EDISON

The Biotech Growth Trust

Positive outlook for the biotech sector

Investment trusts

The Biotech Growth Trust (BIOG) aims to generate long-term capital growth from a concentrated portfolio of global biotech companies. It is jointly managed by Richard Klemm and Geoff Hsu of OrbiMed Capital, who are positive on the outlook for the biotech industry due to a favourable regulatory backdrop, continued industry innovation, an anticipated uptick in M&A activity and reasonable company valuations. The trust is benchmarked against the NASDAQ Biotech index, which it has outperformed in NAV total return terms over 10 years, while trailing over shorter periods. Recent investment performance has been affected by negative newsflow from one of BIOG's top 10 holdings, Celgene, in October 2017.

12 months ending	Share price (%)	NAV (%)	NASDAQ Biotech (%)	World-DS Pharm & Bio (%)	FTSE World (%)
31/01/14	58.2	65.0	63.4	24.5	10.5
31/01/15	52.5	44.9	43.7	30.8	17.3
31/01/16	(22.1)	(13.7)	(11.7)	0.5	(0.1)
31/01/17	15.5	15.1	17.8	12.3	33.6
31/01/18	15.0	7.0	9.7	9.4	12.7

Source: Thomson Datastream. Note: All % on a total return basis in GBP.

Investment strategy: Diligent fundamental research

The managers are able to draw on the broad resources of OrbiMed, which is the world's largest global specialist healthcare investor. Stocks are selected on a bottom-up basis following in-depth fundamental analysis. For each potential investment, a financial model is constructed, and research pipelines and likely catalysts are assessed. Company meetings are a critical element of the investment process to enable an understanding of a firm's development programmes and commercial prospects for individual products. BIOG invests globally, across the capitalisation spectrum. Reflecting the structure of the worldwide biotech industry, the majority of the trust's holdings are in US companies.

Market outlook: Positive fundamentals and valuations

Fundamentals in the biotech industry are positive, led by innovation, a supportive regulatory environment, and a potential higher level of mergers and acquisitions (M&A) following US tax reform. In addition, biotech valuations look relatively attractive. On a forward P/E multiple basis, biotech stocks are trading at a more modest premium to US equities versus the average over the last 10 years, and in aggregate, large-cap US biotech stocks are trading on lower earnings multiples than large-cap US pharma companies. Given this backdrop, investors seeking healthcare exposure may wish to consider the biotech sector.

Valuation: Discount at narrower end of range

BIOG's share price discount to cum-income NAV has been in a broadly narrowing trend since Q417. The current 3.6% discount is lower than the averages of the last one, three, five and 10 years of 5.5%, 5.8%, 4.9% and 5.3% respectively. The trust employs a discount control mechanism, with the board aiming to limit the discount to 6% in normal market conditions.

22 February 2018

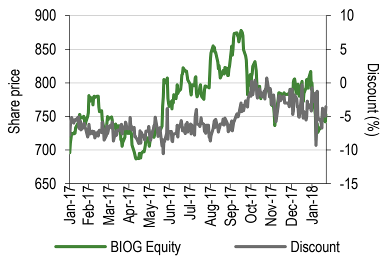
Price	**753.0p**
Market cap	**£420m**
AUM	**£448m**

NAV*	780.0p
Discount to NAV	3.5%
NAV**	780.9p
Discount to NAV	3.6%

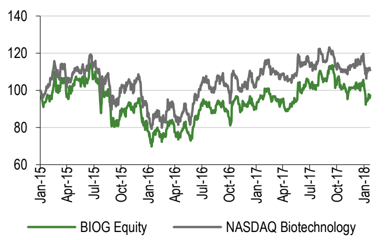
*Excluding income. **Including income. As at 20 February 2018.

Yield	0.0%
Ordinary shares in issue	55.8m
Code	BIOG
Primary exchange	LSE
AIC sector	SS: Biotechnology & Healthcare
Benchmark	NASDAQ Biotechnology

Share price/discount performance



Three-year performance vs index



52-week high/low	878.0p	686.5p
NAV** high/low	926.4p	741.7p

**Including income.

Gearing

Gross*	6.2%
Net*	6.2%

*As at 31 January 2018.

Analysts

Mel Jenner	+44 (0)20 3077 5720
Sarah Godfrey	+44 (0)20 3681 2519

investmenttrusts@edisongroup.com

Edison profile page

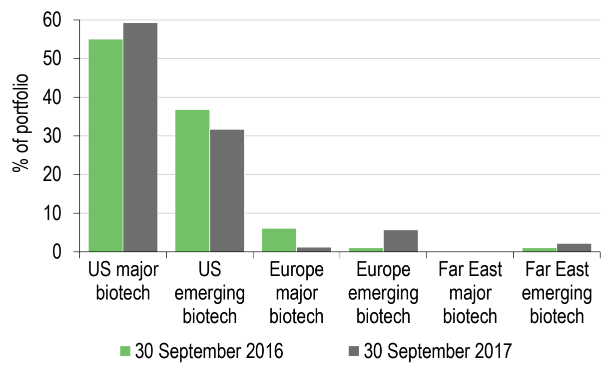
The Biotech Growth Trust is a research client of Edison Investment Research Limited

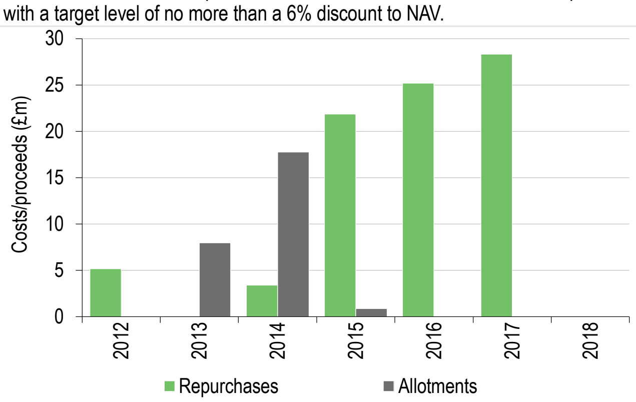
Exhibit 1: Trust at a glance

Investment objective and fund background	Recent developments
The Biotech Growth Trust seeks capital appreciation through investing in the worldwide biotechnology industry. Performance is measured against its benchmark index, the NASDAQ Biotechnology Index (sterling adjusted).	■ 9 November 2017: Interim results for six months ending 30 September 2017. NAV TR +10.9% versus benchmark TR +6.6%. Share price TR +10.3%. ■ 12 July 2017: Retirement of independent non-executive director Peter Keen at 2017 AGM. ■ 25 May 2017: Annual results for 12 months ending 31 March 2017. NAV TR +27.5% versus benchmark TR +29.2%. Share price TR +27.9%.

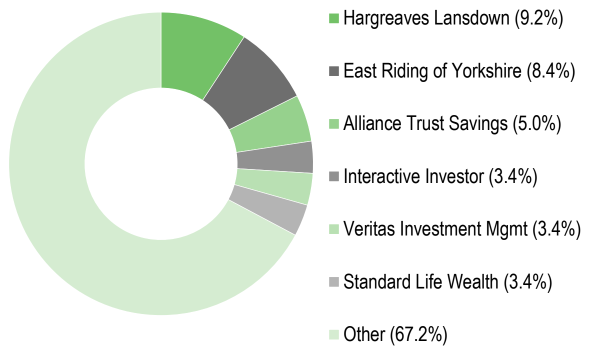
Forthcoming		Capital structure		Fund details	
AGM	July 2018	Ongoing charges	1.1%	Group	Frostrow Capital LLP
Final results	May 2018	Net gearing	6.2%	Manager	OrbiMed Capital
Year end	31 March	Annual mgmt fee	See page 7	Address	25 Southampton Buildings, London, WC2A 1AL
Dividend paid	N/A	Performance fee	See page 7		
Launch date	June 1997	Trust life	Indefinite	Phone	+44 (0)203 008 4910
Continuation vote	Every five years – next 2020	Loan facilities	See page 7	Website	www.biotechgt.com

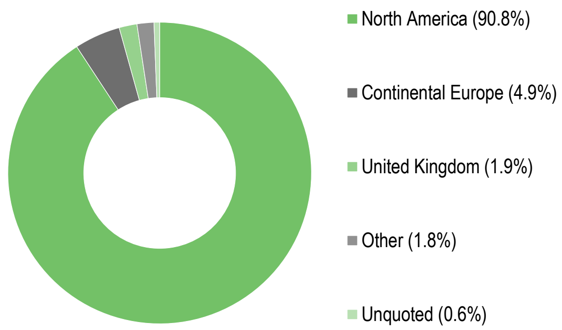
Portfolio sector exposure (adjusted for gearing)	Share buyback policy and history (financial years)
Following an adjustment to the investment objective in October 2013, BIOG is no longer required to invest the majority of assets in companies with a market capitalisation below $3bn at the time of acquisition.	Renewed annually, the trust has authority to purchase up to 14.99% and allot up to 10% of issued share capital. There is a discount control mechanism in place with a target level of no more than a 6% discount to NAV.





Shareholder base (as at 31 January 2018)	Portfolio exposure by geography (as at 31 January 2018)





Top 10 holdings (as at 31 January 2018)

			Portfolio weight %	
Company	**Country**	**Sector**	**31 January 2018**	**31 January 2017***
Biogen	US	Major biotech	13.2	11.1
Amgen	US	Major biotech	9.6	3.1
Vertex Pharmaceuticals	US	Major biotech	9.3	7.6
Celgene	US	Major biotech	7.1	13.0
Regeneron Pharmaceuticals	US	Major biotech	6.4	N/A
Gilead Sciences	US	Major biotech	4.5	3.5
Illumina	US	Major biotech	4.2	4.1
Alnylam Pharmaceuticals	US	Emerging biotech	4.2	N/A
Bluebird Bio	US	Emerging biotech	3.5	N/A
Alexion Pharmaceuticals	US	Major biotech	3.2	9.5
Top 10			**65.2**	**71.4**

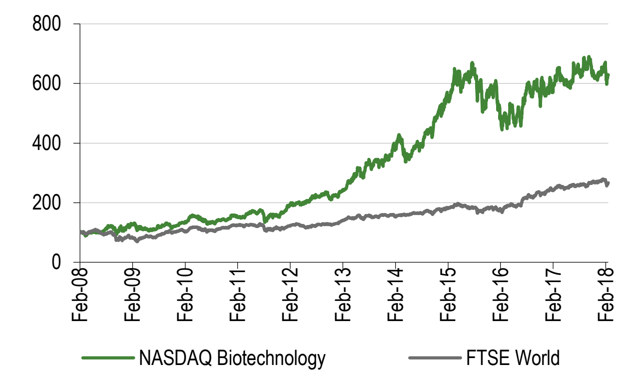
Source: The Biotech Growth Trust, Edison Investment Research, Bloomberg, Morningstar. Note: *N/A where not in January 2017 top 10.

Market outlook: Favourable industry backdrop

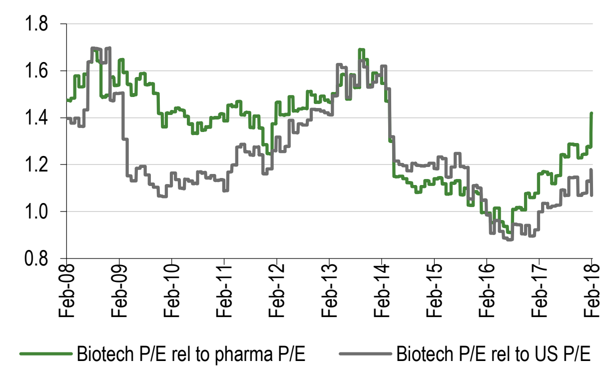
While investment in biotech stocks can be volatile, as shown in Exhibit 2 (left-hand side), over the long term, investment returns from biotech equities have been significantly above those generated from global equities. Following the appointment of Donald Trump as US president, there has been less of a focus on US drug pricing, and biotech shares have performed strongly. Exhibit 2 (right-hand side) shows the relative forward P/E valuations of global biotech stocks versus both global pharma and US equities. Biotech shares are trading on a forward P/E multiple of 20.6x; this is a c 40% premium to global pharma stocks, which is broadly in line with the average premium over the last 10 years. However, compared to the broader US equity market, biotech stocks' current premium of less than 10% compares with a c 25% premium over the last 10 years.

Exhibit 2: Biotech index performance and valuation

NASDAQ Biotech and FTSE World indices (10 years, £-based)



World-DS Biotech P/E relative to World-DS Pharma and US-DS (10 years)



Source: Thomson Datastream, Edison Investment Research. Note: Using Datastream biotech, pharmaceutical and US indices.

Exhibit 3 shows the valuation of the largest US biotech and pharma stocks. The average growth of biotech stocks is negatively skewed by Gilead, which is exiting a period of very high earnings growth in recent years, due to its successful hepatitis franchise. However, on average, for reasonably comparable future earnings growth expectations, large-cap biotech stocks are trading at more attractive forward earnings multiples than large-cap pharma stocks for both 2018 and 2019.

Exhibit 3: Consensus estimate EPS growth rates and valuations of large-cap biotech & pharma companies

Top biotech	5y CAGR	2018e P/E	2019e P/E	PEG	Top pharma	5y CAGR	2018e P/E	2019e P/E	PEG
Abbvie	15.7%	15.8x	13.6x	1.0x	Johnson & Johnson	5.7%	16.5x	15.6x	2.9x
Amgen	3.7%	13.8x	13.2x	3.7x	Pfizer	6.8%	12.3x	12.0x	1.8x
Gilead Sciences	-1.5%	12.5x	12.2x	-8.4x	Merck	5.9%	13.5x	12.8x	2.3x
Celgene	17.5%	11.3x	9.3x	0.6x	Bristol-Myers Squibb	11.2%	21.2x	18.0x	1.9x
Biogen	7.1%	11.7x	11.1x	1.6x	Eli Lilly	11.2%	16.2x	14.9x	1.4x
Average	**8.5%**	**13.0x**	**11.9x**	**-0.3x**	**Average**	**8.2%**	**15.9x**	**14.7x**	**2.1x**

Source: Edison Investment Research, Bloomberg. Note: Data at 19 February 2018.

Fundamentals within the biotech industry remain positive; the regulatory backdrop is favourable and companies developing life-saving, innovative therapies are able to charge premium prices, which in turn funds future drug development. For investors seeking exposure to the sector, a specialist fund with a positive long-term performance record may be of interest.

Fund profile: Global biotech specialist

BIOG was launched in June 1997 and is listed on the Main Market of the London Stock Exchange. Since May 2005, the trust has been managed by OrbiMed, the world's largest specialist healthcare investment manager, with c $15bn assets under management. OrbiMed has a more than 20-year track record of investment in both public and private equity, and employs more than 100 investment professionals, many of whom have PhD or MD degrees and/or are former founders or CEOs of healthcare companies. BIOG is managed by New York-based Richard Klemm and Geoff Hsu, who aim to generate long-term capital growth from a concentrated global portfolio of biotech shares. At end-September 2017 there were 36 positions in the portfolio. The managers select stocks on a bottom-up basis, without reference to the NASDAQ Biotechnology index (sterling-adjusted) benchmark. At the time of purchase, a maximum 15% of NAV may be invested in a single stock, 10% may be in unquoted investments and a maximum $15m may be invested in private equity funds managed by OrbiMed. Gearing of up to 20% is permitted; at end-January 2018, net gearing was 6.2%. Based in the UK, Frostrow Capital is the Alternative Investment Fund Manager (AIFM), and provides company secretarial, administrative and distribution services. Since OrbiMed took over the management of BIOG in May 2005 to end-September 2017, its NAV total return of 785.0% is 183.5pp ahead of the benchmark's 601.5% total return.

The fund managers: Richard Klemm and Geoff Hsu

The managers' view: Retaining a bullish outlook

Hsu says that heading into 2017, there were fears that US President Trump would make an official announcement about controlling drug prices. This did not occur, so sentiment improved, and the biotech sector was able to generate positive investment returns. However, in the recent State of the Union address, Trump mentioned that lowering drug prices was a top priority for his administration, which has led to some uncertainty as to whether there will be some official policy announcement in 2018. Another policy issue to monitor would be potential changes to the Patient Protection and Affordable Care Act (Obamacare), following the failure of Republicans to repeal this healthcare bill in 2017.

The US has recently passed a tax reform bill, reducing the corporate tax rate from 35% to 21%, which Hsu says is positive for corporate America, including the biotech sector. An element of the bill was a lower tax penalty for repatriation of overseas assets, which should provide US biotech companies with the opportunity to undertake more M&A or return cash to shareholders. This is already evident: for example in early February 2018, major US biotech company, Amgen, announced a $10bn share repurchase programme. Regarding M&A, recently announced deals include French pharma company Sanofi's acquisition of US haemophilia treatment specialist Bioverativ and Belgian novel biological therapeutic company Ablynx. Celgene has announced its intentions to acquire CAR-T therapy company Juno Therapeutics, and Impact Biomedicines, which is a private company with a product targeting the bone marrow cancer myelofibrosis.

The manager highlights positive fundamentals within the US biotech industry, including a very favourable regulatory environment. In 2017, there was the highest number of US Food and Drug Administration (FDA) approvals of branded and generic drugs in history; the number of branded approvals was the most since 1995. Hsu says that the quality of drug filings is better than in the past, and the FDA is supportive of drugs that have a transformational effect on patients. The FDA now has a more flexible approach, approving products based on trial datasets that in the past would have been seen as insufficient to grant approval. Trump is keen for drugs to be approved more readily, especially generic drugs, as it ensures that prices can be kept under control via free market mechanisms. An environment in which approval times are reduced also cuts the cost of getting a drug to market.

Innovation within the biotech industry is very strong. In 2017, there were two CAR-T therapies launched. These are first-in-class cellular immunotherapies for leukaemia and lymphoma. T-cells are harvested, modified to attack cancer cells and reinserted back into the patient's body. There was also the first approval of a gene therapy to treat a rare eye disease and other indications. Hsu says that the outlook is for further scientific developments and innovation.

Biotech company valuations are reasonable versus history, and Hsu expects multiples to recover as a result of increased M&A as large-cap companies deploy their cash. Some have large revenue drivers that are beginning to slow, such as Amgen's white blood cell booster neulasta, which may require them to acquire smaller companies to supplement their product pipelines.

Asset allocation

Investment process: Proprietary, bottom-up research

Managers Klemm and Hsu are able to draw on the broad resources of healthcare specialist OrbiMed. Stocks are selected on a bottom-up basis, with a focus on financial modelling, an assessment of research pipelines and the identification of likely catalysts. Company meetings form a key part of the investment process to understand the development programmes and commercial prospects for individual drugs. Stocks may be purchased ahead of anticipated positive clinical data, if companies are viewed as a potential takeover candidate or if early-stage companies are approaching profitability. BIOG's portfolio is invested across the market cap spectrum and holdings are continually assessed to ensure that the investment case remains intact. Understandably, portfolio turnover is high for smaller, rather than large-cap companies.

Current portfolio positioning

More than 90% of BIOG's portfolio is invested in US biotech companies, split broadly two-thirds/one-third between major biotech and emerging biotech firms. US exposure has increased over the last 12 months, while exposure to Continental Europe has declined (Exhibit 4). This was partially due to the acquisition of Actelion by Johnson & Johnson.

Exhibit 4: Portfolio geographic exposure (%)

Region/country	End-January 2018	End-January 2017	Change (pp)
North America	90.8	84.0	6.8
Continental Europe	4.9	12.2	(7.3)
United Kingdom	1.9	2.1	(0.2)
Other	1.8	0.5	1.3
Unquoted	0.6	1.2	(0.6)
Total	**100.0**	**100.0**	

Source: The Biotech Growth Trust, Edison Investment Research

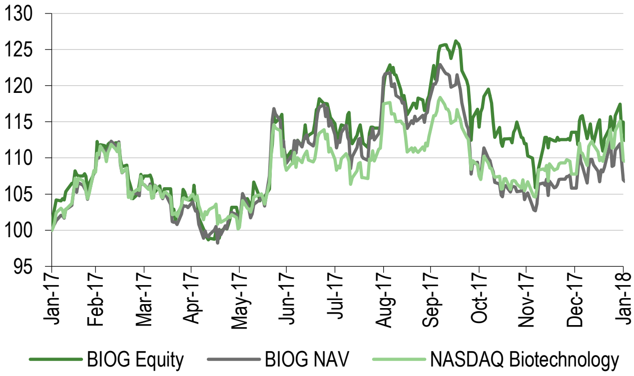
The managers invest in three broad 'buckets': major biotech, emerging biotech and promising early-stage biotech companies. Positions in major biotech companies have robust earnings growth, strong pipelines and are trading on reasonable valuations. Emerging biotech companies in the portfolio have newly launched or late-stage products; they may be approaching profitability or viewed as potential takeover targets. Promising early-stage companies within the portfolio have novel therapeutic products, with potential to deliver positive clinical data.

Performance: Outperformance over 10 years

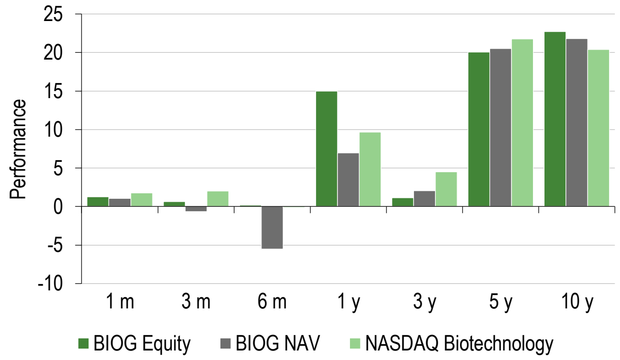
During H118 (ending 30 September 2017), BIOG's NAV and share price total returns of 10.9% and 10.3% respectively were ahead of the benchmark's 6.6% total return. Relative performance was enhanced by a higher level of gearing in a rising market (9.2% at end-September versus 3.2% at end-March 2017). However, absolute returns were negatively affected by the strength of sterling, which appreciated by more than 7% versus the US dollar over the period.

Exhibit 5: Investment trust performance to 31 January 2018

Price, NAV and benchmark total return performance, one-year rebased



Price, NAV and benchmark total return performance (%)



Source: Thomson Datastream, Edison Investment Research. Note: Three-, five- and 10-year performance figures annualised.

BIOG's absolute returns are shown in Exhibit 5. Over the last 12 months, the trust's NAV and share price total returns of 7.0% and 15.0% compare to the benchmark's 9.7% total return. Exhibit 6 illustrates BIOG's relative returns. Its NAV total return has outperformed the benchmark over 10 years, while lagging over shorter periods. However, comparing the trust's performance to the Datastream World Pharm & Bio, FTSE World and FTSE All-Share indices shows BIOG's meaningful outperformance over both five and 10 years.

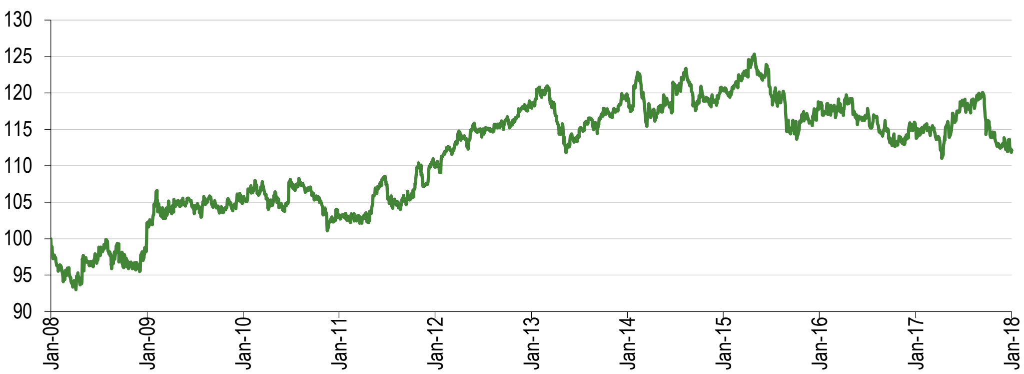
Hsu explains that recent relative performance was affected by a poor October 2017. Large portfolio holding Celgene had three negative announcements: cessation of Phase III trial of inflammatory bowel disease drug GED-0301 after an interim review showed a lack of benefit; weakness in Q317 sales of its key growth driver, psoriasis drug otezla; and a reduction in 2020 earnings guidance. Also in the month, DBV fell sharply. Its Phase III readout for a patch to treat to peanut allergy was positive. However, there was a secondary requirement that had not been disclosed by the company; the patch demonstrated efficacy, but not to the extent of the anticipated statistical plan.

Exhibit 6: Share price and NAV total return performance, relative to indices (%)

	One month	Three months	Six months	One year	Three years	Five years	10 years
Price relative to NASDAQ Biotechnology	(0.5)	(1.4)	0.3	4.9	(9.3)	(6.8)	21.0
NAV relative to NASDAQ Biotechnology	(0.7)	(2.6)	(5.4)	(2.5)	(6.8)	(5.1)	12.2
Price relative to World-DS Pharm & Bio	1.5	(0.4)	(0.9)	5.1	(16.2)	24.1	98.8
NAV relative to World-DS Pharm & Bio	1.3	(1.7)	(6.5)	(2.2)	(14.0)	26.3	84.3
Price relative to FTSE World	1.0	(1.5)	(5.4)	2.0	(31.2)	27.9	185.0
NAV relative to FTSE World	0.8	(2.7)	(10.8)	(5.1)	(29.4)	30.2	164.2
Price relative to FTSE All-Share	3.3	(0.4)	(3.6)	3.3	(18.8)	66.1	291.2
NAV relative to FTSE All-Share	3.1	(1.7)	(9.1)	(3.9)	(16.6)	69.1	262.6

Source: Thomson Datastream, Edison Investment Research. Note: Data to end-January 2018. Geometric calculation.

Exhibit 7: NAV total return performance relative to benchmark over 10 years

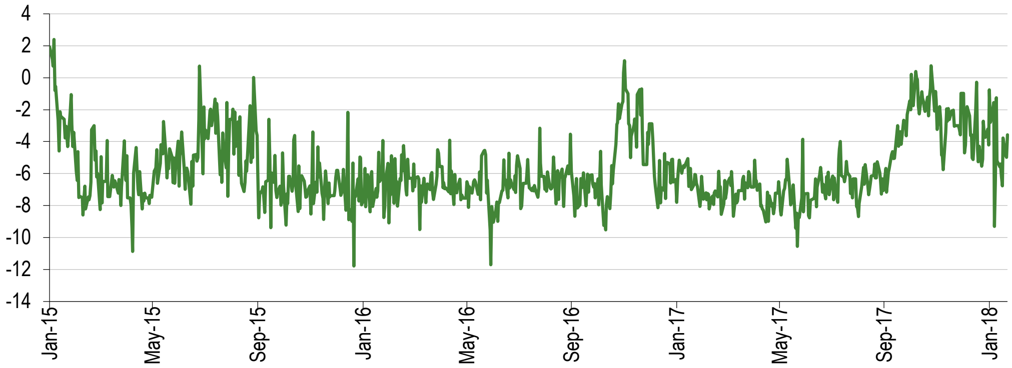


Source: Thomson Datastream, Edison Investment Research

Discount: Recent narrowing of the discount

In recent months, BIOG's share price discount to cum-income NAV has been in a broadly narrowing trend, from c 10% to the current 3.6%. This is towards the lower end of the 12-month range (0.7% premium to 10.6% discount), although it follows a recent sharp widening in the discount caused by an increase in overall stock market volatility. The current discount is lower than the averages of the last one, three, five and 10 years (range of 4.9% to 5.8%). BIOG's board employs a discount control mechanism, aiming to limit the discount to 6% in normal market conditions. As shown in Exhibit 1, there have been no share repurchases in the current financial year.

Exhibit 8: Share price premium/discount to NAV (including income) over three years (%)



Source: Thomson Datastream, Edison Investment Research

Capital structure and fees

BIOG is a conventional investment trust, with one class of share; there are currently 55.8m ordinary shares in issue. Gearing of up to 20% of net assets is permitted via an overdraft facility with JPMorgan Chase. At end-January 2018, net gearing was 6.2%. OrbiMed is paid an annual management fee of 0.65% of net assets and Frostrow Capital, which is BIOG's AIFM, providing company secretarial, administrative and distribution services, is paid 0.3% of market cap plus £60,000. While a performance fee is payable to reward cumulative outperformance versus the benchmark, no fee was paid in FY17. Ongoing charges in FY17 were 1.1%, which was 10bp higher than in FY16.

Dividend policy and record

BIOG's focus on capital growth and the early-stage nature of many of its investments means that the trust does not currently pay a dividend. The last time a dividend was paid was 0.2p per share in 2001. In H118, the net revenue return (after expenses) of £0.15m was 75% lower than £0.59m in H117. It has been transferred to reserves, reducing the revenue deficit from £1.93m to £1.78m.

Peer group comparison

In Exhibit 9 we highlight the members of the AIC Sector Specialist: Biotechnology & Healthcare sector. This includes two biotech funds: Biotech Growth Trust and International Biotechnology Trust; three healthcare funds: relatively new trust BB Healthcare, Polar Capital Global Healthcare Trust and Worldwide Healthcare Trust; and specialist fund investor Syncona. We also include two Switzerland-listed trusts, BB Biotech and HBM Healthcare Investments, both of which pay dividends out of capital. BIOG's NAV total returns are ahead of the peer group average over 10 years, ranking second out of five trusts, but trail the averages over one, three and five years. While the trust's discount has narrowed in recent months, it has one of the widest discounts in the peer group, its ongoing charge is lower than average and BIOG has a higher than average level of gearing. Reflecting the trust's focus on capital growth rather than income, it does not pay a dividend.

Exhibit 9: Biotech and healthcare investment companies, as at 19 February 2018*

% unless stated	Market cap £m	NAV TR 1 year	NAV TR 3 year	NAV TR 5 year	NAV TR 10 year	Discount (ex-par)	Ongoing charge	Perf. fee	Net gearing	Dividend yield (%)
Biotech Growth Trust	419.9	(0.8)	6.0	140.9	619.1	(4.7)	1.1	Yes	106	0.0
BB Biotech	4,117.9	6.4	29.5	249.0	713.8	8.1	1.1	No	103	4.0
BB Healthcare	295.7	0.8				2.1	1.0	No	104	3.1
HBM Healthcare Investments	1,062.6	5.0	45.4	239.0	227.0	(13.4)	1.5	Yes	101	4.2
International Biotechnology	222.3	(4.3)	19.0	155.1	386.9	(1.8)	0.9	Yes	100	4.2
Polar Capital Global Healthcare	236.9	(1.1)	17.8	69.1		(4.5)	1.5	Yes	100	1.8
Syncona	1,310.7	14.8	30.2	51.0		32.7	1.5	No	100	1.2
Worldwide Healthcare Trust	1,226.0	5.5	35.8	157.4	445.3	1.1	0.9	Yes	104	0.9
Average	**1,111.5**	**3.3**	**26.2**	**151.6**	**478.4**	**2.4**	**1.2**		**102**	**2.4**
Trust rank in sector	**5**	**6**	**7**	**5**	**2**	**7**	**5**		**1**	**8**

Source: Morningstar, Edison Investment Research. Note: *Performance to 16 February 2018. TR = total return. Net gearing is total assets less cash and equivalents as a percentage of net assets.

The board

BIOG's board has six directors, five of whom are independent. Chairman Andrew Joy joined the board in March 2012 and assumed his current role in July 2016. The other four independent directors and their dates of appointment are Professor Dame Kay Davies (March 2012), Stephen Bates (July 2015), the Rt Hon Lord Willetts (November 2015) and Julia Le Blan (July 2016). The non-independent director is Sven Borho; he is a founding member of OrbiMed and was appointed to the board in March 2006.

Frankfurt +49 (0)69 78 8076 960
Schumannstrasse 34b
60325 Frankfurt
Germany

London +44 (0)20 3077 5700
280 High Holborn
London, WC1V 7EE
United Kingdom

New York +1 646 653 7026
295 Madison Avenue, 18th Floor
10017, New York
US

Sydney +61 (0)2 8249 8342
Level 12, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia