of these Share based payment windfall gains is recognised through Equity, in the Share-based payment reserve.

The following is a summary of the material adjustments to profit for the financial year and shareholders' equity, which would be required, had the Consolidated Financial Statements been prepared in accordance with U.S. GAAP:

(i) Effect on profit for the financial year

	Year ended 31 December 2018 \$'000	Year ended 31 December 2017 \$'000
Profit for the financial year attributable to equity holders as stated under IFRS	322,817	272,944
U.S. GAAP adjustments		
Share-based payment expense under IFRS	28,059	31,120
Share-based payment expense under U.S. GAAP	(31,594)	(30,573)
Deferred tax adjustments on share-based payments	(1,026)	(121)
Current tax adjustments on share-based payments	4,626	7,519
Tax adjustments on pension contributions	_	754
Additional costs defined benefit pension scheme	(226)	(155)
Net income as stated under U.S. GAAP	322,656	281,488
Basic earnings per Ordinary Share under U.S. GAAP	\$5.96	\$5.20
Diluted earnings per Ordinary Share under U.S. GAAP	\$5.89	\$5.13

Reconciliation from IFRS to US Accounting Policies (continued)

(ii) Effect on shareholders' equity

	31 December 2018	31 December 2017
	\$'000	\$'000
Shareholders' equity as stated under IFRS	1,386,379	1,230,256
U.S. GAAP adjustments		
Goodwill (net) arising on merger with PRAI	(14,009)	(14,009)
Deferred tax adjustments on share-based payments	(18,089)	(25,247)
Shareholders' equity as stated under U.S. GAAP	1,354,281	1,191,000
(iii) Effect on total assets		
	31 December 2018	31 December 2017
	\$'000	\$'000
Total assets as stated under IFRS	2,386,353	2,185,874
U.S. GAAP adjustments		
Goodwill (net) arising on merger with PRAI	(14,009)	(14,009)
Deferred tax adjustments on share-based payments	(18,089)	(25,247)
Total assets as stated under U.S. GAAP	2,354,255	2,146,618
(iv) Effect on total liabilities		
	31 December 2018	31 December 2017
	\$'000	\$'000
Total liabilities as stated under IFRS	999,974	955,618
U.S. GAAP adjustments Offset between deferred tax assets and liabilities	_	_
Total liabilities as stated under U.S. GAAP	999,974	955,618

Appendix A: Risk Factors

Risk Related to Our Business and Operations

We depend on a limited number of customers and a loss of, or significant decrease in business from one or more of them could affect our business.

During the year ended 31 December 2018 39.5% of our revenues were derived from our top five customers, with one customer contributing more than 10% of our net revenues during the period (14%). During the year ended 31 December 2017 42% of our revenues (including revenue from reimbursable expenses) were derived from our top five customers, with one customer contributing more than 10% of our revenues (including revenue from reimbursable expenses) during the period (21%). No other customer contributed more than 10% of our revenues during this period. During the year ended 31 December 2016 45% of our net revenues (excluding revenue from reimbursable expenses) were derived from our top five customers, with one customer contributing more than 10% of our net revenues during this period. During the year ended 31 December 2016 45% of our net revenues (excluding revenue from reimbursable expenses) were derived from our top five customers, with one customer contributing more than 10% of our net revenues (excluding revenue from reimbursable expenses) were derived from our top five customers, with one customer contributing more than 10% of our net revenues (excluding revenue from reimbursable expenses) during the period (26%). No other customer contributed more than 10% of our net revenues during this period. The loss of, or a significant decrease in business from one or more of these key customers could have a material adverse impact on our results of operations and financial results.

Many of our contracts are long-term fixed-fee contracts. We would lose money in performing these contracts if the costs of performance exceed the fixed fees for these projects and we are unable to negotiate a change order for the value of work performed.

Many of our contracts are long-term fixed fee contracts. Revenues on these contracts are agreed in the contract between the Company and the customer and are based on an assessment of progress towards completion based on the cost of time and reimbursable costs. Factors considered in estimating time requirements include the complexity of the study, the number of geographical sites where trials are to be conducted and the number of patients to be recruited at each site. The Company regularly reviews the estimated hours on each contract to determine if the budget accurately reflects the agreed tasks to be performed taking into account the state of progress at the time of review. The Company also endeavours to ensure that changes in scope are appropriately monitored and change orders for additional revenue are promptly negotiated for additional work as necessary. If we were to fail to successfully negotiate change orders for changes in the resources required or the scope of the work to be performed and the costs of performance of these contracts exceeded their fixed fees, it could materially adversely affect our operations and financial results.

If our customers discontinue using our services, or cancel or discontinue projects, our revenue will be adversely affected and/or we may not receive their business in the future or may not be able to attract new clients.

Our clients may discontinue using our services completely or cancel some projects either without notice or upon short notice. The termination or delay of a large contract or of multiple contracts could have a material adverse effect on our revenue and profitability. Historically, clients have cancelled or discontinued projects and may in the future cancel their contracts with us for reasons including, amongst others:

- the failure of products being tested to satisfy safety or efficacy requirements;
- unexpected or undesired clinical results of the product;
- a decision that a particular study is no longer necessary or viable;
- poor project performance, quality concerns, insufficient patient enrolment or investigator recruitment; and
- production problems resulting in shortages of the drug.

If we lose clients, we may not be able to attract new ones, and if we lose individual projects, we may not be able to replace them.

If we fail to attract or retain qualified staff, our performance may suffer.

Our business, future success and ability to continue to expand operations depends upon our ability to attract, hire, train and retain qualified professional, scientific and technical operating staff. We compete for qualified professionals with other Clinical Research Organisations "CROs", temporary staffing agencies and the in-house departments of pharmaceutical, biotechnology and medical device companies. An inability to attract and retain a sufficient number of high calibre clinical research professionals (in particular, key personnel and executives) at an acceptable cost would impact our ability to provide our services, our future performance and results of operations.

Our ability to perform clinical trials is dependent upon the ability to recruit suitable willing patients.

The successful completion of clinical trials is dependent upon the ability to recruit suitable and willing patients on which to test the drug under study. The availability of suitable patients for enrolment on studies is dependent upon many factors including, amongst others, the size of the patient population, the design of the study protocol, eligibility criteria, the referral practices of physicians, the perceived risks and benefits of the drug under study and the availability of alternative medication, including medication undergoing separate clinical trials. Insufficient or inappropriate patient enrolment may result in the termination or delay of a study which could have a material adverse impact on our results of operations.

The Company is focused on continuing to develop its expertise in patient recruitment. The focus is on making it easier for the site and the patient to actively participate in a trial to ensure increased predictability, enrolment and retention. Our site and patient solutions group includes upfront planning of site and patient management including identification, enrolment and engagement.

Improved site selection is achieved through:

- leading technology to identify where the patients are that match the protocol;
- assessment of the qualification of sites based on real data;
- partnerships with leading technology vendors such as Intel, EHR4CR and TriNeTX and developing the capability to enable EMR interrogation into clinical insights such as sub-populations and larger pre-screened pool where the technology and regulations are enabled.

The burden on the site in ensuring patient enrolment and engagement is achieved through integrated site networks. ICON have a number of site alliance partners. During 2018, we enhanced our site and patient recruitment capabilities with an expansion of the PMG Research network through a partnership with the Du Page Medical Group. We also use digital solutions to drive site performance, including pre-screening, eConsent, learning management, document tracking and management with key applications.

Our ability to perform clinical trials is dependent upon our ability to recruit suitable willing investigators.

We contract with physicians located in hospitals, clinics or other similar sites, who serve as investigators in conducting clinical trials to test new drugs on their patients. Investigators supervise administration of the study drug to patients during the course of the clinical trial. The successful conduct of a clinical trial is dependent upon the integrity, experience and capabilities of the investigators conducting the trial. Insufficient investigator recruitment, which in turn may lead to insufficient or inappropriate patient enrolment, may result in the termination or delay of a study which could have a material adverse impact on our results of operations.

We rely on third parties for important products and services.

We depend on certain third parties to provide us with products and services critical to our business. Such services include, amongst others, suppliers of drugs for patients participating in trials, suppliers of kits for use in our central laboratory business, suppliers of reagents for use in our testing equipment and providers of maintenance services for our equipment. The failure of any of these third parties to adequately provide the required products or services or the significant increase in the costs of such products and services could have a material adverse effect on our business.

Our business depends on the continued effectiveness and availability of our information systems, including the information systems we use to provide our services to our clients, and any system failures of, security breaches of or cyber-attacks to these systems may materially limit our operations or have a material adverse effect on our results of operations.

Due to the global nature of our business and our reliance on information systems to provide our services, we use web-enabled and other integrated information systems in delivering our services. We will continue to increase the use of these systems and such systems will either be developed internally or provided in conjunction with third parties. We also provide access to similar information systems to certain clients in connection with the services we provide them. As the use, scope and complexity of our information systems continue to grow, we are exposed to and will increasingly be exposed to the risks inherent in the development, integration and ongoing operation of evolving information systems, including:

- disruption or failure of data centres, telecommunications facilities or other key infrastructure platforms;
- security breaches, cyber-attacks or other failures or malfunctions in our application or information systems or their associated hardware or other systems that we have access to or that we rely upon or that have access to our systems; and
- excessive costs, excessive delays or other deficiencies in or problems with systems development and deployment.

The materialisation of any of these risks may impede our ability to provide services, the processing of data, the delivery of databases and services and the day-to-day management of our business and could result in the corruption, loss or unauthorised disclosure of proprietary, confidential or other data, as well as reputational harm. While we have cybersecurity controls and disaster recovery plans in place, they might not adequately protect us in the event of a system failure, security breach or cyber-attack. Despite any precautions we take, damage from fire, floods, hurricanes, power loss, telecommunications failures, computer viruses, information system security breaches, cyber-attacks and similar events that impact on our various computer facilities could result in interruptions in the flow of data to our servers and from our servers to our clients. Corruption or loss of data may result in the need to repeat a trial at no cost to the client, but at significant cost to us, or result in one or more of the termination of a contract, legal proceedings or claims against us or damage to our reputation. Additionally, significant delays in system enhancements or inadequate performance of new or upgraded systems once completed could damage our reputation and harm our business. Long-term disruptions in the infrastructure caused by events such as security breaches, cyber-attacks, natural disasters, the outbreak of war, the escalation of hostilities and acts of terrorism, particularly involving cities in which we have offices, could adversely affect our business.

Unauthorised disclosure of sensitive or confidential data, whether through system failure or employee negligence, fraud or misappropriation, could damage our reputation and cause us to lose clients. Similarly, despite investing in information and cyber-security controls there is a risk that unauthorised access to or through our information systems or those we develop for our clients, whether by our employees or third parties, including a cyber-attack by computer programmers and hackers who may attack ICON systems, develop and deploy viruses, worms, ransomware or other malicious software programs could result in negative publicity, significant remediation costs, legal liability, loss of customers and damage to our reputation and could have a material adverse effect on our results of operations and financial results. In addition, our liability insurance might not be sufficient in type, the cover provided or amount to adequately cover us against claims related to security breaches, cyber-attacks and other related breaches.

Upgrading the information systems that support our operating processes and evolving the technology platform for our services pose risks to our business.

Continued efficient operation of our business requires that we implement standardised global business processes and evolve our information systems to enable this implementation. We have continued to undertake significant programmes to optimise business processes with respect to our services. A failure to effectively manage the implementation and adapt to new processes designed into these new or upgraded systems in a timely and cost-effective manner may result in disruption to our business and negatively affect our operations.

We have entered into agreements with certain vendors to provide systems development and integration services that develop or license to us the IT platform for programmes to optimise our business processes. If such vendors fail to perform as required or if there are substantial delays in developing, implementing and updating the IT platform, our customer delivery may be impaired, and we may have to make substantial further investments, internally or with third parties, to achieve our objectives.

Additionally, our progress may be limited by parties with existing or claimed patents who seek to prevent us from using preferred technology or seek license payments from us.

Meeting our objectives is dependent on a number of factors which may not take place as we anticipate, including obtaining adequate technology-enabled services, creating IT-enabled services that our customers will find desirable and implementing our business model with respect to these services. If we do not keep pace with rapid technological changes in the CRO industry, our products and services may become less competitive or even obsolete. This applies in particular to our ICONIK, Firecrest and ADDPLAN and One Search services. Also, increased requirements for investment in information technology may negatively impact our financial condition, including profitability.

We rely on our interactive response technologies to provide accurate information regarding the randomisation of patients and the dosage required for patients enrolled in the trials.

We develop and maintain computer run and web based interactive response technologies to automatically manage the randomisation of patients in trials, assign the study drug, and adjust the dosage when required for patients enrolled in trials we support. An error in the design, programming or validation of these systems could lead to inappropriate assignment or dosing of patients, which could give rise to patient safety issues, incorrect dosing of patients, invalidation of the trial and/or liability claims against the Company, amongst other things, any of which could have a material effect on our financial condition and operations.

Our operations might be impacted by a disruption to travel systems.

Many of our operations rely on the availability of air or other transportation for the distribution of clinical trial materials, study samples and personnel. While we have developed contingency plans to minimise the impact of such events, a disruption to the availability of air transportation or other travel systems could have a material adverse impact on our ability to provide services and results of operations.

We may make, or be unable to make, acquisitions in the future, which may lead to disruptions to our ongoing business.

We have made a number of acquisitions and will continue to review new acquisition opportunities. If we are unable to identify suitable acquisition targets, complete an acquisition or successfully integrate an acquired company or business, our business may be disrupted. The success of an acquisition will depend upon, among other things, our ability to:

- effectively and quickly assimilate the operations and services or products of the acquired company or business;
- integrate acquired personnel;
- retain and motivate key employees;
- retain customers; and
- minimise the diversion of management's attention from other business concerns.

In the event that the operations of an acquired company or business do not meet our performance expectations, we may have to restructure the acquired company or business or write-off the value of some or all of the assets of the acquired company or business.

Improper performance of our services

The performance of clinical development services is complex and time-consuming. We may make mistakes in conducting a clinical trial that could negatively impact or damage the usefulness of the clinical trial or cause the results to be reported improperly. If the clinical trial results are compromised, we could be subject to significant costs or liability, which could have an adverse impact on our ability to perform our services. Large clinical trials are costly, and while we endeavour to contractually limit our exposure to such risks, improper performance of our services could have an adverse effect on our financial condition, damage our reputation and result in the cancellation of current contracts or failure to obtain new contracts from affected or other clients.

Our relationships with existing or potential customers who are in competition with each other may adversely impact the degree to which other customers or potential customers use our services, which may adversely affect our results of operations.

The biopharmaceutical industry is highly competitive, with biopharmaceutical companies each seeking to persuade payers, providers and patients that their drug therapies are better and more cost-effective than competing therapies marketed or being developed by competing companies. In addition to the adverse competitive interests that biopharmaceutical companies have with each other, biopharmaceutical companies also have adverse interests with respect to drug selection and reimbursement with other participants in the health care industry, including payers and providers. Biopharmaceutical companies also compete to be first to market with new drug therapies. We regularly provide services to biopharmaceutical companies who compete with each other and we sometimes provide services to such customers regarding competing drugs in development. Our existing or future relationships with our biopharmaceutical customers may therefore deter other biopharmaceutical customers from using our services or may result in our customers seeking to place limits on our ability to serve other biopharmaceutical industry participants. In addition, our further expansion into the broader health care market may adversely impact our relationships with biopharmaceutical customers and such customers may elect not to use our services, reduce the scope of services that we provide to them or seek to place restrictions on our ability to serve customers in the broader health care market with interests that are adverse to theirs. Any loss of customers or reductions in the level of revenues from a customer could have a material adverse effect on our results of operations, business and prospects.

We have only a limited ability to protect our intellectual property rights and these rights are important to our success.

Our success depends, in part, upon our ability to develop, use and protect our proprietary methodologies, analytics, systems, technologies and other intellectual property. Existing laws of the various countries in which we provide services or solutions offer only limited protection of our intellectual property rights, and the protection in some countries may be very limited. We rely upon a combination of trade secrets, confidentiality policies, non-disclosure, invention assignment and other contractual arrangements and patent, copyright and trademark laws, to protect our intellectual property rights. These laws are subject to change at any time and certain agreements may not be fully enforceable, which could further restrict our ability to protect our innovations. Our intellectual property rights may not prevent competitors from independently developing services similar to or duplicative of ours. Further, the steps we take in this regard might not be adequate to prevent or deter infringement or other misappropriation of our intellectual property by competitors, former employees or other third parties and we might not be able to detect unauthorised use of, or take appropriate and timely steps to enforce our intellectual property rights. Enforcing our rights might also require considerable time, money and oversight and we may not be successful in enforcing our rights.

We may, in certain circumstances, grant a customer more expansive rights in intellectual property developed in connection with a contract than we would normally grant. In such situations, we may forego the use of all intellectual property rights we create or develop, which would limit our ability to reuse or deploy that intellectual property for other customers. Any limitation on our ability to provide a service or solution may result in us losing revenue-generating opportunities and may also result in us incurring additional expenses to develop or license new or modified solutions for other projects or customers.

The biopharmaceutical industry has a history of patent and other intellectual property litigation, and we might be involved in costly intellectual property lawsuits.

The biopharmaceutical industry has a history of intellectual property litigation, and these lawsuits will likely continue in the future. Accordingly, we may face patent infringement legal proceedings by companies that have patents for similar business processes or other legal proceedings alleging infringement of their intellectual property rights. Legal proceedings relating to intellectual property could be expensive, take significant time and divert management's attention from other business concerns, regardless of the outcome of the litigation. If we do not prevail in an infringement lawsuit brought against us, we might have to pay substantial damages and we could be required to stop the infringing activity or obtain a license to use technology on unfavourable terms. Any infringement or other legal processing related to intellectual property could have a material adverse effect on our operations and financial condition.

We act as legal representative for some clients.

We act as the legal representative for certain clients in certain jurisdictions. As we believe that acting as legal representative of clients exposes us to a higher risk of liability, this service is provided subject to our policy and requires certain preconditions to be met. The preconditions relate to obtaining specific insurance commitments and indemnities from the client to cover the nature of the exposure. However, there is no guarantee that the specific insurance will be available and provide cover or that a client will fulfil its obligations in relation to their indemnity.

Risk Related to Our Industry

We are dependent on the continued outsourcing of research and development by the pharmaceutical, biotechnology and medical device industries.

We are dependent upon the ability and willingness of the pharmaceutical, biotechnology and medical device companies to continue to spend on research and development and to outsource the services that we provide. We are therefore subject to risks, uncertainties and trends that affect companies in these industries that we do not control. We have benefited to date from the tendency of pharmaceutical, biotechnology and medical device companies to outsource clinical research projects. Any downturn in these industries or reduction in spending or outsourcing could materially adversely affect our business. The following could each result in such a downturn:

- if pharmaceutical, biotechnology or medical device companies expanded upon their in-house clinical or development capabilities, they would be less likely to utilise our services;
- if governmental regulations were changed, it could affect the ability of our clients to operate profitably, which may lead to a decrease in research spending and therefore this could have a material adverse effect on our business; and
- if unfavorable economic conditions or disruptions in the credit and capital markets negatively impacted our clients.

Large pharmaceutical companies are increasingly consolidating their vendor base and entering strategic partnership arrangements with a limited number of outsource providers.

Large pharmaceutical companies are continually seeking to drive efficiencies in their development processes to both reduce costs associated with the development of new drug candidates and accelerate time to market. As a result, large pharmaceutical companies, in particular, are increasingly looking to consolidate the number of outsource providers with which they engage, with many entering strategic partnership arrangements with a limited number of outsource providers. The failure to enter strategic partnership arrangements with customers or the loss of existing customers as a result of them entering strategic partnership arrangements with our competitors could have a material adverse impact on our results of operations.

Increased collaboration amongst pharmaceutical companies in research and development activities may lead to fewer research opportunities.

Certain pharmaceutical companies have begun to collaborate in seeking to develop new drug candidates. Increased collaboration amongst pharmaceutical companies may lead to fewer research opportunities, which in turn may lead to fewer outsource opportunities for companies within the CRO industry. A reduction in outsource opportunities as a result of this increased collaboration could have a material adverse impact on our results of operations.

We operate in a highly competitive and dynamic market.

The CRO industry is highly competitive. In particular, we compete with other large global CROs for strategic relationships with large pharmaceutical companies. If we are unable to retain and renew existing strategic relationships and win new strategic relationships, there would be a material adverse impact on our results. Similarly, we compete with other CROs for work which comes outside of these strategic relationships and being unable to win work outside of these strategic relationships would have a material adverse impact on our results.

The type and depth of services provided by CROs has changed in recent years. Failure to develop and market new services or expand existing service offerings could adversely affect our business and operations.

New entrants may also enter the market which would further increase competition and could adversely affect our business and operations.

Risk Related to Our Financial Results and Financial Position

Our quarterly results are dependent upon a number of factors and can fluctuate from quarter to quarter.

Our results of operations in any quarter can fluctuate or differ from expected or forecasted results depending upon or due to, among other things, the number and scope of ongoing client projects, the commencement, postponement, variation, cancellation or termination of projects in a quarter, the mix of activity, cost overruns, employee hiring and other factors. Our revenue in any period is directly related to the number of employees who were working on billable projects together with investigator activity during that period. We may be unable to compensate for periods of under-utilisation during one part of a fiscal period by earning revenue during another part of that period. We believe that operating results for any particular quarter are not necessarily a meaningful indication of future results.

Also, if in future quarters, we are unable to achieve efficiencies and our expenses grow faster than our net revenues, our operating margins, profitability and overall financial condition will be materially adversely impacted.

Our exposure to exchange rate fluctuations could adversely affect our results of operations.

Our contracts with clients are sometimes denominated in currencies other than the currency in which we incur expenses related to such contracts. Where expenses are incurred in currencies other than those in which contracts are priced, fluctuations in the relative value of those currencies could have a material adverse effect on our results of operations.

In addition, we are also subject to translation exposures as our consolidated financial results are presented in U.S. dollars, while the local results of certain of our subsidiaries are prepared in currencies other than U.S. dollars, including, amongst others, the pound sterling and the euro. Accordingly, changes in exchange rates between the U.S. dollar and those other currencies will affect the translation of a subsidiary's financial results into U.S. dollars for purposes of reporting our consolidated financial results.

Our effective tax rate may fluctuate from quarter to quarter, which may adversely affect our results of operations.

Our quarterly effective tax rate has depended and will continue to depend on the geographic distribution of our taxable earnings amongst the multiple tax jurisdictions in which we operate and the tax law in those jurisdictions. Changes in the geographic mix of our results of operations amongst these jurisdictions may have a significant impact on our effective tax rate from quarter to quarter. Changes in tax law in one or more jurisdictions could also have a significant impact on our tax rate and results. In addition, as we operate in multiple tax jurisdictions, we may be subject to audits in certain jurisdictions. These audits may involve complex issues which could require an extended period of time for resolution. The resolution of audit issues may lead to differences, additional taxes, fines or penalties which could have a material adverse impact on our effective tax rate and our financial condition and results.

Our unsatisfied performance obligation (assessment of the realisable value of contracted awards) may not convert to revenue and the rate of conversion may slow.

Our remaining unsatisfied performance obligation is that element of contracted awards that has not yet converted to revenue. This value is not necessarily a meaningful predictor of future results, due to the potential for the cancellation or delay of projects included in the backlog. No assurances can be given that we will be able to realise this backlog in full as revenue. A failure to realise these contracted awards could have a material adverse impact on our results of operations. In addition, as the length and complexity of projects increases, the rate at which contracted awards convert to revenue may be slower than in the past. A significant reduction in the rate of conversion could have a material impact on our results of operations.

The Company is exposed to various risks in relation to our cash and cash equivalents and short term investments.

The Company's treasury function manages our available cash resources and invests significant cash balances in various financial institutions to try to ensure optimum returns for our surplus cash balances. These balances are classified as cash and cash equivalents or short term investments depending on the maturity of the related investment. Cash and cash equivalents comprise cash and highly liquid investments with maturities of three months or less. Short term investments comprise highly liquid investments with maturities of greater than three months and minimum "A-" rated fixed and floating rate securities.

Given the global nature of our business, we are exposed to various risks in relation to these balances including liquidity risk, credit risk associated with the counterparties with whom we invest, interest rate risk on floating rate securities, sovereign risk (our principle sovereign risk relates to investments in U.S. Treasury funds) and other factors.

Although we have not recognised any significant losses to date on our cash and cash equivalents or short term investments, any significant declines in their market values could have a material adverse effect on our financial position and operating results.

Changes in accounting standards may adversely affect our financial statements

We are required to prepare our financial statements in accordance with International Financial Reporting Standards ("IFRS"), as adopted by the European Union ("EU IFRS") which are revised on an on-going basis by the authoritative bodies. It is possible that future accounting standard changes, may require additional changes to the accounting treatment that we apply in preparation of our financial statements. These changes may also require significant changes to our reporting systems. We applied IFRS 15 - *'Revenue from contracts with customers'* with effect from 1 January 2018. Under this new standard, the Company is required to recognise revenue in respect of our clinical trial services on a percentage of completion basis. The change in revenue recognition requires significant estimates of project costs that will need to be updated and adjusted on a regular basis. These updates may result in unexpected variability in the timing of recognition of revenue and therefore in our operating results. Application of IFRS 16 - *'Leases'* will result in the recognition of a lease liability and right-of-use asset on the Consolidated Statement of Financial Position at 31 December 2019.

Risk Related to Political, Legal or Regulatory Environment

We may lose business opportunities as a result of health care reform and the expansion of managed care organisations.

Numerous governments, including the U.S. government, have undertaken efforts to control growing health care costs through legislation, regulation and voluntary agreements with medical care providers and drug companies. If these efforts are successful, pharmaceutical, biotechnology and medical device companies may react by spending less on research and development and therefore this could have a material adverse effect on our business.

In addition to health care reform proposals, the expansion of managed care organisations in the health care market may result in reduced spending on research and development. Managed care organisations' efforts to cut costs by limiting expenditures on pharmaceuticals and medical devices could result in pharmaceutical, biotechnology and medical device companies spending less on research and development. If this were to occur, we would have fewer business opportunities and our revenues could decrease, possibly materially.

Healthcare reform legislation and other changes in the healthcare industry and in healthcare spending could adversely affect our business model, financial condition or results of operations.

Our results of operations and financial conditions could be affected by changes in healthcare spending and policy. The healthcare industry is subject to changing political, regulatory and other influences. It is possible that legislation will be introduced and passed in the United States repealing, modifying or invalidating the current healthcare reform legislation, in whole or in part, and signed into law. Because of the continued uncertainty about the implementation of the current healthcare reform legislation, including the potential for further legal challenges or repeal of that legislation, we cannot quantify or predict with any certainty the likely impact of the current healthcare reform legislation or its repeal on the health care sector, on our customers and ultimately on our financial condition or results of operations, in particular the outsourcing of costs by our customer base to CROs.

We may lose business as a result of changes in the regulatory environment.

Various regulatory bodies throughout the world may enact legislation, rules and guidance which could introduce changes to the regulatory environment for drug development and research. The adoption and implementation of such legislation, rules and guidance is difficult to predict and therefore could have a material adverse effect on our business.

Failure to comply with the regulations and requirements of the U.S. Food and Drug Administration and other regulatory authorities could result in substantial penalties and/or loss of business.

The U.S. Food and Drug Administration, or FDA, and other regulatory and government authorities and agencies inspect and audit us from time to time to ensure that we comply with their regulations and guidelines, including environmental and health and safety matters, and other requirements imposed in connection with the performance of government contracts. We must comply with the applicable regulatory requirements governing the conduct of clinical trials and contracting with the government in all countries in which we operate. If we fail to comply with any of these requirements we could suffer some or all of:

- termination of or delay in any research;
- disqualification of data;
- denial of the right to conduct business;
- criminal penalties;
- other enforcement actions including debarment from government contracts;
- loss of clients and/or business; and
- litigation from clients and/or patients and/or regulatory authorities and/or other affected third parties, and resulting material penalties, damages and costs.

We are subject to political, regulatory, operational and legal risks associated with our international operations.

We are one of a small group of organisations with the capability and expertise to conduct clinical trials on a global basis. We believe that this capability to provide our services globally in most major and developing pharmaceutical markets enhances our ability to compete for new business from large multinational pharmaceutical, biotechnology and medical device companies. We have expanded geographically in the past and intend to continue expanding in regions that have the potential to increase our client base or increase our investigator and patient populations. We expect that revenues earned in emerging markets will continue to account for an increasing portion of our total revenues. However, emerging market operations may present several risks, including civil disturbances, health concerns, cultural differences such as employment, regulatory and business practices, compliance with economic sanctions, laws and regulations, volatility in gross domestic product, economic and governmental instability, the potential for nationalisation of private assets and the imposition of exchange controls. In addition, operating globally means the Company faces the challenges associated with coordinating its services across different countries, time zones and cultures.

Changes in the political and regulatory environment in the international markets in which we operate such as price or exchange controls could impact our revenue and profitability and could lead to penalties, sanctions and reputational damages if we are not compliant with those regulations. Political uncertainty and a lack of institutional continuity in some of the emerging, developing or other countries in which we operate could affect the orderly operation of markets in these economies. In addition, in countries with a large and complicated structure of government and administration, national, regional, local and other governmental bodies may issue inconsistent decisions and opinions that could increase our cost of regulatory compliance and/or have a material adverse effect on our business.

On 23 June 2016, the United Kingdom, or U.K., held a referendum, referred to as "Brexit", in which voters approved an exit from the European Union (E.U). As a result of the referendum, the British government continues to negotiate the terms of the U.K.'s future relationship with the E.U. The terms of the exit continue to be unknown however it is possible that there will be greater restrictions on trade and the transfer of goods and other items (including lab samples) between the U.K. and E.U. countries and increased regulatory complexities. At present, these changes are not expected to significantly affect our operations or financial results. Approximately 3% of our revenue is billed in Sterling. We currently employ approximately 700 people in the UK. The announcement of Brexit and continued uncertainty around the terms of exit is causing volatility in global stock

markets and exchange rates. The fluctuation of currency exchange rates may expose us to gains and losses on non U.S. currency transactions.

Uncertainty of the legal environment in some emerging countries could also limit our ability to enforce our rights. In certain emerging and developing countries we enjoy less comprehensive protection for some of our rights, including intellectual property rights, which could undermine our competitive position.

If any of the above risks or similar risks associated with our international operations were to materialise, our results of operations and financial condition could be materially adversely affected.

We operate in many different jurisdictions and we could be adversely affected by violations of the Foreign Corrupt Practices Act of 1977 (FCPA), UK Bribery Act of 2010 and similar anti-corruption laws in other jurisdictions.

The FCPA, UK Bribery Act of 2010 and similar anti-corruption laws in other jurisdictions prohibit companies and their intermediaries from making improper payments for the purpose of obtaining or retaining business. In addition, the FCPA imposes certain books, records and accounting control obligations on public companies and other issuers. Our internal policies mandate compliance with these anti-corruption laws. We operate in many jurisdictions that have experienced corruption to some degree and in certain circumstances, anti-corruption laws have appeared to conflict with local customs and practices. Despite our training and compliance programs, we cannot assure that our internal control policies and procedures will protect us from acts in violation of anticorruption laws committed by persons associated with us and our continued expansion, including in developing countries, could increase such risk in the future. Violations of the FCPA, the U.K. Anti-Bribery Act of 2010 or other similar anti-corruption laws in other jurisdictions, or even allegations of such violations, could disrupt our business and result in a material adverse effect on our financial condition, results of operations, cash flows and reputation. For example, violations of anti-corruption laws can result in restatements of, or irregularities in, our financial statements as well as severe criminal or civil sanctions. In some cases, companies that violate the FCPA might be debarred by the U.S. government and/or lose their U.S. export privileges. In addition, U.S. or other governments may seek to hold us liable for successor liability FCPA violations or violations of other anticorruption laws committed by companies that we acquire or in which we invest. Changes in anti-corruption laws or enforcement priorities could also result in increased compliance requirements and related costs which could materially adversely affect our business, financial condition, results of operations and cash flows.

Current and proposed laws and regulations regarding the protection of personal data could result in increased risks of liability or increased costs to us or could limit our service offerings.

The confidentiality, collection, use and disclosure of personal data, including clinical trial patient-specific information, is subject to governmental regulation generally in the country that the personal data was collected or used. For example, United States federal regulations under the Health Insurance Portability and Accountability Act of 1996, or HIPAA, and as amended in 2014 by the Health Information Technology for Economic and Clinical Health ("HITECH") Act, require individuals' written authorisation, in addition to any required informed consent, before Protected Health Information may be used for research. Such regulations specify standards for de-identifications and for limited data sets. We are both directly and indirectly affected by the privacy provisions surrounding individual authorisations because many investigators with whom we are involved in clinical trials are directly subject to them as a HIPAA "covered entity" and because we obtain identifiable health information from third parties that are subject to such regulations. As there are some instances where we are a HIPAA "business associate" of a "covered entity", we can also be directly liable for mishandling protected health information. Under HIPAA's enforcement scheme, we can be subject to up to \$1.5 million in annual civil penalties for each HIPAA violation.

The European data protection framework was significantly revised in 2018 with the coming into force of the General Data Protection Regulation ('GDPR') containing new provisions specifically directed at the processing of health information, sanctions of up to 4% of worldwide gross revenue and extra-territoriality measures intended to bring non-EU companies under the proposed regulation. Post GDPR implementation we are receiving increased volumes and breadth of data protection/ privacy queries from both sponsors and strategic alliance partners and anticipate that this will continue.

For the regulators in the European Union, or EU, personal data includes any information that relates to an identified or identifiable natural person with health information carrying special obligations, including obtaining the explicit consent from the individual for collection, use or disclosure of the information. EU regulations also apply to the personal data of EU data subjects travelling or living outside the EU. In addition, we are subject to EU rules with respect to cross-border transfers of such data out of the EU. The United States, the EU and its member states and other countries where we have operations, such as Japan, South Korea, Malaysia, the Philippines, Russia and Singapore, continue to issue new privacy and data protection rules and regulations that relate to personal data and health information. Failure to comply with certain certification/registration and annual re-certification/registration provisions associated with these data protection and privacy regulations and rules in various jurisdictions, or to resolve any serious privacy complaints, could subject us to regulatory sanctions, criminal prosecution or civil liability. Federal, state and foreign governments are contemplating or have proposed or adopted additional legislation governing the collection, possession, use or dissemination of personal data, such as personal health information and personal financial data as well as security breach notification rules for loss or theft of such data. Additional legislation or regulation of this type might, among other things, require us to implement new security measures and processes or bring within the legislation or regulation de-identified health or other personal data, each of which may require substantial expenditures or limit our ability to offer some of our services. Additionally, if we violate applicable laws, regulations or duties relating to the use, privacy or security of personal data, we could be subject to civil liability or criminal prosecution, be forced to alter our business practices or suffer reputational harm.

The failure to comply with our government contracts or applicable laws and regulations could result in, among other things, fines or other liabilities, and changes in procurement regulations could adversely impact our business, results of operations or cash flows.

Revenues from our government customers are derived from sales to federal, state and local governmental departments and agencies through various contracts. Sales to public segment customers are highly regulated. Noncompliance with contract provisions, government procurement regulations or other applicable laws or regulations (including but not limited to the False Claims Act) could result in civil, criminal and administrative liability, including substantial monetary fines or damages, termination of government contracts or other public segment customer contracts, and suspension, debarment or ineligibility from doing business with the government and other customers in the public segment. In addition, generally contracts in the public segment are terminable at any time for convenience of the contracting agency or upon default. The effect of any of these possible actions by any governmental department or agency could adversely affect our business, results of operations or cash flows. In addition, the adoption of new or modified procurement regulations and other requirements may increase our compliance costs and reduce our gross margins, which could have a negative effect on our business, results of operations or cash flows.

Liability claims brought against us could result in payment of substantial damages, costs and liabilities and decrease our profitability.

Customer Claims

If we breach the terms of an agreement with a customer (for example if we fail to comply with the agreement, all applicable regulations or Good Clinical Practice) this could result in claims against us for substantial damages which could have a material adverse effect on our business. As we are a "people business" in that we provide staff to provide our services in hospitals and other sites, there is a risk that our management, quality and control structures fail to quickly detect a failure by one or more employees or contractors to comply with all applicable regulations and Good Clinical Practice and our internal requirements and standard operating procedures thereby exposing us to the risk of claims by customers.

Claims relating to Investigators

We contract with physicians who serve as investigators in conducting clinical trials to test new drugs on their patients. This testing creates the risk of liability for personal injury to or death of the patients. Although investigators are generally required by law to maintain their own liability insurance, we could be named in lawsuits and incur expenses arising from any professional malpractice or other actions brought against the investigators with whom we contract.

Indemnification from Customers

Indemnifications provided by our customers against the risk of liability for personal injury to or death of the patients arising from a study drug vary from customer to customer and from trial to trial and may not be sufficient in scope or amount, or

our customer may not have the financial ability to fulfil their indemnification obligations. Furthermore, we would be liable for our own negligence and negligence of our employees which could lead to litigation from customers or action or enforcement by regulatory authorities.

Insurance

We maintain what we believe is an appropriate level of worldwide Professional Liability/Error and Omissions Insurance. In the future we may be unable to maintain or continue our current insurance coverage on the same or similar terms. If we are liable for a claim or settlement that is beyond the level of insurance coverage, we may be responsible for paying all or part of any award or settlement amount. Also, the insurance policies contain exclusions which mean that the policy will not respond or provide cover in certain circumstances.

Claims to Date

To date, we have not been subject to any liability claims that are expected to have a material effect on our business; however, there can be no assurance that we will not become subject to such claims in the future or that such claims will not have a material effect on our business.

Risks Related to Our Indebtedness

We have incurred debt, which could impair our flexibility and access to capital and adversely affect our financial position.

As of 31 December 2018, and 31 December 2017, we had an outstanding principal amount of indebtedness of \$350 million under our \$350 million Note Purchase and Guarantee Agreement or 'Senior Notes' that we entered into on 15 December 2015. The Senior Notes will mature on 15 December 2020. We also have up to \$150 million of additional borrowing capacity available under the Revolving Credit Facility which was entered into with Citibank, JP Morgan, Santander, HSBC Bank and Morgan Stanley International on 12 March 2018. No amounts were drawn under the Revolving Credit Facility as of 31 December 2018. This facility bears interest at LIBOR plus a margin. We are monitoring the phasing out of LIBOR currently scheduled for 2021. We have engaged with our lenders on the implications of the change. In the absence of an agreed new rate, documents continue to be negotiated using LIBOR. We will continue to engage with our lenders in respect of the requirement for a new rate and seek an amendment letter at that point.

The cost and availability of credit are subject to changes in the global or regional economic environment. If conditions in the major credit markets deteriorate our ability to obtain debt financing on favourable terms may be negatively affected.

We may incur additional debt in the future. Our debt could have significant adverse consequences, including to;

- limit our ability to borrow additional funds for working capital, capital expenditures, acquisitions or other general business purposes;
- limit our ability to use our cash flow or obtain additional financing for future working capital, capital expenditures, acquisitions or other general business purposes;
- require us to use all or a portion of our cash flow from operations to make debt service payments;
- require us to sell certain assets;
- restrict us from making strategic investments, including acquisitions or cause us to make non-strategic divestitures;
- place us at a competitive disadvantage compared to our competitors that have less debt;
- cause us to incur substantial fees from time to time in connection with debt amendments or refinancing;
- limit our flexibility to plan for, or react to, changes in our business and industry; and
- increase our vulnerability to the impact of adverse economic and industry conditions.

Our ability to meet our debt service obligations will depend on our future performance, which will be subject to financial, business and other factors affecting our operations, many of which are beyond our control. If we do not have sufficient funds to meet our debt service obligations, we may be required to refinance or restructure all or part of our existing debt, sell assets, borrow more money or sell securities, none of which we can be assured that we would be able to do in a timely manner, or at all.

In addition, a failure to comply with the covenants under our indebtedness could result in an event of default under such indebtedness. In the event of an acceleration of amounts due under our existing indebtedness as a result of an event of default,

we may not have sufficient funds or may be unable to arrange for additional financing to repay our indebtedness or to make any required accelerated payments.

In addition, we are required, under the terms of the Senior Notes, to offer to purchase all of the outstanding Senior Notes if we experience a change of control. Similar requirements exist in the Revolving Credit Facility. These provisions may delay or prevent a change in control that our stockholders may consider desirable.

Covenants in our credit agreements may restrict our business and operations and our financial condition and results of operations could be adversely affected if we do not comply with those covenants.

The Senior Notes and the Revolving Credit Facility credit agreements include certain customary covenants that limit our ability to, amongst other things, subject to certain exceptions;

- incur or assume liens or additional debt;
- dispose of assets;
- engage in mergers or reorganisations, or;
- enter into certain types of transactions with affiliates.

The Senior Notes agreement also includes certain financial covenants that require us to comply with a consolidated leverage ratio, a minimum EBITDA to consolidated net interest charge ratio and a maximum amount of priority debt, each of which are defined in the Note Purchase and Guarantee Agreement. Our ability to comply with these financial covenants may be affected by events beyond our control.

These covenants may limit our operating and financial flexibility and limit our ability to respond to changes in our business or competitive activities.

In the event that we fail to pay principal or interest when due on the Senior Notes, or as a result of a material breach of any representation, warranty or covenant or any other event of default then all outstanding amounts could become immediately due and payable. If, in such a circumstance, any of the holders of the Senior Notes, accelerate the repayment of such indebtedness, there can be no assurance that we will have sufficient assets to repay our indebtedness.

Interest rate fluctuations may materially adversely affect our results of operations and financial condition in the event that the Company draws down on either Revolving Credit Facility or in respect of any future issuances of debt.

The interest rate in respect of the Senior Notes is fixed at 3.64% for the five year term of the agreement. The Revolving Credit Facility bears interest at LIBOR plus a margin. There were no amounts drawn on the Revolving Credit Facility at 31 December 2018. The Company is therefore subject to interest rate volatility in respect of any future draw down on the Revolving Credit Facility or in respect of any future issuances of debt.

Risk Related to Our Common Stock

Volatility in the market price of our common stock could lead to losses by investors.

The market price of our common stock has experienced volatility in the past and may experience volatility in the future which could lead to losses for investors. Factors impacting volatility in the market price of our common stock include, amongst others:

- general market and economic conditions;
- our results of operations;
- issuance of new or changed securities analysts' reports or recommendations;
- developments impacting the industry or our competitors;
- introduction of new products or services by us or our competitors;
- the public's reaction to our press releases, our other public announcements and our filings with the SEC;
- guidance, if any, that we provide to the public, any changes in this guidance or failure to meet this guidance;
- changes in the credit ratings of our debt;

- sales, or anticipated sales, of large blocks of our stock;
- additions or departures of key personnel;
- regulatory or political developments;
- litigation and governmental investigations;
- changing economic conditions; and
- exchange rate fluctuations.

In addition, stock markets have from time to time experienced significant price and volume fluctuations unrelated to the operating performance of particular companies. Future fluctuations in stock markets may lead to volatility in the market price of our common stock which could lead to losses by investors.

Forward-looking statements

To the extent any statements made in this annual report deal with information that is not historical, these statements are necessarily forward-looking. Because forward-looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict and many of which are outside of the Group's control. Any forward-looking statement made by the Group is based only on information currently available as at the time of publication of this report. Forward-looking statements are subject to the occurrence of many events outside of the Group's control and are subject to various risk factors that would cause our results to differ materially from those expressed in any forward-looking statement. These risk factors described in Appendix A include, without limitation, the inherent risk of dependence on pharmaceutical and biotechnology industries and certain clients, termination or delay of large contracts, risk of cost overruns, the risk of clinical outcomes, regulatory risks and market competition.

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About ICON

ICON plc is a global provider of outsourced drug and device development and commercialisation services to pharmaceutical, biotechnology, medical device and government and public health organisations. The company specialises in the strategic development, management and analysis of programs that support clinical development - from compound selection to Phase I-IV clinical studies. Further information is available at www.iconplc.com

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