EDISON

The Biotech Growth Trust

Celebrating its 20th birthday

Investment trusts

The Biotech Growth Trust (BIOG) was launched in 1997, aiming to generate long-term capital growth from a global portfolio of biotech stocks. Since 2005, the trust has been managed by OrbiMed Capital, the largest global specialist healthcare investor; over this period, BIOG has significantly outperformed its benchmark NASDAQ Biotech Index (sterling adjusted), despite less compelling short-term performance. The trust's managers are bullish on the outlook for the biotech industry due to continued innovation, and suggest that investor concerns about drug price controls are overdone and have led to attractive biotech company valuations, especially for the larger-cap stocks. They believe that greater clarity surrounding US tax policy, including the potential repatriation of overseas cash, could lead to more industry mergers and acquisitions (M&A), which should be an important driver for the sector and could lead to a positive revaluation of the industry.

12 months ending	Share price (%)	NAV (%)	NASDAQ Biotech (%)	World-DS Pharm & Bio (%)	FTSE World (%)
30/06/13	37.1	37.0	39.1	32.5	22.1
30/06/14	28.3	37.7	31.7	15.9	10.0
30/06/15	59.6	60.9	56.8	26.0	9.9
30/06/16	(23.0)	(21.4)	(17.7)	9.4	14.6
30/06/17	25.9	23.8	24.6	10.4	22.9

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

Investment strategy: Proprietary research

Managers Richard Klemm and Geoff Hsu are part of the investment team at OrbiMed, which comprises more than 100 professionals, many of whom have scientific or medical backgrounds. Stocks are selected on a bottom-up basis following rigorous fundamental analysis, which includes financial modelling, an assessment of research pipelines and identification of likely catalysts. BIOG invests across the capitalisation spectrum, although the majority (c 60%) is invested in major US biotech stocks. Gearing of up to 20% of NAV is permitted; at end-June 2017 net gearing was 10.6%, which is towards the high end of its historical range.

Market outlook: Attractive industry valuations

The last couple of years have been a volatile time for investors in the biotech sector, where concerns have centred on drug pricing. However, the outlook for the US biotech industry (the largest global biotech market by far) remains positive; continued innovation and a potential increase in industry M&A could be important drivers for an industry that is looking attractively valued versus history.

Valuation: Discount modestly wider than average

BIOG's current 7.2% share price discount to cum-income NAV is modestly wider than the averages of the last one, three, five and 10 years (range of 4.4% to 6.4%). The board manages the discount, repurchasing shares at its discretion when the discount exceeds 6%. There is scope for the discount to narrow if investor sentiment towards the biotech sector improves or if BIOG continues to outperform its benchmark. Given its focus on capital growth, BIOG does not pay a dividend.

25 July 2017

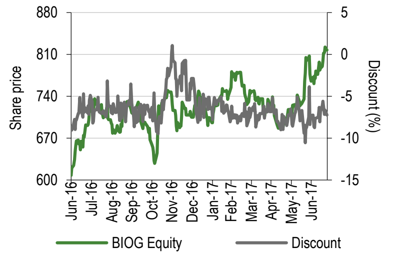
Price	**817.5p**
Market cap	**£457m**
AUM	**£544m**

NAV*	881.4p
Discount to NAV	7.3%
NAV**	881.3p
Discount to NAV	7.2%

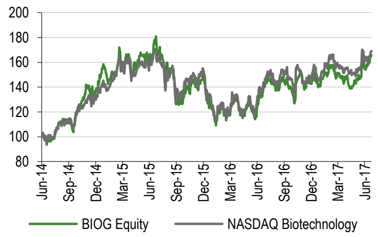
*Excluding income. **Including income. As at 21 July 2017.

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	822.5p	627.8p
NAV* high/low	881.8p	662.5p

*Including income.

Gearing

Gross*	10.6%
Net*	10.6%

*As at 30 June 2017.

Analysts

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

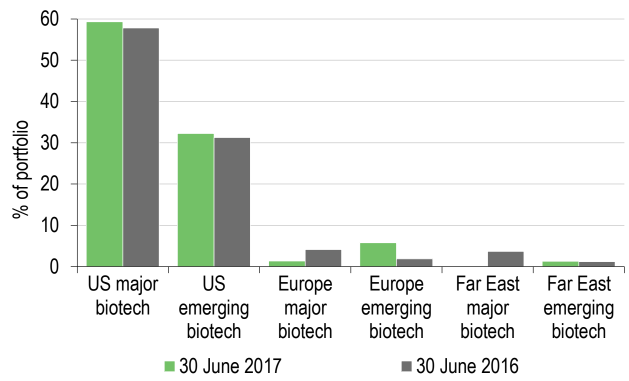
Exhibit 1: Trust at a glance

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).	■ 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%. ■ 7 November 2016: Interim results for six months ending 30 September 2016. NAV TR +20.5% versus benchmark TR +23.2%. Share price TR +21.7%.

Forthcoming		Capital structure		Fund details	
AGM	July 2018	Ongoing charges	1.1%	Group	Frostrow Capital LLP
Interim results	November 2017	Net gearing	10.6%	Manager	OrbiMed
Year end	31 March	Annual mgmt fee	See page 7	Address	25 Southampton Buildings, London, WC2A 1AL, UK
Dividend paid	N/A	Performance fee	See page 7		
Launch date	June 1997	Trust life	Indefinite	Phone	+44 (0)20 3008 4910
Continuation vote	Every five years – next 2020	Loan facilities	See page 7	Website	www.biotechgt.com

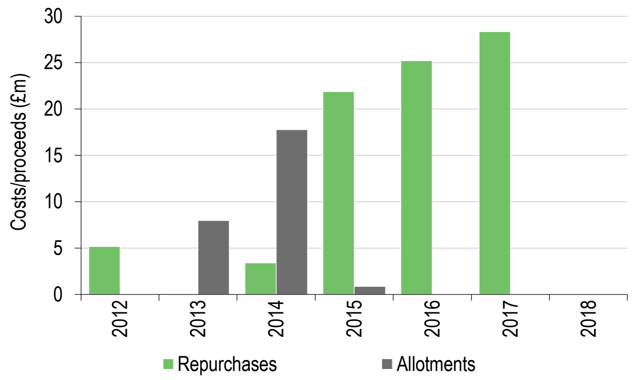
Portfolio sector exposure (adjusted for gearing)

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.

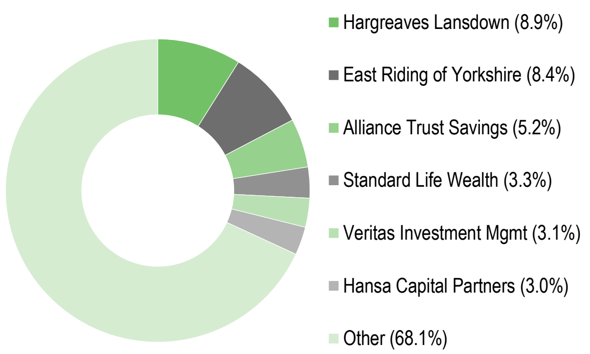


Share buyback policy and history (financial years)

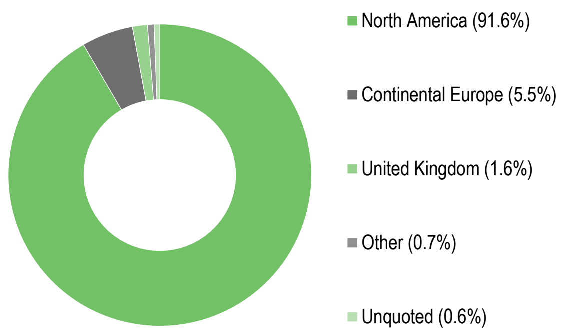
Renewed annually, the trust has authority to purchase up to 14.99% and allot up to 10% of issued share capital. There is a discount control mechanism in place with a target level of no more than a 6% discount to NAV.



Shareholder base (as at 30 June 2017)



Portfolio exposure by geography (as at 30 June 2017)



Top 10 holdings (as at 30 June 2017)

			Portfolio weight %	
Company	**Country**	**Sector**	**30 June 2017**	**30 June 2016***
Celgene	US	Major biotech	12.1	7.2
Biogen	US	Major biotech	11.8	12.4
Vertex Pharmaceuticals	US	Major biotech	8.2	6.7
Regeneron Pharmaceuticals	US	Major biotech	7.6	5.1
Alexion Pharmaceuticals	US	Major biotech	6.6	6.9
Incyte	US	Emerging biotech	5.8	6.6
Amgen	US	Major biotech	5.6	14.1
Gilead Sciences	US	Major biotech	3.9	8.5
Illumina	US	Major biotech	3.7	3.7
Clovis Oncology	US	Emerging biotech	3.6	N/A
Top 10			**68.9**	**74.9**

Source: The Biotech Growth Trust, Edison Investment Research, Frostrow Capital, Morningstar. Note: *N/A where not in June 2016 top 10.

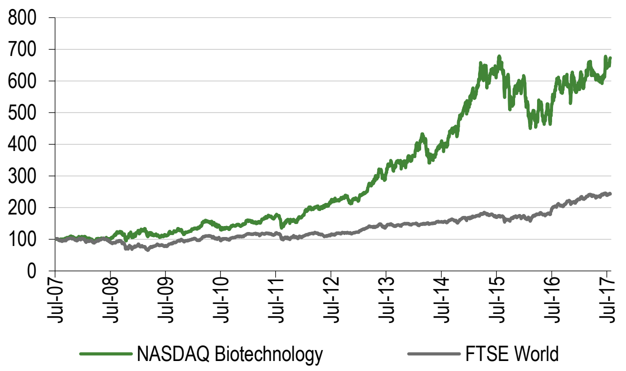
Market outlook: Valuations remain attractive

Exhibit 2 (left-hand side) shows the performance of biotech stocks compared to world equities over the last 10 years. They have outperformed significantly over the period, albeit with markedly higher volatility since mid-2015. This has primarily been due to investor concerns about industry price controls following some high-profile incidents of companies ‘price gouging’, including Mylan and Turing Pharmaceuticals. In the run-up to the US general election in November 2016, drug pricing was a campaign feature of both political parties. However, in the recent proposed Republican healthcare reform bill, there were no explicit references to drug price controls and President Trump has appointed market-friendly candidates to some key healthcare agency positions.

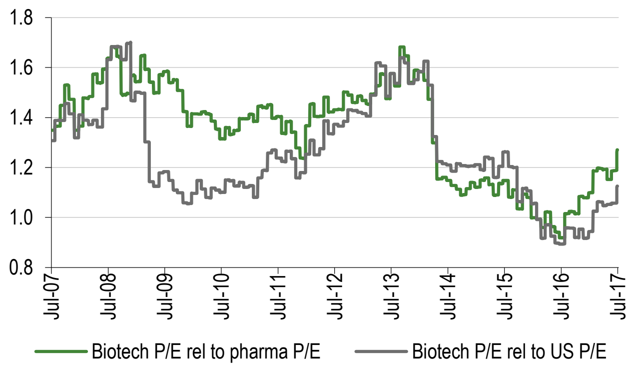
Innovation is key to growth in the biotech sector, as approved products that can demonstrate benefits from improved efficacy or safety or meeting an unmet medical need should continue to demand premium pricing. If biotech companies are unable to generate significant revenues from novel therapies, there is no incentive for them to invest in research and development. Investor concerns about drug pricing have affected the valuation of the whole biotech sector. As shown in Exhibit 2 (right-hand side), while having rallied off their low points, biotech company relative valuations versus both the pharma sector and the broader US equity market remain below their averages of the last 10 years. For investors aiming to invest in the biotech sector and diversify the often binary biotech stock-specific risk, a fund with global exposure and a well-established track record with good relative performance may be of interest.

Exhibit 2: Biotech index performance and valuation

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



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



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

Fund profile: Well-established 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 Capital – the world’s largest healthcare-dedicated investment company, which has c $13bn assets under management and a track record of more than 20 years investing in both public and private equity. BIOG is managed by Richard Klemm and Geoff Hsu, who aim to generate long-term capital growth from a portfolio of biotech shares and related securities across the globe. UK-based Frostrow Capital is the Alternative Investment Fund Manager (AIFM) as well as providing company secretarial, administration and marketing services. BIOG is benchmarked against the sterling-adjusted NASDAQ Biotechnology Index, although the managers select stocks on a bottom-up basis, without reference to benchmark weightings. The majority of the portfolio (c 60%) is invested in US major biotech stocks (see Exhibit 1). To mitigate risk, the board imposes various limits including a maximum 15% of gross assets in a single stock at the time of acquisition, up to 10% in unquoted investments, and up to $15m in private equity funds managed by OrbiMed. Gearing of up to 20% of net assets is permitted; at end-

June 2017, net gearing was 10.6%. From OrbiMed's appointment as BIOG's manager until end-March 2017, the trust's NAV and share price total returns of 704.0% and 693.6% have meaningfully outperformed the benchmark's 556.2% total return.

The fund managers: Richard Klemm and Geoff Hsu

The managers' view: Very optimistic about the future

The managers comment that it has been a difficult period over the last two years, with a major negative shift in sentiment towards investing in healthcare stocks, especially biotech. There have been concerns about price controls in the US (the largest global healthcare market) due to negative political comments, which has sparked an outflow of investors' capital. However, the managers point to a very important change in the US healthcare system: they believe there has been a U-turn on US healthcare policy. The Affordable Care Act was signed into law in 2010; it is a hybrid free market/government driven system, with the ultimate goal of a single payer (the US government). BIOG's managers believe that the election of President Trump will eventually lead to a move back towards a more free market healthcare system. Importantly, the managers state that drug pricing proposals appear to be absent from the recently proposed Republican healthcare reform bill. They believe that the biotech sector will still be able to charge premium prices for innovative therapies. However, they suggest that generalist investors have overlooked the change in the political climate, which has created a valuation opportunity.

The managers say that there are many good things happening in the healthcare industry following Trump's election. They believe that the industry has an open communication channel with the White House; Trump has already met with some of the biotech senior managements including the chief executives of Amgen, Celgene and Regeneron. The managers highlight recent appointments for healthcare agency positions, suggesting the appointees are pro free-market activities. These include Scott Gottlieb as the new head of the US Food & Drug Administration (FDA). On 11 July 2017, the FDA revised an orphan drug decision (Amicus Therapeutics' migalastat for Fabry disease). Amicus will be allowed to file its drug using already-submitted Phase II data, rather than having to collect further data, which may have taken until 2019/20.

Trump has also talked about the potential for tax reform at the corporate level and on the repatriation of overseas assets. BIOG's managers suggest this would be very positive for the biotech industry as some companies have a lot of cash held overseas, such as Amgen ($34bn) and Gilead ($25bn), which could be used for M&A. They say that at the beginning of 2017, there was a significant amount of activity, such as Johnson & Johnson's $30bn bid for Actelion. However, M&A activity has abated due to uncertainty about tax reform. The managers believe that once there is more clarity, there will be a flurry of M&A, which will be a major driver for the biotech sector.

Klemm and Hsu note that historically, periods of weakness in the biotech industry have been as a result of political concerns either around pricing or healthcare reform. They state that these downturns have provided buying opportunities, such as the Clinton-proposed healthcare reform in 1993/94, which led to a significant three-year bear market for the industry. The reform was unsuccessful and biotech subsequently outperformed the broader stock market for the next five years. The managers also highlight the numerous new emerging therapeutic classes that could generate more than $10bn in annual revenues, such as Alzheimer's, novel oncology treatments and gene therapy. They argue that the biotech industry is an "extreme hotbed of innovation" and that BIOG is investing and capitalising on industry developments; they are excited about innovation in the sector.

The managers state that large-cap biotech stocks are trading at a compelling c 30% discount to the broader US equity market. They believe that the valuation gap will narrow either through positive biotech industry fundamentals being recognised by investors or an increase in M&A, which should be a positive driver for the sector. Klemm and Hsu add that biotech stocks rallied in June 2017, helped by Clovis Oncology's positive Phase III data for ovarian cancer drug Rubraca.

Asset allocation

Investment process: Proprietary fundamental research

The managers are part of a team of more than 100 investment professionals at OrbiMed, many of whom have scientific or medical backgrounds. Stocks are selected on a bottom-up basis; fundamental analysis includes financial modelling, an assessment of research pipelines and identification of likely catalysts (which includes statistical analysis alongside fundamental research). Company visits are a key part of the investment process in order to understand the commercial prospects and development programmes for individual drugs.

BIOG invests in companies across the biotech spectrum:

- major biotech companies that have robust earnings growth, strong pipelines to replace maturing revenues and are trading on reasonable valuations (such as Biogen and Celgene);
- emerging biotech companies, with newly launched products or products in late-stage development. They may be considered as potential takeover targets or are approaching profitability (such as Clovis Oncology and Incyte); and
- promising early-stage companies with novel therapeutic products that have the potential to deliver positive clinical data (such as Bluebird Bio, DBV Technologies and Vanda Pharmaceuticals).

Investments are constantly reassessed to ensure that the investment thesis remains intact; portfolio turnover is understandably higher for smaller- than larger-cap companies.

Current portfolio positioning

At end-June 2017, BIOG had 34 holdings, with the top 10 positions comprising 68.9% of the portfolio. This is a decrease in concentration versus 74.9% at end-June 2016; nine positions were common to both periods. Given the dominance of American companies in the global biotech industry, the majority of BIOG's portfolio is invested in the US (more than 90% as at end-June 2016). However, the trust invests across the globe, with modest exposure in Europe and the Far East. Within the US, a large percentage (c 60%) is invested in eight major biotech companies; the managers believe that the larger companies are the most attractively valued within the biotech capitalisation spectrum.

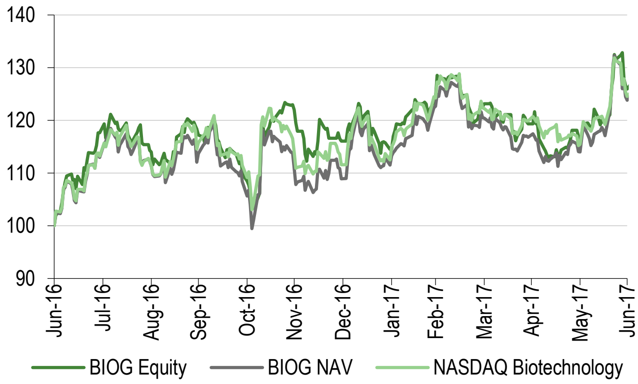
At end-June 2017, the largest position in the fund was Celgene. As shown in Exhibit 1, exposure has increased meaningfully over the last 12 months. The company has seven marketed products focusing on cancer and inflammatory diseases; it was one of the top contributors to BIOG's performance in FY17 as a result of multiple positive catalysts including strong financial results, the approval of Revlimid for maintenance therapy for patients with multiple myeloma, and positive Phase III data for ozanimod in multiple sclerosis. Celgene has recently announced it has taken a stake in China-based BeiGene to help develop and commercialise its treatment for solid tumour cancers. BIOG also holds a small position in BeiGene; the stock rallied by more than 25% following the announcement of the deal.

Performance: Long-term outperformance

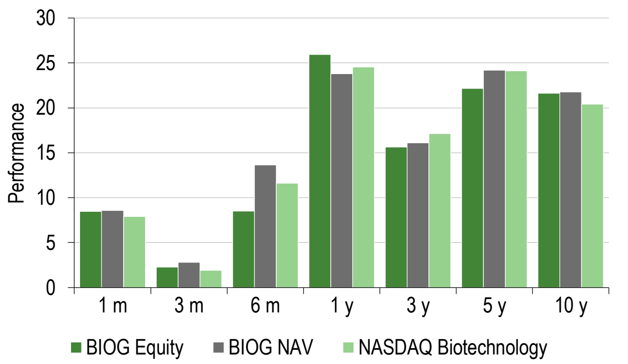
During FY17 (ending 31 March), BIOG's NAV and share price total returns of 27.5% and 27.9%, respectively, lagged the benchmark's 29.2% total return; sterling weakness was a positive contributor to absolute returns. The trust had a higher weighting in large caps compared to the benchmark, due to their attractive valuations; however, over the period, small- and mid-cap companies performed relatively better than larger companies. BIOG's top contributors to performance were Incyte (+7.1pp contribution), Celgene (+4.3pp) and Biogen (+4.2pp), while the largest detractors were Impax Laboratories (-1.3pp) and Achillion Pharmaceuticals (-1.3pp). Incyte announced a strategic collaboration with Merck to advance the epacadostat/pembrolizumab combination to Phase III trials in four new tumour types, while Impax announced poor quarterly results and weak earnings guidance.

Exhibit 3: Investment trust performance to 30 June 2017

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.

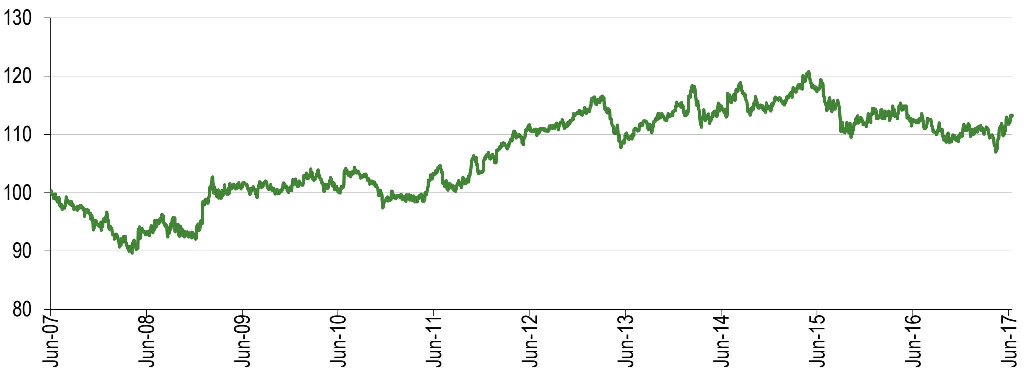
BIOG's relative returns are shown in Exhibit 4. The trust's NAV total return has outperformed the benchmark over 10 years and performed broadly in line over five years, while trailing over one and three years. Of interest to UK shareholders is BIOG's outperformance versus the FTSE All-Share Index over all periods shown, particularly over 10 years.

Exhibit 4: 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	0.4	(2.8)	1.1	(3.8)	(7.6)	10.7
NAV relative to NASDAQ Biotechnology	0.7	0.9	1.8	(0.6)	(2.6)	0.4	11.9
Price relative to World-DS Pharm & Bio	6.0	0.4	(0.3)	14.1	1.7	16.5	90.8
NAV relative to World-DS Pharm & Bio	6.2	0.9	4.4	12.1	2.9	26.6	92.9
Price relative to FTSE World	8.6	1.8	2.2	2.5	(0.0)	30.9	196.6
NAV relative to FTSE World	8.8	2.3	7.0	0.7	1.2	42.2	199.9
Price relative to FTSE All-Share	11.2	0.8	2.9	6.6	24.9	64.7	320.5
NAV relative to FTSE All-Share	11.3	1.4	7.7	4.8	26.4	78.9	325.1

Source: Thomson Datastream, Edison Investment Research. Note: Data to end-June 2017. Geometric calculation.

Exhibit 5: NAV total return performance relative to benchmark over 10 years



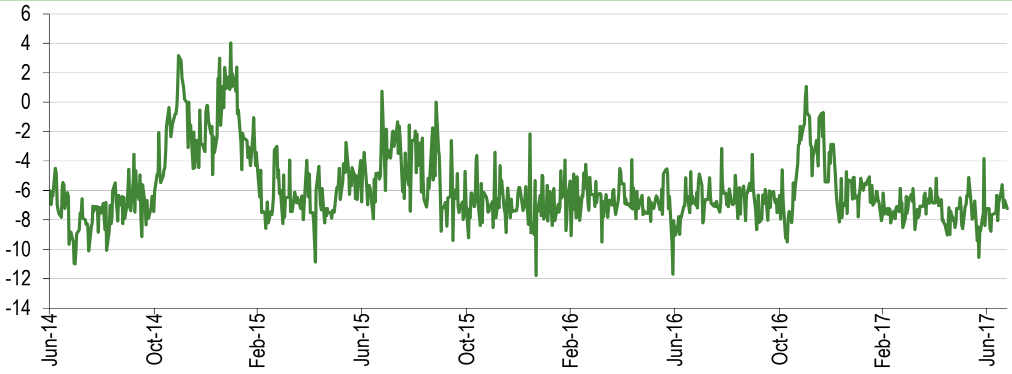
Source: Thomson Datastream, Edison Investment Research

Discount: Wider than historical averages

BIOG's current 7.2% share price discount to cum-income NAV is modestly wider than the 6.4% average of the last 12 months (range of a 1.1% premium to a 10.6% discount). It is also wider than the historical averages over the last three, five and 10 years of 5.9%, 4.4% and 5.4%, respectively. There is scope for BIOG's discount to narrow or the shares to revert to a premium to NAV if there is improved investor sentiment towards the biotech industry or if BIOG continues to build on its long-term record of outperformance versus the benchmark.

The trust's board employs a discount control mechanism, targeting a maximum discount of 6%. During FY17, 4.5m shares were repurchased at a cost of £29.7m (average discount of 7.0%); so far in FY18, no shares have been repurchased.

Exhibit 6: 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 shares in issue. The trust has an overdraft facility with JPMorgan Chase, and gearing of up to 20% of net assets is permitted. During FY15, the borrowing limit was raised twice, first from 10% to 15% and then from 15% to 20%, to allow the manager greater flexibility in making investment decisions. As at end-June 2017, net gearing was 10.6%; while higher than 3.2% at end-FY17, it is modestly lower than 11.1% at end-FY16. Portfolio manager OrbiMed receives an annual fee of 0.65% of net assets, while Frostrow Capital, which acts as the AIFM and provides company secretarial, marketing and administration services, is paid 0.3% of the market cap plus £60,000. A performance fee structure is in place to reward cumulative outperformance of the NASDAQ Biotech Index. In FY17, ongoing charges were 1.1%, which was 10bp higher than the prior financial year; as in FY16, no performance fees were payable in FY17.

Dividend policy and record

BIOG aims for capital growth rather than income; in addition, the early-stage nature of many biotech companies means that they tend to reinvest any profits for future growth, rather than returning cash to shareholders. As a result, BIOG has not historically paid a dividend; the last was 0.2p per share in 2001. In FY17, the net revenue return (after expenses) was £1.92m (1.6p per share), which was 11% higher than in FY16 (£0.83m and 1.3p per share). This was transferred to reserves, resulting in a 32.3p reduction in BIOG's revenue deficit.

Peer group comparison

Within the AIC Sector Specialist: Biotechnology & Healthcare sector there are two biotech-focused investment trusts (Biotech Growth Trust and International Biotechnology Trust) and three generalist healthcare funds (Polar Capital Global Healthcare Trust, Worldwide Healthcare Trust and recently listed BB Healthcare Trust). To widen the peer group we have also included BB Biotech and HBM Healthcare Investments; both are listed in Switzerland and pay dividends out of capital rather than income. Despite having a relatively tough period of performance in 2016, due to its overweight in larger-cap biotech stocks, BIOG's NAV total return ranks second out of six funds over one year. It is ahead of the peer group weighted average over 10 years, ranking second out of four funds, while lagging over three and five years. BIOG's discount is modestly wider than average, its ongoing charge is in line and it has the highest level of gearing in the group. Reflecting its capital growth mandate, BIOG does not pay a dividend.

Exhibit 7: Biotech and healthcare investment companies (as at 24 July 2017*)

% 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 (%)
The Biotech Growth Trust	456.5	20.7	73.8	210.2	679.7	(7.5)	1.1	Yes	111	0.0
BB Biotech	3,519.5	44.5	131.8	317.1	719.1	(5.8)	1.1	No	101	4.6
HBM Healthcare Investments	884.7	10.1	71.9	214.2		(17.9)	1.5	Yes	102	5.1
International Biotechnology	236.6	19.3	97.3	197.7	364.1	(6.6)	1.4	Yes	100	1.8
Polar Capital Global Healthcare	260.3	6.5	45.4	103.8		1.4	1.1	Yes	100	2.4
Worldwide Healthcare	1,185.8	17.3	90.1	197.7	462.6	0.4	0.9	Yes	109	0.9
Weighted average		**30.9**	**107.4**	**261.3**	**643.9**	**(6.2)**	**1.1**		**103**	**3.7**
BIOG rank in sector	**4**	**2**	**4**	**3**	**2**	**5**	**4**		**1**	**6**

Source: Morningstar, Edison Investment Research. Note: *Performance to 21 July 2017. Net gearing is total assets less cash and equivalents as a percentage of net assets.

The board

Following the retirement of Peter Keen at the July 2017 AGM, there are now six directors on BIOG's board, of whom five are independent. Keen had been a director since the trust's inception in 1997 and had been chairman of the audit committee since 2005. Chairman Andrew Joy was appointed in March 2012 and assumed his current role in July 2016. Professor Dame Kay Davies was appointed in March 2012, Stephen Bates in July 2015 and the Rt Hon Lord Willetts in November 2015. The newest member of the board is Julia Le Blan, who was appointed in July 2016 and will chair the audit committee following Keen's retirement. Sven Borho is a founding member of OrbiMed and so is considered to be non-independent; he was appointed to the board in March 2006.

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