Pharmaceuticals & Biotechnology

Source: Refinitiv

Market data	
EPIC/TKR	**OXB**
Price (p)	503
12m High (p)	800
12m Low (p)	462
Shares (m)	76.8
Mkt Cap (£m)	386.1
EV (£m)	368.5
Free Float	59.3%
Market	LSE

Description

OXB is a UK-based biopharmaceutical company specialising in cell and gene therapies developed using the LentiVector platform technology for creation of gene-delivery vehicles based on viruses. In addition to vector development and manufacture, OXB has a pipeline of therapeutic candidates and undertakes innovative pre-clinical R&D in gene-medicine.

Company information

CEO	John Dawson
CFO	Stuart Paynter
Chairman	Lorenzo Tallarigo

+44 1865 783 000

www.oxfordbiomedica.co.uk

Key shareholders

Directors	0.3%
Vulpes	15.2%
M&G	15.1%
Novo Holdings A/S	10.1%
Canaccord Genuity	5.2%
Hargreaves Lansdown	4.7%
Oaktree	3.5%
Aviva	3.5%

Diary

Mar'20	2019 full-year results

Analysts

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OXFORD BIOMEDICA

Demanding second half

Oxford BioMedica (OXB) is a gene-based medicine viral-vector biopharma company. It offers vector manufacturing and development services, while developing proprietary therapies, with its LentiVector® platform. Growth in gross income and profitability were driven by new licensing deals in 2018. Despite steady growth in 1H'19 group sales (bioprocessing and commercial development), a reduction in licensing income resulted in a first-half operating loss; the absence of significant deals in 2019 has also dampened the shares. Although interim results were in line with our expectations, they highlight the importance of 2H'19 for a full-year profit.

- **Strategy:** OXB has four strategic objectives: i) delivery of vector development services that embed its technology within partners' commercial products; ii) bioprocessing and commercial manufacture of vector; iii) out-licensing of proprietary candidates; and iv) investment in R&D and the LentiVector platform.

- **Interim results:** The results were broadly in line with expectations, with growth in group sales (bioprocessing/commercial development) and a reduction in other income (licensing, grants, royalties) following the significant deal flow in 1H'18. An £11.5m milestone payment was awarded from the Parkinson's partnership.

- **Second-half emphasis:** The annual manufacturing shutdown contributes to back-end-weighted bioprocessing income, compounded this half by the transfer of the Yarnton facility to next-generation processes. Management remains transparent on, and reiterated its confidence in, closing ongoing deal discussions.

- **Risks:** Investors should understand that OXB's core growth trajectory is dependent on the progress of partners' clinical trials and commercialisation of LentiVector-enabled products. OXB is investing heavily in infrastructure for manufacturing capacity and in personnel, which is affecting the bottom line.

- **Investment summary:** In our view, OXB is an exciting company with market-leading technology. It has been extensively validated through large deals with leading (bio)pharmaceutical partners and through UK government grants. On expectations of further licensing income in 2019, OXB will be profitable, cashflow-positive at the operating level, and net cash-positive at the full year.

Financial summary and valuation

Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Gross income (as reported)	**30.8**	**39.3**	**66.9**	**81.1**	**102.8**	**120.3**
Group sales	27.8	31.8	40.6	54.6	78.3	87.0
EBITDA	-7.6	-3.6	11.3	10.1	15.8	29.2
Underlying EBIT	**-11.3**	**-8.0**	**7.0**	**5.3**	**10.5**	**23.9**
Reported EBIT	-11.3	-5.7	10.0	5.3	10.5	23.9
Underlying PBT	-16.2	-17.4	2.4	0.5	10.9	24.4
Statutory PBT	-20.3	-11.8	4.0	0.5	10.9	24.4
Underlying EPS (p)	-22.6	-23.6	7.5	4.1	20.5	41.4
Statutory EPS (p)	-30.0	-14.6	10.1	4.1	20.5	41.4
Net (debt)/cash	**-19.1**	**-22.5**	**-8.9**	**18.6**	**19.0**	**32.4**
Capital increase	17.5	0.4	19.8	54.7	0.1	0.1
P/E (x)	-	-	67.2	122.1	24.5	12.1
EV/sales (x)	-	-	-	6.8	4.7	4.2

Source: Hardman & Co Life Sciences Research

2019 interim results

Key features

- **Gross income:** A 23% increase in group sales (bioprocessing and commercial development) was countered by a 33% reduction in other income (licensing and other operating income), to generate gross income of £32.6m (£36.0m) in 1H'19.
- **Group sales:** Bioprocessing and commercial development income of £18.8m (£15.4m) was slightly below our forecasts. Although commercial development increased on 1H'18, bioprocessing income declined, following a temporary reduction in utilisable manufacturing capacity due to planned shutdowns.
- **Other income:** OXB received considerably less other income (licensing fees, milestones, royalties and grants – near 100% margin) in 1H'19 than in 1H'18 (when deals were signed with BIVV and AXON), recognising £13.7m (£20.6m).
- **Gross margin:** The reduction in other income was evident in the 7.9ppt fall in the gross margin to 64.1% (72.0%). However, on an underlying basis (group sales only), the margin increased 3.5ppts to 37.9%, in accordance with the rise in commercial development work, which commands higher margins than bioprocessing.
- **SG&A:** Tight control of costs meant that administration expenses of -£3.1m (-£2.0m) came in under our forecasts, despite the increased investment in personnel, processes and infrastructure (spread across admin, R&D and COGS).
- **R&D:** As anticipated, ongoing investment in platform technology and R&D talent accelerated group R&D spend by 54% in the period to -£21.7m (-£14.1m). Within this, bioprocessing costs of -£4.1m (-£0.7m) were split out for the first time, which included investment in capacity and costs of the downtime at the Yarnton facility.
- **Profitability:** The reduction in other income, ongoing business expansion and investment in capacity impacted the bottom line. Half-year losses were £4.9m (£9.4m profit) at the underlying (excludes OXB's shares in Orchard Therapeutics) EBIT level and £2.1m (£11.5m profit) at the underlying EBITDA level.
- **Net cash/(debt):** OXB had net cash of £17.6m on 30 June (net debt -£8.9m at 31 December 2018), composed of £26.1m in cash and -£8.5m in lease liabilities. This follows repayment of the £43.6m/$55.0m Oaktree loan using the £53.5m equity investment by Novo Holdings (Novo) on 28 June 2019.
- **Operating cashflow:** Operating cashflow was positive in 1H'19, despite lower licensing income and the fact that the £11.5m Axovant milestone was recognised but not received. OXB's working capital requirement is usually back-end-weighted.

Oxford BioMedica – half-year analysis

Half-year to Jun (£m)	2018 actual	2019 actual	Growth	2019 forecast	Delta Δ
Gross income	36.0	32.6	-9%	36.0	-3.4
Sales	15.4	18.8	23%	22.3	-3.5
COGS	-10.1	-11.7	16%	-15.6	3.9
SG&A (underlying)*	-2.0	-3.1	50%	-6.1	3.1
R&D	-14.1	-21.7	54%	-14.3	-7.5
Other income	20.6	13.7	-33%	13.7	0.1
Underlying EBIT	9.4	-4.9	-152%	-0.1	-4.8
Depreciation & amortisation	-2.1	-2.8	31%	-2.4	0.0
EBITDA	11.5	-2.1	-118%	2.3	-4.4
Reported EBIT	9.4	-4.9	-152%	-1.1	-3.8
Underlying EPS (p)	11.1	-11.8	-206%	-2.0	-9.9
Net cash/(debt)**	5.1	17.6	243%	43.2	-25.6

**Underlying SG&A excludes share-based payments, **Net cash/(debt) re-stated to include lease liabilities;*
Source: Hardman & Co Life Sciences Research

Financials

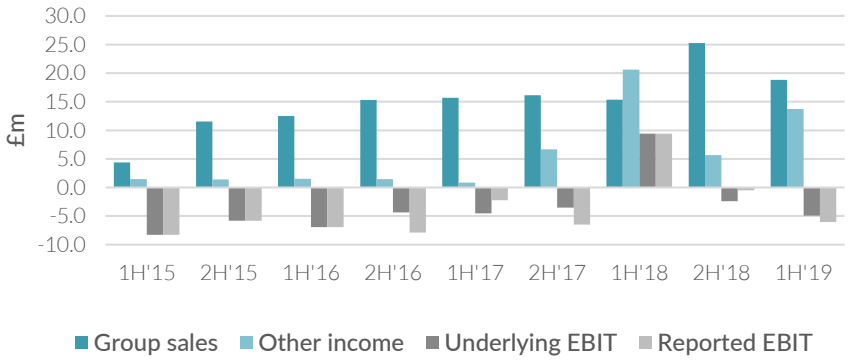
Profitability lumpy

As shown in the chart below, the first half of 2019 delivered an underlying EBIT loss of £4.9m (or £6.1m as reported by the company, which includes re-valuation of the Orchard Therapeutics shares). We reiterated at the 2018 full year[1] that OXB's operating profits are currently dependent on the other income line, which combines licensing income (upfronts and milestones), royalty payments and grants. While group sales are potentially high-margin, depending on the proportion of bioprocessing (25%-50% margin) and commercial development (50%-75% margin), growth in bioprocessing/commercial development has been insufficient to compensate for the lumpiness of other income in delivering consistent half-on-half profits.

The acceleration of bioprocessing (the number of vector batches produced for clinical trials and commercial therapies) and the timing of other income are somewhat out of OXB's control, being dependent on partners' regulatory and launch progress, and on the signing of deals, respectively. A second-half bias in group sales (bioprocessing and commercial development) has been developing over the past four years – due, in part, to the annual manufacturing shutdown in January; this period, bioprocessing income was directly reduced due to the combined effect of the annual shutdown and the transfer of the Yarton facility to the new bioreactor technology ("Process B").

Further affecting reported performance is the inclusion of marked-to-market revaluations of OXB's shares in Orchard Therapeutics within reported EBIT, which causes (albeit relatively minor) fluctuations in reported profits, depending on market sentiment at the time. Finally, OXB is going through a transitional phase, where the growth of the business, investment in innovation and expansion of manufacturing facilities are resulting in significantly higher costs than previously. As noted, SG&A spend (excluding share-based payments) grew 50% to £3.1m (£2.0m) and R&D spend grew 54% to £21.7m (£14.1m) in the first half of 2019.

Overview – income and operating profit



Underlying EBIT excludes revaluations in Orchard Therapeutics shares and share-based payments; Source: Company reports, newswires, Hardman & Co Life Sciences Research

Other income

The £13.7m (£20.6m) other income in the six months to 30 June was composed of the $15m/£11.5m milestone payment from Axovant on the dosing of the second cohort of patients in the Phase II Parkinson's disease trial, a small upfront payment from Santen on signing the collaboration to develop a gene-therapy for a retinal disease, royalty payments from Novartis's sales of Kymriah, and the accrued Innovate UK grant (reported as "other operating income").

[1] Deal-making drives first annual profit

The prior period's £20.6m other income included large upfront payments following the signing of deals with Bioverativ (now Sanofi) and Axovant. The company aims to sign various deals in 2019, and while conversations are ongoing, according to management, none with material near-term value have been announced at the time of writing (15 October 2019).

Sales summary				
£m	1H'18	1H'19	Delta	Growth
Group sales	15.4	18.8	+3.5	23%
Other income	20.6	13.7	-6.9	-33%
Gross income	**36.0**	**32.6**	**-3.4**	**-9%**

Source: Company reports, Hardman & Co Life Sciences Research

Bioprocessing and commercial development

Steady growth in bioprocessing and commercial development

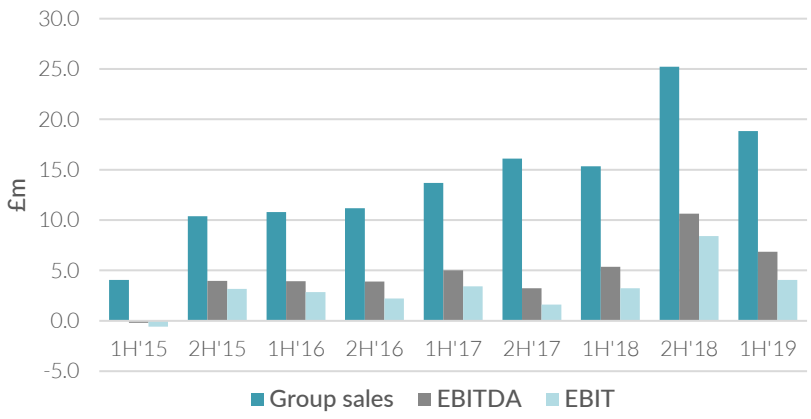
Solid growth of 23% in 1H'19 took group sales to £18.8m (£15.4m). As in prior periods, this included bioprocessing income from the production of batches for Novartis, which are protected up to a minimum offtake (expires mid-2020) agreed with the second deal with Novartis. We estimate that ca.£1.4m was accrued related to the reservation fee.

Summary of income from Novartis		
Income type	Description	Allocation
Bioprocessing income	Fees for manufacture of vector batches for clinical trials and commercial CAR-T sales	Group sales
Commercial development	Fees for process development of vector for CAR-T programmes	Group sales
Capacity reservation fee	Fee paid upfront and recognised as batches are made (agreed on signing second Novartis deal in July 2017)	Group sales
Royalties	Royalties received from sales of commercial CAR-T therapies (low single-digit)	Other income

Source: Company reports, Hardman & Co Life Sciences Research

We believe that accrued income from Axovant for the pre-manufactured vector batches (reported in the "Product" segment) also contributed ca.£1.3m to bioprocessing in 1H'19. The reduction in bioprocessing income in 1H'19 was due to the temporary reduction in utilisable capacity related to the annual shutdown and planned upgrade of the Yarnton facilities. Commercial development fees increased more than 23% as a result of ongoing work for Novartis, Orchard Therapeutics, Sanofi and other partners.

Core trading performance – bioprocessing/commercial development



Pre-R&D profitability measures based on group sales alone;
Source: Company reports, newswires, Hardman & Co Life Sciences Research

The second-half bias notwithstanding, there is a positive trend in OXB's performance as group sales gain traction, as can be seen in the "core trading performance" chart above. While there are some headcount and overhead costs related to internal R&D activities included in the EBITDA measure above, a pre-R&D view does demonstrate a strong year-on-year positive trend in OXB's performance.

Operational update

Investment in facilities

Manufacturing capacity

Operational progress in the six months was centred on the expansion of manufacturing capacity and on investment in facilities towards continued innovation. A second GMP production suite was converted to a bioreactor facility (Process B) in the first half of 2019, meaning that only one of the three suites remains on an adherent process (Process A), as necessary to continue with Kymriah's currently approved manufacturing processes outside of the US. The table below summarises the planned progress in capacity expansion. In 2018, although sales were not limited by capacity constraints, the group was operating close to its existing capacity, due to the Novartis reservation agreement; the additional process B facilities will support the anticipated rise in demand for lentiviral vector in coming years.

Investment in GMP manufacturing capacity and vector yields

Fiscal year	"Process A"	"Process B"	Comment
	Number of cleanrooms		
2018	2	1	Improving efficiency, lowering costs
1H'19	1	2	Allows small level of sales growth
1H'20E	1	6	Will come on stream over course of the year

Process A: Cell factory bioprocessing technology, Process B: Bioreactor bioprocessing technology; Source: Hardman & Co Life Sciences Research

The build-out of the new facilities that were leased in 2018 (including four GMP clean rooms and two fill/finish suites) – known as OxBox – also progressed well, on track to completion by the end of this year, and expected to be operational by the end of 1H'20. The addition of the Fill Finish suites, providing end-to-end manufacturing in-house, will reduce risk and improve OXB's attractiveness to partners as a consequence.

R&D facilities

Emphasis on R&D investment

This half, a lease for a discovery and innovation facility – The Windrush Innovation Centre – was also signed. This will support both platform development and internal R&D for the proprietary pipeline. The renewed emphasis on products illustrates OXB's strategic focus on its reputation as a biopharmaceutical company, over and above its CMDO activities. At this stage, it is unclear whether it will advance all its proprietary candidates to a suitable stage of development for out-licensing, or whether OXB will expand into commercialisation of gene therapies itself. The agreement with Santen, whereby OXB has the option to participate in commercialisation in the US and Europe, implies the latter.

New partnerships

Santen – new deal

Just prior to the period-end, OXB entered into an R&D collaboration with the specialist Japanese ophthalmology company, Santen Pharmaceutical Co Ltd, for development of vectors for a gene therapy for an inherited retinal disease. We commented on this in full in June 2019[2]. To summarise, inherited retinal diseases are among the most amenable indications for gene therapies often being single gene

[2] https://www.hardmanandco.com/wp-content/uploads/2019/07/OXB-Santen-July-2019.pdf

disorders, and due to ease of access for administration. The eye is immune-privileged, reducing the chance of toxicity. While this could reduce the pre-clinical and early clinical risk of this programme, it should be noted that there is increasing competition in the area, which could affect commercial potential. In totality, any realised value from this programme is long-range, although we expect a small contribution in the near term, with commercial development commanding a 50%-75% margin.

Microsoft – R&D collaboration

In 1Q'19, OXB announced an R&D collaboration with Microsoft to explore the use of machine-learning approaches for development of cloud-based algorithms to further improve the efficiency and yield of industrial vector bioprocessing. These approaches should overcome the complexities inherent in the design of next-generation processes, towards improvements that reduce costs, speed the time to supply, and reduce variability in output. Although not generating near-term value for investors, collaborations such as these demonstrate OXB's focus on positioning itself at the forefront of supplying the UK's cell and gene therapy industry.

OXB – corporate partnerships

Partner	Therapy/technology (Indications)	Phase
Novartis (NOVN)	Kymriah (ALL, DLBCL)	Approved
	Undisclosed (oncology)	Phase I/II
Orchard Therapeutics (ORTX)	OTL-101 (ADA-SCID)	Phase III
	OTL-201 (San Filippo syndrome A)	Pre-clinical
	OTL-202 (San Filippo syndrome B)	Pre-clinical
Sanofi (SAN)	SAR422459 (Startgardt disease)	Phase II
Bioverativ (acquired by SAN)	Factor VIII (Haemophilia A)	Phase I
	Factor VII (Haemophilia B)	Pre-clinical
Axovant (AXON)	AXO-LENTI-PD (Parkinson's disease)	Phase II
Boehringer Ingelheim, UK CFGTC, Imperial Innovations	CFTR gene therapy (cystic fibrosis)	Pre-clinical
Santen Pharmaceutical Co	R&D collaboration (retinal disease)	Research

Source: Oxford BioMedica, Hardman & Co Life Sciences Research

Product: proprietary programmes

Axo-Lenti-PD

Positive top-line data from first cohort of Sunrise-PD Phase II trial

The out-licensed Parkinson's disease programme appears to be progressing well, albeit in a small number of patients. Axovant commented in June that six-month tolerability data from the first cohort (totalling two patients) of the Sunrise-PD Phase II trial were positive, with benefits across multiple measures of clinical outcomes also observed. As anticipated at the time of the full-year results, the first patient in the second cohort was dosed in 2Q'19, triggering the first $15.0m/£11.5m of a possible $55m in development milestones from Axovant.

Platform: licensing deals

Novartis CAR-T partnerships

Commercial development for Novartis programmes continued well in 1H'19

The partnership with Novartis covers two CAR-T programmes, Kymriah in r/r ALL and r/r DLBCL, and an undisclosed CAR-T programme (possibly Kymriah in follicular lymphoma or CLL, or in combination with pembrolizumab in DLBCL). Commercial development for the undisclosed programme continued well in the first half of 2019.

Bioprocessing (vector batches for trials and commercialised therapies) included production of vector for trials of Kymriah for use earlier in the treatment cascade in existing indications. The number of batches produced for Kymriah's approved indications appears to have been at lower levels than in the first half of 2018, due potentially to the move from Process A to Process B manufacturing.

Although not thought to have affected OXB at this point, the pace of global rollout of Kymriah has been affected by complications in Novartis's processing of cells for reinfusion of DLBCL patients, and by the lack of appropriate payment structures within some healthcare systems (mostly outside of Europe). However, at Novartis's recent ESG meeting, held in London, the CEO of Novartis mentioned that:

> *...As a result of setting Kymriah's price at ca.50% of the value-based price, 'Kymriah is now reimbursed in 18 countries' on the basis of cost-effectiveness...*

Source: Vas Narasimhan, Novartis CEO

OXB remains the only supplier of the lentiviral vector for Kymriah; therefore, future fluctuations in Novartis's demand for vector from OXB remain beyond its control.

Outlook

Full-year picture likely to be very different from first half

The full-year picture is likely to be substantially different. Group sales are expected to continue to gain traction, underpinned by Process B improvements supporting supply of vector to Novartis, no further halts to manufacturing, and by ongoing commercial development for partners. Not least, management has reiterated that partnering discussions are ongoing – with new potential partners and for expansion of the number of programmes with existing partners. Given that discussions can take 18 months to draw to a close, forecasting the timing of upfront payments is very difficult – we do not include new deals in our forecasts for 2019. We do, however, anticipate additional licensing income before the end of the year from existing partners.

Valuation

Our sum-of-the-parts valuation was last updated on 14 June 2018, following the deal with Axovant[3], generating an implied EV of £631m or 960p/share. Updating this same model to reflect only the de-leveraged balance sheet, expected 2019 bioprocessing/commercial development sales and sterling weakness gives a similar value of 965p/share (implied EV: £739m). As a minimum, the current market view appears negative, given the good progress of Novartis and Orchard Therapeutics in the past 15 months. We believe the shares will recover when uncertainty over timing of new partnership/licensing deals is removed. At the 1H'19 analyst presentation, management reiterated its expectation that these will be concluded by the year-end.

OXB share price

Source: Refinitiv

[3] https://hardmanandco.sharepoint.com/Life_Sciences/Documents/Industry%20data/CFAD%20work/Oxford%20Biomedica/Hardman/2018/OXB%20-%20Parkinsons%20deal%20-%2014th%20June%202018.pdf

Financial forecasts

Changes to forecasts

We have reduced our 2019 group sales (bioprocessing and commercial development) forecasts, in line with the lower-than-anticipated 1H'19 group sales, but tempered to allow for the positive impact of Process B manufacturing in 2H'19 and the progression of partnered programmes. We estimate 2019 group sales of £54.6m (previously £57.0m). Combined with slight increases to SG&A, this drops through to EBITDA; we now forecast £10.1m EBITDA, versus £13.4m previously. Given that bioprocessing costs within R&D increased in 1H'19, we assume a similar situation in the forecast period, and have re-weighted our COGS and R&D forecasts. Our expectations for other income (licensing, royalty, grants) in 2019 are unchanged. To recap, we are expecting additional licensing income from existing partners in the second half: the remainder of the Axovant upfront, a small milestone payment from Orchard Therapeutics, grant income, and growth in royalty payments from Novartis. We expect the company to break even in 2019, with PBT of £0.5m.

Profit & Loss

Profit & Loss account						
Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
GBP:USD	1.354	1.289	1.312	1.312	1.312	1.312
Gross income (as reported)	30.78	39.32	66.87	81.09	102.80	120.26
Group sales	27.78	31.80	40.60	54.55	78.30	87.02
COGS	-11.84	-18.44	-22.76	-27.25	-39.70	-39.37
Gross profit	15.94	13.36	17.84	27.30	38.60	47.64
Gross margin	49.9%	35.9%	43.9%	50.1%	49.3%	54.8%
SG&A	-5.09	-6.31	-6.19	-8.73	-9.40	-9.57
Share-based costs	-0.87	-0.97	-1.25	-1.35	-1.45	-1.55
R&D	-24.30	-21.61	-29.71	-38.49	-41.73	-45.86
Other income	3.00	7.52	26.27	26.54	24.46	33.24
EBITDA	-7.64	-3.64	11.32	10.07	15.75	29.15
Depreciation	-3.34	-4.11	-4.33	-4.77	-5.24	-5.24
Amortisation	-0.34	-0.26	-0.03	-0.03	-0.03	0.00
Underlying EBIT	**-11.32**	**-8.01**	**6.96**	**5.28**	**10.48**	**23.91**
EBIT margin	40.7%	-25.2%	17.2%	9.7%	13.4%	27.5%
Exceptional items	0.00	0.00	0.00	0.00	0.00	0.00
Statutory EBIT (not reported)	-11.32	-8.01	6.96	5.28	10.48	23.91
Net interest	-4.89	-9.38	-4.61	-4.81	0.39	0.53
Underlying PBT	**-16.20**	**-17.39**	**2.35**	**0.47**	**10.87**	**24.44**
Forex gain/loss	-4.11	5.58	-4.29	0.00	0.00	0.00
Revaluation of investments	0.00	2.30	5.98	0.00	0.00	0.00
Extraordinary items	0.00	0.00	0.00	0.00	0.00	0.00
Statutory PBT	-20.31	-11.81	4.05	0.47	10.87	24.44
Tax credit/(payable)	3.67	2.74	2.53	2.50	2.71	2.98
Underlying net income	**-12.53**	**-14.63**	**4.88**	**2.98**	**13.59**	**27.42**
Statutory net income	-16.64	-9.07	6.57	2.98	13.59	27.42
Ordinary 50p shares:						
Period-end (m)	61.76	62.15	66.17	76.61	76.61	61.77
Weighted average (m)	55.56	61.91	65.19	72.26	66.17	66.17
Fully-diluted (m)	58.00	67.03	70.70	77.88	71.89	71.99
Underlying basic EPS (p)	**-22.56**	**-23.63**	**7.48**	**4.12**	**20.53**	**41.44**
Statutory basic EPS (p)	-29.95	-14.64	10.08	4.12	20.53	41.44
Underlying fully-dil. EPS (p)	-21.61	-21.82	6.90	3.82	18.90	38.09
Statutory fully-dil. EPS (p)	-28.70	-13.52	9.30	3.82	18.90	38.09
DPS (p)	0.00	0.00	0.00	0.00	0.00	0.00

Source: Hardman & Co Life Sciences Research

- **Gross income:** The sum of group sales (bioprocessing & commercial development) and other income (licensing, inlc. upfronts and milestones, royalties and grants), which equates to reported revenue plus other operating income.
- **Group sales:** Composed of bioprocessing/CD, this will be the underlying growth driver over the next three years. As noted, "other income" is lumpy – forecasts do not include potential new deals. We do forecast licensing income from existing partners, Axovant and Orchard Therapeutics, in 2H'19.
- **Profit:** 2018 was the first profitable year, with EBITDA of £11.3m (-£3.6m), due to an impressive performance in securing partnership deals. We expect 2019 to be EBITDA-positive again, contingent on the other income line.
- **Underlying EBIT:** Despite the significant investment in personnel and R&D, we forecast the overall outcome for underlying EBIT in 2019 to be in line with fiscal 2018. Increases in R&D are likely to be supported by growth in bioprocessing/commercial development sales, dependent on partners' progress.

Balance sheet

- **Trade debtors:** The increase in trade debtors to £15.4m at the end of 2018 rose further to £20.2m at the end of June 2019. However, this includes the $15.0m/£11.5m milestone due from Axovant, expected to be received in 2H'19.
- **Cash:** Other income in the P&L mostly drops straight through the cashflow statement, benefiting the period-end cash balance. Following the 2018 Placing and the 1H'19 strategic investment, cash is expected to remain strong throughout the forecast period, supporting the planned investment in manufacturing facilities and internal R&D programmes.
- **Debt repaid:** Following the Novo subscription for shares, the Oaktree loan has been repaid. Apart from the leases introduced under IFRS16, OXB is debt-free.

Balance sheet						
@31 Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Shareholders' funds	12.62	6.70	34.74	92.38	106.07	133.59
Cumulated goodwill	0.00	0.00	0.00	0.00	0.00	0.00
Total equity	12.62	6.70	34.74	92.38	106.07	133.59
Share capital	30.88	31.08	33.03	38.31	38.31	38.31
Reserves	-18.26	-24.38	1.71	54.08	67.76	95.28
Provisions/liabilities	3.94	14.20	24.81	12.40	0.62	0.00
Deferred tax	0.00	0.00	0.28	0.28	0.28	0.28
Lease liabilities	0.00	0.00	8.47	8.47	8.47	8.47
Long-term loans	34.39	36.86	41.15	0.00	0.00	0.00
Short-term debt	0.00	0.00	0.00	0.00	0.00	0.00
less: Cash	15.34	14.33	32.24	27.03	27.51	40.84
less: Non-core investments	0.66	2.95	10.97	9.56	9.56	9.56
Invested capital	**34.95**	**40.48**	**57.77**	**76.95**	**78.36**	**91.94**
Fixed assets	27.51	25.37	31.79	57.13	66.99	76.85
Intangible assets	1.33	0.10	0.12	0.12	0.12	0.12
Inventories	2.20	3.33	4.25	5.71	8.20	9.11
Trade debtors	*1.97*	*5.71*	*15.41*	*12.33*	*14.79*	*17.75*
Other debtors	*4.94*	*11.93*	*15.18*	*15.18*	*15.18*	*15.18*
Tax liability/credit	*3.00*	*2.78*	*2.45*	*2.53*	*2.50*	*2.71*
Trade creditors	*-1.58*	*-3.68*	*-3.75*	*-4.48*	*-6.53*	*-6.48*
Other creditors	*-4.43*	*-5.05*	*-7.68*	*-11.56*	*-22.88*	*-23.30*
Debtors less creditors	3.90	11.68	21.61	13.99	3.05	5.86
Invested capital	**34.95**	**40.48**	**57.77**	**76.95**	**78.36**	**91.94**
Net cash/(debt)	**-19.05**	**-22.54**	**-8.91**	**18.56**	**19.05**	**32.38**

Source: Hardman & Co Life Sciences Research

Cashflow

- **Working capital:** In prior years, since much of OXB's work is on a fee-for-service basis, there was no major working capital requirement for the group. However, an increase in the number of partners, preparation for clinical trials and commercialisation of partners' products introduced an increased requirement for working capital in 2018. This is expected to unwind during 2019.

- **Capex:** The large increase in capital expenditure expected in 2019 is associated with the purchase and fit-out of OxBox to more than double manufacturing capacity, along with expenditure associated with the Innovation Centre.

- **Free cashflow:** Improvements in the cashflow during the forecast period are the result of the improved operational performance, coupled with known licensing income. This could be boosted further through the delivery of new licensing deals.

Cashflow						
Year-end Dec (£m)	2016	2017	2018	2019E	2020E	2021E
Underlying EBIT	-11.32	-8.01	6.96	5.28	10.48	23.91
Depreciation	3.34	4.11	4.33	4.77	5.24	5.24
Amortisation	0.34	0.26	0.03	0.03	0.03	0.00
Share-based costs	-0.87	-0.97	-1.25	-1.35	-1.45	-1.55
Inventories	*0.50*	*-1.13*	*-0.92*	*-1.46*	*-2.49*	*-0.91*
Receivables	*4.03*	*-10.73*	*-14.56*	*3.08*	*-2.47*	*-2.96*
Payables	*-3.28*	*2.73*	*2.73*	*0.74*	*2.05*	*-0.05*
Change in working capital	1.25	-9.13	-12.75	2.36	-2.91	-3.92
Exceptionals/provisions	-0.75	10.27	10.45	-0.75	-0.75	-0.75
Disposals	0.00	0.00	0.00	0.00	0.00	0.00
Other	0.35	1.31	-0.30	0.00	0.00	0.00
Company op. cashflow	-5.93	-0.22	9.98	13.03	13.54	26.03
Net interest	-3.21	-10.76	-4.61	-3.39	0.39	0.53
Lease payments	0.00	0.00	0.00	-0.94	-0.94	-0.94
Tax paid/received	4.08	3.51	3.65	2.53	2.50	2.71
Operational cashflow	**-5.06**	**-7.47**	**9.02**	**11.22**	**15.49**	**28.33**
Capital expenditure	-6.46	-1.97	-10.10	-30.10	-15.10	-15.10
Sale of fixed assets	0.00	0.00	0.00	0.00	0.00	0.00
Free cashflow	**-11.52**	**-9.44**	**-1.09**	**-18.88**	**0.39**	**13.23**
Dividends	0.00	0.00	0.00	0.00	0.00	0.00
Acquisitions	0.00	0.00	-0.05	0.00	0.00	0.00
Disposals	0.00	0.00	0.00	0.00	0.00	0.00
Other investments	0.00	0.00	-0.76	0.15	0.00	0.00
Cashflow after investments	**-11.52**	**-9.44**	**-1.89**	**-18.73**	**0.39**	**13.23**
Share repurchases	0.00	0.00	0.00	0.00	0.00	0.00
Equity issues	17.50	0.39	19.81	54.67	0.10	0.10
Currency effect	-7.13	-2.79	-4.29	0.00	0.00	0.00
Loans/cash acquired	0.00	8.36	0.00	0.00	0.00	0.00
Change in net cash/(debt)	**-1.15**	**-3.49**	**13.63**	**35.94**	**0.49**	**13.33**
OCFPS (p)	-9.11	-12.07	13.83	15.53	23.41	42.81
Opening net cash/(debt)	-17.90	-19.05	-22.54	-8.90	18.57	19.05
Closing net cash/(debt)	**-19.05**	**-22.54**	**-8.90**	**18.57**	**19.05**	**32.38**

Source: Hardman & Co Life Sciences Research

Company matters

Registration

Incorporated in 1995 in the UK, with company registration number 03028927. Originally called Oxford Genetic Therapeutics Ltd, it was renamed Oxford BioMedica in 1996.

Headquarters:

Oxford BioMedica plc
Windrush Court
Transport Way
Oxford
OX4 6LT

Tel: +44 1865 783 000

www.oxfordbiomedica.co.uk

Board of Directors

Board of Directors

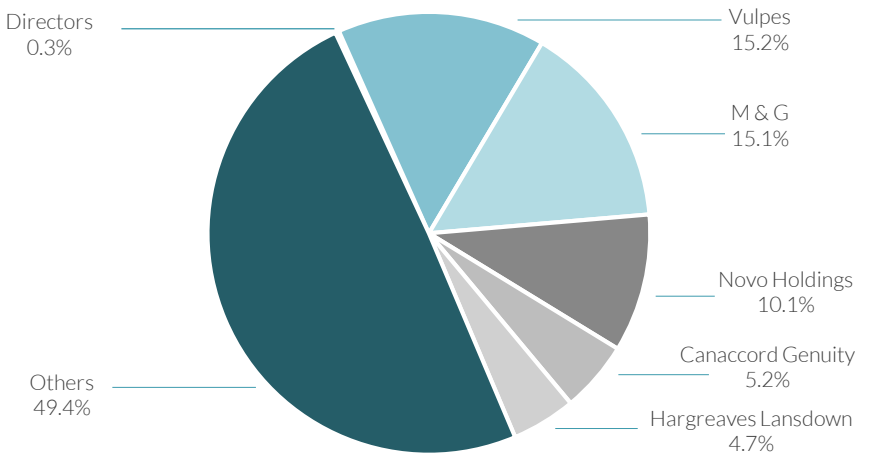
Position	Name	Nominations	Remuneration	Audit
Chairman	Lorenzo Tallarigo	C		
Chief Executive Officer	John Dawson			
Chief Financial Officer	Stuart Paynter			
Non-executive director	Martin Diggle			
Deputy Chairman/NED	Andrew Heath	M	C	M
Non-executive director	Stuart Henderson	M	M	C
Non-executive director	Heather Preston	M	M	M

M = member; C = chair
Source: Company reports

Share capital

At 10 October 2019, OXB had 76,768,699 Ordinary shares of 50p in issue.

Shareholders



Source: Company reports, newswires, Hardman & Co Life Sciences Research

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(Disclaimer Version 8 – Effective from August 2018)

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The full detail is on page 26 of the full directive, which can be accessed here: http://ec.europa.eu/finance/docs/level-2-measures/mifid-delegated-regulation-2016-2031.pdf

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