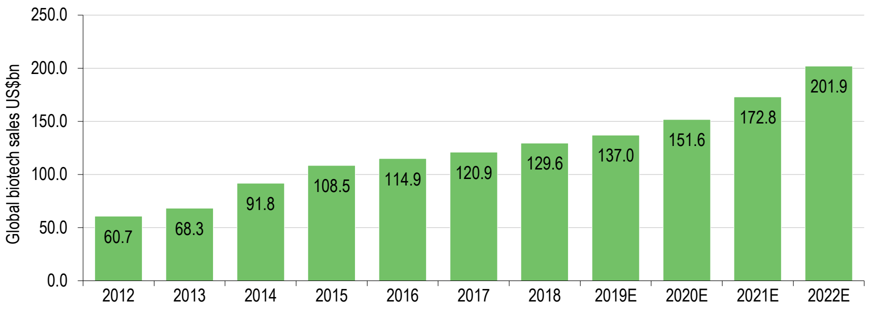
BB Biotech

Concentrated portfolio offering true differentiation

Investment companies
Biotechnology

BB Biotech (BION) has continued the process of refocusing its portfolio on innovative smaller and mid-cap stocks, selling out of bigger names such as Novo Nordisk and Regeneron, and taking new positions in smaller stocks at the cutting edge of genetic medicine. The Switzerland-based fund retains a highly concentrated portfolio of c 30–35 stocks (and five to eight core holdings make up more than half of total assets), but has a broad spread of clinical indications and development stages. Lead Manager Daniel Koller says that focusing the portfolio away from the big index names allows BION to remain relevant to investors who may hold such stocks directly. The fund has a high distribution policy (funded out of capital returns) and currently yields 4.6%.

BION gives exposure to fast-growing global biotech product sales



Source: BB Biotech, Edison Investment Research

The market opportunity

Advances in the understanding of disease processes, coupled with an ageing global population, are driving both the development and uptake of innovative biotechnology-based medical treatments. The regulatory backdrop is relatively benign, with life-changing treatments for 'orphan' diseases (which affect relatively few people but have a dramatic impact) enjoying fast-track approval in the key US market. However, the risk of new drugs failing to achieve their intended effects is ever-present, and this can lead to significant volatility in biotechnology share prices. For this reason, specialist fund management is often key to investment success in the sector.

Why consider investing in BB Biotech?

- Multinational management team with diverse scientific specialisms.
- Sector-beating, long-term performance track record.
- Greater focus on mid-caps offers significant differentiation from index.
- Concentrated portfolio allows meaningful impact from individual positions.
- High distribution policy (paid out of capital) rewards investors with c 5% yield.

Now consistently trading at a premium to NAV

BION's shares have re-rated substantially over recent years, owing to a combination of strong performance, index inclusion and the high (5%) distribution policy. While the share price currently stands at a 14.6% premium to NAV, this is well below the 10-year high premium of 22.2%, seen in October 2018.

18 June 2019

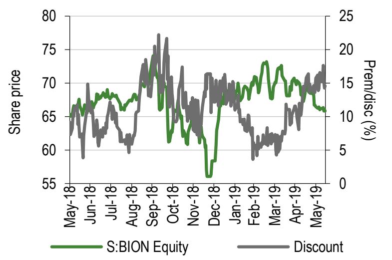
Price	**CHF65.85**
Market cap	**CHF3,648.1m**
AUM	**CHF3,182.7m**

NAV*	CHF57.45
Premium to NAV	14.6%

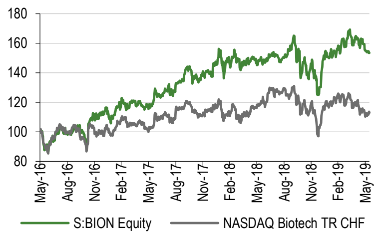
*Including income. As at 14 June 2019.

Yield	4.6%
Ordinary shares in issue	55.4m
Code	BION
Primary exchange	SIX
AIC sector	N/A
Benchmark	NASDAQ Biotechnology (CHF)

Share price/discount performance



Three-year performance vs index



52-week high/low	CHF74.10	CHF56.10
NAV* high/low	CHF68.95	CHF47.25

*Including income.

Gearing

Gross*	9.8%
Net*	9.8%

*As at 31 March 2019.

Analysts

Sarah Godfrey +44 (0)20 3681 2519

Mel Jenner +44 (0)20 3077 5720

investmenttrusts@edisongroup.com

Edison profile page

BB Biotech is a research client of Edison Investment Research Limited

Exhibit 1: Company at a glance

Investment objective and fund background

BB Biotech (BION) is a Switzerland-based investment company, targeting long-term capital growth from biotechnology companies that are developing and marketing innovative drugs. At least 90% (currently 100%) of the portfolio is invested in listed companies, primarily those that already have products on the market or have promising drug candidates in advanced stages of development. BION is benchmarked against the Nasdaq Biotechnology index (in Swiss francs) but is managed bottom-up, with a concentrated 20–35 stock portfolio.

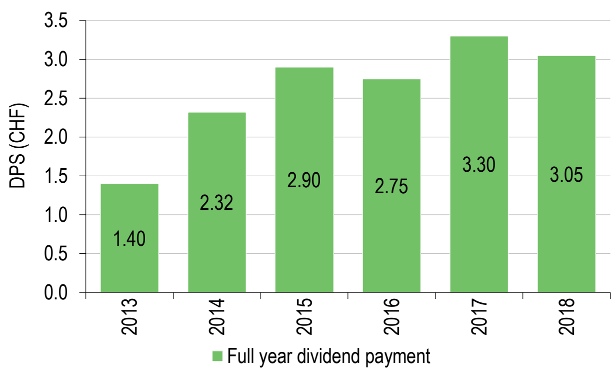
Recent developments

- 26 April 2019: Results for the three months ended 31 March 2019. NAV total returns of 31.1% in CHF, 32.3% in EUR and 29.4% in USD, versus Nasdaq Biotechnology Index return of 15.5% in US dollar terms. Share price total returns of 24.2% in Swiss francs and 25.4% in euros.
- 11 April 2019: Commencement of a new share buyback programme, with authority to repurchase up to 10% of shares (5,540,000 shares) over a period of 36 months. No shares were bought back under the previous three-year programme.

Forthcoming		Capital structure		Fund details	
AGM	March 2020	Total expense ratio	1.25% (31 March)	Group	Bellevue Asset Management
Quarterly results	July 2019	Net gearing	9.8% (31 March)	Manager	Team led by Daniel Koller
Year end	31 December	Annual mgmt fee	1.1% of market cap	Address	Seestrasse 16, 8700 Küsnacht, Switzerland
Dividend paid	March (out of capital)	Performance fee	None		
Launch date	November 1993	Company life	Indefinite	Phone	+41 44 267 67 00
Continuation vote	None	Loan facilities	See page 9	Website	www.bbbiotech.com

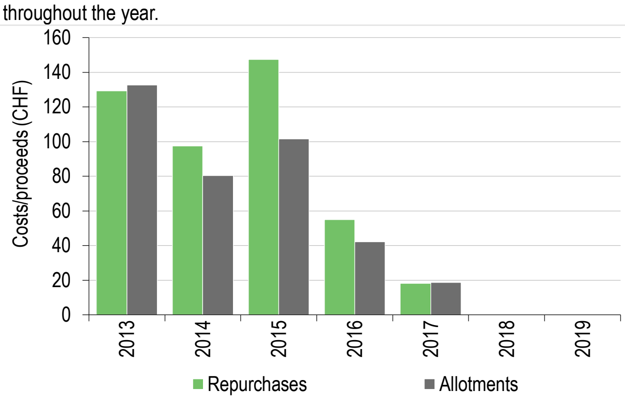
Dividend policy and history (financial years)

Under a policy in place from 2012, BION makes an annual cash distribution equivalent to c 5% of the volume-weighted average December share price. Dividends restated to take account of five-for-one stock split in March 2016.

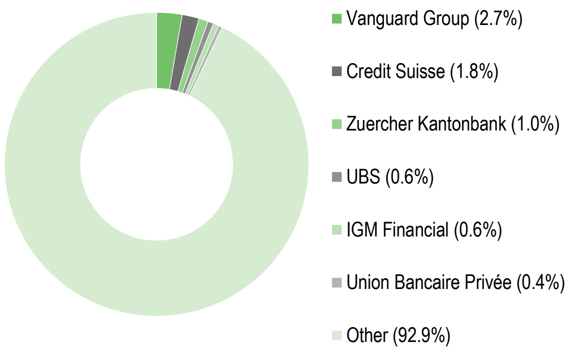


Share buyback policy and history (financial years)

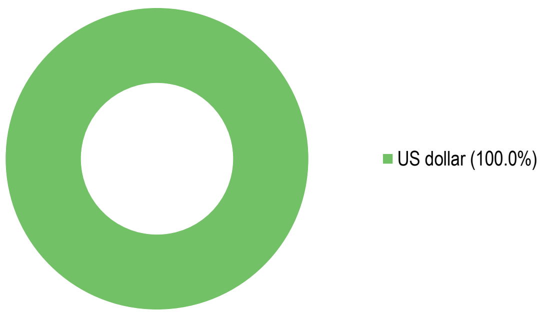
BION has the authority, renewed every three years, to repurchase up to 10% of its issued share capital over a three-year period. As part of the distribution policy announced in 2012, it may return up to 5% of its share price through buybacks throughout the year.



Shareholder base (as at 31 March 2019)



Portfolio exposure by currency (as at 31 March 2019)



Top 10 holdings (as at 31 March 2019)

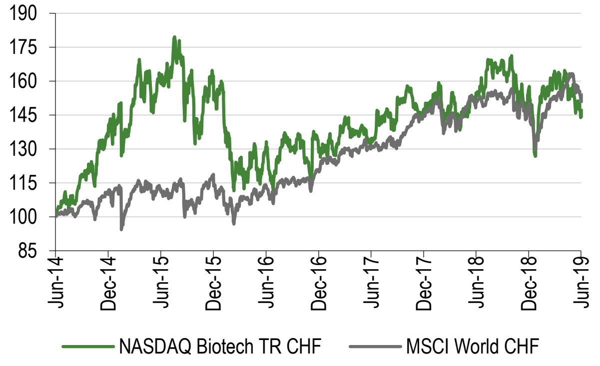
			Portfolio weight %	
Company	**Country**	**Sector**	**31 March 2019**	**31 March 2018***
Ionis Pharmaceuticals	US	Genetic diseases	15.8	9.8
Incyte	US	Oncology	7.8	8.0
Neurocrine Biosciences	US	Neurological diseases/women's health	7.5	7.3
Vertex Pharmaceuticals	US	Orphan diseases	6.0	6.3
Sage Therapeutics	US	Neurological diseases	5.5	N/A
Celgene	US	Oncology	5.2	7.7
Agios Pharmaceuticals	US	Oncology	5.0	5.4
Alexion Pharmaceuticals	US	Orphan diseases	4.5	N/A
Alnylam Pharmaceuticals	US	Genetic diseases	3.8	N/A
Esperion Therapeutics	US	Cardiovascular diseases	3.6	4.5
Top 10 (% of holdings)			**64.7**	**64.0**

Source: BB Biotech, Edison Investment Research, Bloomberg, Morningstar. Note: *N/A where not in end-March 2018 top 10.

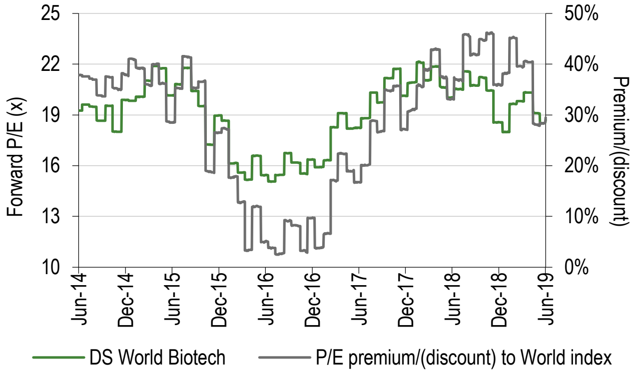
Market outlook: Innovation high, valuations reasonable

Exhibit 2: Market performance and valuation

Nasdaq Biotech and MSCI World Index total returns (in CHF)



Absolute and relative forward P/E multiple for DS World Biotech index



Source: Refinitiv, Edison Investment Research. Note: valuation data at 7 June 2019.

The investment case for biotechnology and healthcare is underpinned by scientific advances and demographic factors. With life expectancy rising worldwide, as well as growing prosperity in developing markets, there is greater demand globally for treatments for previously intractable health issues such as dementia (where a breakthrough treatment is yet to be developed), while conditions such as heart disease and cancer are increasingly treatable, with good long-term outcomes. An example at the cutting edge of biotechnology is the advances in genetic medicine that are giving hope to the parents of children with certain rare conditions, providing the chance to live a practically normal life where their prognosis would otherwise have been very poor.

For investors in the companies that develop such treatments, medium-term market returns in aggregate have been broadly commensurate with global market returns (Exhibit 2, left-hand chart, in Swiss franc terms). However, at the individual stock level, binary risk may be high (as clinical trial data may be positive or negative), and the whole biotech market (which is overwhelmingly US based, so the Nasdaq Biotechnology Index is a reasonable proxy) tends to be more volatile, as non-specialist investors pile in and out, and political and regulatory pressures wax and wane. In the most recent period, the decline in the global equity index (as investors have begun to be less optimistic on a positive outcome to US-led trade disputes, and economic growth has slowed) has been magnified in the biotech index by nervousness over a sudden change at the head of the key regulator, the US Food and Drug Administration. However, the new incumbent, Ned Sharpless (who replaced Scott Gottlieb), has a biotechnology background, which arguably should lead to a continuation of the benign, pro-scientific regulatory environment.

Biotech company valuations (right-hand chart, based on the Datastream World Biotechnology index) are a little below their five-year average, with a 12-month forward P/E of 18.7x compared with an average of 19.6x, while world equity valuations are similarly at a small discount to their five-year average. Given the rate of innovation and the significant reward potential (as well as risk) on offer, biotech stocks tend to trade at a premium to the broader market. While the sector does not currently offer the level of relative value it displayed during 2016 (when valuations were almost at parity with the global index), the current 29.5% premium is close to the five-year average of 28.3%, and well below the highs of c 45% seen only a few months ago.

Fund profile: Strong focus on biotech innovation

BB Biotech (BION) was launched in 1993 and is one of the largest specialist funds investing in the fast-growing sector of biotechnology. It is managed by Bellevue Asset Management, a specialist healthcare investment manager headquartered in Switzerland, and has an executive board of industry specialists who oversee major investment decisions. BION has a strong focus on innovation, and primarily aims to achieve capital growth for its investors. Although returns can be volatile, as biotech companies' share prices can move significantly on positive or negative clinical developments, its long-term track record vindicates its approach, with sector-beating NAV total returns of c 400% in Swiss franc terms over 10 years. BION is incorporated and listed in Switzerland, and also has listings on German and Italian exchanges. It is a member of the SMIM index in Switzerland, and the Europe-wide Stoxx 600 index. The fund measures its performance against the Nasdaq Biotechnology Index (in Swiss franc terms), although its concentrated portfolio (c 30–35 stocks, with an official range of 20–35) and greater focus on mid-cap companies means its performance is likely to differ significantly from that of the benchmark.

The portfolio blends earlier-stage biotech companies with those that already have products on the market and are profitable. It has five to eight core holdings (currently seven), which are expected to make up around half to two-thirds of the portfolio (52.8% at 31 March 2019). Up to 10% of assets may be invested in unquoted companies, although none are currently held, following the initial public offering (IPO) of Moderna Therapeutics in December 2018.

The fund manager: Bellevue Asset Management

The manager's view: Attractive opportunities in genetic medicine

Over the past six to eight months, BION has increased its focus on gene therapy and gene editing specialists, which now make up c 5% of the portfolio. Following the takeover of AveXis (a long-term holding) by Novartis in 2018, Voyager Therapeutics was the only stock in the portfolio with a specific focus on the attractive area of genetic medicine, so after a careful assessment of the sector, BION's managers have added four new stocks: Audentes Therapeutics and Sangamo Therapeutics in Q418, and Crispr Therapeutics and Homology Medicines in Q119. These are (including Voyager) all relatively small companies, with market capitalisations between c $800m and c $2bn.

Sangamo combines exposure to gene therapy with the more experimental area of gene editing. BION lead manager Daniel Koller says that shortly after purchasing the stock, the company announced positive gene therapy trial results in haemophilia A, where it is partnered with Pfizer. Sangamo's gene editing is based on zinc finger technology (ZFT), which Koller says is showing some success in the clinic for patients with Hunter syndrome (a mucopolysaccharide disease causing progressive intellectual disability), but is not yet at a stage where patients can be withdrawn from enzyme replacement therapy. Koller says Sangamo has echoes of BION's largest holding Ionis: the company has been listed since the early 2000s (in Ionis's case it had been listed since the mid-1990s) but has remained under the radar (Ionis, then known as Isis, did not see its shares rally significantly until around seven years ago). The manager says Sangamo has now developed its gene editing technology to the extent that it has started being medically applicable and the investment case is balanced because the company has gene therapy as well as gene editing exposure. 'We can see that ZFT works, so it is now more about testing the next generation to achieving higher efficacy and test for safety and durability,' says Koller.

The key investment hypothesis for Audentes, meanwhile, is its project in X-linked myotubular myopathy. Koller explains that this disorder, which only affects boys, causes degeneration of muscle fibres, and usually results in very poor outcomes for sufferers, who require intensive care and mechanical ventilation from birth. Particularly in the US, this is extremely expensive, with neonatal intensive care (NICU) costing $30,000–50,000 per day. In a recent Phase I/II trial of nine patients, Koller says Audentes' AT132 treatment, a one-time delivery directly after birth, led to significant improvements in respiratory function in most of the treated patients – in some cases to levels looking consistent with a healthy child – with the control subject showing a decline. While the cost of the treatment are expected in the multi-million US dollar range, this actually has the potential to reduce overall healthcare costs (given the length of time for which babies may otherwise need to be treated in NICU), although Koller points out that the real benefit is that the treatment may lead to patients having more normal-looking muscle fibres, hopefully leading to substantial long-term benefits, and ultimately the chance of leading close to a normal life.

In investment terms, the BION team was able to take advantage of a depressed share price for Audentes, following a delay in a pipeline project. The position (now 1.3% of the portfolio) was built aggressively in Q418, after the stock suffered further declines in December's market volatility, with further purchases in Q119. Audentes' share price has risen by more than 100% since its 24 December low point. Koller says the company is at a similar stage to AveXis when it was first purchased for the portfolio in 2016, which may mark it out as a future acquisition target for a larger company. 'The big players want access to gene therapy,' he explains.

Away from these earlier-stage genetic medicine names, there are some important potential catalysts coming up for some of BION's portfolio holdings. One of the most significant is from Sage Therapeutics; its Sage 217 molecule has shown good results in post-partum depression (PPD). Later in 2019, the company is set to announce results of a trial of the drug in patients with major depressive disorder (MDD), which has a far larger patient population than PPD. 'It could be a complete disruptor in MDD, where patients currently take a lot of pills without that much efficacy,' says Koller. 'Although these trials are at the higher end of the risk curve, Sage is already de-risked for PPD, with Zulresso approved and positive results in Sage 217, and if 217 is effective in MDD, it allows it to target a double-digit billion dollar market,' he adds.

With a market capitalisation of c $9bn, Sage is considered a mid-cap stock. The fact that five of the eight core holdings are in the $5–30bn market cap bracket (averaging $13.9bn) illustrates BION's continued move away from large-cap stocks. The manager explains that while this may bring some more volatility to BION's portfolio, these companies have very much higher upside potential than the large-cap 'evergreens'. 'Nowadays the Vertexes, Alexions and Incytes (respectively $44.4bn and $26.6bn and $17.3bn) represent our large-cap exposure and upon maturing further are more likely to be the ones leaving the portfolio in the next few years,' says Koller. 'As companies move up the "S" curve [where returns tend to plateau] and growth rates come down, or if we think they are overvalued, the weightings will start to reduce.' This has been shown in practice by the exits from Novo Nordisk and Regeneron in Q418 and Q119, respectively.

Merger and acquisition (M&A) activity remains an important feature of the biotech landscape, typified by deals such as Novartis's purchase of BION holding AveXis, and two other recent bids for gene therapy stocks not held by BION, Nightstar Therapeutics (by Biogen) and Spark (by Roche). While Biogen's purchase of Nightstar has completed, the Roche/Spark deal is still being scrutinised by competition authorities. Koller says that while M&A underscores interest in the technology of genetic medicine and is likely to remain a feature, he is happy that the two recent bids were for gene therapy companies not held by BION. 'We don't want to leave the upside in the hands of the acquirer if deals happen too early,' he explains, adding that the BION team had considered the investment merits of both Nightstar and Spark, and concluded there were better opportunities elsewhere.

Asset allocation

Investment process: Increasing focus on promising mid-caps

BION's lead portfolio manager, Daniel Koller, heads a team including five other investment professionals – based in New York and Zurich – with a variety of scientific and medical specialisms. Koller is the joint-longest serving member of the management team, having been involved with the fund since 2004. The scientific backgrounds of the managers are fundamental to their understanding of the clinical landscape, and they keep their knowledge up to date by meeting clinicians and biotech company executives, monitoring medical journals and attending industry conferences.

The universe of established and developing biotech companies globally, from which BION's managers construct the portfolio, has grown to c 1,000 stocks, so a variety of filters are employed to arrive at the final list of c 30–35 companies. The team begins by focusing on clinical areas where advances in science and technology coexist with strong market potential, looking at factors such as indication and mechanism of action. This brings the opportunity set down to c 300–400 companies, which is further refined to a 'long list' of c 100 stocks by applying a variety of quantitative and qualitative screens. These candidate stocks are modelled and analysed by the investment team, assessing factors such as innovation, quality of company management, intellectual property (the team prefers wholly owned assets), pharmacoeconomics and company financials. The team concentrates its efforts on identifying truly novel products, which, while they may initially come with a high price tag, essentially reduce healthcare costs over the long term, because of their higher efficiency or better safety profile. While the clinical side is the main driver of investment decisions, companies considered for inclusion in the portfolio should also have the potential to achieve above-average sales and profits growth.

The investment team produces an investment proposal for each potential holding that passes through the due diligence process, which is then presented to BION's executive board. The proposal includes financial models, clinical data, recommendations on purchase price and position size (new positions tend to come into the portfolio at 0.5–4.0% of NAV), and estimates of potential upside and downside. The executive board signs off on all new positions, complete exits and major changes in weightings.

While the investment universe is global, BION has a heavy bias towards the US, as this is where the majority of the world's biotechnology companies are based. The portfolio also has an increasing focus away from the large-cap 'evergreen' stocks that dominate the Nasdaq Biotechnology Index, preferring mid-cap companies that have greater growth potential, but are not necessarily higher risk, as many have products on the market already and may be less exposed to patent expiries. Koller says that shareholder feedback to this shift in the portfolio has been very positive; many BION investors have direct holdings in the big index stocks, and see the fund as giving them exposure to the 'next generation' of biotech companies.

BION's portfolio is not merely focused (with a short list of c 30–35 stocks), but also concentrated, with five to eight core holdings that are expected to account for c 50–65% of the total. The team actively manages the portfolio, trimming positions to lock in gains and keep them from becoming too large, and topping up underperforming holdings. Complete exits may occur where a stock has reached its valuation target, or if poor clinical data or regulatory outcomes call the original investment thesis into question.

Current portfolio positioning

At 31 March 2019, BION's portfolio was made up of 35 stocks, with seven core holdings accounting for 52.8% of the total. This compares with 34 stocks at 31 March 2018, with eight core holdings accounting for 55.2% of the portfolio. The largest holding, Ionis Pharmaceuticals, increased from

9.8% to 15.8% of the total over the period, although the number of shares held decreased by 791,334, as the managers took profits following a period of very strong performance for the RNA/antisense specialist, which is seeing strong sales for its spinal muscular atrophy treatment Spinraza (partnered with Biogen). Shares were sold in Q119 at prices from the high $70s into the $80s, compared with the current price in the low $60s.

In terms of clinical focus (Exhibit 3), over the 12 months to 31 March 2019, the portfolio saw a large increase in orphan diseases (+12.4pp), which is now the most prominent area, while oncology, previously the biggest category, fell back slightly (-3.4pp), mainly as a result of poorer performance. Exposure to neurological diseases increased (+1.7pp), driven by strong clinical data in post-partum depression from fifth-largest holding Sage Therapeutics.

Exhibit 3: Portfolio distribution by clinical focus (% unless stated)

	Portfolio end-March 2019	Portfolio end-March 2018	Change (pp)
Orphan diseases	38.1	25.7	12.4
Oncology	26.7	30.1	(3.4)
Neurological diseases	17.4	15.7	1.7
Metabolic diseases	7.5	11.9	(4.4)
Cardiovascular diseases	5.2	6.2	(1.0)
Infectious diseases	2.1	6.1	(4.0)
Other	3.0	4.3	(1.3)
	100.0	**100.0**	

Source: BB Biotech, Edison Investment Research

Exhibit 4: Portfolio distribution by market capitalisation (% unless stated)

	Portfolio end-March 2019	Portfolio end-March 2018	Change (pp)
>$30bn	17.6	25.3	(7.7)
$5-30bn	46.2	38.3	7.9
$1-5bn	26.8	33.0	(6.2)
$500m-1bn	7.9	2.7	5.2
<$500m	1.5	0.6	0.9
	100.0	**100.0**	

Source: BB Biotech, Edison Investment Research

The breakdown of the portfolio by market capitalisation clearly shows the shift away from the larger end of the size spectrum ($30bn plus companies down 7.7pp over 12 months to 31 March 2019). The position in Novo Nordisk was exited in Q418, while Regeneron was sold in Q119. Gilead – one of the largest biotech companies – has gone from a core holding at 31 March 2018 to a 1.2% position now, and the holding in Celgene (subject to a takeover bid by Bristol-Myers Squibb) has also been trimmed, although it remains a core position. In the market volatility of Q418, the managers topped up holdings in favoured mid-cap stocks including Neurocrine Biosciences, Agios Pharmaceuticals, Alnylam Pharmaceuticals and Sage Therapeutics, as well as adding to recently purchased smaller-caps Argenx, Nektar Therapeutics, MyoKardia and G1 Therapeutics. Purchases in the past six months have had a strong tilt towards the field of genetic medicine, with new positions in Sangamo (gene editing and gene therapy) and Audentes (gene therapy) in Q418, and Crispr Therapeutics (gene editing) and Homology Medicines (gene editing and gene therapy) in Q119.

Performance: Solid record of outperforming the index

Exhibit 5: Five-year discrete performance data

12 months ending	Share price (%)	NAV (%)	NASDAQ Biotech TR CHF (%)	MSCI World Health Care TR CHF (%)	FTSE All-Share CHF (%)
31/05/15	104.3	109.6	61.4	28.6	3.2
31/05/16	(10.9)	(24.2)	(19.1)	(0.9)	(5.8)
31/05/17	15.3	11.2	0.0	5.4	7.5
31/05/18	26.4	14.3	16.3	8.6	11.6
31/05/19	6.3	0.6	(5.3)	8.2	(6.2)

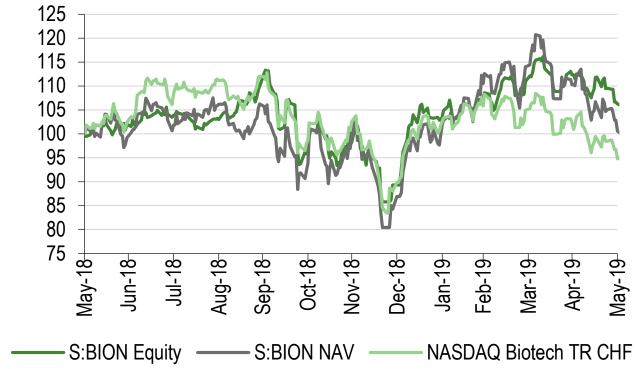
Source: Refinitiv. Note: All % on a total return basis in Swiss francs.

BION's concentrated portfolio, and its increased focus on mid-cap companies rather than the large index constituents, mean its performance often diverges widely from that of its benchmark, the Nasdaq Biotechnology Index. As shown in Exhibit 6, over most periods to 31 May 2019, this divergence has been soundly in BION's favour, with annualised NAV total returns of 15.5% and 17.7% over five and 10 years, respectively, compared with 7.6% and 15.9% for the index (all in Swiss franc terms). The sustained re-rating in the share price since the latter part of 2017 has meant that share price total returns have outstripped NAV returns over all periods shown.

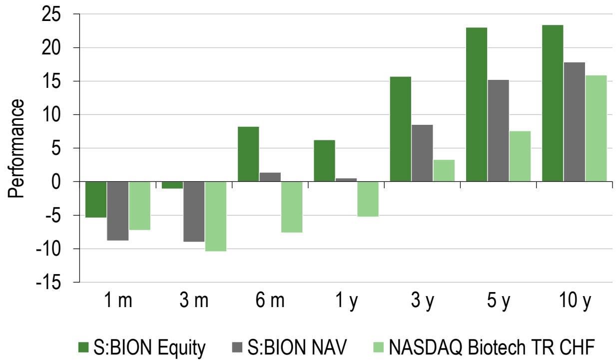
Following the sharp sell-off in global equity markets in Q418, BION's NAV recovered more quickly than its share price in Q119. Returns from largest holding Ionis Pharmaceuticals were particularly strong in the first quarter, with the share price rising by 50.1% (in US dollar terms) from 1 January to 31 March. Koller comments that there may have been some read-across by speculators that new FDA head Ned Sharpless's background in RNA would be particularly positive for Ionis. BION's managers took profits in the stock to maintain the position at c 15% of the portfolio, reinvesting some of the proceeds in stocks that had suffered short-term underperformance. Ionis's shares subsequently fell back somewhat (-19.2% from 31 March to 31 May, causing a notional decline in BION's NAV of 3.4% if the size of the position remained unchanged over the period), although they have still risen by more than 20% year-to-date.

Exhibit 6: Investment company performance (in CHF terms) to 31 May 2019

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



Price, NAV and benchmark total return performance (%)



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

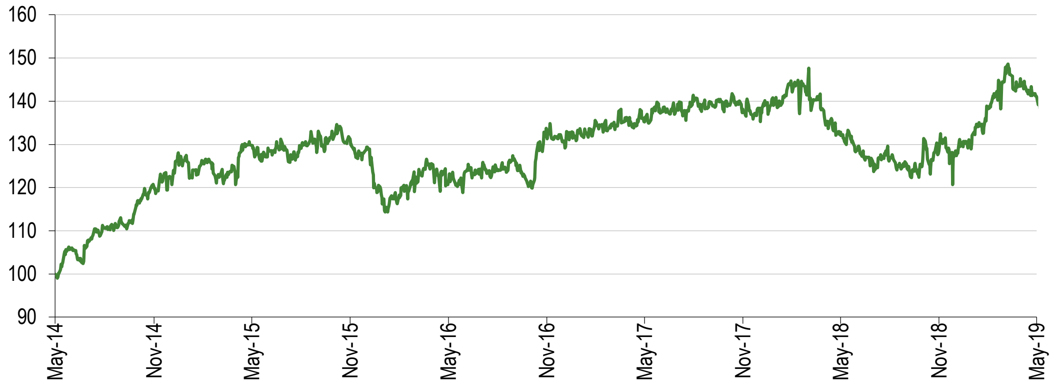
Exhibit 7: Share price and NAV total return performance, relative to indices (percentage points)

	One month	Three months	Six months	One year	Three years	Five years	10 years
Price relative to NASDAQ Biotech	1.8	9.3	15.9	11.5	44.8	138.0	382.5
NAV relative to NASDAQ Biotech	(1.6)	1.4	9.0	5.8	17.6	59.1	78.7
Price relative to MSCI World Health Care	(1.8)	1.9	12.8	(1.9)	31.1	124.1	492.5
NAV relative to MSCI World Health Care	(5.2)	(6.1)	5.9	(7.6)	4.0	45.1	188.7
Price relative to FTSE All-Share	2.0	1.1	4.0	12.4	42.4	172.7	635.7
NAV relative to FTSE All-Share	(1.4)	(6.9)	(2.9)	6.7	15.3	93.7	331.8

Source: Refinitiv, Edison Investment Research. Note: Data to end-May 2019. Arithmetic calculation.

Sage Therapeutics, another of BION's core holdings, has also contributed positively to performance, jumping by 55.7% on positive clinical news in early January, and continuing to make positive progress since then, up another 26.0%. All seven of the core holdings produced double-digit gains in Q119 in US dollar terms, ranging from 11.0% for Vertex Pharmaceuticals to 66.0% for Sage. From 31 March to 31 May, all but one of the core holdings (Sage) posted declines, ranging from -0.6% for Celgene to -31.5% for Agios Pharmaceuticals. However, all seven stocks have performed positively year-to-date (to 5 June), with five of the seven in double digits. Exhibit 8 illustrates how these have contributed to BION's outperformance of the index since the latter part of 2018, after trailing somewhat in the first half of the year.

Exhibit 8: NAV total return performance relative to benchmark (in CHF) over five years

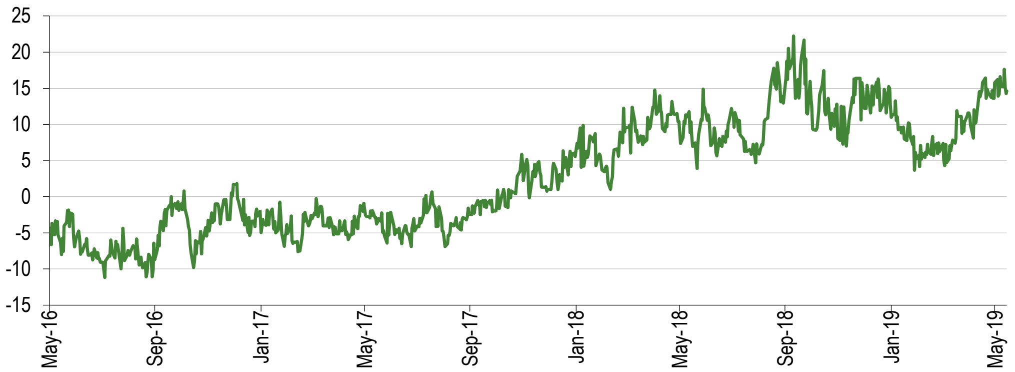


Source: Refinitiv, Edison Investment Research

Discount: Now trading consistently at a premium

Broadly since the latter part of 2016, BION's share price has re-rated steadily (having previously traded at a double-digit discount to NAV), and at 14 June, the shares traded at a 14.6% premium to cum-income NAV. This was above the one-year average premium of 11.1%, although some way below the 10-year high of 22.2%, reached in October 2018. Over three years, the shares have traded at an average premium of 2.9%, while over five and 10 years they have traded at an average discount of 4.9% and 13.4%, respectively. Factors underlying the re-rating may include the attractiveness of the 5% distribution policy in a continued low-yield environment, buying from passive funds as a result of BION's inclusion in major European and Swiss market indices, and the fund's strong long-term performance record. The premium reduced in Q119 as the rise in the share price lagged the strongly performing NAV, but has since increased again against a backdrop of less positive short-term NAV performance.

Exhibit 9: Share price premium/discount to NAV (including income) over three years (%)



Source: Refinitiv, Edison Investment Research

Capital structure and fees

BION is a Switzerland-incorporated closed-end investment company with one class of share. Its primary Swiss franc-denominated stock market listing is on the SIX Swiss Exchange, and it also has euro-denominated listings in Germany and Italy. Since 2014 it has been a constituent of the Stoxx 600 index of European companies, and in September 2018 it was promoted to the SMIM index in Switzerland, made up of the next 50 largest and most liquid companies after the 20 bluechip constituents of the Swiss Market Index (SMI). There are currently 55.4m shares in issue. Following the expiry of its previous three-year share buyback authority (which was not used), BION has authority to repurchase up to 10% of its shares (5,540,000 shares) over a period of 36 months from April 2019. Gearing is available via a short-term bank loan with an interest rate of 0.40%. At 31 March 2019, CHF375m of the loan was drawn (up from CHF185m at 31 December 2018), equating to c 9.8% of net assets.

The fund pays Bellevue Asset Management an all-in management fee of 1.1% a year, and there is no performance fee. At 31 March 2019, the total expense ratio (broadly equivalent to an investment trust's ongoing charges) was 1.25%, which is competitive with the majority of peers (see Exhibit 10).

Dividend policy and record

Biotechnology is not a high-yielding sector of the stock market, as many companies are at a relatively early stage of development, and even those with products on the market may be more focused on reinvesting their profits for future growth than rewarding shareholders with dividends. However, in recognition of investors' appetite for income in an environment where yields on other assets are low, BION has a policy of paying out some of its capital profits as an annual distribution to shareholders. The rate of the distribution is set at 5% of BION's market capitalisation, based on the volume-weighted average share price in December each year. In respect of FY18, a dividend of CHF3.05 was paid to shareholders in March 2019. This was 7.6% below the CHF3.30 paid in respect of FY17, because the widespread equity market sell-off in December 2018 meant BION's market capitalisation was lower than a year earlier; the share price has since bounced back. While the payout may fall as well as rise, over the five years to end-FY18 it has grown at a compound annual rate of 16.9% (adjusting for the FY16 stock split). Based on the current share price, BION has a dividend yield of 4.6%. The high distribution policy (introduced in 2012) has arguably been one of the factors underlying the shares' move from a discount to a premium to NAV in recent years.

Peer group comparison

Exhibit 10: Biotech and healthcare peer group (in CHF terms) as at 4 June 2019*

% unless stated	Market cap £m	NAV TR 1 year	NAV TR 3 year	NAV TR 5 year	NAV TR 10 year	Ongoing charge	Perf. fee	Discount (cum-fair)	Net gearing	Dividend yield
BB Biotech	**3,670.3**	**(1.2)**	**28.2**	**102.0**	**398.7**	**1.25**	**No**	**13.9**	**110**	**4.6**
BB Healthcare	669.4	6.4	--	--	--	1.21	No	1.8	113	2.9
Biotech Growth Trust	434.6	(9.6)	(2.3)	26.8	319.8	1.09	Yes	(6.5)	105	0.0
HBM Healthcare Investments	1,249.5	8.5	39.2	96.2	292.7	1.56	Yes	(9.3)	100	4.2
International Biotechnology Trust	296.6	(3.9)	12.8	65.5	247.3	1.14	Yes	1.7	100	4.6
Polar Capital Global Healthcare	317.7	(0.2)	12.7	29.0	--	1.22	Yes	(7.0)	101	1.0
Syncona	1,983.5	13.8	46.9	52.7	--	1.55	No	22.4	100	1.0
Worldwide Healthcare Trust	1,731.6	(6.1)	17.6	65.4	275.0	0.91	Yes	1.7	109	1.0
Peer group average (8 funds)	**1,294.1**	**1.0**	**22.2**	**62.5**	**306.7**	**1.24**		**2.3**	**105**	**2.4**
BION rank in peer group	**1**	**5**	**3**	**1**	**1**	**3**		**2**	**2**	**1=**

Source: Morningstar, Edison Investment Research. Note: *Performance to 3 June 2019 based on ex-par NAV. TR=total return. Net gearing is total assets less cash and equivalents as a percentage of net assets (100 = ungeared).

As a Switzerland-domiciled fund, BION is not included in the Association of Investment Companies' Biotechnology & Healthcare sector. However, in Exhibit 10 we present it (along with fellow Swiss fund HBM Healthcare Investments) alongside the AIC peer group (in Swiss franc terms) for comparison purposes. BION is by some way the largest fund in the group. The peers differ in their investment focuses, with some, like BION, specialising in biotechnology, while others have more general healthcare exposure. In broad terms, the healthcare funds have performed better than the biotech specialists in the past 12 months, over which period BION's NAV total return ranks fifth out of eight. BION's performance has been above average over three, five and 10 years, ranking third out of seven, first out of seven and first out of five, respectively. Its total expense ratio (broadly the same as ongoing charges) is close to the average, and unlike the majority of peers, there is no performance fee. Currently five of the funds trade at a premium to NAV and three trade at a discount. BION has the second-highest premium, which may reflect the fact that it offers the joint-highest yield in the peer group (most of the funds that pay a yield do so at least partly out of capital), as well as its strong medium- to longer-term performance record. Gearing, although relatively modest at c 10%, is above average for the peer group.

The board

Unlike UK investment trusts, whose boards of directors are usually non-executive, BION has an executive board made up of four industry-specialist directors. The board signs off on all major investment decisions, although day-to-day portfolio management rests with Bellevue. The chairman (since 2013) is Dr Erich Hunziker, who has served on the board since 2011. He is a former CEO of Swiss pharmaceutical giant Roche. Dr Clive Meanwell is CEO of the Medicines Company, which he founded, and is BION's longest-serving director, having been appointed in 2003. Professor Dr Klaus Strein, also a former Roche executive, became a director of BION in 2013. The newest director, Dr Thomas von Planta, was appointed in March 2019. His background is in investment banking, and until recently he was chairman of the board of BION's portfolio manager, Bellevue Asset Management.

EDISON

General disclaimer and copyright

This report has been commissioned by BB Biotech and prepared and issued by Edison, in consideration of a fee payable by BB Biotech. Edison Investment Research standard fees are £49,500 pa for the production and broad dissemination of a detailed note (Outlook) following by regular (typically quarterly) update notes. Fees are paid upfront in cash without recourse. Edison may seek additional fees for the provision of roadshows and related IR services for the client but does not get remunerated for any investment banking services. We never take payment in stock, options or warrants for any of our services.

Accuracy of content: All information used in the publication of this report has been compiled from publicly available sources that are believed to be reliable, however we do not guarantee the accuracy or completeness of this report and have not sought for this information to be independently verified. Opinions contained in this report represent those of the research department of Edison at the time of publication. Forward-looking information or statements in this report contain information that is based on assumptions, forecasts of future results, estimates of amounts not yet determinable, and therefore involve known and unknown risks, uncertainties and other factors which may cause the actual results, performance or achievements of their subject matter to be materially different from current expectations.

Exclusion of Liability: To the fullest extent allowed by law, Edison shall not be liable for any direct, indirect or consequential losses, loss of profits, damages, costs or expenses incurred or suffered by you arising out or in connection with the access to, use of or reliance on any information contained on this note.

No personalised advice: The information that we provide should not be construed in any manner whatsoever as, personalised advice. Also, the information provided by us should not be construed by any subscriber or prospective subscriber as Edison's solicitation to effect, or attempt to effect, any transaction in a security. The securities described in the report may not be eligible for sale in all jurisdictions or to certain categories of investors.

Investment in securities mentioned: Edison has a restrictive policy relating to personal dealing and conflicts of interest. Edison Group does not conduct any investment business and, accordingly, does not itself hold any positions in the securities mentioned in this report. However, the respective directors, officers, employees and contractors of Edison may have a position in any or related securities mentioned in this report, subject to Edison's policies on personal dealing and conflicts of interest.

Australia

Edison Investment Research Pty Ltd (Edison AU) is the Australian subsidiary of Edison. Edison AU is a Corporate Authorised Representative (1252501) of Myonlineadvisers Pty Ltd who holds an Australian Financial Services Licence (Number: 427484). This research is issued in Australia by Edison AU and any access to it, is intended only for "wholesale clients" within the meaning of the Corporations Act 2001 of Australia. Any advice given by Edison AU is general advice only and does not take into account your personal circumstances, needs or objectives. You should, before acting on this advice, consider the appropriateness of the advice, having regard to your objectives, financial situation and needs. If our advice relates to the acquisition, or possible acquisition, of a particular financial product you should read any relevant Product Disclosure Statement or like instrument.

New Zealand

The research in this document is intended for New Zealand resident professional financial advisers or brokers (for use in their roles as financial advisers or brokers) and habitual investors who are "wholesale clients" for the purpose of the Financial Advisers Act 2008 (FAA) (as described in sections 5(c) (1)(a), (b) and (c) of the FAA). This is not a solicitation or inducement to buy, sell, subscribe, or underwrite any securities mentioned or in the topic of this document. For the purpose of the FAA, the content of this report is of a general nature, is intended as a source of general information only and is not intended to constitute a recommendation or opinion in relation to acquiring or disposing (including refraining from acquiring or disposing) of securities. The distribution of this document is not a "personalised service" and, to the extent that it contains any financial advice, is intended only as a "class service" provided by Edison within the meaning of the FAA (i.e. without taking into account the particular financial situation or goals of any person). As such, it should not be relied upon in making an investment decision.

United Kingdom

This document is prepared and provided by Edison for information purposes only and should not be construed as an offer or solicitation for investment in any securities mentioned or in the topic of this document. A marketing communication under FCA Rules, this document has not been prepared in accordance with the legal requirements designed to promote the independence of investment research and is not subject to any prohibition on dealing ahead of the dissemination of investment research.

This Communication is being distributed in the United Kingdom and is directed only at (i) persons having professional experience in matters relating to investments, i.e. investment professionals within the meaning of Article 19(5) of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, as amended (the "FPO") (ii) high net-worth companies, unincorporated associations or other bodies within the meaning of Article 49 of the FPO and (iii) persons to whom it is otherwise lawful to distribute it. The investment or investment activity to which this document relates is available only to such persons. It is not intended that this document be distributed or passed on, directly or indirectly, to any other class of persons and in any event and under no circumstances should persons of any other description rely on or act upon the contents of this document.

This Communication is being supplied to you solely for your information and may not be reproduced by, further distributed to or published in whole or in part by, any other person.

United States

The Investment Research is a publication distributed in the United States by Edison Investment Research, Inc. Edison Investment Research, Inc. is registered as an investment adviser with the Securities and Exchange Commission. Edison relies upon the "publishers' exclusion" from the definition of investment adviser under Section 202(a)(11) of the Investment Advisers Act of 1940 and corresponding state securities laws. This report is a bona fide publication of general and regular circulation offering impersonal investment-related advice, not tailored to a specific investment portfolio or the needs of current and/or prospective subscribers. As such, Edison does not offer or provide personal advice and the research provided is for informational purposes only. No mention of a particular security in this report constitutes a recommendation to buy, sell or hold that or any security, or that any particular security, portfolio of securities, transaction or investment strategy is suitable for any specific person.

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
1,185 Avenue of the Americas
3rd Floor, New York, NY 10036
United States of America

Sydney +61 (0)2 8249 8342
Level 4, Office 1205
95 Pitt Street, Sydney
NSW 2000, Australia