



NANOCO GROUP PLC
("Nanoco" or the "Company")

Preliminary Results for the year ended 31 July 2017

Nanoco Group plc (LSE: NANO), a world leader in the development and manufacture of cadmium-free quantum dots and other nanomaterials, is pleased to announce its preliminary results for the year ended 31 July 2017.

Operational Highlights

Display

- Hybrid commercial model in display established: direct sales of own manufactured product and multiple non-exclusive licences
- Ten-fold increase in manufacturing capacity at Runcorn and reduction in product costs
- First commercial sales orders received
- Substantial pipeline of commercial opportunities - focused on television and monitor projects with near term potential
- Signed development and commercialisation deal with Kyulux focused on CFQD/OLED hybrid display
- Operating cost base reduced significantly

Solar

- Decision taken to divest and process ongoing

Life Sciences and Specialised Lighting

- New grant awarded for work on pancreatic cancer and excellent progress made in research in medical applications

Financial Highlights

- Revenue and other operating income for the year was £1.6 million (2016: £0.8 million) and the loss after tax was £9.1 million (2016: £10.6 million).
- Cash and cash on deposit at 31 July 2017 was £5.7 million (2016: £14.5 million)

Post balance sheet events

- Net proceeds of £8 million following a placing in November 2017 significantly strengthens cash balance and removes immediate going concern issues
- Successful exhibition of televisions containing Nanoco Fine Color Film™ at Touch Taiwan
- In September 2017, a Commercial Supply and License Agreement was finalised with a US corporation in the field of medical devices for the treatment of pain, soft tissue injury and dermatological conditions such as acne and skin anti-ageing

Dr Christopher Richards, Nanoco's Chairman, said: "Significant progress has been made this year in developing demand for our CFQDs and advancing our go-to-market strategy supported by our own manufacturing facility. While there have been challenges from slower than anticipated adoption in the display industry, an increasing number of manufacturers are now producing demonstration displays incorporating our technology.

"We continue to keep a tight control on costs and our post year end fundraising will fully support the Company as we commercialise our technology and take advantage of large and growing market opportunities.

"I remain confident about the relevance of our technology in display and other markets, including Life Sciences and Specialised Lighting, as well as our ability to execute and deliver orders and sales, and I remain positive about the prospects for the Group."

Analyst meeting and webcast details

To listen to a webcast of the analyst briefing, please log on to the following web address approximately 5 minutes before 8.30am on 16 November 2017: <http://webcasting.brrmedia.co.uk/broadcast/5a0990732acfc74f9342e72b>

A recording of the webcast will also be made available on Nanoco's website, www.nanocogroup.com, later today.

A meeting for analysts will be held at 8.30am this morning, 16 November 2017 at the offices of Peel Hunt, Moor House, 120 London Wall, London EC2Y 5ET. For further details please contact MHP Communications on 0203 128 8788.

This announcement contains inside information.

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About Nanoco Group plc

Nanoco (LSE: NANO) harnesses the power of nanotechnology to create a brighter, more sustainable future. Based on breakthrough science, Nanoco's proprietary manufacturing process enables the large-scale production of its cadmium-free CFQD® quantum dots for multiple applications including LCD display, lighting, healthcare and solar.

Nanoco has non-exclusive manufacturing and marketing licensing agreements in display with The Dow Chemical Company, Merck KGaA of Germany, and Wah Hong Industrial Corporation of Taiwan.

Nanoco was founded in 2001 and is headquartered in Manchester, UK, with a US subsidiary, Nanoco Inc., in Concord, MA. Nanoco continues to build out a world-class, patent-protected IP portfolio generated both by its own innovation engine, as well as through acquisition.

Nanoco is listed on the main market of the London Stock Exchange and trades under the ticker symbol NANO. For further information please visit: www.nanocogroup.com.

Chairman's Statement

Introduction

It is a pleasure to introduce Nanoco's results for the year to 31 July 2017. This has been a challenging year, with slower than anticipated adoption of the Company's cadmium-free quantum dots ("CFQDs") in the display industry. However, significant progress has been made in developing demand for our CFQDs; an increasing number of manufacturers are now producing demonstration displays incorporating our technology and we are confident that sales will result as these move into commercial production. We are also making good progress in Life Sciences and Specialised Lighting. The slower than expected progress in Display and the Company's funding horizon have both had a detrimental impact on the Company's share price. I am pleased to say that the recent announcement of an equity placing has alleviated liquidity concerns.

Following the change in commercial strategy in the previous financial year, substantial changes were made in the business during this year, which have created the building blocks for future commercial success. The Company has a compelling go-to-market strategy, with a partnership with Taiwan's Wah Hong Industrial Corporation ("Wah Hong"), alongside its two licensees, The Dow Chemical Company ("Dow") and Merck KGaA ("Merck"). These routes to market are supported by the Company's own manufacturing facility in Runcorn. We now have the supply chain and the technology to support the development of the emerging market in CFQDs for the display industry.

The recent move by the European Commission to ban cadmium in displays in Europe from 31 October 2019 is helping to accelerate adoption of the technology and the demonstration by major television manufacturers of displays featuring Nanoco's CFQDs is further evidence of this adoption.

While our focus in 2017 has been on the display market, Nanoco's technology has several important applications beyond that sector. Important progress was made during 2017 in two of the Group's three other target markets: life sciences and specialised lighting. Of particular note, the Life Sciences business was awarded an Innovate UK grant. In addition, after the year end, a commercial supply and license agreement was won from a US medical device company for light therapy products for the treatment of pain, soft tissue injury and dermatological conditions such as acne and skin anti-ageing. This underlines the value being built beyond Display and highlights the future potential in these other areas.

The Board has decided that the Solar assets are non-core and has commenced a process to divest these assets.

Over the year the Board made tough decisions to reduce costs which has led to a substantial reduction in headcount, the main expense of the business. During the period, average employee numbers reduced to 110 (2016: 129) and have fallen further to approximately 80 since the year end. However, that headcount reduction has not impacted the Group's ability to manufacture product and sell its technology or its ability to develop next generation IP and product.

Financial performance

Revenues and other operating income in the year to 31 July 2017 were £1.6 million (2016: £0.8 million) and the loss before tax was £10.9 million (2016: loss before tax of £12.6 million).

The Group continued to exercise careful cost control during the year. Cash, cash equivalents and deposits at the year end were £5.7 million (31 July 2016: £14.5 million; 31 January 2017: £8.3 million). Cash balances have increased post year end as a consequence of the equity raise in November 2017 of £8.0 million net of expenses. No dividend is proposed for the year (2016: none).

Governance and Board

The Board recognises the value of meeting the highest standards of corporate governance and will continue to strive to achieve such standards for the benefit of all stakeholders.

Gordon Hall retired as a Non-executive Director of Nanoco on 31 January 2017, after eight years on the Board. Robin Williams stood down from the Board in July 2017 after three years with the Company as a Non-executive Director. We would like to thank both Gordon and Robin for their contribution to the business.

In April 2017 we announced the appointment of Dr Alison Fielding as a Non-executive Director. Alison brings an exceptional breadth of relevant skills to the Nanoco Board, with her background in chemistry and her extensive commercial, financial and international experience across the technology sector.

Employees and shareholders

On behalf of the Board, I would like to thank all of Nanoco's employees for their achievements during the year and for their commitment to the Group. Nanoco benefits from an exceptional, multi-national team and the Board is enormously appreciative of its contributions and loyalty in what has been a challenging period.

I would also like to thank our shareholders for their continuing support and look forward to meeting as many as possible at our AGM to be held on 12 January 2018.

Outlook

I am confident about the relevance of our technology in display and other markets as well as our ability to execute and deliver orders and sales and I remain positive about the prospects for the Group.

Dr Christopher Richards
Chairman
16 November 2017

Chief Executive Officer's Review

Overview

While the Group has not met the commercial targets we set ourselves a year ago, we have made substantial changes in our approach to the business which underpin our confidence in future success. We have implemented an enhanced go-to-market strategy, invested in manufacturing capability and received our first commercial sales orders, all against a backdrop of growing global interest in our technology.

The evolution in marketing strategy for the display industry, initiated in 2016, has enabled the Group to accelerate the roll-out of its technology. We have moved from an exclusive licensing model with Dow to a hybrid model, combining multiple non-exclusive licenses with direct sales of own manufactured product. In August 2016, we announced that we had signed up Merck as a second licensee of our technology. We also developed our own channel to market for product manufactured at our facility in Runcorn, UK and sold via our Taiwanese partner Wah Hong (referred to as "our direct partner"). We now have a three-pronged go-to-market strategy which will enable us to capitalise on the expected demand for our CFQDs. During the year, in conjunction with Wah Hong, we have developed a substantial pipeline of commercial opportunities in Display and in June secured the important milestone of our first commercial sales orders. We remain very excited about the potential for our technology both in Display and in our emerging Life Sciences and Specialised Lighting developments.

Display market

The market in display for CFQDs continues to grow, driven by the increasing appetite for enhanced colour and brightness and the penetration of ultra-high-definition ("UHD") TVs. IHS Technology ("IHS") forecasts 26 million displays will be quantum dot ("QD") equipped by 2021, with more than 90% of the market cadmium free. Samsung, with its QLED brand, is leading the field and sold more than 3 million QD displays in 2016. Other than Samsung, the market for quantum dot displays is still in its infancy although the introduction of UHD TV and media-centric monitor products will drive growth in the markets.

While other display OEMs are embracing CFQD technology, adoption continues to be slow due somewhat to protracted regulatory initiatives to restrict the use of cadmium. However, in early August 2017, the European Commission announced legislation, which passed into law in October 2017, banning the use of cadmium in displays from 31 October 2019, which we expect to accelerate the shift to CFQDs. Several major Taiwanese and Chinese display and TV manufacturers are now actively seeking CFQD solutions, where Nanoco continues to have a competitive lead.

Commercialisation

Nanoco's CFQDs are now being manufactured at Nanoco's Runcorn facility and at Dow's large manufacturing plant in Cheonan, South Korea, while Merck is also evaluating the establishment of a manufacturing facility. These sites will manufacture CFQDs, blend them into a resin system and supply the combined CFQD resin system to multiple display integrators located across Asia. Samsung is the market leader in CFQD display at present and Nanoco and our licensees are all actively marketing Nanoco technology to the global display industry to compete effectively with Samsung.

Commercialisation - Runcorn

Nanoco's Runcorn manufacturing facility has been extensively enhanced to meet anticipated demand. New production methods have achieved a substantial reduction in costs while increasing the productivity of installed capacity.

Runcorn now has the capacity to produce enough CFQDs to supply approximately 1 million large TVs per annum. Further capacity can be achieved with limited capital expenditure and will be brought online as demand increases.

We were pleased to announce in December 2016 that the Company had been awarded ISO 9001:2015 certification for our production and supply processes, underlining the robust nature of our systems.

Commercialisation - Wah Hong

Wah Hong, which is quoted on the Taipei Exchange, is our partner for the production and sale of our Fine Color Film™. We chose to partner with Wah Hong as it is one of the world's largest manufacturers of optical films and sheets for the display industry and has a large operational footprint across China, Taiwan and Southeast Asia. We have benefited from its industry and supply chain knowledge and customer contacts since signing the agreement in July last year. Under the agreement, Nanoco will supply resins containing CFQDs from our manufacturing facility in Runcorn and Wah Hong will incorporate the resin into a film, under Nanoco's CFQD® Fine Color Film™ brand, and sell to the display industry. We will generate revenue from the sale of resin to Wah Hong and receive a licence fee from Wah Hong based on its sales and two further milestone payments dependent on the volume of film sold.

The Group's relationship with Wah Hong has progressed well over the period. Product from Nanoco/Wah Hong was used by three manufacturers, Hisense, TCL and TPV Philips, at CES in January 2017, to demonstrate prototype large screen, UHD, wide colour gamut LCD TVs. Feedback and lead generation from CES were encouraging and further validated the market opportunity. As a result, Wah Hong brought forward its investment in a new coating line which is now commissioned and capable of producing films to fit up to 100-inch TVs. These developments resulted in Wah Hong placing the first commercial orders for CFQDs from Nanoco in June 2017.

In September 2017, Nanoco's technology was featured at Touch Taiwan 2017, a leading show for the world's display industry, where major global television manufacturers showcased state-of-the-art 4K and 8K UHD products incorporating Nanoco's CFQD® Fine Color Film™.

At the Display Innovation Conference, which ran alongside Touch Taiwan 2017, Nanoco's Senior Vice President of Global Sales gave a presentation on the growing demand from manufacturers and consumers for quantum dots as a method of achieving wider colour gamut and enhanced picture quality in the next generation of displays.

The trade show further validated the growing interest in state-of-the-art TVs and monitors incorporating CFQDs to enhance colour performance.

Over the last year we have developed a very active pipeline of sales opportunities. The Group's key short-term focus is on TV and monitor projects with near term potential. Moving projects through the sales pipeline into commercial sales takes many months of intensive work. Each customer has its own requirements and it is difficult to predict how long customers will take to reach mass production status. Nanoco/Wah Hong will continue to develop further opportunities in the future.

Commercialisation - Dow

Nanoco signed an exclusive licence agreement with Dow in January 2013 for Dow to manufacture, market and sell Nanoco's heavy-metal-free quantum dots into the display market. Last year Dow and Nanoco agreed to amend the licensing agreement from exclusive to non-exclusive. Dow sells product under the TREVISTA™ brand, manufactured in its facility in South Korea. We generate royalty revenue from Dow calculated as a percentage of Dow's sales of Nanoco CFQDs.

Dow continues to see growing interest in CFQDs and is making good progress with several Display customers considering movement to quantum dot technology.

Commercialisation - Merck

Merck is the leading German science and technology company focused on healthcare, life sciences and performance materials, and the manufacturer of approximately 60% of the world's liquid crystals used in liquid crystal displays. Nanoco will generate revenue from sales made by Merck from licence fees and royalties on Merck manufactured sales.

Nanoco has completed the transfer of its technology to Merck, which has successfully produced pilot plant scale quantities of CFQDs at its facility in Darmstadt, Germany. Merck is carefully watching the development of the CFQD market and will continue to purchase CFQD products from Nanoco until it decides to build its own manufacturing facility. Merck is actively engaged with its potential customers on various CFQD application projects and sells under the Livilux® brand.

Commercialisation - staying ahead of the technology curve

In May 2017 Nanoco signed a collaboration and joint development agreement ("JDA") with Kyulux Inc. Under the agreement, Nanoco's CFQDs will be combined with Kyulux's technology to create future generation hybrid OLED/QLED display technology with superior qualities to existing products in the display market.

Nanoco also strengthened its intellectual property in electroluminescence with the acquisition of a patent portfolio from Kodak Eastman. The Group now benefits from c. 600 patents and patent applications.

These activities will ensure that Nanoco remains at the forefront of next generation products for the display industry.

Other markets

While display was the Group's primary focus during the year, Nanoco continued to develop its other target markets of life sciences and specialised lighting. The Board has decided that the solar assets are non-core and the divestment process is progressing with discussions currently ongoing with interested parties.

Other markets - life sciences

Nanoco Life Sciences ("NLS") is led by Dr Imad Nassani, who joined Nanoco in 2009 and is one of the pioneers of the use of quantum dots in the sector. Quantum dots have favourable optical and physical properties compared with organic dyes and radioisotopes, but their use in medical applications has been hindered due to the presence of cadmium. Because Nanoco's quantum dots are free of cadmium, they can be used in the human body in, for example, cancer diagnosis and surgical imaging. The initial focus of the division is on illumination of cancerous

tumours to facilitate their surgical removal and then, with further development, cancer diagnosis. The NLS team has made great strides in the development of safe and clinically acceptable quantum dot nanomaterials based on the Company's heavy-metal-free quantum dot technology.

The promising outcome from our efforts may be used to develop quantum dot probes for the early detection of aggressive tumours such as pancreatic and bladder cancers. This, in addition to our burgeoning relationships with commercial and research institutions at the cutting edge of the battle against cancer, shows the scope of our ambition and the value of our technology.

We are now working to prepare the technology for clinical trials. To date Nanoco's life sciences efforts have been grant funded. In early July 2017, we announced that we had been awarded an Innovate UK grant for a VIVODOTS™ programme in conjunction with University College London targeting pancreatic cancer.

In September 2017, we announced that we had signed a Commercial Supply and License Agreement with a US corporation in the field of medical devices. Nanoco will supply film product and other technologies for light therapy products for the treatment of pain, soft tissue injury and dermatological conditions such as acne and skin anti-ageing.

Other markets - specialised lighting

Nanoco's CFQDs can tune the colour of light emitted by LEDs such that any particular shade of light can be produced by tailoring the wavelength. This ability to fine-tune the colour of light has very broad applications, such as the use of LEDs in homes and offices and in specific, niche applications where a particular wavelength of light is required.

Nanoco's commercial strategy in lighting is to focus on niche lighting applications which take advantage of quantum dots' unique properties. Lighting products for the horticulture and photodynamic therapy industries are being developed with partners and continue to make headway in line with management's expectations.

Restriction of Hazardous Substances ("RoHS")

In August 2017, as part of the RoHS Directive, the European Commission announced its decision to prohibit cadmium in TVs and displays sold in Europe from 31 October 2019. Cadmium in lighting products was prohibited immediately, although they are not commercially available. This was a much needed decision, which will provide market certainty as to the end date for cadmium to be used in TVs and other display products such as monitors. The RoHS Directive recognises cadmium as the most hazardous heavy metal. We believe that this legislation should accelerate the move from cadmium to cadmium-free QDs in TVs and displays and we are already seeing increased interest from the industry. The lack of a decision on the future of cadmium led to stronger than anticipated competition from non-CFQD solutions.

People

This has been a challenging year for the Company and I would like to take this opportunity to thank all staff for their hard work and commitment throughout the period.

Post-year end

In October 2017 we announced a placing of 19.99% of our issued share capital to raise £8.0 million net of expenses.

This fundraise significantly strengthens Nanoco's balance sheet and puts it on a strong footing for the opportunities ahead.

Outlook

The Group continues to make solid progress in commercialisation of CFQDs and expects to announce further progress from its healthy pipeline of projects. With the market developing more slowly than originally anticipated, we remain focused on careful management of costs ahead of the anticipated sales ramp-up. The Board remains confident that the opportunity for CFQDs, both in display and in other sectors, remains exciting and, moreover, that the Company has a competitive lead in this technology

Michael Edelman
Chief Executive Officer
16 November 2017

Financial Review

Results

Revenue for the year was £1.3 million (2016: £0.5 million) and the loss before tax was £10.9 million (2016: £12.6 million). As has historically been the case, the timing of revenue receipts in the form of milestone and joint development payments from strategic partners continued to be the major determinant of the results of the business.

Revenue and other operating income increased by 112% to £1.6 million (2016: £0.8 million).

Revenue from sale of products and services rendered accounted for 53.6% (2016: 67.1%) with the balance of revenues being royalty and licence income. Revenue from sale of products was £0.5 million (2016: £0.2 million).

Revenue from royalties and licences and revenue from the joint development agreements which comprise payments from customers to gain preferential treatment in terms of supply or pricing do not have an associated cost of sale.

During the previous year, two significant licences were signed which generated invoices for upfront payments of £1.2 million. This revenue is expected to be recognised as follows:

Year ending 31 July	£ million
2016 - actual	—
2017 - actual	0.5
2018 to 2023	0.7
Total	1.2

The invoices for the upfront payments were settled in the first half of the 2017 financial year. At 31 July 2017 the amount included in deferred revenue is £0.7 million (2016: £1.2 million). The timing of revenue recognition of upfront licence fees is dependent upon the nature of each contract. One of the agreements signed in July 2016 is for a seven-year period and the upfront licence fee, which was settled in August 2016, is to be recognised as revenue evenly over the seven-year duration of the agreement. Future milestone payments received under this agreement are subject to performance conditions and at this stage the likelihood of this cannot be determined with reasonable certainty. Thus, any future milestone payments will be recognised as revenue once the milestone has been achieved. The other upfront payment has been recognised as revenue in the year ended 31 July 2017.

The impact of this is as follows:

	2017 £ million	2016 £ million
Value of sales invoices ("billings") raised during the year	1.1	1.9
Release of deferred revenue	0.5	—
Less revenue deferred to future years	—	(1.2)
Revenue and other operating income per consolidated statement of comprehensive income	1.6	0.7

The generation of cash for the Group is important and as a result the level of billings is considered a key performance indicator. Billings have fallen compared to 2016 as no new licence agreements have been signed during the year.

The decrease in research and development expenditure of £0.5 million to £5.5 million (2016: £6.0 million) comprises a decrease in R&D labour costs of £0.6 million offset by increases in material costs and utilities totalling £0.1 million. Labour costs represent 72.8% (2016: 76.6%) of total R&D costs with the balance of costs comprising materials and utility costs.

Total payroll costs (before the charge for share-based payments) decreased by £0.8 million to £5.7 million (2016: £6.5 million). The decrease in payroll costs is attributable to a 14.7% decrease in average staff numbers compared to 2016 largely due to a cost reduction programme implemented during the year to extend the Company's cash runway. Staff numbers have fallen further since 31 July 2017 and currently we have c. 80 staff. The decrease in administrative costs of £0.6 million to £6.8 million reflects decreased employee costs (£0.2 million), professional fees (£0.1 million), depreciation (£0.3 million) and material costs (£0.2 million) offset by increases in amortisation (£0.2 million).

Non-GAAP measures

The non-GAAP measures of adjusted operating loss and LBITDA are provided to show the operating loss and loss before interest and tax, before including non-cash charges and large non-recurring items, in order to give a clearer understanding of the loss for the year that reflects cash outflow from the business.

The adjusted operating loss* for the year ended 31 July 2017 was £10.7 million (2016: £12.5 million).

Loss before interest, tax, amortisation and share-based payment charges ("LBITDA") was as shown in the table below.

The decrease of £1.7 million in LBITDA compared to 2016 is a result of the higher revenue leading to an increase in gross profit of £0.8 million and a decrease in R&D and administrative costs of £1.1 million (excluding the items added back in the below table).

With interest income (net of interest payments) decreasing by £0.1 million, the loss before tax was £10.9 million (2016: loss of £12.6 million).

The tax credit for the year is £1.8 million (2016: £2.0 million). The tax credit to be claimed, in respect of R&D spend, is £1.8 million (2016: £2.0 million). Overseas corporation tax was £0.1 million during the year (2016: £nil). There was no deferred tax credit or charge (2016: £nil).

	2017 £ million	2016 £ million
Operating loss	(10.9)	(12.8)
Share-based payment charge	0.2	0.3
Adjusted operating loss*	(10.7)	(12.5)
Depreciation	0.7	1.0
Amortisation	0.5	0.3
LBITDA	(9.5)	(11.2)

* Adjusted basic loss per share was 4.36 pence (2016: 3.36 pence). Basic loss per share was 4.47 pence (2016: loss of 4.05 pence). No dividend has been proposed (2016: £nil).

Cash flow and balance sheet

During the year cash, cash equivalents, deposits and short-term investments decreased by £8.8 million to £5.7 million (2016: £14.5 million) largely as a result of the cash outflow from operating activities. Tax credits of £2.0 million (2016: £1.8 million) were received during the year.

The Group increased its capital spend in tangible assets in the year to a total of £0.4 million (2016: £0.2 million). Expenditure incurred in registering patents totalled £1.2 million (2016: £0.9 million) during the year reflecting the Group's continued focus on developing and registering intellectual property. Capitalised patent spend is amortised over ten years in line with the established Group's accounting policy.

On 14 November 2017, the Company's shareholders voted in favour of a placing of 19.99% of the Company's issued share capital raising approximately £8.0 million net of costs. This fundraise strengthens the Company's balance sheet significantly and eliminates immediate going concern issues. Further details are set out in note 2c) to the preliminary results.

Treasury activities and policies

The Group manages its cash deposits prudently. The placing proceeds and other cash balances will be invested across a number of financial institutions which have investment-grade credit ratings. The deposits will range from instant access to six-month term deposits. Cash deposits are regularly reviewed by the Board and cash forecasts are updated monthly to ensure that there is sufficient cash available for foreseeable requirements. More details on the Group's treasury policies are provided in note 26 to the preliminary results.

Credit risk

The Group only trades with recognised, creditworthy third parties. Receivable balances are monitored on an ongoing basis and any late payments are promptly investigated to ensure that the Group's exposure to bad debts is not significant.

Foreign exchange management

The Group invoices most of its revenues in US Dollars and Euros. The Group is therefore exposed to movements

in those currencies relative to Sterling. The Group uses forward currency contracts to fix the exchange rate on invoiced or confirmed foreign currency receipts. The Group does not take out forward contracts against uncertain or forecast income.

There were no open forward contracts as at July 2017 (2016: none). The Group's net profit and its equity are exposed to movements in the value of Sterling relative to the US Dollar. The indicative impact of movements in the Sterling exchange rate on profits and equity based on the retranslation of the closing balance sheet are summarised in note 26 to the preliminary results and were based on the year-end position.

Forward-looking statements

The foregoing disclosures contain certain forward-looking statements. Although Nanoco believes that the expectations reflected in these forward-looking statements are reasonable, it can give no assurance that these expectations will materialise. Because the expectations are subject to risks and uncertainties, actual results may vary significantly from those expressed or implied by the forward-looking statements based upon a number of factors. Nanoco undertakes no obligation to revise or update any forward statement to reflect events or circumstances after the date of this Interim Report.

Summary

Following the placing completed in November 2017, the Group is well positioned to exploit the exciting opportunities ahead.

David Blain
Chief Financial Officer
16 November 2017

Directors' responsibility statement

In accordance with the FCA's Disclosure and Transparency Rules, the Directors listed on the Company's website (www.nanocotechnologies.com/about-us/board-directors) confirm, to the best of their knowledge, that:

1. the preliminary results have been prepared in accordance with IFRS as adopted by the European Union and give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group and Company and the undertakings included in the consolidation taken as a whole; and
2. the foregoing reviews and statements, includes a fair review of the development and performance of the business and the position of the Group and the undertakings included in the consolidation taken as a whole, together with a description of the principal risks and uncertainties faced by the Group.

By order of the Board

David Blain
Chief Financial Officer
16 November 2017

Consolidated statement of comprehensive income for the year ended 31 July 2017

	Notes	2017 £'000	2016 £'000
Revenue	4	1,326	474
Cost of sales		(257)	(177)
Gross profit		1,069	297
Other operating income	5	281	284
Operating expenses			
Research and development expenses		(5,508)	(5,995)
Administrative expenses		(6,784)	(7,367)
Operating loss	6	(10,942)	(12,781)
- before share-based payments		(10,700)	(12,511)
- share-based payments	22	(242)	(270)
Finance income	8	44	193
Finance expense	8	—	(12)
Loss on ordinary activities before taxation		(10,898)	(12,600)
Taxation	9	1,788	1,993
Loss on ordinary activities after taxation for the year and total comprehensive loss for the year		(9,110)	(10,607)
Loss per share			
Basic and diluted loss for the year	10	(3.82)p	(4.47)p

The loss for the current and preceding year arises from the Group's continuing operations and is attributable to the equity holders of the Parent.

The basic and diluted loss per share are the same as the effect of share options is anti-dilutive.

Consolidated statement of changes in equity for the year ended 31 July 2017

Group	Issued equity capital £'000	Share-based payment reserve £'000	Merger reserve £'000	Revenue reserve £'000	Total £'000
At 31 July 2015	58,057	2,445	(1,242)	(30,160)	29,100
Loss for the year and total comprehensive loss for the year	—	—	—	(10,607)	(10,607)
Share-based payments	—	270	—	—	270
At 31 July 2016	58,057	2,715	(1,242)	(40,767)	18,763
Loss for the year and total comprehensive loss for the year	—	—	—	(9,110)	(9,110)
Issue of share capital on exercise of options (note 21)	552	—	—	—	552
Share-based payments	—	242	—	—	242
At 31 July 2017	58,609	2,957	(1,242)	(49,877)	10,447

Company statement of changes in equity for the year ended 31 July 2017

Company	Issued equity capital £'000	Share-based payment reserve £'000	Capital redemption reserve £'000	Revenue reserve £'000	Total £'000
At 31 July 2015	135,925	2,445	4,402	(25,292)	117,480
Profit for the year and total comprehensive profit for the year	—	—	—	167	167
Share-based payments	—	270	—	—	270
At 31 July 2016	135,925	2,715	4,402	(25,125)	117,917
Profit for the year and total comprehensive profit for the year	—	—	—	30	30
Issue of share capital on exercise of options (note 21)	552	—	—	—	552
Share-based payments	—	242	—	—	242
At 31 July 2017	136,477	2,957	4,402	(25,095)	118,741

Statement of financial position at 31 July 2017

Registered no. 05067291

	Notes	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Assets					
Non-current assets					
Tangible fixed assets	11	865	—	1,260	—
Intangible assets	12	2,619	—	2,423	—
Investment in subsidiaries	14	—	66,564	—	66,322
		3,484	66,564	3,683	66,322
Current assets					
Inventories	15	188	—	208	—
Trade and other receivables	16	669	47,957	2,045	42,988
Income tax asset	9	1,837	—	1,970	—
Short-term investments and cash on deposit	17	—	—	5,000	5,000
Cash and cash equivalents	17	5,706	4,670	9,511	4,057
		8,400	52,627	18,734	52,045
Assets held for sale	13	535	—	—	—
Total assets		12,419	119,191	22,417	118,367
Liabilities					
Current liabilities					
Trade and other payables	18	1,318	—	2,443	—
Financial liabilities	19	—	—	32	—
Deferred revenue	20	102	—	531	—
		1,420	—	3,006	—
Non-current liabilities					
Other payables	18	—	450	—	450
Deferred revenue	20	552	—	648	—
		552	450	648	450
Total liabilities		1,972	450	3,654	450
Net assets		10,447	118,741	18,763	117,917
Capital and reserves					
Issued equity capital	21	58,609	136,477	58,057	135,925
Share-based payment reserve	22	2,957	2,957	2,715	2,715
Merger reserve	23	(1,242)	—	(1,242)	—
Capital redemption reserve	23	—	4,402	—	4,402
Retained earnings	24	(49,877)	(25,095)	(40,767)	(25,125)
Total equity		10,447	118,741	18,763	117,917

The Parent Company's result for the period ended 31 July 2017 was a profit of £30,000 (2016: £167,000). There were no other recognised gains or losses in either the current or prior year.

Cash flow statements

for the year ended 31 July 2017

	Notes	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
(Loss)/profit before tax		(10,898)	30	(12,600)	167
Adjustments for:					
Net finance income	8	(44)	(30)	(181)	(167)
Depreciation of tangible fixed assets	11	741	—	991	—
Amortisation of intangible assets	12	482	—	298	—
Share-based payments	22	242	—	270	—
Changes in working capital:					
Decrease in inventories		20	—	—	—
Decrease/(increase) in trade and other receivables		1,365	—	(1,143)	—
(Decrease)/increase in trade and other payables		(1,125)	—	503	—
(Decrease)/increase in deferred revenue	20	(525)	—	1,179	—
Cash outflow from operating activities		(9,742)	—	(10,683)	—
Research and development tax credit received		2,000	—	1,830	—
Overseas corporation tax paid		(79)	—	(7)	—
Net cash outflow from operating activities		(7,821)	—	(8,860)	—
Cash flow from investing activities					
Purchases of tangible fixed assets	11	(374)	—	(189)	—
Purchases of intangible fixed assets	12	(1,185)	—	(900)	—
Cash advance to subsidiary	17	—	(4,980)	—	(11,153)
Decrease in cash placed on deposit	17	5,000	5,000	15,000	15,000
Interest received		55	41	224	198
Net cash inflow from investing activities		3,496	61	14,135	4,045
Cash flow from financing activities					
Proceeds from issues of ordinary share capital		552	552	—	—
Interest paid		—	—	(12)	—
Loan repayment	19	(32)	—	(63)	—
Net cash inflow/(outflow) from financing activities		520	552	(75)	—
(Decrease)/increase in cash and cash equivalents		(3,805)	613	5,200	4,045
Cash and cash equivalents at the start of the year		9,511	4,057	4,311	12
Cash and cash equivalents at the end of the year		5,706	4,670	9,511	4,057
Monies placed on deposit at the end of the year		—	—	5,000	5,000
Cash, cash equivalents and deposits at the end of the year	17	5,706	4,670	14,511	9,057

Notes to the preliminary results

1. Reporting entity

Nanoco Group plc (“the Company”), a public company limited by shares, is on the premium list of the London Stock Exchange. The Company and is incorporated and domiciled in England, UK. The Registered Number is 05067291 and the address of its registered office is 46 Grafton Street, Manchester M13 9NT.

These Group preliminary results consolidate those of the Company and its subsidiaries (together referred to as “the Group” and individually as “Group entities”) for the year ended 31 July 2017.

The preliminary results of Nanoco Group plc and its subsidiaries (the “Group”) for the year ended 31 July 2017 were authorised for issue by the Board of Directors on 16 November 2017 and the statements of financial position were signed on the Board’s behalf by Dr Michael Edelman.

The preliminary results do not constitute statutory financial statements within the meaning of section 435 of the Companies Act 2006. A copy of the statutory financial statements for the year ended 31 July 2016 has been delivered to the Registrar of Companies. The Auditors’ opinion on those financial statements was unqualified, did not draw attention to any matters by way of an emphasis of matter paragraph, and it contained no statement under section 498(2) or section 498(3) of the Companies Act 2006.

The Company has elected to take the exemption under section 408 of the Companies Act 2006 not to present the Parent Company’s income statement.

The significant accounting policies adopted by the Group are set out in note 3.

2. Basis of preparation

(a) Statement of compliance

The Group’s and Parent Company’s preliminary results have been prepared in accordance with International Financial Reporting Standards as adopted by the European Union (“IFRS”) and IFRS Interpretations Committee (“IFRS”) interpretations as they apply to the preliminary results of the Group for the year ended 31 July 2017.

(b) Basis of measurement

The Parent Company and Group preliminary results have been prepared on the historical cost basis. There were no assets or liabilities that were measured at fair value at 31 July 2017.

(c) Going concern

In assessing whether the going concern basis is an appropriate basis for preparing the 2017 Annual Report, the Directors have utilised their detailed forecasts for the period to 31 July 2019 which take into account the Group’s current and expected business activities, its cash balance of £5.7 million as shown in its balance sheet at 31 July 2017, the cash raised of £8.0 million following the shareholder approval of the placing on 14 November 2017, the principal risks and uncertainties it faces and other factors impacting its future performance.

The key assumptions underpinning the assessment during the period cover the following areas:

- commercialisation of CFQD[®] products through existing contractual arrangements;
- ability to manufacture and supply sufficient CFQD[®] products to meet partner demand; and
- continued investment in research and development.

The principal, plausible downside stress tests in accordance with the Group’s principal risks and uncertainties are:

- a significant reduction in projected CFQD[®] sales volumes due to either a reduction in demand from the Group’s partners or an inability to supply;
- lower selling prices and higher manufacturing costs;
- ability of Wah Hong to produce final products that meet our quality standards;
- ability of Wah Hong to generate sufficient demand at attractive price levels to generate sufficient operating margins for the Group and achieve targets for future milestone payments;
- the length of time it will take our licence partners (Dow and Merck) to contract new customers and supply products in volume to generate royalty income and achieve targets for milestone payments;
- likelihood of new inventions making CFQD[®] products obsolete; and
- higher investment in research and development.

Various sensitivity analyses have been performed to reflect possible downside scenarios as referred to above. Even in the worst case scenario whereby the Group achieves no cash revenues for the twelve months following the date of the Annual Report, the Company and the Group have sufficient resources to continue in operational existence for the foreseeable future.

At the time of approving the preliminary results the Directors have a reasonable expectation that the Company and the Group have adequate resources to continue in operational existence for the foreseeable future. Thus they continue to adopt the going concern basis of accounting in preparing the 2017 Annual Report.

(d) Functional and presentational currency

These preliminary results are presented in Pounds Sterling, which is the presentational currency of the Group and the functional currency of the Company. All financial information presented has been rounded to the nearest thousand.

(e) Use of estimates and judgements

The preparation of preliminary results requires management to make estimates and judgements that affect the amounts reported for assets and liabilities as at the reporting date and the amounts reported for revenues and expenses during the year. The nature of estimation means that actual amounts could differ from those estimates. Estimates and judgements used in the preparation of the preliminary results are continually reviewed and revised as necessary. While every effort is made to ensure that such estimates and judgements are reasonable, by their nature they are uncertain and, as such, changes in estimates and judgements may have a material impact on the preliminary results.

In the process of applying the Group's accounting policies, management has made the following judgements, which have the most significant effect on the amounts recognised in the consolidated preliminary results.

Equity-settled share-based payments

The determination of share-based payment costs requires: the selection of an appropriate valuation method; consideration as to the inputs necessary for the valuation model chosen; and judgement regarding when and if performance conditions will be met. Inputs required for this arise from judgements relating to the future volatility of the share price of Nanoco and comparable companies, the Company's expected dividend yields, risk-free interest rates and expected lives of the options. The Directors draw on a variety of sources to aid in the determination of the appropriate data to use in such calculations. The share-based payment expense is most sensitive to vesting assumptions (below) and to the future volatility of the future share price factor. Further information is included in note 3.

Outlook

The key assumptions concerning the future and other key sources of estimation uncertainty at the reporting date, which have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year, are those relating to the estimation of the number of share options that will ultimately vest (note 22). The Group based its assumptions and estimates on parameters available when the consolidated preliminary results were prepared. Existing circumstances and assumptions about future developments, however, may change due to market changes or circumstances arising that are beyond the control of the Group. Such changes are reflected in the assumptions when they occur.

Impairment of intellectual property and tangible fixed assets

Management judgement is required to determine the carrying value of these assets. As the Group has not, to date, made a profit the carrying value of these assets may need to be impaired. During the year an extensive review was undertaken to identify which patents are of no further value to Nanoco and should be allowed to lapse. As a consequence, patents with a value of £77,000 (2016: £nil) have been fully impaired in these preliminary results. Judgements are based on the information available at each reporting date, which includes the progress with testing and certification and progress on, for example, establishment of commercial arrangements with third parties. Management has adopted the prudent approach of amortising patent registration costs over a ten-year period, which is substantially shorter than the life of the patent. For external patents acquired the same rule is adopted unless the remaining life of the patent is shorter, in which event the cost of acquisition is amortised over the remaining life of the patent.

Taxation

Management judgement is required to determine the amount of tax assets that can be recognised, based upon the likely timing and level of future taxable profits together with an assessment of the effect of future tax planning strategies. Further information is included in note 9.

Research and development

Careful judgement by the Directors is applied when deciding whether the recognition requirements for development costs have been met. This is necessary as the economic success of any product development is uncertain until such time as technical viability has been proven and commercial supply agreements are likely to be achieved. Judgements are based on the information available at each reporting date which includes the progress with testing and certification and progress on, for example, establishment of commercial arrangements with third parties. In addition, all internal activities related to research and development of new products are continuously monitored by the Directors. Further information is included in note 3.

Revenue recognition

Judgements are required as to whether and when contractual milestones have been achieved and in turn the period over which development revenue should be recognised. Management judgements are similarly required to determine whether services or rights under licence agreements have been delivered so as to enable licence revenue to be recognised. Further information is included in note 3.

3. Significant accounting policies

The accounting policies set out below are consistent with those of the previous financial year and are applied consistently by Group entities.

(a) Basis of consolidation

The Group preliminary results consolidate the preliminary results of Nanoco Group plc and the entities it controls (its subsidiaries) drawn up to 31 July each year.

Subsidiaries are all entities over which the Group has the power over the investee (i.e. existing rights that give it the current ability to direct the relevant activities of the investee), exposure, or rights, to variable returns from its involvement with the investee and ability to use its power over the investee to affect its returns. All Nanoco Group plc's subsidiaries are 100% owned. Subsidiaries are fully consolidated from the date control passes.

The acquisition method of accounting is used to account for the acquisition of subsidiaries by the Group. The costs of an acquisition are measured as the fair value of the assets given, equity instruments issued and liabilities incurred or assumed at the date of exchange, plus costs directly attributable to the acquisition. Identifiable assets acquired and liabilities and contingent liabilities assumed in a business combination are initially measured at fair value at acquisition date irrespective of the extent of any minority interest. The difference between the cost of acquisition of shares in subsidiaries and the fair value of the identifiable net assets acquired is capitalised as goodwill and reviewed annually for impairment. Any deficiency in the cost of acquisition below the fair value of identifiable net assets acquired (i.e. discount on acquisition) is recognised directly in the consolidated statement of comprehensive income.

In the consolidated preliminary results, income and cash flow statement items for Group entities with a functional currency other than Sterling are translated into Sterling at monthly average exchange rates, which approximate to the actual rates, for the relevant accounting periods.

All intra-group transactions, balances and unrealised gains on transactions between Group companies are eliminated on consolidation. Subsidiaries' accounting policies are amended where necessary to ensure consistency with the policies adopted by the Group.

(b) Foreign currency transactions

Transactions in foreign currencies are initially recorded in the functional currency by applying the spot rate ruling at the date of the transaction. Monetary assets and liabilities denominated in foreign currencies (including those of the Group's US subsidiary) are retranslated at the functional currency rate of exchange ruling at the reporting date. All differences are taken to the consolidated statement of comprehensive income.

Non-monetary items that are measured in terms of historical cost in a foreign currency are translated using the exchange rates as at the dates of the initial transactions. Non-monetary items measured at fair value in a foreign currency are translated using the exchange rates at the date when the fair value was determined.

(c) Segmental reporting

An operating segment is a component of an entity that engages in business activities from which it may earn revenues and incur expenses, whose operating results are regularly reviewed by the entity's chief operating decision maker to make decisions about resources to be allocated to the segment and assess its performance, and for which discrete financial information is available. As at the reporting date the Company operated with only a single segment, being the research, development and manufacture of products and services based on high performance nanoparticles.

(d) Revenue recognition

Revenue is recognised to the extent that it is probable that economic benefits will flow to the Group and the revenue can be reliably measured. Revenue is measured at the fair value of the consideration received or receivable for the sale of goods or services, excluding discounts, rebates, VAT and other sales taxes or duties.

The Group's revenues to date comprise amounts earned under joint development agreements, individual project development programmes and material supply and licence agreements and revenue from the sale of quantum dot products.

Revenues received in advance of work performed from development programmes are recognised on a straight-line basis over the period that the development work is being performed as measured by contractual milestones. Revenue is not recognised where there is uncertainty regarding the achievement of such milestones and where the customer has the right to recoup advance payments.

Contractual payments received from licence agreements are recognised as revenue when goods, services or rights and entitlements are supplied. Upfront licence fees, where control over the intellectual property has been retained by the Group, are taken to income on a straight-line basis over the initial period of the contract in accordance with the continuing obligations under the contract.

Revenue from the sale of products is recognised at the point of transfer of risks and rewards of ownership, which is generally on shipment of product.

(e) Government grants

Government grants are recognised when it is reasonable to expect that the grants will be received and that all related conditions are met, usually on submission of a valid claim for payment.

Government grants of a revenue nature are recognised as other operating income in the consolidated statement of comprehensive income.

Government grants relating to capital expenditure are deducted in arriving at the carrying amount of the asset.

(f) Cost of sales

Cost of sales comprises the labour, materials and power costs incurred in the generation of revenue from products sold. Revenue from royalties and licences and revenue from the rendering of services, which comprise payments from customers to gain preferential treatment in terms of supply or pricing, do not have an associated cost of sale.

(g) Operating loss

Operating losses are stated after research and development and administration expenses but before finance charges and taxation.

(h) Research and development

Research costs are charged in the consolidated statement of comprehensive income as they are incurred. Development costs will be capitalised as intangible assets when it is probable that future economic benefits will flow to the Group.

Such intangible assets will be amortised on a straight-line basis from the point at which the assets are ready for use over the period of the expected benefit, and will be reviewed for impairment at each reporting date based on the circumstances at the reporting date.

The criteria for recognising expenditure as an asset are:

- it is technically feasible to complete the product;
- management intends to complete the product and use or sell it;
- there is an ability to use or sell the product;
- it can be demonstrated how the product will generate probable future economic benefits;
- adequate technical, financial and other resources are available to complete the development, use and sale of the product; and
- expenditure attributable to the product can be reliably measured.

Development costs are currently charged against income as incurred since the criteria for their recognition as an asset are not met, the exception being the costs of filing and maintenance of intellectual property as these are considered to generate probable future economic benefits and are capitalised as intangible assets (see note 12).

(i) Lease payments

Rentals payable under operating leases, which are leases where the lessor retains a significant proportion of the risks and rewards of the underlying asset, are charged in the consolidated statement of comprehensive income on a straight-line basis over the expected lease term.

Lease incentives received are recognised as an integral part of the total lease expense, over the term of the lease.

(j) Finance income and expense

Finance income comprises interest income on funds invested and changes in the fair value of financial assets at fair value through the consolidated statement of comprehensive income. Interest income is recognised as interest accrues using the effective interest rate method.

Finance expense comprises interest expense on borrowings. All borrowing costs are recognised using the effective interest method.

(k) Income tax

Income tax expense comprises current and deferred tax. Income tax expense is recognised in the consolidated statement of comprehensive income except to the extent that it relates to items recognised directly in equity or in other comprehensive income.

Current income tax assets (including research and development income tax credit) and liabilities for the current and prior periods are measured at the amount expected to be recovered from, or paid to, the tax authorities. The tax rates and tax laws used to compute the amount are those that are enacted or substantively enacted by the reporting date.

Deferred income tax is recognised on all temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the preliminary results with the following exceptions:

- where the temporary difference arises from the initial recognition of goodwill or of an asset or liability in a transaction that is not a business combination that at the time of the transaction affects neither accounting nor taxable profit or loss; and
- in respect of taxable temporary differences associated with investments in subsidiaries where the timing of the reversal of the temporary differences can be controlled and it is probable that the temporary differences will not reverse in the foreseeable future.

Deferred income tax assets and liabilities are measured on an undiscounted basis using the tax rates and tax laws that have been enacted or substantively enacted by the balance sheet date and which are expected to apply when the related deferred tax asset is realised or the deferred tax liability is settled.

Deferred income tax assets are recognised to the extent that it is probable that future taxable profits will be available against which differences can be utilised. An asset is not recognised to the extent that the transfer of economic benefits in the future is uncertain.

Deferred income tax assets and liabilities are offset only if a legally enforceable right exists to set off current tax assets against current tax liabilities, the deferred income taxes relate to the same taxation authority and that authority permits the Group to make a single payment.

(l) Property, plant and equipment

Property, plant and equipment assets are recognised initially at cost. After initial recognition, these assets are carried at cost less any accumulated depreciation and any accumulated impairment losses. Cost comprises the aggregate amount paid and the fair value of any other consideration given to acquire the asset and includes costs directly attributable to making the asset capable of operating as intended.

Depreciation is computed by allocating the depreciable amount of an asset on a systematic basis over its useful life and is applied separately to each identifiable component.

The following bases and rates are used to depreciate classes of assets:

Laboratory infrastructure	– straight line over remainder of lease period (two to ten years)
Fixtures and fittings	– straight line over five years
Office equipment	– straight line over three years
Plant and machinery	– straight line over five years

The carrying values of tangible fixed assets are reviewed for impairment if events or changes in circumstances indicate that the carrying value may not be recoverable, and are written down immediately to their recoverable amount. Useful lives and residual values are reviewed annually and where adjustments are required these are made prospectively.

A tangible fixed asset item is derecognised on disposal or when no future economic benefits are expected to arise from the continued use of the asset. Any gain or loss arising on the derecognition of the asset is included in the consolidated statement of comprehensive income in the period of derecognition.

(m) Intangible assets

Intangible assets acquired either as part of a business combination or from contractual or other legal rights are recognised separately from goodwill provided they are separable and their fair value can be measured reliably. This includes the costs associated with acquiring and registering patents in respect of intellectual property rights.

Where consideration for the purchase of an intangible asset includes contingent consideration, the fair value of the contingent consideration is included in the cost of the asset.

Where intangible assets recognised have finite lives, after initial recognition their carrying value is amortised on a straight-line basis over those lives. The nature of those intangibles recognised and their estimated useful lives are as follows:

Patents – straight line over ten years

(n) Impairment of assets

At each reporting date the Group reviews the carrying value of its plant, equipment and intangible assets to determine whether there is an indication that these assets have suffered an impairment loss. If any such indication exists, or when annual impairment testing for an asset is required, the Company makes an assessment of the asset's recoverable amount.

An asset's recoverable amount is the higher of an asset's or cash-generating unit's fair value less costs to sell and its value in use and is determined for an individual asset, unless the asset does not generate cash inflows that are largely independent of those from other assets or groups of assets. Where the carrying value of an asset exceeds its recoverable amount, the asset is considered impaired and is written down to its recoverable amount. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset. In determining fair value less costs of disposal, an appropriate valuation model is used and these calculations are corroborated by valuation multiples or other available fair value indicators. Impairment losses on continuing operations are recognised in the consolidated statement of comprehensive income in those expense categories consistent with the function of the impaired asset.

An assessment is made at each reporting date as to whether there is any indication that previously recognised impairment losses may no longer exist or may have decreased. If such indication exists, the recoverable amount is estimated. A previously recognised impairment loss is reversed only if there has been a change in the assumptions used to determine the asset's recoverable amount since the last impairment loss was recognised. If that is the case the carrying amount of the asset is increased to its recoverable amount. That increased amount cannot exceed the carrying amount that would have been determined, net of depreciation, had no impairment loss been recognised for the asset in prior years. Such reversal is recognised in the consolidated statement of comprehensive income unless the asset is

carried at a revalued amount, in which case the reversal is treated as a valuation increase. After such a reversal the depreciation charge is adjusted in future periods to allocate the asset's revised carrying amount, less any residual value, on a systematic basis over its remaining useful life.

The carrying values of plant and equipment as at the reporting date have not been subjected to impairment charges. An impairment loss in the year in respect of intangible fixed assets is described in note 12.

(o) Assets held for sale

Non-current assets are classified as held for sale if their carrying amounts will be recovered principally through a sale transaction, rather than through continuing use. They are measured at the lower of carrying amount and fair value less costs to sell, which are incremental costs directly attributable to the disposal of the asset. The carrying value is assessed at each reporting period.

Property, plant and equipment and intangible assets are not amortised once classified as held for sale. Assets classified as held for sale are presented separately as current assets in the statement of financial position.

(p) Investments in subsidiaries

Investments in subsidiaries are stated in the Company statement of financial position at cost less provision for any impairment.

(q) Inventories

Inventories are stated at the lower of cost and net realisable value. Cost based on latest contractual prices includes all costs incurred in bringing each product to its present location and condition. Net realisable value is based on estimated selling price less any further costs expected to be incurred to disposal. Provision is made for slow-moving or obsolete items.

(r) Financial instruments

Financial assets and financial liabilities are recognised when the Group becomes party to the contractual provisions of the relevant instrument and derecognised when it ceases to be party to such provisions. Such assets and liabilities are classified as current if they are expected to be realised or settled within twelve months after the balance sheet date. Financial assets and liabilities are initially recognised at fair value and subsequently measured at either fair value or amortised cost including directly attributable transaction costs.

The Group has the following categories of financial assets and liabilities:

Loans and receivables

(i) Trade and other receivables

Trade receivables, which generally have 30 to 60-day terms, are recognised and carried at the lower of their original invoiced value and recoverable amount. The time value of money is not material.

Provision is made when there is objective evidence that the Group will not be able to recover balances in full. Significant financial difficulties faced by the customer, probability that the customer will enter bankruptcy or financial reorganisation and default in payments are considered indicators that the trade receivable is impaired. The amount of the provision is the difference between the asset's carrying amount and the present value of estimated future cash flows, discounted at the original effective interest rate. The carrying value of the asset is reduced through the use of an allowance account, and the amount of the loss is recognised in the consolidated statement of comprehensive income within administrative expenses.

When a trade receivable is uncollectable, it is written off against the allowance account for trade receivables.

(ii) Cash, cash equivalents and short-term investments

Cash and cash equivalents comprise cash at hand and deposits with maturities of three months or less. Short-term investments comprise deposits with maturities of more than three months, but no greater than twelve months.

Financial liabilities at amortised cost

(i) Trade and other payables

Trade and other payables are non-interest bearing and are initially recognised at fair value. They are subsequently measured at amortised cost using the effective interest rate method.

(ii) Loans

Obligations for loans and borrowings are measured initially at fair value and subsequently interest-bearing loans are measured at fair value.

(s) Share capital

Proceeds on issue of shares are included in shareholders' equity, net of transaction costs. The carrying amount is not re-measured in subsequent years.

(t) Shares held by the Employee Benefit Trust ("EBT")

Following the exercise on 2 August 2016 upon which jointly owned shares were transferred to the sole beneficiary, there are no further shares held in the EBT.

(u) Share-based payments

Equity-settled share-based payment transactions are measured with reference to the fair value at the date of grant, recognised on a straight-line basis over the vesting period, based on the Company's estimate of shares that will eventually vest. Fair value is measured using a suitable option pricing model.

At each reporting date before vesting, the cumulative expense is calculated, representing the extent to which the vesting period has expired and management's best estimate of the achievement or otherwise of non-market conditions and the number of equity instruments that will ultimately vest. The movement in cumulative expense since the previous reporting date is recognised in the consolidated statement of comprehensive income, with a corresponding entry in equity.

Where the terms of an equity-settled award are modified or a new award is designated as replacing a cancelled or settled award, the cost based on the original award terms continues to be recognised over the original vesting period. In addition, an expense is recognised over the remainder of the new vesting period for the incremental fair value of any modification, based on the difference between the fair value of the original award and the fair value of the modified award, both as measured on the date of the modification. No reduction is recognised if this difference is negative.

Where awards are granted to the employees of the subsidiary company, the fair value of the awards at grant date is recorded in the Company's preliminary results as an increase in the value of the investment with a corresponding increase in equity via the share-based payment reserve.

(v) Defined contribution pension scheme

The Group operates a defined contribution pension scheme. The assets of the scheme are held separately from those of the Company in an independently administered fund. The amounts charged against profits represent the contributions payable to the scheme in respect of the accounting period.

(w) New accounting standards and interpretations

The following amendments to IFRS became mandatory in this reporting period. The Group has applied the following standards and amendments for the first time for the reporting period commencing 1 August 2016:

- Disclosure initiative – amendments to IAS 1 Presentation of Financial Statements;
- Clarification of acceptable methods of depreciation and amortisation – amendments to IAS 16 Property, Plant and Equipment and IAS 38 Intangible Assets;
- Accounting for acquisitions of interests in joint operations – amendments to IFRS 11; and
- Annual improvements to IFRS 2012-2014 cycle.

The adoption of these amendments did not have an impact on the current period or any prior period.

New standards not yet adopted

The IASB has published three new accounting standards relevant to the Group that will be mandatory in future periods. These standards have not been early adopted in these consolidated preliminary results. The Group's initial assessment of the future impact of these new standards is as follows:

IFRS 9 Financial Instruments (effective for annual periods beginning on or after 1 January 2018)

The new financial instruments standard introduces changing to accounting for credit losses, including related disclosures. The new standard also introduces changes to how financial assets are measured on an ongoing basis to align with the asset's cash flow characteristics and the business model in which the asset is held. In addition the Company will be required to measure expected losses in respect of balances due from other Group companies.

As the Group does not have any complex financial instruments, this is not expected to impact on reported performance.

IFRS 15 Revenue from Contracts with Customers (effective for annual periods beginning on or after 1 January 2018)

The new revenue standard provides a clearer and more detailed five-step model for revenue recognition and disclosure in a framework that is designed to improve comparability of revenue amounts over a range of industries, companies and geographical boundaries. The standard can significantly change an issuer's timing of recognition of revenue, among other changes.

Revenue is often not only a key performance measure in its own right, but also a starting point for other performance measures, such as operating income, net income and earnings per share; key analytical ratios, such as margins, return on equity and return on assets; and valuation metrics, such as revenue multiples and price-to-earnings ratios.

The standard is effective for Nanoco in the year ending 31 July 2019. The new standard provides enhanced detail and a five-step revenue recognition approach to reflect the transfer of goods and services to customers.

IFRS 15 requires the identification of deliverables in contracts with customers that qualify as performance obligations. The transaction price receivable from customers must be allocated between the Company's performance obligations under contracts on a relative stand-alone basis. Where goods or services sold together are concluded to be distinct performance obligations, revenue allocated to such goods or services is recognised when the control of goods passes to the customer or as the service is delivered.

Detailed reviews of revenue arrangements are under way and will continue into 2017/18 as we finalise our assessment of the impact of the new standard. Key matters arising from the assessment relate to the identification of performance obligations and determining when they are satisfied.

Based on work to date we expect that one contract will be impacted by IFRS 15 in that an upfront licence fee, currently recognised over the life of the agreement (seven and a half years) under IAS 18, will be recognised over time, based on the number of units of product sold under IFRS 15 thereby deferring revenues and profits recognised under IAS 18 in the early years of the agreement. We continue to work on other agreements but we do not expect them to be significantly impacted by the implementation of IFRS 15.

When IFRS 15 is adopted, it can be applied either on a fully retrospective basis, requiring the restatement of the comparative periods presented in the preliminary results, or with the cumulative retrospective impact of IFRS 15 applied as an adjustment to equity on the date of adoption. When the latter approach is applied it is necessary to disclose the impact of IFRS 15 on each line item in the preliminary results in the reporting period. A cumulative retrospective approach as modified in accordance with the standard is expected to be taken.

IFRS 16 Leases (effective for annual periods beginning on or after 1 January 2019)

The new leases standard changes the previous lease accounting model so a lessee will now reflect more assets and liabilities arising from leases on its balance sheet. This can substantially affect key financial ratios, including ratios related to debt covenants or debt-to-equity ratios.

The Group expects to recognise certain assets and liabilities (as outlined in note 25) on initial recognition of this standard, although it is not expected to have a major impact on the consolidated income statement as the Group only has a limited number of off-balance sheet leases classified as operating leases under current lease accounting requirements per IAS 17 Leases.

4. Segmental information

Operating segments

At 31 July 2017 the Group operated as one segment, being the research, development and manufacture of products and services based on high performance nanoparticles. This is the level at which operating results are reviewed by the chief operating decision maker (i.e. the Chief Executive Officer) to make decisions about resources, and for which financial information is available. All revenues have been generated from continuing operations and are from external customers.

	31 July 2017 £'000	31 July 2016 £'000
Analysis of revenue		
Products sold	470	204
Rendering of services	241	114
Royalties and licences	615	156
	1,326	474

There were two material customers who generated revenue of £832,000 and £150,000 (2016: one material customer amounting to £114,000).

The Group operates in four main geographic areas, although all are managed in the UK. The Group's revenue per geographical segment based on the customer's location is as follows:

	31 July 2017 £'000	31 July 2016 £'000
Revenue		
UK	167	20
Europe (excluding UK)	843	42
Asia	163	135
USA	153	277
	1,326	474

All the Group's assets are held in the UK and all of its capital expenditure arises in the UK. The loss on ordinary activities before taxation and attributable to the single segment was £10,898,000 (2016: £12,600,000).

5. Other operating income

	31 July 2017 £'000	31 July 2016 £'000
Government grants	213	284
Other income - insurance proceeds	68	—
	281	284

6. Operating loss

	31 July 2017 £'000	31 July 2016 £'000
Operating loss is stated after charging:		
Depreciation of tangible fixed assets (see note 11)	741	991
Amortisation of intangible assets (see note 12)	405	298
Impairment of intangible assets (see note 12)	77	—
Staff costs (see note 7)	5,947	6,801
Foreign exchange losses	43	4
Research and development expense*	5,508	5,995
Share-based payments	242	270
Operating lease rentals (see note 25):		
Land and buildings	733	723

* Included within research and development expense are staff costs totalling £4,011,000 (2016: £4,590,000) also included in note 7.

Auditor's remuneration

Audit services:		
– Fees payable to Company auditor for the audit of the Parent and the consolidated accounts	60	20
– Auditing the accounts of subsidiaries pursuant to legislation	30	23
Fees payable to Company auditor for other services:		
– Assurance services in connection with the review of interim results	22	8
– Services relating to corporate finance transactions not covered above	30	—
Total auditor's remuneration	142	51

7. Staff costs

	31 July 2017 £'000	31 July 2016 £'000
Wages and salaries	4,947	5,622
Social security costs	453	567
Pension contributions	305	342
Share-based payments	242	270
	5,947	6,801
Directors' remuneration (including benefits in kind) included in the aggregate remuneration above comprised:		
Emoluments for qualifying services	1,071	1,227

Directors' emoluments (excluding social security costs and long-term incentives, but including benefits in kind) disclosed above include £327,000 paid to the highest paid Director (2016: £349,000).

Pension contributions into money purchase schemes were made for four Directors (2016: four).

Aggregate gains made by Directors during the year following the exercise of share options and jointly owned EBT shares were £nil (2016: £nil).

Not included in the costs reported above are share awards to be made to Directors under the deferred bonus plan amounting to £nil (2016: £166,000) which are included in the Directors' remuneration report. The awards are recognised in the income statement by way of a share-based payment charge over the deferral period as required by IFRS 2.

An analysis of the highest paid Director's remuneration is included in the Directors' remuneration report.

The average number of employees during the year (including Directors) was as follows:

Group	31 July 2017 Number	31 July 2016 Number
Directors	8	9
Laboratory and administrative staff	102	120
	110	129

8. Finance income and expense

Group	31 July 2017 £'000	31 July 2016 £'000
Finance income		
Bank interest receivable	44	193
Finance expense		
Loan interest payable	—	(12)
	44	181

Bank interest receivable includes £nil (2016: £12,000), which is receivable after the year end.

9. Taxation

The tax credit is made up as follows:

Group	31 July 2017 £'000	31 July 2016 £'000
Current income tax		
Research and development income tax credit receivable	(1,837)	(1,970)
Adjustment in respect of prior years	(30)	(30)
Overseas corporation tax	79	7
	(1,788)	(1,993)
Deferred tax		
Charge for the year	—	—
Total income tax credit	(1,788)	(1,993)

The adjustments in respect of prior years relate to research and development income tax credits. The research and development income tax for the year ended 31 July 2016 was submitted in May 2017 and the repayment was received in June 2017. The income tax receivable shown in the statement of financial position is the R&D tax credit receivable reported above.

The tax assessed for the year varies from the standard rate of corporation tax as explained below:

Group	31 July 2017 £'000	31 July 2016 £'000
Loss on ordinary activities before taxation	(10,898)	(12,600)
Tax at standard rate of 19.67% (2016: 20%)	(2,143)	(2,520)
Effects of:		
Expenses not deductible for tax purposes	78	243
Additional reduction for research and development expenditure	(1,405)	(1,556)
Surrender of research and development relief for repayable tax credit	2,492	2,758
Research and development tax credit receivable	(1,837)	(1,970)
Share options exercised (CTA 2009 Pt 12 deduction)	(17)	—
Overseas corporation tax	79	7
Losses and share-based payment charges carried forward not recognised in deferred tax	995	1,075
Adjustment in respect of prior years	(30)	(30)
Tax credit in income statement	(1,788)	(1,993)

The Group has accumulated losses available to carry forward against future trading profits of £29.1 million (2016: £24.3 million).

Deferred tax liabilities/(assets) provided/(recognised) at a standard rate of 17% (2016: 20%) are as follows:

Group	31 July 2017 £'000	31 July 2016 £'000
Accelerated capital allowances	83	189
Share-based payments	—	(189)
Tax losses	(83)	—
	—	—

The Group also has deferred tax assets, measured at a standard rate of 17% (2016: 20%), in respect of share-based payments of £369,000 (2016: £455,000) and tax losses of £4,951,000 (2016: £4,850,000) which have not been recognised as an asset as it is not yet probable that future taxable profits will be available against which the assets can be utilised.

10. Earnings per share

Group	31 July 2017 £'000	31 July 2016 £'000
Loss for the financial year attributable to equity shareholders	(9,110)	(10,607)
Share-based payments	242	270
Loss for the financial year before share-based payments	(8,868)	(10,337)
Weighted average number of shares		
Ordinary shares in issue	238,180,510	237,077,578
Adjusted loss per share before share-based payments (pence)	(3.72)	(4.36)
Basic loss per share (pence)	(3.82)	(4.47)

Diluted loss per share has not been presented above as the effect of share options issued is anti-dilutive.

11. Property, plant and equipment

Group	Laboratory infrastructure £'000	Office equipment, fixtures and fittings £'000	Plant and machinery £'000	Total £'000
Cost				
At 1 August 2015	2,578	230	4,652	7,460
Additions	67	26	96	189
At 31 July 2016	2,645	256	4,748	7,649
Additions	10	139	225	374
Reclassified as assets held for sale (note 13)	—	—	(203)	(203)
At 31 July 2017	2,655	395	4,770	7,820
Depreciation				
At 1 August 2015	2,007	161	3,230	5,398
Provided during the year	394	47	550	991
At 31 July 2016	2,401	208	3,780	6,389
Provided during the year	213	55	473	741
Reclassified as assets held for sale (note 13)	—	—	(175)	(175)
At 31 July 2017	2,614	263	4,078	6,955
Net book value				
At 31 July 2017	41	132	692	865
At 31 July 2016	244	48	968	1,260

The aggregate original cost of tangible assets now fully depreciated but considered to be still in use is £5,081,000 (2016: £3,301,000).

12. Intangible assets

Group	Patents £'000
Cost	
At 1 August 2015	2,803
Additions	900
At 31 July 2016	3,703
Additions	1,185
Reclassified as assets held for sale (note 13)	(597)
At 31 July 2017	4,291
Amortisation	
At 1 August 2015	982
Provided during the year	298
At 31 July 2016	1,280
Provided during the year	405
Impairment charge	77
Reclassified as assets held for sale (note 13)	(90)
At 31 July 2017	1,672
Net book value	
At 31 July 2017	2,619
At 31 July 2016	2,423

Intangible assets are amortised on a straight-line basis over ten years. Amortisation provided during the period is recognised in administrative expenses. The Group does not believe that any of its patents in isolation are material to the business. The aggregate original cost of intangible assets now fully depreciated but considered to be still in use is £161,000 (2016: £154,000). During the year an extensive review was undertaken to identify which patents are of no further value to Nanoco and should be allowed to lapse. As a consequence, patents with a value of £77,000 (2016: £nil) have been fully impaired in these preliminary results. This impairment charge is recognised within administrative expenses.

Contingent consideration of \$150,000 is payable in respect of a purchase of patents made during the year. The amount is payable if the Group reaches a revenue target in a future reporting period. The addition is recorded above at the directors' estimate of fair value of the consideration payable.

13. Assets held for sale

	Plant and machinery £'000	Intellectual property £'000	Total £'000
At 1 August 2016	—	—	—
Reclassified during the period	28	507	535
At 31 July 2017	28	507	535

These assets represent those held for sale following the Board's decision to dispose of the equipment and intellectual property arising from the Group's studies on solar power generation using CIGS (copper indium gallium selenide) materials. The Directors consider that these assets will be disposed of within twelve months through a sale transaction. Upon reclassification no re-measurement was necessary and therefore there have been no gains or losses recognised. All of the assets are held by the one operating segment.

14. Investment in subsidiaries

Company	Shares £'000	Loans £'000	Loan impairment £'000	Total £'000
At 1 August 2015	63,235	23,103	(20,286)	66,052
Increase in respect of share-based payments	—	270	—	270
At 31 July 2016	63,235	23,373	(20,286)	66,322
Increase in respect of share-based payments	—	242	—	242
At 31 July 2017	63,235	23,615	(20,286)	66,564

By subsidiary	Shares £'000	Loans £'000	Loan impairment £'000	Total £'000
Nanoco Tech Limited	63,235	—	—	63,235
Nanoco Life Sciences Limited	—	20,286	(20,286)	—
Nanoco Technologies Limited	—	3,329	—	3,329
At 31 July 2017	63,235	23,615	(20,286)	66,564

Loans to subsidiary undertakings carry no interest and are repayable on demand. Further information in relation to these loans is given in note 27.

Subsidiary undertakings	Country of incorporation	Principal activity	Share of issued ordinary share capital	
			31 July 2017	31 July 2016
Nanoco Life Sciences Limited	England and Wales	Research and development	100%	100%
Nanoco Tech Limited	England and Wales	Holding company	100%	100%
Nanoco Technologies Limited*	England and Wales	Manufacture and development of nanoparticles	100%	100%
Nanoco 2D Materials Limited***	England and Wales	Research and development	100%	—
Nanoco US Inc.**	USA	Management services	100%	100%

All subsidiaries incorporated in England and Wales are registered at 46 Grafton Street, Manchester M13 9NT.

Nanoco US Inc. is registered at 33 Bradford Street, Concord, MA 01742.

With the exception of the two companies footnoted below all other shareholdings are owned by Nanoco Group plc.

* Share capital is owned by Nanoco Tech Limited.

** Nanoco US Inc. is a wholly owned subsidiary of Nanoco Tech Limited. It was formed in July 2013 primarily in order to provide the services of US-located staff to the rest of the Group.

*** Nanoco 2D Materials Limited was incorporated on 6 February 2017.

15. Inventories

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Raw materials, finished goods and consumables	188	—	208	—

A total of £80,000 (2016: £85,000) was included in cost of sales with respect to inventory during the year.

16. Trade and other receivables

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Trade receivables	111	—	1,455	—
Prepayments and accrued income	329	—	422	12
Inter-company short-term loan to subsidiary	—	47,957	—	42,976
Other receivables	229	—	168	—
	669	47,957	2,045	42,988

Trade receivables are non-interest bearing and are generally due and paid within 30 to 60 days. The Directors consider that the carrying amount of trade and other receivables approximates to their fair value and that no impairment is required at the reporting date. Therefore there is no provision for impairment at the balance sheet date (2016: £nil).

Trade receivables are denominated in the following currency:

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
US Dollars	15	—	1,032	—
Euros	53	—	423	—
Sterling	43	—	—	—
	111	—	1,455	—

At 31 July the analysis of trade receivables that were past due but not impaired was as follows:

	Not yet due £'000	Due but not impaired £'000	Past due but not impaired >90 days £'000	Past due but not impaired 120 to 150 days £'000	Total £'000
2017	105	6	—	—	111
2016	1,374	30	8	43	1,455

17. Cash, cash equivalents and deposits

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Short-term investments and cash on deposit	—	—	5,000	5,000
Cash and cash equivalents	5,706	4,670	9,511	4,057
	5,706	4,670	14,511	9,057

Under IAS 7, cash held on long-term deposits (being deposits with maturity of greater than three months and no more than twelve months) that cannot readily be converted into cash has been classified as a short-term investment. The maturity on this investment was less than twelve months at the reporting date.

Cash and cash equivalents at 31 July 2017 include deposits with original maturity of three months or less of £nil (2016: £5,000,000).

An analysis of cash, cash equivalents and deposits by denominated currency is given in note 26.

18. Trade and other payables

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Current				
Trade payables	814	—	1,093	—
Other payables	136	—	185	—
Accruals	368	—	1,165	—
	1,318	—	2,443	—
Non-current				
Long-term loan from subsidiary	—	450	—	450
	—	450	—	450

The Directors consider that the carrying amount of trade and other payables approximates to their fair value. Interest is not charged on inter-company loans (2016: no interest). The average credit period taken is 37 days (2016: 45 days).

19. Financial liabilities

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Other loan				
Current	—	—	32	—
	—	—	32	—

The loan was unsecured, bore interest at 2% above base rate, was repayable in quarterly instalments and was fully repaid in 2017.

20. Deferred revenue

	31 July 2017 Group £'000	31 July 2017 Company £'000	31 July 2016 Group £'000	31 July 2016 Company £'000
Current	102	—	531	—
Non-current	552	—	648	—
	654	—	1,179	—

Deferred revenue arises under IFRS where upfront licence fees are accounted for on a straight-line basis over the initial term of the contract or where performance criteria have not been satisfied in the accounting period.

21. Issued equity capital

Group	Number	Share capital £'000	Share premium £'000	Reverse acquisition reserve £'000	Total £'000
Allotted, called up and fully paid ordinary shares of 10p					
At 31 July 2015 and 31 July 2016	237,077,578	23,708	112,217	(77,868)	58,057
Shares issued on exercise of options	1,213,750	121	431	—	552
At 31 July 2017	238,291,328	23,829	112,648	(77,868)	58,609

The balances classified as share capital and share premium include the total net proceeds (nominal value and share premium respectively) on issue of the Company's equity share capital, comprising ordinary shares.

The retained loss and other equity balances recognised in the Group preliminary results reflect the consolidated retained loss and other equity balances of Nanoco Tech Limited immediately before the business combination which was reported in the year ended 31 July 2009. The consolidated results for the period from 1 August 2008 to the date of the acquisition by the Company are those of Nanoco Tech Limited. However, the equity structure appearing in the Group preliminary results reflects the equity structure of the legal parent, including the equity instruments issued under the share-for-share exchange to effect the transaction. The effect of using the equity structure of the legal parent gives rise to an adjustment to the Group's issued equity capital in the form of a reverse acquisition reserve.

Shares issued on exercise of options

1,213,750 options were exercised this year (2016: nil) with an average exercise price of 45.5 pence.

Company	Number	Share capital £'000	Share premium £'000	Total £'000
Allotted, called up and fully paid ordinary shares of 10p				
At 31 July 2015 and 31 July 2016	237,077,578	23,708	112,217	135,925
Shares issued on exercise of options	1,213,750	121	431	552
At 31 July 2017	238,291,328	23,829	112,648	136,477

22. Share-based payment reserve

Group and Company	£'000
At 31 July 2015	2,445
Share-based payments	270
At 31 July 2016	2,715
Share-based payments	242
At 31 July 2017	2,957

The share-based payment reserve accumulates the corresponding credit entry in respect of share-based payment charges. Movements in the reserve are disclosed in the consolidated statement of changes in equity.

A charge of £242,000 has been recognised in the statement of comprehensive income for the year (2016: £270,000).

Share option schemes

The Group operates the following share option schemes, all of which are operated as Enterprise Management Incentive ("EMI") schemes insofar as the share options being issued meet the EMI criteria as defined by HM Revenue & Customs. Share options issued that do not meet EMI criteria are issued as unapproved share options, but are subject to the same exercise performance conditions.

Nanoco Group plc Long Term Incentive Plan ("LTIP")

Grant in November 2011

Share options were granted to staff and Executive Directors on 25 November 2011. The options granted to Executive Directors were subject to commercial targets being achieved. The exercise price was set at 50 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. Share options issued to staff vest over a three-year period from the date of grant and are exercisable until the tenth anniversary of the award, but are not subject to performance conditions.

Grant in October 2012

Share options were granted to staff and Executive Directors on 22 October 2012. The options granted to Executive Directors were subject to commercial targets being achieved. The exercise price was set at 57 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. Share options issued to staff vest over a three-year period from the date of grant and are exercisable until the tenth anniversary of the award, but are not subject to performance conditions.

Grant in May 2014

Share options were granted to certain staff on 23 May 2014. The exercise price was set at 89 pence, being the average closing share price on the day preceding the issue of the share options. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of three years from the date of grant and are exercisable until the tenth anniversary of the award. The awards are not subject to performance conditions. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting. No options were granted to Executive Directors.

Grant in October 2014

Share options were granted to an Executive Director on 14 October 2014. The exercise price was set at 10 pence, being the nominal value of the share. The fair value benefit is measured using a binomial model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of three years from the date of grant and are exercisable until the tenth anniversary of the award. The awards are subject to performance conditions which were amended during the year so as to be in line with the 2015 LTIP scheme. As a result of the modification, the fair value of the award was reduced. However, in accordance with IFRS 2 no change was made to the charge in the preliminary results. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting.

Grant in December 2015

Following approval of the new scheme at the 2015 AGM, share options were granted to four Executive Directors at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of the three-year performance period subject to meeting performance criteria and are exercisable after a two-year holding period until the tenth anniversary of the award.

Grant in April 2016

Share options were granted to an employee on 12 April 2016 at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued. The options vest at the end of a three-year performance period subject to meeting performance criteria and are exercisable until the tenth anniversary of the award.

Grant in November 2016

Options were granted to the Executive Directors and all eligible staff on 22 November 2016 at nil cost. The fair value benefit is measured using a stochastic model, taking into account the terms and conditions upon which the share options were issued and are subject to a two-year holding period. The options vest at the end of a three-year performance period subject to meeting performance criteria and are exercisable until the tenth anniversary of the award.

Other awards

Share options are awarded to management and key staff as a mechanism for attracting and retaining key members of staff. The options are issued at either market price on the day preceding grant, or in the event of abnormal price movements, at an average market price for the week preceding grant date. On 14 October 2015, unapproved options were granted to a member of staff with an exercise price of 56.5 pence. These options vest over a three-year period from the date of grant with performance conditions and are exercisable until the tenth anniversary of the award. Vesting of the award is subject to the employee remaining a full-time member of staff at the point of vesting. The fair value benefit is measured using a binomial valuation model, taking into account the terms and conditions upon which the share options were issued.

Shares held in the Employee Benefit Trust ("EBT")

The Group operates a jointly owned EBT share scheme for senior management under which the trustee of the Group-sponsored EBT acquired shares in the Company jointly with a number of employees. The shares were acquired pursuant to certain conditions set out in jointly owned agreements ("JOA"). Subject to meeting the performance criteria conditions set out in the JOA, the employees are able to exercise an option to acquire the trustee's interests in the jointly owned EBT shares at the option price. The jointly owned EBT shares issued on 1 September 2006 had met the option conditions on 1 August 2010 and the option to gain sole ownership was exercised by the option holder on 2 August 2016.

The fair value benefit is measured using a binomial valuation model, taking into account the terms and conditions upon which the jointly owned shares were issued.

The following tables illustrate the number and weighted average exercise prices of, and movements in, share options and jointly owned EBT shares during the year.

Group and Company	Share options Number	EBT Number	2017 total Number	2016 total Number
Outstanding at 1 August	13,477,933	530,089	14,008,022	12,534,322
Granted during the year	4,158,821	—	4,158,821	1,695,368
Exercised during the year	(1,213,750)	(530,089)	(1,743,839)	—
Forfeited/cancelled	(286,688)	—	(286,688)	(221,668)
Outstanding at 31 July	16,136,316	—	16,136,316	14,008,022
Exercisable at 31 July	9,784,814	—	9,784,814	11,528,654

Weighted average exercise price of options

Group and Company	2017 Pence	2016 Pence
Outstanding at 1 August	48.9	51.9
Granted during the year	—	5.0
Exercised during the year	31.7	—
Forfeited/cancelled	22.6	61.7
Outstanding at 31 July	38.6	48.9

The weighted average exercise price of options granted during the year to 31 July 2017 was nil (2016: 5 pence). The range of exercise prices for options outstanding at the end of the year was nil–110 pence (2016: nil–110 pence).

For the share options outstanding as at 31 July 2017, the weighted average remaining contractual life is 6.4 years (2016: 6.1 years).

The following table lists the inputs to the models used for the years ended 31 July 2017 and 31 July 2016.

Group and Company	Market performance-linked grants		Non-market performance-linked grants	
	2017	2016	2017	2016
Expected volatility	59%	54%	n/a	n/a
Risk-free interest rate	0.26%	0.85%	n/a	n/a
Expected life of options (years' average)	3	3	3	n/a
Weighted average exercise price	nil	5.0p	nil	n/a
Weighted average share price at date of grant	49p	56.5p	49p	n/a
Model used	Stochastic	Stochastic	Binomial	Binomial

The expected life of the options is based on historical data and is not necessarily indicative of exercise patterns that may occur. The expected volatility reflects the assumption that the historical volatility is indicative of future trends, which may also not necessarily be the actual outcome.

Certain awards are subject to a holding period after vesting. A Finnerty model has been used to determine a discount for the lack of marketability of the shares.

23. Merger reserve and capital redemption reserve

Merger reserve

Group	£'000
At 31 July 2015, 31 July 2016 and 31 July 2017	(1,242)

The merger reserve arises under section 612 of the Companies Act 2006 on the shares issued by Nanoco Tech Limited to acquire Nanoco Technologies Limited as part of a simple Group reorganisation on 27 June 2007.

Capital redemption reserve

Company	£'000
At 31 July 2015, 31 July 2016 and 31 July 2017	4,402

The capital redemption reserve arises from the off-market purchase of deferred shares on 4 May 2005 and their subsequent cancellation.

24. Movement in revenue reserve and treasury shares

Group	Retained deficit £'000	Treasury shares £'000	Total revenue reserve £'000
At 31 July 2015	(30,063)	(97)	(30,160)
Loss for the year	(10,607)	—	(10,607)
At 31 July 2016	(40,670)	(97)	(40,767)
Loss for the year	(9,110)	—	(9,110)
Exercise of options	(77)	77	—
At 31 July 2017	(49,857)	(20)	(49,877)

During the year, the option to convert jointly owned EBT shares into sole ownership was exercised (2016: nil) for an aggregate consideration of £1 (2016: £nil).

Retained deficit represents the cumulative loss attributable to the equity holders of the Parent Company.

Treasury shares include the value of Nanoco Group plc shares issued as jointly owned equity shares and held by the Nanoco Group-sponsored EBT jointly with a number of the Group's employees. At 31 July 2017 no shares in the Company were held by the EBT (2016: 530,089). In addition there are 12,222 (2016: 12,222) treasury shares not held by the EBT.

Company	Retained deficit £'000	Treasury shares £'000	Total revenue reserve £'000
At 31 July 2015	(25,195)	(97)	(25,292)
Profit for the year	167	—	167
At 31 July 2016	(25,028)	(97)	(25,125)
Profit for the year	30	—	30
Exercise of options	(77)	77	-
At 31 July 2017	(25,075)	(20)	(25,095)

25. Commitments

Operating lease commitments

The Group leases premises under non-cancellable operating lease agreements. The future aggregate minimum lease and service charge payments under non-cancellable operating leases are as follows:

	31 July 2017 Group £'000	31 July 2016 Group £'000
Land and buildings:		
Not later than one year	779	594
After one year but not more than five years	2,039	1,551
After five years	—	226
	2,818	2,371

26. Financial risk management

Overview

This note presents information about the Group's exposure to various kinds of financial risks, the Group's objectives, policies and processes for measuring and managing risk, and the Group's management of capital.

The Board of Directors has overall responsibility for the establishment and oversight of the Group's risk management framework. The Executive Directors report regularly to the Board on Group risk management.

Capital risk management

The Company reviews its forecast capital requirements on a half-yearly basis to ensure that entities in the Group will be able to continue as a going concern while maximising the return to stakeholders.

The capital structure of the Group consists of equity attributable to equity holders of the Parent, comprising issued share capital, reserves and retained earnings as disclosed in notes 21 to 24 and in the Group statement of changes in equity. At 31 July 2017 total equity was £10,447,000 (2016: £18,763,000).

The Company is not subject to externally imposed capital requirements.

Liquidity risk

The Group's approach to managing liquidity is to ensure that, as far as possible, it will always have sufficient liquidity to meet its liabilities when due, under both normal and stressed conditions, without incurring unacceptable losses or risking damage to the Group's reputation.

The Group manages all of its external bank relationships centrally in accordance with defined treasury policies. The policies include the minimum acceptable credit rating of relationship banks and financial transaction authority limits. Any material change to the Group's principal banking facility requires Board approval. The Group seeks to mitigate the risk of bank failure by ensuring that it maintains relationships with a number of investment-grade banks.

At the reporting date the Group was cash positive with no outstanding borrowings, apart from a long-term loan which is being repaid on a quarterly basis in line with the terms of the loan agreement.

Categorisation of financial instruments

Financial assets/(liabilities)	Loans and receivables £'000	Financial liabilities at amortised cost £'000	Group £'000	Loans and receivables Company £'000
31 July 2017				
Trade receivables	111	—	111	—
Inter-company short-term loan to subsidiary	—	—	—	47,957
Trade and other payables	—	(1,318)	(1,318)	—
Inter-company long-term loan from subsidiary	—	—	—	(450)
	111	(1,318)	(1,207)	47,507

Financial assets/(liabilities)	Loans and receivables £'000	Financial liabilities at amortised cost £'000	Group £'000	Loans and receivables Company £'000
31 July 2016				
Trade receivables	1,455	—	1,455	—
Inter-company short-term loan to subsidiary	—	—	—	42,976
Short-term investments and cash on deposit	5,000	—	5,000	5,000
Trade and other payables	—	(2,443)	(2,443)	—
Inter-company long-term loan from subsidiary	—	—	—	(450)
Financial liabilities	—	(32)	(32)	—
	6,455	(2,475)	3,980	47,526

The values disclosed in the above table are carrying values. The Board considers that the carrying amount of financial assets and liabilities approximates to their fair value.

The main risks arising from the Group's financial instruments are credit risk and foreign currency risk. The Board of Directors reviews and agrees policies for managing each of these risks which are summarised below.

Credit risk

The Group's principal financial assets are cash, cash equivalents and deposits. The Group seeks to limit the level of credit risk on the cash balances by only depositing surplus liquid funds with multiple counterparty banks that have investment-grade credit ratings.

The Group trades only with recognised, creditworthy third parties. Receivable balances are monitored on an ongoing basis with the result that the Group's exposure to bad debts is not significant. The Group's maximum exposure is the carrying amount as disclosed in note 16, which was neither past due nor impaired. All trade receivables are ultimately overseen by the Chief Financial Officer and are managed on a day-to-day basis by the UK credit control team. Credit limits are set as deemed appropriate for the customer.

The maximum exposure to credit risk in relation to cash, cash equivalents and deposits is the carrying value at the balance sheet date.

Foreign currency risk

The Group is exposed to currency risk on sales and purchases that are denominated in a currency other than the respective functional currency of the Company. These are primarily US Dollars ("USD") and Euros. Transactions outside of these currencies are limited.

Almost all of the Company's revenue is denominated in USD. The Group purchases some raw materials, certain services and some assets in USD which partly offsets its USD revenue, thereby reducing net foreign exchange exposure.

The Group may use forward exchange contracts as an economic hedge against currency risk, where cash flow can be judged with reasonable certainty. Foreign exchange swaps and options may be used to hedge foreign currency receipts in the event that the timing of the receipt is less certain. There were no open forward contracts as at 31 July 2017 or at 31 July 2016.

The split of Group assets between Sterling and other currencies at the year end is analysed as follows:

Group	31 July 2017				31 July 2016			
	GBP £'000	EUR £'000	USD £'000	Total £'000	GBP £'000	EUR £'000	USD £'000	Total £'000
Cash, cash equivalents and deposits	5,659	7	40	5,706	14,477	5	29	14,511
Trade receivables	43	53	15	111	—	423	1,032	1,455
Trade payables	(503)	(5)	(306)	(814)	(546)	(49)	(498)	(1,093)
	5,199	55	(251)	5,003	13,931	379	563	14,873

Sensitivity analysis to movement in exchange rates

The following table demonstrates the sensitivity to a reasonably possible change in the Sterling rate against other currencies used within the business, with all other variables held constant, of the Group's loss before tax (due to foreign exchange translation of monetary assets and liabilities) and the Group's equity.

Increase/(decrease)	Impact on loss before tax and Group equity 2017 £'000	Impact on loss before tax and Group equity 2016 £'000
10%	(32)	(83)
5%	(16)	(39)
(5)%	18	35
(10)%	39	68

Interest rate risk

As the Group has no significant borrowings the risk is limited to the reduction of interest received on cash surpluses held at bank which receive a floating rate of interest. The principal impact to the Group is to interest-bearing cash and cash equivalent balances held, which are as set out below:

	31 July 2017			31 July 2016		
	Fixed rate £'000	Floating rate £'000	Total £'000	Fixed rate £'000	Floating rate £'000	Total £'000
Group						
Cash, cash equivalents and deposits	—	5,706	5,706	5,000	9,511	14,511
Company						
Cash, cash equivalents and deposits	—	4,670	4,670	5,000	4,057	9,057

The exposure to interest rate movements is immaterial.

Maturity profile

Set out below is the maturity profile of the Group's financial liabilities at 31 July 2017 based on contractual undiscounted payments, including contractual interest.

	Less than one year £'000	One to five years £'000	Greater than five years £'000	Total £'000
2017				
Financial liabilities				
Trade and other payables	1,318	—	—	1,318
	1,318	—	—	1,318
2016				
Financial liabilities				
Trade and other payables	2,443	—	—	2,443
Other loans (including contractual interest)	32	—	—	32
	2,475	—	—	2,475

Trade and other payables are due within three months.

The Directors consider that the carrying amount of the financial liabilities approximates to their fair value.

As all financial assets are expected to mature within the next twelve months, an aged analysis of financial assets has not been presented.

The Company's financial liability, a long-term loan from a subsidiary undertaking, is due after more than five years.

27. Related party transactions

The Group

There were no sales to, purchases from or, at the year end, balances with any related party.

The Company

The following table summarises inter-company balances at the year end between Nanoco Group plc and subsidiary entities:

	31 July 2017 Notes	31 July 2016 £'000	31 July 2016 £'000
Long-term loans owed to Nanoco Group plc by			
Nanoco Life Sciences Limited		20,286	20,286
Nanoco Technologies Limited*		3,329	3,087
	14	23,615	23,373
Less provision against debt owed by Nanoco Life Sciences Limited	14	(20,286)	(20,286)
		3,329	3,087
Short-term loan owed to Nanoco Group plc by			
Nanoco Technologies Limited**	16	47,957	42,976
Long-term loan owed by Nanoco Group plc to			
Nanoco Tech Limited	18	(450)	(450)

* The movement in the long-term loan due from Nanoco Technologies Limited relates to the recharge in respect of the expense for share-based payments for staff working for Nanoco Technologies Limited and is included in investments.

** The movement in the short-term loan due from Nanoco Technologies Limited relates to transfers of cash balances between the entities for the purposes of investing short-term funds and the funding of trading losses.

There are no formal terms of repayment in place for these loans and it has been confirmed by the Directors that the long-term loans will not be recalled within the next twelve months.

None of the loans are interest bearing.

28. Compensation of key management personnel (including Directors)

	2017 £'000	2016 £'000
Short-term employee benefits	1,218	1,370
Pension costs	73	60
Benefits in kind	32	—
Share-based payments	188	190
	1,511	1,620

The key management team comprises the Directors and two members of staff (2016: two) who are not Directors of the Company. The staff members of the team are the supply chain and compliance director and the applications development director.

29. Post balance sheet events

Following shareholder approval at a general meeting held on 14 November 2017, 47,655,821 shares were issued on 15 November 2017 as a result of a placing of shares at 18 pence each raising cash of £8.0 million net of expenses.