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Berenberg Investment Companies

Biotech – Equities – Specialist Equity

Compelling fundamentals up against macro headwinds

29 June 2022

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Compelling fundamentals up against macro headwinds

- **The biotechnology asset class has been one of the outstanding investment trust sectors over the last decade, with the companies initiated here generating average NAV total returns of 15% pa. Consensus across the board is that the long-term fundamentals are compelling. On the supply side, scientific innovation – such as mRNA-based vaccines, gene therapy, and multivalent antibodies and cell engagers – continues to drive the performance of successful biotech companies. The demand side is highly defensive and agnostic to where we are in the economic cycle; people continue to get sick and will prioritise their health over most discretionary and luxury spending.**
- **Berenberg view:** Despite the strong fundamentals and impressive long-term returns, sentiment towards the biotech sector is more cyclical in nature and investors are clearly grappling with the sustained sell-off we are witnessing. Negative developments around inflation, rising interest rates and geopolitical uncertainty have all been material headwinds to longer-duration, riskier assets and it looks likely that these will continue in the mid- to near term.
- While share price performance over the past year has been painful for investors (peer group average: -24%), biotech valuations have subsequently come down to a more reasonable level and we view M&A activity and headline clinical readouts as potential support for investor sentiment in 2022. While the stellar year biotech enjoyed in 2020 generally saw a "rising tide lift all boats" (ie it lent well to a passive strategy), that is not currently the case, and investors will now have a bias towards quality and place significantly higher scrutiny on emerging biotech prospects. We therefore believe that an active management approach is crucial and take comfort in the experience and longer-term track record of the respective investment managers covered in this note.
- **HBM Healthcare (HBMN)** is a CHF1.9bn Swiss-listed investment company that focuses on investing earlier on in the value-creation cycle, typically into private or small cap public companies with an emphasis on biotech. We believe HBMN's private equity exposure (36% of portfolio) sets it apart by generating consistent positive returns whilst also serving as an invaluable ballast to public market volatility. HBMN has generated +20% pa total returns over the last decade, outperforming the index by +6% pa – thus, HBMN is our preferred pick.
- **International Biotechnology (IBT)** is a £276m London-listed investment company that has generated NAV total returns of +14% pa over the last decade. For investors looking to gain exposure to the sector but are cautious about the ongoing uncertainty, we believe it is the most appropriate play. We note that IBT's risk-mitigation approach has worked – IBT's shares exhibit the lowest volatility of peers and has experienced the least severe sell-off YTD (-7% vs. peer group avg. -16%).
- **Biotech Growth (BIOG)** is a £339m London-listed investment company that has strategic overweights in emerging companies and emerging markets such as China. Whilst BIOG's strategic overweights have paid off in recent years (NAV returns of +19% and +55% in 2020 and 2021), performance has suffered of late as small-cap biotech and China materially underperformed. Over 10 years, BIOG has generated NAV total returns of +12% pa.
- **BB Biotech (BION)** is a CHF3.2bn Swiss-listed investment company that takes a highly concentrated approach, investing into 20-35 small and mid-cap companies and typically holding them for the longer-term. This approach has generated impressive returns over the longer term (+16% pa over the last decade). However, we calculate BION has been underperforming the benchmark on a one-, three- and five-year view and thus cannot currently justify BION's 26% premium to NAV.

HBM Healthcare Investments (HBMH SW)

Share price CHF 272
Market Cap CHF1.9bn
Premium to NAV: 0.4%

29/06/2022 SIX Swiss Close

International Biotechnology Trust (IBT LN)

Share price GBp 674
Market Cap £276bn

Discount to NAV: -1.4%

29/06/2022 London Close

Biotech Growth Trust (BIOGW LN)

Share price GBp 820
Market Cap £339m

Discount to NAV: -5.0%

29/06/2022 London Close

BB Biotech (BION SW)

Share price CHF 57
Market Cap CHF3.2bn
Premium to NAV: 26%

29/06/2022 SIX Swiss Close

29 June 2022

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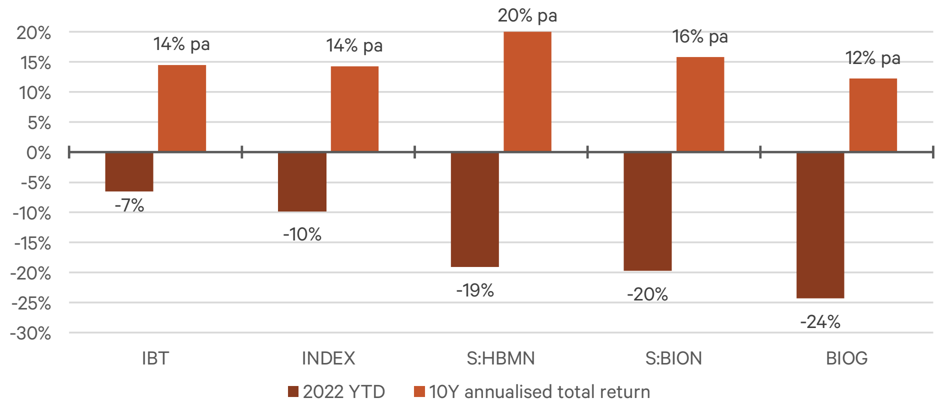
Despite poor ytd performance, long-term returns are compelling

In general, closed-ended biotech funds and the wider biotech sector have underperformed, both on an absolute and relative basis, since the start of 2021. This drawdown has been even more severe in 2022 ytd, with all funds posting negative NAV total returns between -7% and -24% (compared to the benchmark -10%).

Macro headwinds led to ongoing weakness currently witnessing

Negative developments around inflation, rising interest rates, geopolitical uncertainty and the "hot air" coming out of the biotech sector following a stellar 2020 have all been headwinds and ultimately led to the ongoing weakness we are witnessing. While we have previously concluded that the wider healthcare sector is a "whatever weather winner" (see note here), investor sentiment around the biotech sector is particularly cyclical in nature – longer-duration, pre-revenue companies will inevitably experience periods of heightened share price volatility during risk-off periods.

Figure 1: Long-term returns are strong, even after weak ytd performance



Source: Company data, Datastream. Note: All data is to closing price at 29 June 20 22 apart from HBMN which is data to 31 May 2022

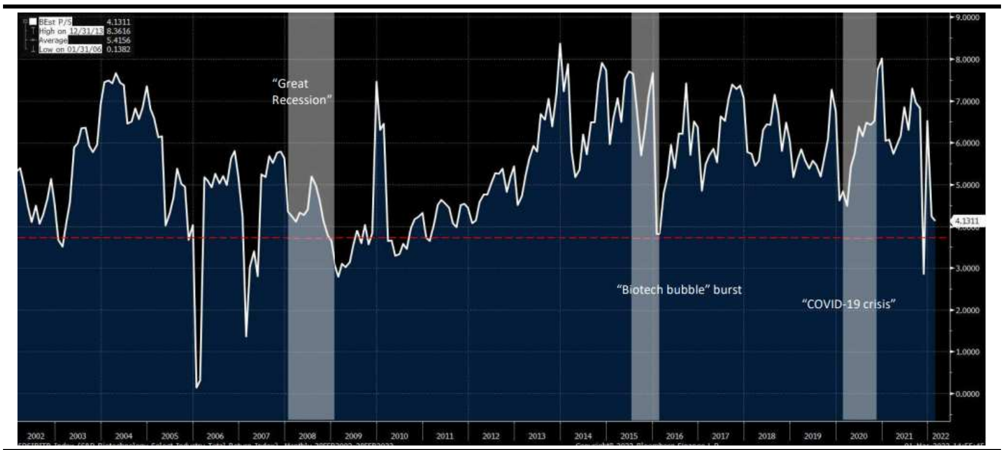
Long-term fundamentals underpinning biotech sector remain very strong

Crucially, though, consensus across the board is that the long-term fundamentals underpinning the biotech sector remain very strong – this is driven by continued scientific innovation and societal secular demand that is agnostic to where we are in the economic cycle. In an inflationary environment where prices are rising and disposable income is falling, we expect healthcare spending to remain defensive and at the top of consumers' agenda. Our dedicated biotech analysts (see note here) believe that there is a very strong pipeline of drugs based on compelling science making their way to the marketplace in the coming years and "companies who develop these drugs will generate positive cash flows; and investors who can identify the opportunities and stay ahead of the curve will likely be rewarded with attractive returns".

Headwinds likely to continue; however, valuations have come down to long-term average

For ytd 2022, it is clear that the macro headwinds are overpowering the strong fundamentals (Figure 1) and we believe this could continue in the near term as investors flight-to-safety. Thus, continued volatility and share price falls are not unlikely in such a high risk/high reward asset class. However, biotech valuations have come down to an increasingly reasonable level relative to multiples seen over the past decade (Figure 2) and, in extreme cases, around 20% of the NASDAQ Biotechnology Index is trading for less than cash. This is despite the fundamentals remaining strong and scientific innovation continuing at pace – there has been a record number of FDA approvals of late. We therefore believe that for investors with a long-term view, current valuations will begin to offer opportunities, and we remind investors that in the last 10 years, the XBI (SPDR S&P Biotech ETF) has outperformed the S&P for seven of those years. Over that same period, the four biotech funds we cover have generated attractive double-digit annual returns (Figure 1) between +12% and +20% pa – for more contrarian investors, in the current climate, we believe that exposure to the biotech sector should not be overlooked.

Figure 2: XBI two-year forward price/sales (March 2002-March 2022)



Source: Bloomberg, Berenberg Capital Markets

Active management approach particularly important in current market

We feel an active management approach is particularly important in the current market. Given current macro headwinds, careful judgement when picking high-quality names with nearer-term catalysts could generate significant alpha relative to the benchmark. Ultimately, managers who are able to identify the right opportunities will be rewarded with attractive returns that outweigh any negative impact of inflation and interest rates on growth equities. While the stellar year biotech enjoyed in 2020 generally saw a "rising tide lift all boats" (ie it lent well to a passive strategy), that is not currently the case, and investors will have a bias towards quality and place significantly higher scrutiny on emerging biotech prospects.

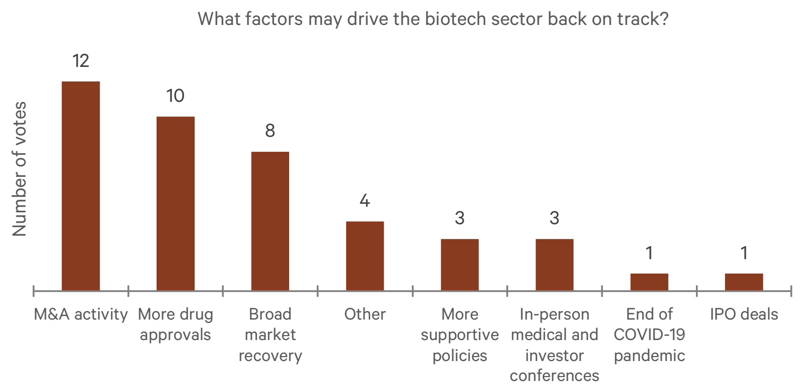
Possible catalysts for a rebound in biotech sentiment

Investor sentiment is low but believe fundamentals are compelling

While acknowledging that investor sentiment towards the biotech sector is currently low and may remain so in the near to mid-term, we ultimately believe that the fundamentals behind biotech remain compelling and thus any continued weakness in valuations will only make the sector more attractive for long-term investors. On the supply side, scientific innovation continues to drive the performance of successful biotech companies – these include mRNA-based vaccines, gene therapy, cell therapy, nucleic acid therapies (DNA/RNA), and multivalent antibodies and cell engagers. On the demand side, regardless of where we are in the economic cycle, people continue to get sick and continue to prioritise their health over most discretionary and luxury spending.

Our Berenberg biotech analysts (see note here) note that M&A, drug approvals and a broad market recovery are cited by surveyed investors as the top factors which will likely turn biotech sector performance around in 2022 (Figure 3).

Figure 3: Top factors that may turn the biotech sector around



Source: Berenberg Capital Markets

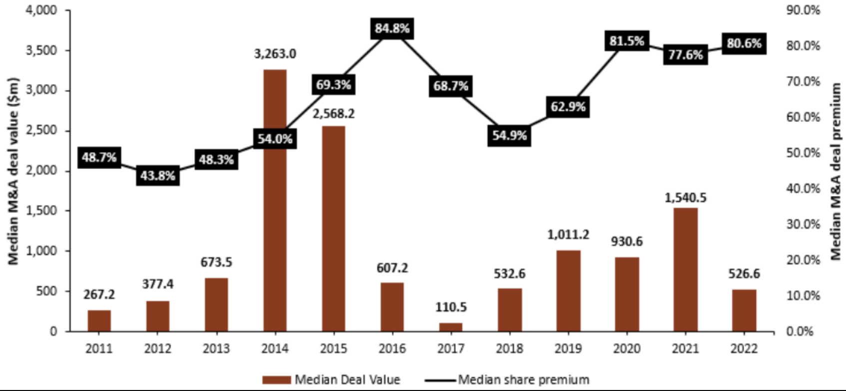
With macro headwinds (ie inflation and rising interest rates) likely to continue in the mid- to near term, we believe M&A is likely to serve as a key catalyst for the wider biotech sector.

As explained in our healthcare initiation (see note here), "big pharma" companies must continually replenish their pipeline through internal (R&D) and external (M&A) investment to ensure future prospects as patent protection on existing drugs expire. An analysis of the cash positions of the pharma sector highlights that there is significant unallocated dry powder which is expected to be used towards M&A.

M&A likely to support investor sentiment towards sector

With small and mid-cap biotech valuations continuing to fall, this only makes M&A more attractive to the larger-cap players. At a high level, any uptick in M&A should drive investor interest in the biotech sector while generating attractive uplifts (between +45-90%) to the share prices of target companies (Figure 4).

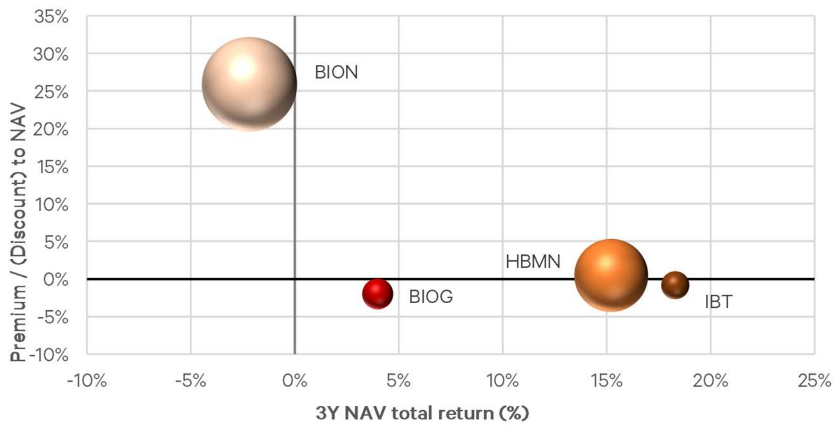
Figure 4: M&A deal size and premium, 2011-22



Source: FactSet, Berenberg Capital Markets

Introduction to four biotech companies

Figure 5: Premium/(discount) (%), three-year NAV total return (%) and market cap on 29 June 2022



Source: Company data, Datastream

Figure 6: Key data on IBT, BIOG, BION and HBMN

Name	International Biotechnology	Biotech Growth	BB Biotech	HBM Healthcare
Ticker	IBT	BIOG	BION	HBMN
Listing Year	1994	1997	1993	2001
Listing Currency	GBP	GBP	CHF	CHF
Year End	31-Aug	31-Mar	31-Dec	31-Mar
Objective	Long-term capital growth by investing primarily in biotech and other life sciences companies that are either quoted or unquoted and possess potential for high growth	Capital appreciation through investment in the worldwide biotechnology industry	The investment company's objective is to generate attractive and competitive capital growth in the long term	Long-term capital gains with investments in private and public companies in the human medicine, biotechnology, medical technology and diagnostics sectors, and related areas.
Investment Manager	SV Health Managers	OrbiMed Capital	Bellevue Asset Management	HBM Partners
Market Cap (m)	276	339	3180	1897
Premium/(Discount) to NAV (%)	-1.4	-5.0	25.9	0.4
Share price TR, 1Y	-3	-41	-30	-21
Share price TR, 3Y	18	9	2	67
Share price TR, 5Y	36	7	26	183
Benchmark	NASDAQ Biotechnology Index (£)	NASDAQ Biotechnology Index (£)	NASDAQ Biotechnology Index	NASDAQ Biotechnology Index
Number of holdings	87	70	31	60-80
Dividend policy	4% of NAV pa bi-annually	Dividends, if any, likely to be small	5% dividend yield on volume weighted average price of shares in December of respective year	3-5% yield target pa on closing share price
Current leverage (%)	12%	4%	13%	11% net cash
Leverage limits (%)	30%	20%	15%	20%
Ongoing charges	1.4%	1.1%	n/a	n/a
Management Fees	0.9% of NAV	0.65% of NAV plus 0.3% on MV up to 500m; 0.2% between 500m-1bn; and 0.1% over 1bn	All-in 1.1%	0.75% on net assets plus 0.75% on market cap
Performance Fees	Quoted: 10% of outperformance over 0.5% hurdle. Unquoted: 20% of net realised gains; no performance fee on SV Fund VI	15% of any outperformance over the benchmark	All-in 1.1%	15% of increase in NAV above high water mark provided increase is more than 5%

Source: Company data, Datastream

Earlier-stage companies increase risk-reward

Earlier-stage companies can yield greater financial returns

It is often unquoted or earlier-stage companies that can provide investors with access to highly dynamic investments with the potential to yield greater financial returns. Emerging biotech companies are responsible for c70% of new drug approvals in the US and generate a return on R&D nearly 5x greater than that of larger-cap, multinational pharmaceutical companies[1].

Likelihood of progressing through all clinical trials is low

While the potential for returns is very high, the probability of a new drug successfully making it through all clinical trials is very low (Figure 7) – therapeutic areas such as oncology have a 3% success rate of progressing through all clinical trials, with the overall probability that a new drug makes it through all clinical stages at 14%. The funds we cover will actively manage their holdings to avoid binary event exposure (such as an important clinical trial outcome or a regulatory decision on a new drug) and can focus their investment on companies with meaningful clinical data and innovative products that address areas of unmet medical need.

We believe funds that can successfully invest in earlier-stage companies will have a higher chance of mitigating the negative impact of high inflation and rising interest rates – innovative platforms or drug candidates that successfully reach the market will have strong pricing power given their ability to solve an unmet medical need.

Figure 7: Probability of success by clinical trial phase and therapeutic area

Therapeutic Area	P1 to P2	P2 to P3	P3 to Approval	Overall
Oncology	58	33	36	3%
Metabolic	76	60	52	20%
Cardiovascular	73	66	62	26%
Central Nervous System	73	52	51	15%
Autoimmune/Inflammation	70	46	64	15%
Genitourinary	69	57	67	22%
Infectious Disease	70	58	75	25%
Ophthalmology	87	61	75	33%
Vaccines	77	58	85	33%
Overall	**66%**	**49%**	**59%**	**14%**

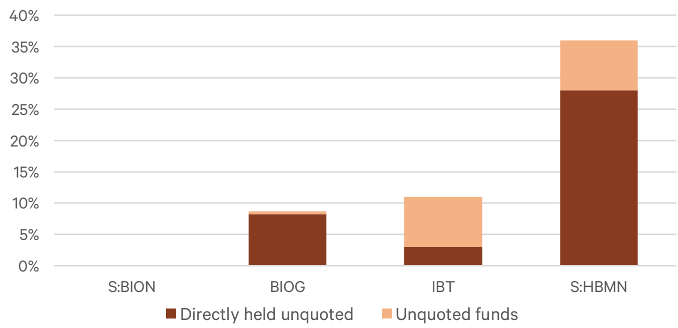
Source: Chi Heem Wong, Kien Wei Siah, Andrew W Lo. "Estimation of clinical trial success rates and related parameters". Biostatistics 20(2): April 2019, pages 273-286

HBMN our preferred pick for private equity exposure

HBMN our preferred pick for unquoted exposure

We believe that access to unquoted, typically illiquid companies is a key benefit of the permanent capital structure of closed-ended funds. If executed successfully, meaningful alpha can be generated relative to the index (which only consists of public companies). Furthermore, a higher weighting to unquoted investments can reduce NAV volatility during periods of heightened public market volatility.

Figure 8: Private equity exposure across funds



Source: Company data. Note: BION data as of 31 May 2022; BIOG (31 March 2022); IBT (31 May 2022); and HBMN (31 March 2022)

[1] Cultivating Economic Growth in the Biotech Sector - https://blogs.worldbank.org/health/cultivating-economic-growth-biotech-sector

While HBMN invests in both private and small cap (under $2bn) public companies, we feel it is its expertise and focused investing in later-stage private companies that sets it apart. HBMN has been investing in private companies for over 20 years, and in the past five years, it has achieved 27 IPOs at an average uplift of 2.4x.

HBMN has expertise and track record investing in unquoteds

For example, HBMN first invested 2% of NAV into Cathay Biotech in May 2006, when it was still private. Cathay is a synthetic biology company and is potentially the first company with a commercial-scale production of bio-based diamine 5 (meaning it is made from renewable plant materials and its carbon content is derived 100% from renewable resources).

HBMN achieved a 14.0x uplift upon Cathay's IPO (unrealised return on invested capital) and we note that such a large uplift has meant that even with current public market weakness (Cathay is down c-23% since its IPO), HBMN is still sitting on significant realised and unrealised gains. We view this as a key differentiator for HBMN as management is therefor under less pressure to exit positions if they trade on depressed levels and can take a much longer-term view on companies where fundamentals and rationale remain intact.

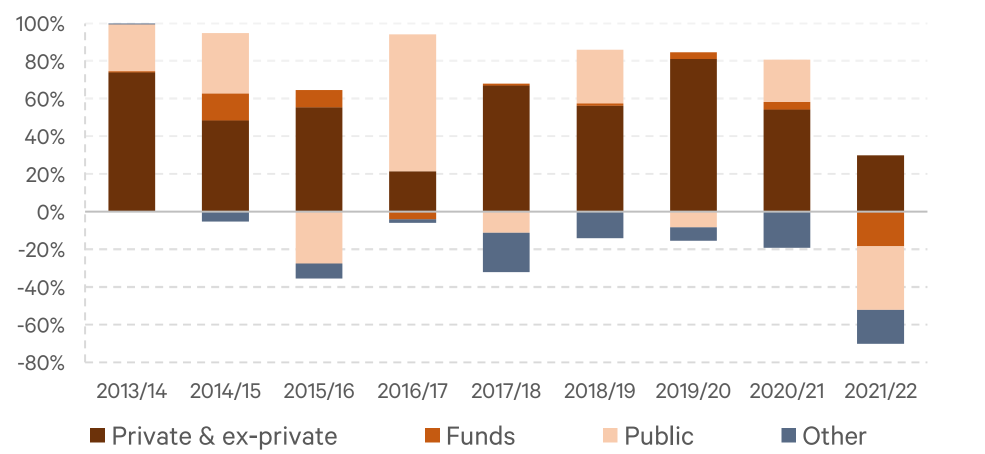
Across HBMN's wider portfolio, management notes that it is still sitting on multiples of around 2x on positions (blend of realised and unrealised return on invested capital), even where the share prices have lost 60-70% since their IPOs. Management constantly reviews the investment rationale and if it is valid, will stay invested, noting that value creation often occurs 2-3 years after the IPO.

HBMN sitting on realised and unrealised c2x return even after public valuations fallen

At c36% of the portfolio, HBMN has the highest exposure to unquoted investments out of our peer group (Figure 8). Over time, management would expect a roughly 50/50 split between quoted and unquoted investments, and informally will not look to increase unquoted exposure any higher to avoid restricting flexibility given higher outstanding commitments. While 28% is in direct private investments, 8% is via private equity funds where HBMN can rely on partners 1) in geographies where it does not have a physical presence (such as India and China); 2) with dedicated expertise (such as genomics); and 3) where investment size falls outside HBMN's core focus (early-stage med. tech). At the same time, HBMN will also benefit from co-investment rights.

HBMN 36% unquoted exposure

Figure 9: Private and ex-PE positions have generated consistent positive returns across the years at HBMN, even when public markets were down



Source: Company data

As we can see in Figure 9, HBMN's focus on unquoted investments has provided consistent positive returns and also served as an invaluable ballast to public market volatility over the years. This highlights the USP of HBMN relative to other mandates more solely focused on public markets, as HBMN can meaningfully pivot its allocation to public and private markets depending on where it sees the most attractive investments.

HBMN's unquoted exposure ballast to public market volatility

BIOG and IBT have sub-15% private equity exposure

The unquoted exposure for BIOG and IBT is materially lower than HBMN (Figure 8), with both having limits and target ranges up to 10% of GAV and 15% of NAV. While BION can invest up to 10% in private holdings, it does not currently have any exposure to unquoteds, believing that it can find adequate opportunities in the public space at attractive valuations.

IBT invests in unquoted mainly through funds

In 2016, IBT's strategy changed to cease direct investments into new unquoted holdings and instead focus on investing via unquoted funds. We believe this strategy change fits well with IBT's risk-minimisation approach, as it will enable a broader and more diversified exposure to the unquoted opportunities that exist. IBT currently has c7% invested in a venture capital fund, SV Fund VI (Figure 8), which invests across three sectors: biotech, healthcare, and IT and medical devices. SV (the manager of IBT) has developed a strong track record over the past three decades, investing more than $650m into early-stage biotech, and this has been reflected in SV Fund VI, which has delivered an IRR of 23% pa since its first investment in 2016.

We would expect IBT's unquoted portfolio to exhibit less volatility than BIOG's, as BIOG selectively invests in crossover investments[2]. BIOG's c9% exposure to unquoted is predominantly via direct unquoted holdings with three private investments totalling 8.2% of NAV and 0.4% of NAV invested in OrbiMed Asia Partners Fund. With depressed valuations in SMID cap biotech names, BIOG is actively monitoring potential investments in quality assets at lower-than-usual valuations.

Difficult private market currently – quality is key

Headwinds in private biotech markets – quality is key

Clearly, the favourable biotech IPO backdrop we witnessed in 2020/early 2021 has since reversed heavily. In general, we would expect unquoted companies to face greater headwinds when looking to finance or exit (through an IPO or trade sale), given investors are placing increased scrutiny on longer-duration assets. Thus, we would encourage caution in an environment where we see increased write-downs in private assets in the coming months. To combat this, we anticipate management focusing on quality unquoted companies with strong financials and product pipelines across our coverage.

For HBMN's higher-conviction private and ex-private positions, management looks to de-risk holdings by placing significant importance on companies being well-financed with products already on the market and generating substantial revenue growth. These include Cathay (20% of total assets at 31 March 2022), Harmony Biosciences (8%), Swixx BioPharma (7%) and Neurelis (2%). Management expects these companies will thus have less pressure on valuations as they have less of a need to raise capital or can do so from a position of strength. It is only in HBMN's smaller positions (c1-2% of NAV) that management is comfortable being exposed to higher risks around regulation, clinical data and commercialisation factors.

Equally, IBT's unquoted investments are focused on high-quality private companies with strong syndicates and a long-term horizon. Management places the ability to successfully achieve future financing requirements as central to unquoted investments and focuses on ensuring that the companies it invests in have multiple potential financing possibilities beyond the public markets. Adequate diversification in IBT's unquoted portfolio is key to addressing market fluctuations, with investments across SV Fund VI, the legacy portfolio of individual unquoted investments, and BCOF (a new fund at SV that IBT is investing in and can utilise to exploit the opportunities that have arisen after valuations have become depressed).

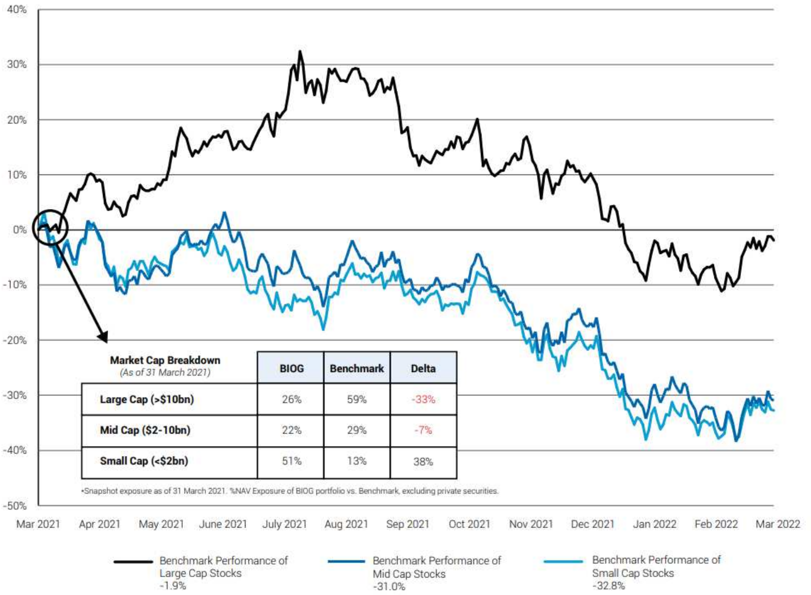
[2] Crossover investments consist of investing in the later-stage financing rounds, typically before an IPO, and utilising the investor's expertise to help unlock any value when looking to list. Crossover investors thus gain access to a private company before it goes public, typically at a discount to the IPO price.

Small cap stocks have suffered in risk-off backdrop

Size factor has been particular driver of relative performance

The current risk-off environment has been particularly difficult for smaller-cap biotech companies that are still in the riskier development stage of the business cycle and have yet to generate revenues. Instead, investors have favoured larger-cap biotech companies that embody the more defensive growth qualities healthcare can offer – this includes surplus FCF generation (dividends and M&A), strong balance sheets (lower leverage means lower interest rate sensitivity), high operating margins (pricing power) and growth.

Figure 10: Divergence in the performance of large, mid- and small cap biotech companies



Source: Bloomberg, Biotech Growth. Note: Chart shows equal-weighting performance of benchmark stocks in their respective market cap buckets, using market cap classifications as of 31 March 2021

BIOG's strategy most exposed to the small cap and emerging market weakness

Investing in smaller-cap biotech companies will invariably be a significant portion of all four fund's strategy – it is often earlier-stage companies that can provide investors with access to highly dynamic investments with the potential to yield outsized financial returns. Thus, the weakness in SMID cap companies will have affected all our coverage to varying degrees.

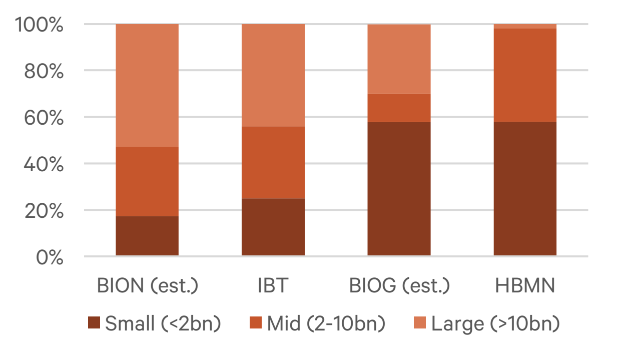
BIOG has strategic overweights in emerging companies

BIOG has some of the highest exposure to smaller-cap companies (Figure 11), and we estimate the lowest exposure to profitable biotech companies (Figure 12). This follows BIOG's strategy shift in 2019 to emphasise overweight positions in small caps versus the benchmark. As of 31 March 2021, BIOG was 38% overweight small caps and 33% underweight large caps. This strategic allocation was a considerable detractor from BIOG's performance (-34% during the financial year to 31 March 2022 versus benchmark -7%) as small caps went on to underperform large cap biotech by over 30% in the financial year to 31 March 2022 (Figure 10). For example, Guardant Health (3% of portfolio at 31 March 2022) was the second-largest detractor to FY 2022 performance, despite reporting generally strong financial results throughout the course of the year.

BIOG's management is still maintaining its overall strategy into emerging biotech and believes that it "should rebound the most when the overdue recovery occurs", especially as valuations continue to fall to unprecedented lows.

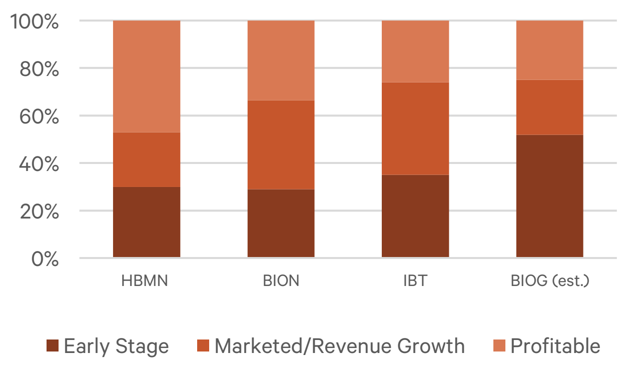
Our biotech analysts have laid out drivers of a biotech rebound in 2022 (see note here), which include continued strong sector fundamentals (eg continued innovation in medicine) and strong M&A expectations and capability (which only increase as valuations become more depressed). When an inflection in small cap performance occurs, we see BIOG as being most geared to any uptick in sentiment.

Figure 11: Market cap breakdown across the funds (Berenberg estimates)



Source: Company data. Note: IBT data as of 31 May 2022. BIOG data as of 31 March 2022 and estimated based on published data. BION estimates based on data at 31 December 2021 and CHF. HBMN based on data at 31 March 2022 and split provided in Swiss Francs (CHF)

Figure 12: Development stage breakdown across the funds



Source: Company data, Berenberg estimates. Note: 1) HBMN's current portfolio includes oversized weighting in Cathay/Swixx which are locked up, this distorts portfolio breakdown from their estimated steady state which might typically include c15% exposure to profitable; and 2) BIOG is based on management estimate of breakdown as of 31 March 2022

HBMN insulated by unquoted exposure and higher-than-normal exposure to profitable companies

Alongside BIOG, HBMN has some of the highest exposure to small and mid-cap biotech companies, which should suggest a similar headwind to performance. However, as discussed earlier in the note, HBMN has a high (c35%) exposure to private and ex-private companies, which means it is participating earlier on in the value creation cycle and has often generated significant uplift by the time companies are listed on public markets. This means HBMN can often be sitting on multiples of c2x on positions, even though share prices have fallen 60-70% since their IPOs.

HBMN unquoted exposure will decrease NAV volatility

Furthermore, HBMN's significant private exposure will decrease NAV volatility relative to other trusts. Private markets are relatively opaque compared to public markets as a result of longer holding periods, less frequent valuations and financial performance reporting, and a lack of observable market prices. We discuss HBMN's conservative valuation methodology in its individual company section of this note.

Finally, we believe HBMN has a higher exposure to profitable (safer-haven) companies than it would typically expect in a steady state, and this has insulated it more during a difficult period for non-profitable companies. While HBMN's current exposure to profitable companies stands at 47% (Figure 12), we estimate that in a steady state, exposure to profitable companies could stand at a much lower c15% of portfolio (given HBMN's focus on revenue-generating companies or companies at an advanced stage of development). HBMN's investment in Cathay (which is defined as profitable) included a very atypical three-year lock-up post-IPO until August 2023 (we would typically expect 6-to-12-month lock-ups). Following very strong performance upon listing (14x multiple), Cathay has grown to a c20% holding within the portfolio.

Portfolio allocation matters in risk-off environment

IBT is our preferred play for the cautious investor

IBT preferred play for cautious investors

For investors who are looking to gain access into the biotech sector but are cautious about the ongoing uncertainty and risk-off environment we find ourselves in, we believe IBT is the most appropriate play.

At a high level, IBT seeks to reduce the risk that investors associate with biotech. In addition to a high number of portfolio holdings (Figure 16), particularly across its smaller, riskier names, IBT also diversifies across development stage, company size and therapeutic area. Most importantly for us in the current environment is that IBT believes being aware of where we are in the investment cycle is key to preserving capital.

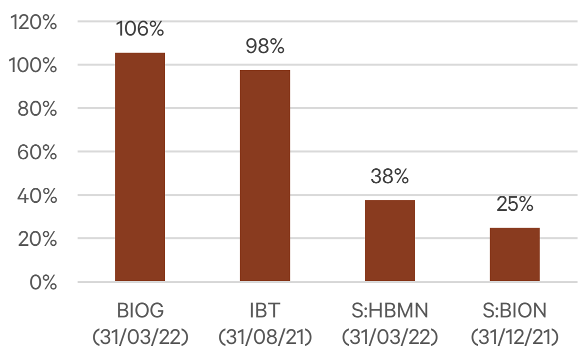
IBT most significant macroeconomic overlay to portfolio positioning

In fact, we believe IBT has the most significant macroeconomic overlay to portfolio allocation, with the remaining mandates (BIOG, HBMN and BION) predominantly focusing on a bottom-up approach. Management shifts allocation between higher-beta, development-stage biotech companies and more defensive large cap names as it sees fit. This is reflected in IBT's high turnover over the last two years (98%; Figure 13). While management acknowledges that larger-cap, profitable companies are least affected by inflation (36% of portfolio), it has reacted to the continued depressed valuations in small cap names by increasing exposure from 3% in February 2020 to 22% in May 2022 (Figure 14). Management feels larger-cap companies are mostly fairly valued, while it is increasingly able to access compelling science within smaller-cap companies at knock-down prices, in many instances down 70-80% from peak levels. In order to limit the risk associated with increasing small-cap exposure, IBT will seek out credible science within financial healthy companies that do not have a long timeline before generating revenues.

BIOG's high c106% turnover (Figure 13) is a function of its higher exposure to the more volatile, smaller-cap names in biotech. Management has found that having a higher active turnover is most suitable given the many catalysts it needs to navigate that are more frequent with emerging biotech prospects.

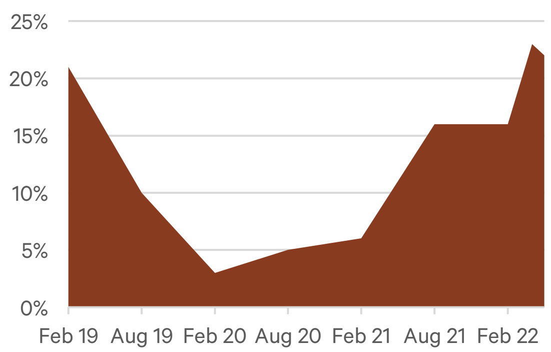
Conversely, BION's low turnover (25%; Figure 13) is a function of any trading leaning towards short-term trading activity such as trimming positions or trading around unjustifiable volatility. Typically, BION looks to hold assets as they mature up the growth curve and only look to sell out of a position if and when management believe the growth curve is flattening or if their hypothesis has broken (eg on the back of a failed trial). For example, BION sold a significant amount of Moderna shares at around the $400-500 level and has since been a buyer at lower levels (Moderna share price is currently c$142).

Figure 13: Average two-year turnover of funds



Source: Company data, Berenberg estimates. Note: Calculation is based on average of previous two FY reports, and uses average NAV as opposed to year-end NAV

Figure 14: IBT have shifted exposure to small caps over three years



Source: Company data

Portfolio positioning can be an indicator of potential volatility

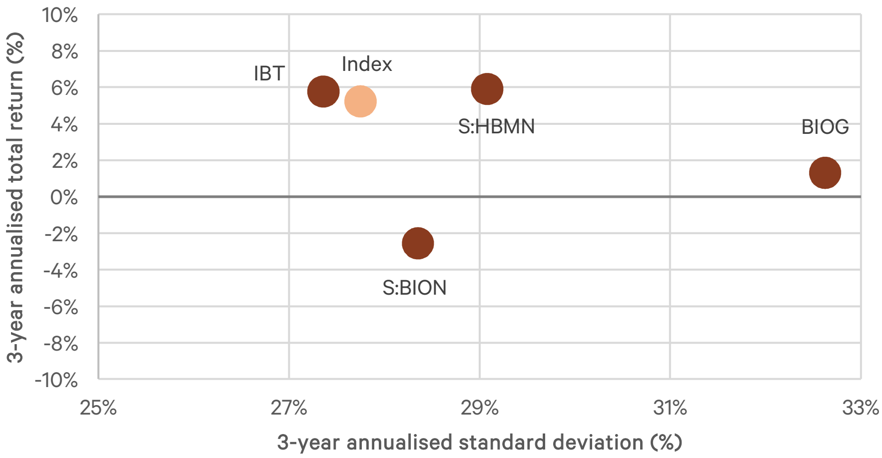
We believe IBT's more defensive, macro-aware approach is reflected in its performance. IBT's NAV has held up the most ytd (IBT -17% versus peers -25% versus index -19%).

Furthermore, IBT has exhibited the lowest volatility out of its peers on a three-year view (Figure 15) and we would generally expect IBT's risk mitigation strategy to generate a lower beta out of its peers.

BIOG exhibits higher volatility due to strategic emerging overweights

On account of BIOG's strategic overweights in emerging, smaller-cap companies and emerging markets such as China, we observe much higher volatility in its share price (Figure 15). Moving forward, we would expect BIOG to exhibit volatility at the higher end of the spectrum. As discussed previously, it has been a difficult market for BIOG's strategic overweights in emerging companies and China, and this has been a headwind to BIOG's three-year NAV total return. If we start to see a rebound in wider biotech, or indeed an inflection for smaller-cap performance, we expect BIOG's fortunes to also rebound at a higher rate than peers.

Figure 15: Risk-return profile of funds relative to benchmark at 29 June 2022



Source: Datastream, Berenberg analysis. Note: Index is Nasdaq Biotechnology Index (£)

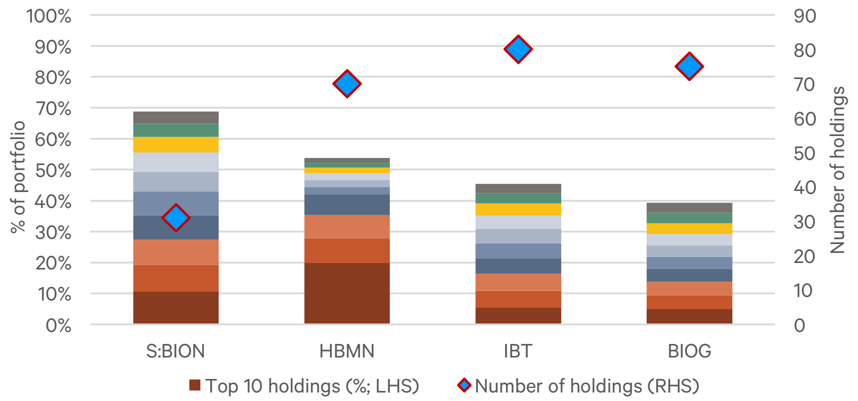
Varying conviction across funds

BION takes high-conviction approach

BION takes a high-conviction approach

Unlike the rest of the peer group, which have a diversified portfolio of 70-80 underlying holdings, BION takes a differentiated, high-conviction approach, investing into fast-growing companies with innovative drugs. BION's portfolio generally consists of 20-35 holdings; it currently has 31 positions, with the top 10 holdings accounting for 69% of the total portfolio (Figure 16).

Figure 16: Top 10 holdings and total number of holdings



Source: Company data

BION's approach is to initiate positions (c1-2% of NAV) into small and mid-cap holdings, with management favouring earlier-stage platform companies (ie companies that have multiple "shots on goal" as technologies are scalable and target agnostic). BION then holds these emerging companies for the long term as they mature into larger positions, thus leading to significantly lower turnover (Figure 13). BION does not actively allocate into larger-cap companies – the sizing of BION's high conviction, larger-cap holdings (eg Argenx, Moderna and Vertex) is driven by how successful the value creation has been. This de-risks the larger-conviction positions as big positions only generate themselves as they have gone successfully initially through the s-curve.

BION has generated attractive long-term returns of c15% pa

This conviction approach into higher-growth companies has generated impressive returns over the longer term – BIOG has generated NAV total returns of c15% pa over the last 10 years, towards the top end of our peer group. However, in a sector where binary events and clinical readouts can lead to large share price movements, we feel a particularly high-conviction approach will invariably experience periods of heightened volatility and underperformance when the tides turn. In Q1 2022, only 11 of BION's 32 positions achieved positive share price performance, with 21 showing a decline and some by quite a large margin.

Given BION's high conviction, and at a time when larger-cap stocks should have performed as safer-haven assets, we note that its third-largest holding (Moderna: 8.1% of portfolio; $52bn market cap) has declined by c42% ytd, compounding the weak performance of SMID cap holdings. Management is convinced of the long-term value proposition of mRNA technology and Moderna's strategy of monetising that value, and thus accept that it may continue to be subject to industry high volatility.

HBMN's crossover and private equity exposure can lead to large single positions

HBMN is often subject to lock-up upon IPOs

As noted, HBMN invests in unquoted companies typically 1-3 rounds before the company plans to exit (through an IPO or trade sale). As a result, HBMN will often be subject to a lock-up upon an IPO – this is typically for a period of six to 12 months, but for Cathay Biotech it was for a period of three years. Therefore, in situations where a crossover investment performs exceptionally well upon listing in public markets, HBMN can have high single-stock exposure. At 31 May 2022, Cathay Biotech represented 19.8% of the portfolio.

On the one hand, we see this as a risk given the increased volatility and stock-specific exposure it generates. To mitigate this, HBMN cannot invest more than 10% into a stock at time of investment and will apply illiquidity discounts for the duration of any holdings subject to selling restrictions of more than 12 months. However, having a large single stock exposure can be perceived as a "luxury issue", as it is a situation that can only arise on the back of considerable success in an investment (unrealised 14.0x multiple at IPO in the case of Cathay Biotech).

Valuations

HBMN's valuation is reasonable in our view

We see HBMN as a top pick given an impressive track record generating +21% pa over the last decade and outperforming the benchmark by +6% pa in the process. As such we believe the fact that HBMN currently trades around NAV (Figure 17) as a reasonable entry point into a vehicle that we have confidence is well placed to continue this performance into the future. Over the last few years HBMN's performance has led to the discount gradually narrowing from a c23% discount to NAV in September 2017 and peaking at a 19% premium to NAV in May 2021. We believe its significant private sleeve provides a differentiated exposure that general investors would not otherwise be able to access, allowing entry into exciting companies much earlier on in their value creation cycle.

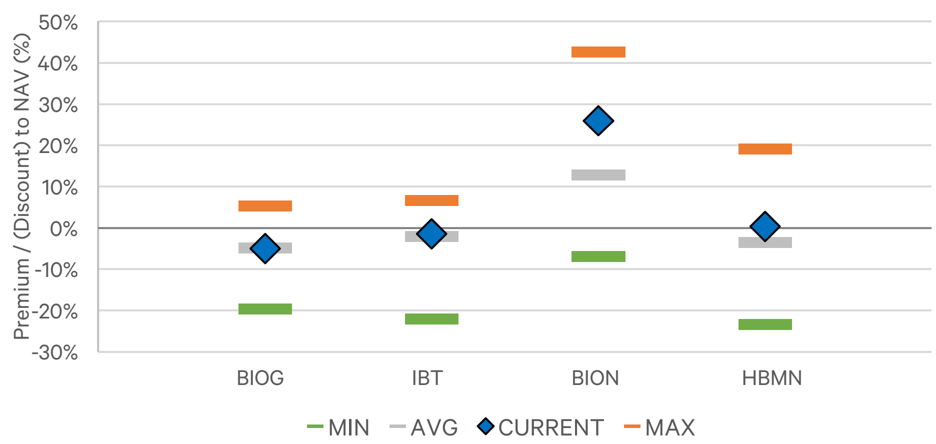
While investors might be cautious about the potential for delayed write-downs in private assets, and thus look to apply a discount, we have confidence that HBMN's management has the track record and expertise to correctly navigate the current private market and we take comfort in its prudent, conservative valuation methodology and focus on private companies with strong financials and pipeline products.

BION's high premium appears expensive

BION's premium to NAV has consistently been higher than peers over the last five years (Figure 17), at times trading at significant premiums of up to 43% in January 2022. We think the key drivers of this are twofold. First, BION has an impressive track record over multiple economic cycles, generating an annualised NAV total return of c+14% pa for almost 30 years. The second reason comes from the supply-demand dynamic for BION's shares. BION has not issued new shares since 2000 and thus supply has been constrained. However, based on poor absolute and relative performance over one, three and five years and given that headwinds to small and mid-cap stocks are likely to persist in the near to mid-term, we believe that their current 27% premium to NAV appears expensive, in our view.

From a valuation perspective, we believe both IBT and BIOG are roughly fairly valued as both are trading within +/- 1 standard deviation on a five-year view. We would perhaps expect BIOG to have a slightly wider discount in the current market given its focus on higher growth, emerging names, while IBT has a risk-mitigation and macroeconomic overlay that should help limit the downside relative to BIOG. We note both BIOG and IBT have formal and informal discount control mechanisms at around the 6% discount to NAV level, which should provide some comfort for investors.

Figure 17: Premium/(discount) to NAV analysis over five years to 29 June 2022



Source: Company data, Datastream, Berenberg analysis

Expertise in unquoted drives outperformance

29 June 2022

Initiation

Share price CHF272
Close: 29/06/2022 SIX Swiss Close

Premium to NAV:
0.4% premium to NAV

Yield: Targets yield ranging from 3-5%

Background: Listed on SIX Swiss Exchange, HBMN holds a well-balanced globally diversified portfolio of investments in private and public healthcare companies.

HBMN's objective is to generate long-term capital gains with investments in private and public companies in the human medicine, biotechnology, medical technology and diagnostics sectors, and related areas.

- **HBM Healthcare (HBMN) is a CHF1.9bn Swiss-listed investment company that focuses on investing earlier on in the value-creation cycle, typically into private or small cap public companies with an emphasis on biotech. We believe HBMN's private equity exposure (36% of portfolio) sets it apart by generating consistent positive returns whilst also serving as an invaluable ballast to public market volatility. HBMN has generated +20% pa total returns over the last decade, outperforming the index by +6% pa.**
- **Private equity exposure set HBMN apart:** While HBMN invests in both private and small cap (under $2bn) public companies, we feel it is its expertise and focused investing in later-stage private companies that sets it apart. HBMN's focus on unquoted investments has provided consistent positive returns and also served as an invaluable ballast to public market volatility over the years. This highlights the USP of HBMN relative to other mandates more solely focused on public markets, as HBMN can meaningfully pivot its allocation to public and private markets respectively depending on where it sees the most attractive investments.
- **Less volatile NAV:** HBMN's significant private exposure will decrease NAV volatility relative to other trusts. Private markets are relatively opaque compared to public markets as a result of longer holding periods, less frequent valuations and financial performance reporting, and a lack of observable market prices. Furthermore, we believe HBMN has a higher exposure to profitable (safer-haven) companies than it would typically expect in a steady state, and this has insulated it more during a difficult period for non-profitable companies. While HBMN's current exposure to profitable companies stands at 47% (driven by Cathay Biotech at 19% of portfolio due to lock-ups), we estimate that in a steady state, exposure to profitable companies could stand at c15% of portfolio given a focus on earlier-stage companies.
- **Lock-up can lead to high single stock exposure:** As noted, HBMN invests in unquoted companies typically 1-3 rounds before the company plans to exit (through an IPO or trade sale). As a result, HBMN will often be subject to a lock-up upon an IPO – this is typically for a period of 6 to 12 months, but for Cathay Biotech it was for a period of three years. Therefore, in situations where a crossover investment performs exceptionally well upon listing in public markets, HBMN can have high single-stock exposure. We do see this as a risk given the increased volatility and stock-specific exposure it generates.
- **Valuation:** We see HBMN as a top pick given an impressive track record generating +21% pa over the last decade and outperforming the benchmark by +6% pa in the process. As such we believe the fact that HBMN currently trades around NAV as a reasonable entry point into a vehicle that we have confidence is well placed to continue this performance into the future. Over the last few years HBMN's performance has led to the discount gradually narrowing from a c23% discount to NAV in September 2017 and peaking at a 19% premium to NAV in May 2021. We believe its significant private sleeve provides a differentiated exposure that general investors would not otherwise be able to access, allowing entry into exciting companies much earlier on in their value creation cycle.

HBMN's strengths	HBMN's weaknesses
Expertise in private equity sets HBMN apart and can generate greater returns	Concentration risk due to lock up, eg Cathay
Greatest NAV total returns of +21% pa over last decade, significantly outperforming benchmark	Headwinds to biotech IPO market could be a headwind to HBMN; including write-downs to small portion of portfolio
Private assets lead to lower NAV volatility	

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Portfolio overview

HBMN invests earlier on in the value creation cycle

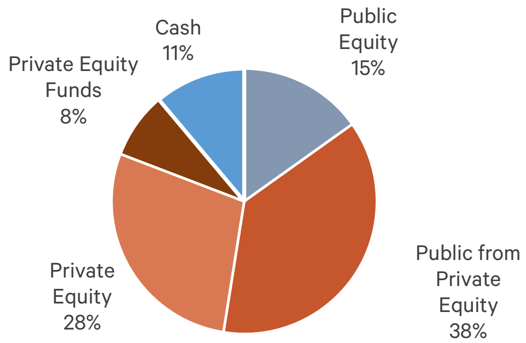
HBMN focusses on investing earlier on in the value-creation cycle, typically into private or small cap (under $2bn) public companies within the healthcare sector with an emphasis on biotech (Figures 18 and 19), in order to reap the benefit of healthcare innovation and target higher growth. Investments will typically first be made in a venture round via a syndicate, with financing rounds between CHF5m-30m. Subsequently, investments may be increased in follow-on financings. Alongside the syndicate, and with HBMN's expertise, they will collectively look to nurture companies to market (IPO or trade sale) and eventually crystalise their investment.

Private equity is key to HBMN's approach

36% exposure to unquoted

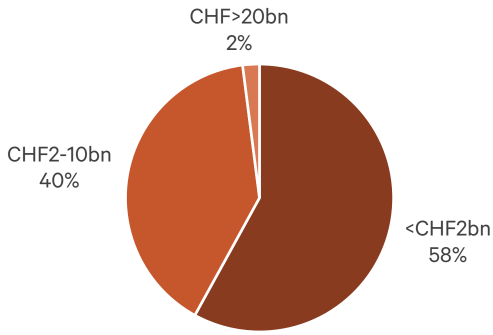
HBMN has been investing in private companies for over 20 years, and we feel it is its expertise and focused investing in later-stage private companies that sets it apart. Within the portfolio, 36% is invested in private equity through direct holdings and funds, 38% is public holdings that have been held since the private portfolio and 17% is public equities (Figure 18). In the past five years, HBMN has achieved 27 IPOs at an average uplift of 2.4x. Its most successful recent IPO from within its private equity portfolio is Cathay, which achieved a 14.02x multiple in 2020. Given HBMN's expertise and track record investing in unquoted positions and holdings in emerging biopharma and other healthcare related companies, we believe that this mandate can provide investors with a differentiated and hard-to-access portfolio that general investors would not otherwise be able to access.

Figure 18: Investment portfolio (% of total assets) at 31 March 2022



Source: Company data

Figure 19: Market capitalisation at 31 March 2022



Source: Company data

Figure 20: Top 10 holdings for HBMN at 31 May 2022

Company	Weighting	Currency	Market cap (bn)	Current price	Consensus Rating	Consensus target price	Upside to target price
Cathay Biotech	19.8	CNY	45	107.1	BUY	135.2	26%
Private Equity Funds	8.0	N/A	N/A	N/A	N/A	N/A	N/A
Harmony Biosciences	7.6	USD	3	50.6	BUY	58.4	15%
Swixx BioPharma	6.6	N/A	N/A	N/A	N/A	N/A	N/A
Neurelis	2.4	N/A	N/A	N/A	N/A	N/A	N/A
ConnectRN	2.2	N/A	N/A	N/A	N/A	N/A	N/A
Biohaven Pharmaceutica	2.2	USD	10	144.4	BUY	153.6	6%
Y-mAbs Therapeutics	1.9	USD	1	14.5	BUY	28.0	93%
Argenx	1.6	EUR	19	346.3	BUY	346.6	0%
Pacira BioSciences	1.5	USD	3	57.3	BUY	79.9	39%
Sum	53.8	Average	13			Average	30%

Source: Company data, Datastream. Note: 1) Large number of N/A data fields correlate to the unquoted positions; and 2) the average uplift of 30% again correlates to the public positions, we would expect the potential uplift for top 10 holdings to be higher if factored for the unquoted holdings

Experience with valuation of private equity should be comfort in current environment

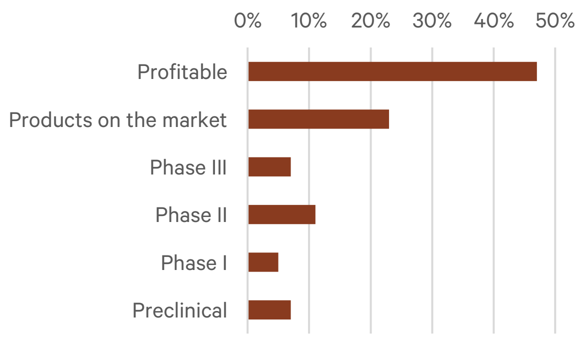
Conservative valuation methodology for unquoteds

HBMN applies a conservative valuation methodology and management believes that there is significant potential to the upside as failures have an immediate impact on the valuations, however, successes will only be reflected as part of the upcoming financing rounds. In addition, management note that their most significant positions (which are more mature) do not need to raise capital, or they can do it from a place of strength. Management believes that a smaller portion of the company's exposure is potentially at risk of down rounds. Allocation to unquoted earlier stage companies (up to phase II) amounts to 5-10% of overall portfolio.

As management has been managing private assets for some time, we believe it has a good track record across the market cycle and handling private holdings pre- and post-IPO.

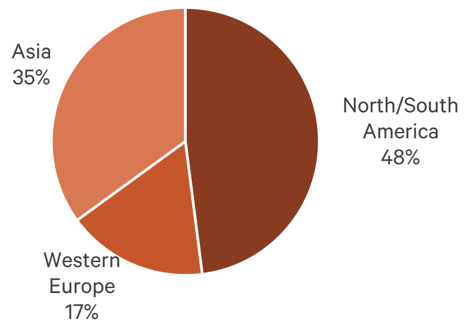
HBMN's valuation policy for unquoted positions is to value them at acquisition cost, except when 1) portfolio company is valued higher or lower in connection with a new round of financing with third-party-led investors; 2) portfolio company is performing below expectations, leading to a write down in increments of 25%; and 3) portfolio company has significant revenues and profits, in which case an appropriate price/sales or price/earnings multiple is applied.

Figure 21: Portfolio breakdown by development stage at 31 March 2022 (Stage of lead drug)



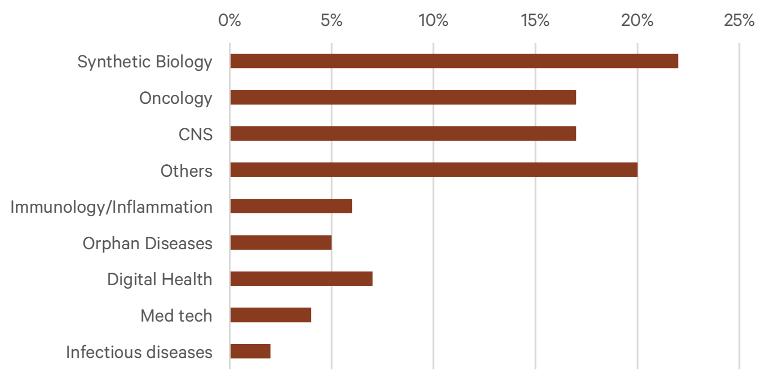
Source: Company data

Figure 22: Geographic diversification at 31 March 2022



Source: Company data

Figure 23: Therapeutic areas at 31 March 2022



Source: Company data

HBMN's crossover and private equity exposure can lead to large single positions

As noted, HBMN invests in unquoted companies typically 1-3 rounds before the company plans to exit (through an IPO or trade sale). As a result, HBMN will often be subject to a lock-up upon an IPO – this is typically for a period of six to 12 months, but for Cathay Biotech it was for a period of three years. Therefore, in situations where a crossover investment performs exceptionally well upon listing in public markets, HBMN can have high single-stock exposure.

On the one hand we, see this as a risk given the increased volatility and stock-specific exposure it generates. To mitigate this, HBMN cannot invest more than 10% into a stock at time of investment and will apply illiquidity discounts for the duration of any holdings in lock-up. However, having a large single stock exposure can be perceived as a "luxury issue", as it is a situation that can only arise on the back of considerable success in an investment (14.0x unrealised multiple at IPO in the case of Cathay Biotech).

Team infrastructure and fees

The investment adviser is HBM Partners, a Swiss healthcare investor with $3bn of assets under management. HBM Partners was founded in 2001 with the goal to invest in private and public emerging biopharma and other healthcare-related companies.

HBM Partners has a team of experienced professionals to source, analyse and engage in investments in biopharma, medical devices and diagnostics industries. It has a track record of over 150 investments that have so far resulted in significant value creation via more than 60 trade sales and IPOs since inception.

Dr Andrea Wicki (CEO) and Erwin Troxler (CFO) form the management alongside a wider team of 21, most of whom are investment advisers.

The management fee is 0.75% pa on the company's NAV plus 0.75% pa on its market capitalisation, payable quarterly. There is a performance fee of 15% of the increase in value of NAV above the high-water mark (provided that value increase is more than 5%) which is calculated annually.

Dividend

3-5% target yield

HBMN targets a target yield ranging from 3-5% on the closing share price as a way to return value creation to shareholders.

Over the last five years, HBMN has paid out a dividend yield between 3.5% and 4.9% based on closing share price at year end.

Leverage

11% cash at 31 March

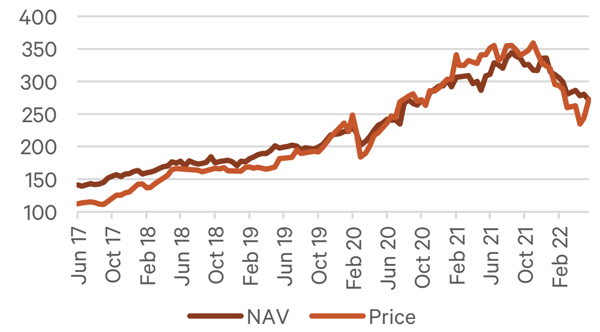
HBMN can utilise leverage up to 20% of NAV. Cash and cash equivalents amount to CHF224m (11% of total assets as of 31 March 2022), thus offering scope for new investments and buying opportunities. They also noted the closing acquisition of Turning Point Therapeutics in coming weeks which should increase cash and cash equivalents by another CHF45m, taking total to around CHF260M (12% of NAV). HBMN still holds the acquired position in Biohaven (worth around CHF60m), where the closing is expected early 2023. Management is cognisant of any investments in its private portfolio that will need follow-on commitments and maintains adequate short-term funds to ensure it is able to satisfy any commitments. However, management notes that it has the flexibility to sell publicly listed assets if needed.

Outstanding liabilities constituted two straight bonds with a par value of CHF50m and CHF100m, coupons of 2.5% and 1.125%, and maturing on 10 July 2023 and 12 July 2027 respectively; to be redeemed at 100% of par value.

Performance

In the full year to 31 March 2022, the NAV total return was -3.6% versus the Nasdaq Biotechnology Index (£) return of -6.9% in the same period. This was HBMN's first negative return in a decade, even during periods where the index posted negative returns, and we calculate that HBMN has outperformed the index by an average of +11.9% pa over the last five years.

Figure 24: HBMN price and NAV between June 2017-May 2022



Source: Company data

Figure 25: Yearly relative and absolute performance

	FY 31/03/18	FY 31/03/19	FY 31/03/20	FY 31/03/21	FY 31/03/22
NAVTR	11.1	18.1	13.9	52.2	-3.6
INDEX	-2.1	13.3	2.1	25.9	-6.9
Relative performance	13.2	4.8	11.8	26.3	3.3

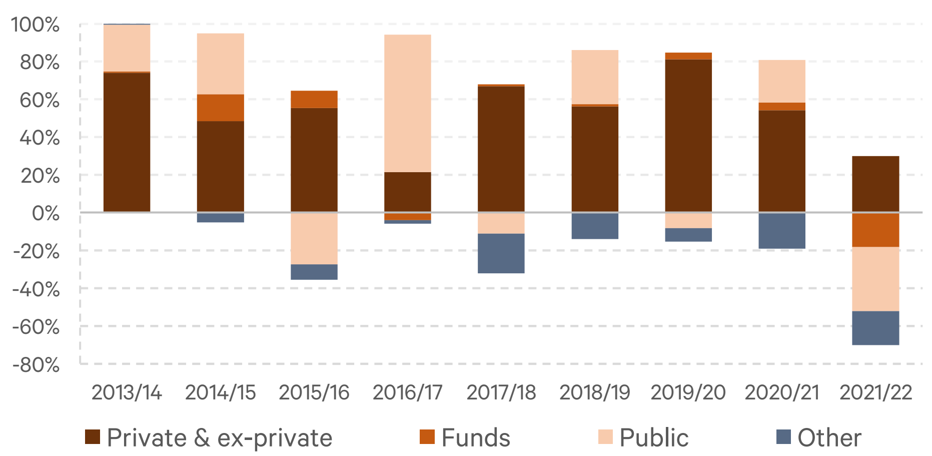
Source: Company data

The strong absolute and relative performance over the years is attributable to its successful strategy of investing in unquoted investments.

Unquoted served as ballast to public market volatility

As we can see in Figure 26, HBMN's focus on unquoted investments has provided consistent positive returns and also served as an invaluable ballast to public market volatility over the years. This highlights the USP of HBMN relative to other mandates more solely focused on public markets, as HBMN can meaningfully pivot its allocation to public and private markets respectively depending on where it sees the most attractive investments.

Figure 26: Private and ex-PE positions generated consistent positive performance across the years at HBMN, even when public markets were down



Source: Company data

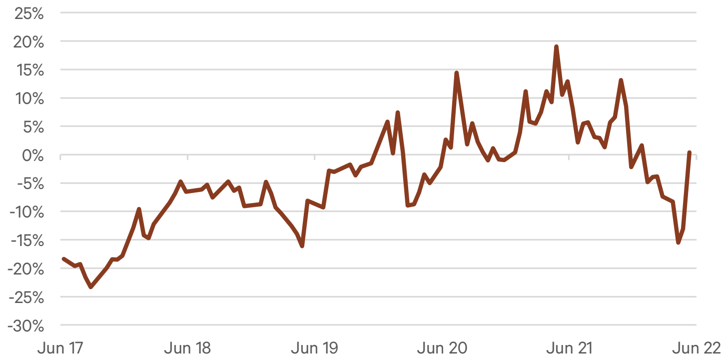
Valuation

Trading at around NAV

We see HBMN as a top pick given an impressive track record generating +21% pa over the last decade and outperforming the benchmark by +6% pa in the process. As such we believe the fact that HBMN currently trades around NAV as a reasonable entry point into a vehicle that we have confidence is well placed to continue this performance into the future. Over the last few years HBMN's performance has led to the discount gradually narrowing from a c23% discount to NAV in September 2017 and peaking at a 19% premium to NAV in May 2021.

We believe its significant private sleeve provides a differentiated exposure that general investors would not otherwise be able to access, allowing entry into exciting companies much earlier on in their value creation cycle.

Figure 27: HBMN premium/(discount) to NAV over five years (%)



Source: Company data, Datastream

Risk mitigation approach useful in current market

29 June 2022

Initiation

Share price GBp674

Close: 29/06/2022 London Close

Discount to NAV: -1%

Yield: 4% of NAV bi-annually

Background: IBT's objective is to achieve long-term capital growth by investing in biotechnology and other life science companies addressing an unmet medical need.

- **International Biotechnology (IBT) is a £276m London-listed investment company that has generated NAV total returns of +14% pa over the last decade. For investors who are looking to gain access to the sector but are cautious about the ongoing uncertainty, we believe it is the most appropriate play. We calculate that IBT's risk mitigation approach and macroeconomic overlay has led to it exhibiting the lowest volatility out of peers while also outperforming the benchmark over all periods in the last five years.**
- **Risk mitigation approach and macro overlay:** For investors who are looking to gain access into the biotech sector but are cautious about the ongoing uncertainty and risk-off environment we find ourselves in, we believe IBT is the most appropriate play. In fact, we believe IBT has the most significant macroeconomic overlay to portfolio allocation. Management shifts allocation between higher-beta, development-stage biotech companies and more defensive large cap names as it sees fit. While management acknowledges that larger-cap, profitable companies are least affected by inflation (36% of portfolio), it has reacted to the continued depressed valuations in small cap names by increasing exposure from 3% in February 2020 to 22% in May 2022. The impact of this is that IBT has the lowest volatility and also experienced the lowest NAV decline ytd out of peers and the benchmark index.
- **Unquoted exposure predominantly through funds:** In 2016, IBT's strategy changed to cease direct investments into new unquoted holdings and instead focus on investing via unquoted funds. We believe this strategy change fits well with IBT's risk minimisation approach as it will enable a broader and more diversified exposure to the unquoted opportunities that exist. IBT currently has c7% invested in a venture capital fund, SV Fund VI, which invests across three sectors: biotech, healthcare, and IT and medical devices. SV (the manager of IBT) has developed a strong track record over the past three decades, investing more than $650m into early-stage biotech, and this has been reflected in SV Fund VI which has delivered an IRR of 23% pa since its first investment in 2016.
- **4% dividend:** IBT pays a 4% dividend biannually based on NAV at August year end. These dividends will be predominantly paid out of capital given the majority of biotech companies do not pay dividends; however, M&A – as and when it occurs – can provide cash injections.
- **Valuation:** While we believe IBT is the most suitable play for investors who are more cautious about the wider market backdrop, we feel that at a c1% discount to NAV, IBT is around fairly valued.

IBT's strengths	IBT's weaknesses
14% pa NAV total returns over last decade	On absolute basis NAV has fallen 7% YTD
Risk mitigation approach and macroeconomic overlay led to lowest volatility	Lower beta means might underperform in growth market
More defensive approach suitable to play any ongoing uncertainty – NAV has fallen least	Has recently increased leverage up to 12% which will increase volatility
Well-diversified portfolio	
11% unquoted sleeve through funds	

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Portfolio overview

International Biotechnology Trust (IBT) listed in May 1994 and aims to generate long-term capital growth by investing in a well-diversified portfolio of predominantly biotech companies. IBT provides investors with access to biotechnology companies across their lifecycle, from venture-stage companies engaged in early-stage laboratory work (via IBT's investment in SV Fund VI worth 7% of NAV) to larger-cap listed companies with well-established products, diversified portfolios and more predictable sales.

Diversified access across the biotech spectrum

Diversified portfolio by development stage, company size and therapeutic area

The portfolio looks to provide diversified exposure to the biotech sector across development stage, company size and therapeutics area. At 31 May 2022, the portfolio consisted of 87 underlying holdings. While the portfolio is invested in the EU/UK (12%) and the rest of world (1%), the majority of the portfolio is invested in the US and Canada (87%).

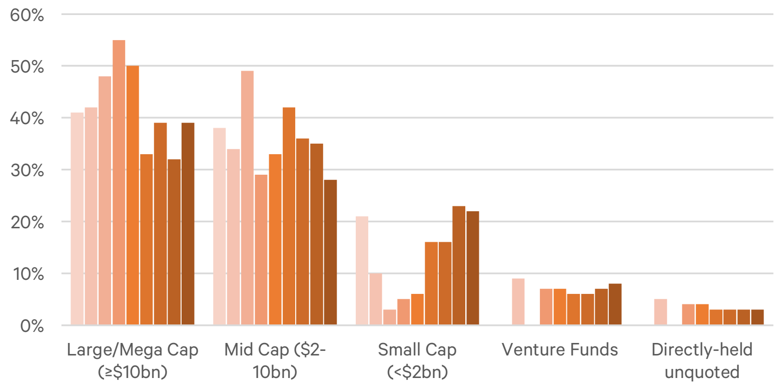
As it stands, around 61% of the portfolio is invested in companies which have approved drugs selling on the market. Of that, 26% of the companies are profitable and 35% are achieving revenue growth. These companies will typically exhibit more defensive qualities and be less affected by macro dynamics. There is also around 42% of the portfolio invested in smaller-cap early-stage companies. While management acknowledges that larger-cap, profitable companies are least affected by inflation (36% of portfolio), it has reacted to the continued depressed valuations in small cap names by increasing exposure from 3% in February 2020 to 22% in May 2022 (Figure 29). Management feels larger-cap companies are mostly fairly valued, while it is increasingly able to access compelling science within smaller-cap companies at knock-down prices, in many instances down 70-80% from peak levels. In order to limit the risk associated with increasing small cap exposure, IBT will seek out credible science within financial healthy companies that do not have a long timeline before generating revenues.

Figure 28: Portfolio overview at 31 May 2022

Company	Weighting	Currency	Market cap (bn)	Current price	Consensus Rating	Consensus target price	Upside to target price
Biohaven	8.1	USD	10	144.2	BUY	153.6	n/a
Horizon	8.0	USD	19	82.9	BUY	137.6	66%
Neurocrine	6.8	USD	9	97.4	BUY	111.8	15%
Incyte	5.6	USD	17	74.8	BUY	91.9	23%
Argenx	3.6	EUR	18	340.0	BUY	346.6	2%
Illumina	3.6	USD	30	193.6	HOLD	341.1	76%
Amgen	3.2	USD	130	243.1	HOLD	250.0	3%
Ultragenyx	3.1	USD	4	60.0	BUY	124.2	107%
Harmony	3.0	USD	3	51.3	BUY	57.4	12%
Travere	2.7	USD	2	26.0	BUY	40.9	57%
Sum	47.7	Average	24			Average	40%

Source: Company data, Datastream

Figure 29: NAV by size between February 2019 and April 2022 – small cap has been increasing



Source: Company data

Unquoted investments between 5-15%

IBT's target unquoted range will be between 5-15%, and at 31 May 2022 stood at 11%.

Unquoted investments predominantly through funds

In 2016, IBT's strategy changed to cease direct investments into new unquoted holdings and instead focus on investing via unquoted funds. We believe this strategy change fits well with IBT's risk minimisation approach, as it will enable a broader and more diversified exposure to the unquoted opportunities that exist. IBT currently has c8% invested in a venture capital fund, SV Fund VI (Figure 29), which invests across three sectors: biotech, healthcare, and IT and medical devices. SV (the manager of IBT) has developed a strong track record over the past three decades, investing more than $650m into early-stage biotech, and this has been reflected in SV Fund VI which has delivered an IRR of 23% pa since its first investment in 2016.

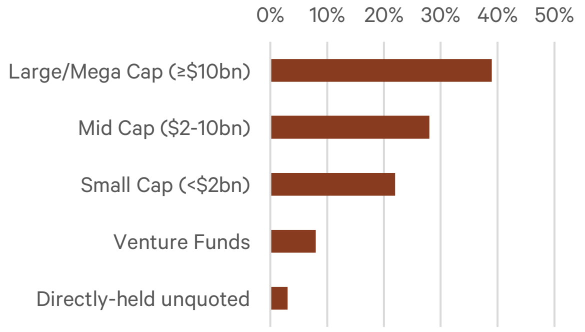
All unquoted investments are valued at least quarterly unless there is information relating to the particular investment which comes to light in between quarter ends. SV Fund VI's next valuation date is 30 June 2022; however, this has already been adjusted for known events and write-downs or uplifts which have occurred between 31 March to date.

Macro overlay to portfolio positioning

Macroeconomic overlay and risk mitigation approach

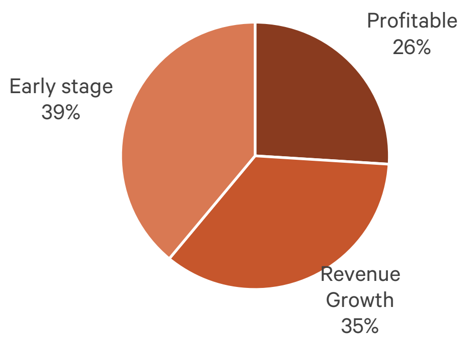
IBT applies a macroeconomic overlay to portfolio allocation alongside its bottom-up approach. Management shifts allocation between higher-beta, development-stage biotech companies and more defensive large cap names as it sees fit. This is reflected in IBT's high turnover over the last two years (98%; Figure 13). While management acknowledges that larger-cap, profitable companies are least affected by inflation (36% of portfolio), it has reacted to the continued depressed valuations in small cap names by increasing exposure from 3% in February 2020 to 22% in May 2022. Management feels larger-cap companies are mostly fairly valued, while it is increasingly able to access compelling science within smaller-cap companies at knock-down prices, in many instances down 70-80% from peak levels. In order to limit the risk associated with increasing small cap exposure, IBT will seek out credible science within financial healthy companies that do not have a long timeline before generating revenues.

Figure 30: NAV by size at 31 May 2022



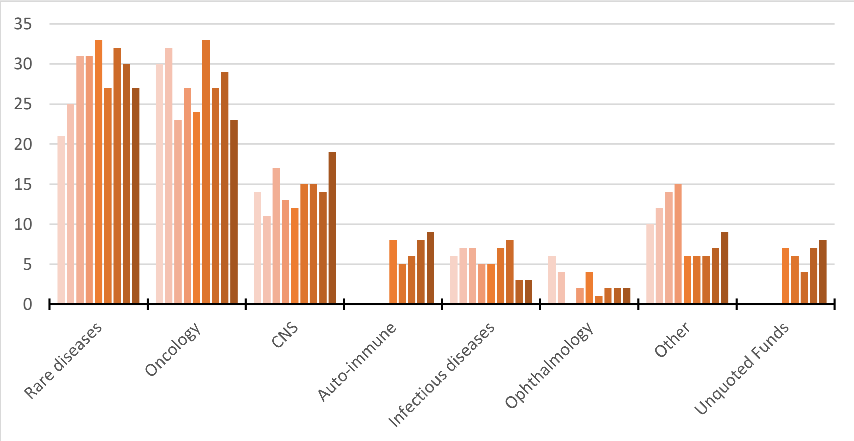
Source: Company data

Figure 31: NAV by development stage at 31 May 2022



Source: Company data

Figure 32: Sub-sector allocation since February 2019 to May 2022

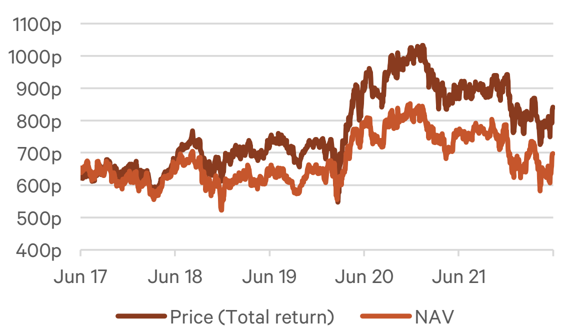


Source: Company data

Performance

On a relative basis, IBT has outperformed the benchmark index over every time period in the last five years (Figure 34). At the same time, IBT has also exhibited lower volatility than the benchmark on account of its risk mitigation approach and macroeconomic considerations to portfolio allocation. However, given the wider sell-off in biotech, IBT has not been immune to negative returns and ytd has generated a NAV total return of -7%. Over the longer term, returns look strong at c+14% pa over the last decade.

Figure 33: Price (total return) and NAV



Source: Datastream

Figure 34: IBT relative performance to benchmark

	1m	3m	6m	1y	3y	5y
IBT	7	-1	-11	-6	18	28
INDEX	2	-2	-12	-16	17	24
Relative performance	5	1	1	10	2	4

Source: Datastream

Investment manager and fees

IBT is managed by SV Health Managers, which was founded in 1993 and now has assets under management of $2.7bn and over 50 professionals based in offices in Boston and London.

IBT is co-managed by Ailsa Craig (lead investment manager) and Marek Poszepczynski (lead investment manager). They both manage the public market investments (which constitute the majority of the IBT portfolio), while the private and venture capital investments are made via a venture fund (currently SV Fund VI) under the guidance of the SV core biotech team co-led by Kate Bigham and Houman Ashrafian.

The management fee is payable monthly at a rate of 0.9% pa of the NAV. The performance fee relates to the quoted and unquoted allocation within the portfolio. On the quoted pool, the performance fee is 10% of the outperformance above the NBI (£) plus a 0.5% hurdle. On the unquoted pool (excluding SV Fund VI), the fee is 20% of net realised gains and takes into account any unrealised losses. There is no performance fee on SV Fund VI.

Dividends

4% biannual dividend

IBT pays a 4% dividend biannually based on NAV at August year end. These dividends will be predominantly paid out of capital given the majority of biotech companies do not pay dividends. However, M&A – as and when it occurs – can provide cash injections.

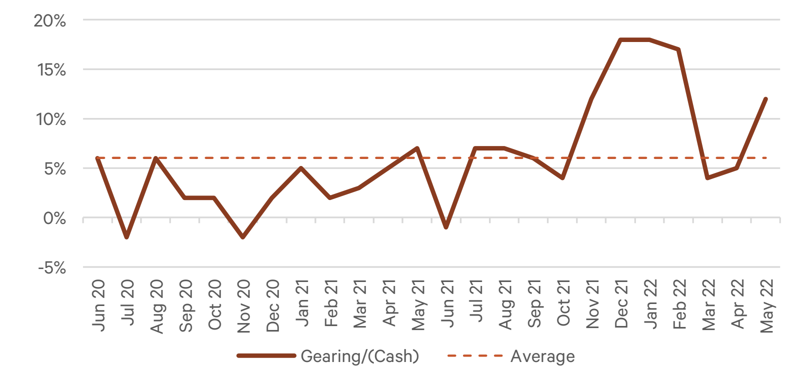
Leverage

Leverage currently 12% of NAV

IBT can utilise leverage up to 30% of NAV and, as of May 2022, leverage stood at 12% of NAV. Management looks to actively manage leverage to take advantage of market dislocations. We have seen leverage increase over the recent months as market valuations have fallen and management sees compelling long-term value and is confident in the fundamentals (Figure 35).

IBT has a £55m RCF debt facility which bears interest at 1.75% above the relevant base rate.

Figure 35: IBT leverage/(cash) on a monthly basis since June 2020



Source: Company data

Berenberg Investment Companies

The Biotech Growth Trust plc (BIOGW LN)

BERENBERG
PARTNERSHIP SINCE 1590

Emerging bias underperforming in current market

- **Biotech Growth (BIOG) is a £334m London-listed investment company that has strategic overweights in emerging companies and emerging markets such as China. We see BIOG as higher up the risk-reward spectrum and returns of +19% and +55% in 2020 and 2021 have been unwound following particular headwinds for its strategic overweights that led to BIOG underperforming the benchmark by 26% in the financial year to 31 March 2022. Over 10 years, BIOG has generated total returns of +12% pa.**
- **Strategic emerging overweights a headwind in current market:** BIOG has some of the highest exposure to smaller-cap companies, and we estimate the lowest exposure to profitable biotech companies out of peers. This follows BIOG's strategy shift in 2019 to emphasise overweight positions in small caps versus the benchmark. On 31 March 2021, BIOG was 38% overweight small caps and 33% underweight large caps. This strategic allocation was a considerable detractor from BIOG's performance (-34% during the financial year to 31 March 2022 versus benchmark -7%) as small caps went on to underperform large cap biotech by over 30% in the financial to 31 March 2022. This could well continue; however, management has not changed its overall strategy given unprecedented low valuations in emerging biotech, and believes this area of the asset class should "rebound the most when the overdue recovery occurs".
- **Emerging market exposure:** Compounding the small cap underperformance for BIOG was a significant drawdown in the Chinese markets, including Hong Kong, between September 2021 and March 2022. While management believes the Chinese market will rebound, it has recently been trimming some of its Chinese exposure to invest in more compellingly valued US biotech names.
- **Access to crossover investments:** BIOG's c9% exposure to unquoted is predominantly via direct unquoted holdings with three private investments totalling 8.2% of NAV and 0.4% of NAV invested in OrbiMed Asia Partners Fund. With depressed valuations in SMID cap biotech names, BIOG is actively monitoring potential investments in quality assets at lower-than-usual valuations.
- **Higher volatility:** On account of BIOG's strategic overweights in emerging, smaller-cap companies and emerging markets such as China, we observe much higher volatility in its share price. Moving forward, we would expect BIOG to exhibit volatility at the higher end of the spectrum.

BIOG's strengths	BIOG's weaknesses
Long term returns of 12% pa	Strategic overweights have heavily detracted from performance in last 1 year
BIOG most likely to benefit from any inflection in small-cap biotech fortunes	Macro backdrop likely to remain a headwind in near term
Over the long-term emerging, SMID-cap companies typically generate higher returns	Strategic overweights in emerging companies generate higher volatility

29 June 2022

Initiation

Share price GBp820

Close: 29/06/2022 London Close

Premium/Discount: -5% discount to NAV

Yield: Dividends, if any, likely to be small

Background: The Biotech Growth Trust seeks capital appreciation through investment in the worldwide biotechnology industry. In order to achieve its investment objective, the company invests in a diversified portfolio of shares and related securities in biotechnology companies on a worldwide basis. Performance is measured against the NASDAQ Biotechnology Index (sterling adjusted).

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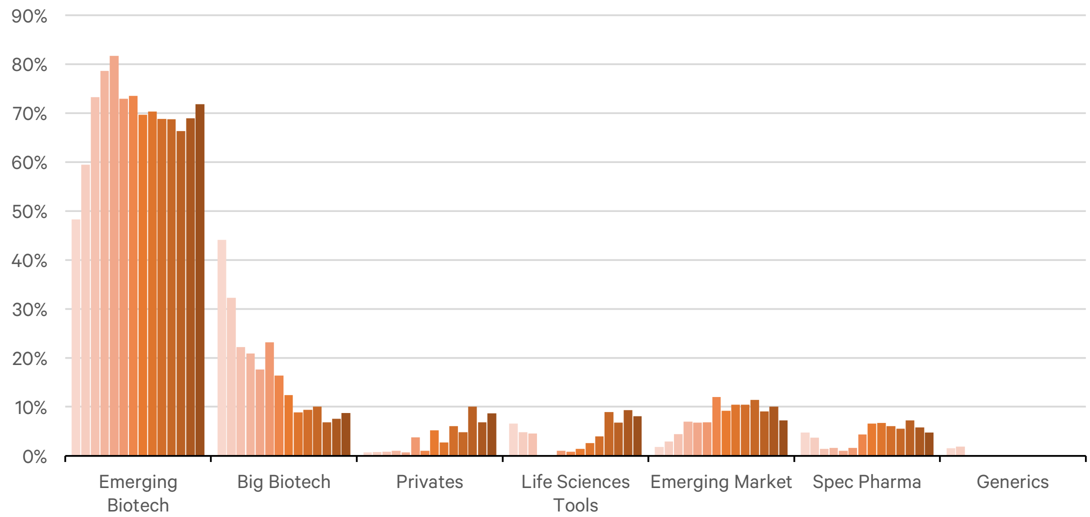
Portfolio overview

Strategic overweights towards emerging companies

BIOG aims to provide investors with access to the worldwide biotechnology industry. Following a strategy shift in 2019, it has allocated significantly more capital towards emerging biotech companies, an area of the sector that has historically offered better returns than the broader market. Typically, BIOG looks to initiate new positions in early-stage companies that it believes are approaching profitability, have anticipated positive clinical data or are considered a potential takeover target. Figure 36 shows that between December 2018 and March 2022, emerging biotech exposure increased from 48% to 72% of the portfolio.

Figure 36: Subsector breakdown quarterly between 31 December 2018 and 31 March 2022 – since strategy shift in 2019, BIOG has increased emerging biotech exposure from c50% up to c70%



Source: Company data

Strategic overweights in emerging companies and China have been a headwind

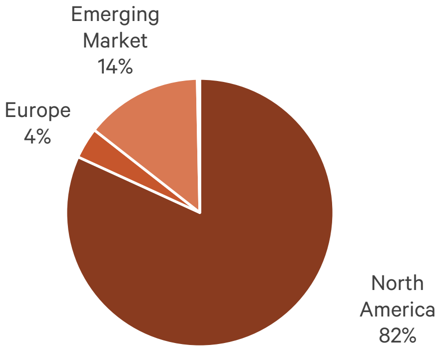
In addition to the increasing strategic overweights in smaller-cap, emerging biotech companies (Figure 36), BIOG has allocated an increasing amount of capital (c13% of NAV at March 2022; Figure 37) towards Chinese biotech companies where it sees value. In 2020, China accounted for 12% of the industry's early-stage pipeline and the Chinese government is committed to a biotech ecosystem as part of its Made in China 2025 plan.

Significant headwinds to strategic overweights in last year

Both of these strategic overweights (to emerging companies and emerging markets) have created a significant headwind to the performance of the portfolio over the last year (discussed in more detail in the Performance section). Regulatory tightening by the Chinese government alongside strict continued COVID-19-related lockdowns have provided a difficult environment for the emerging market biotech names. Furthermore, rising interest rates and inflation have created a particularly challenging backdrop for the smaller-cap, emerging biotech names that are pre-revenue or still progressing drug candidates through clinical trials. Between March 2021 and March 2022, small cap biotech names within the Nasdaq Biotechnology Index underperformed their large cap counterparts by over 30%.

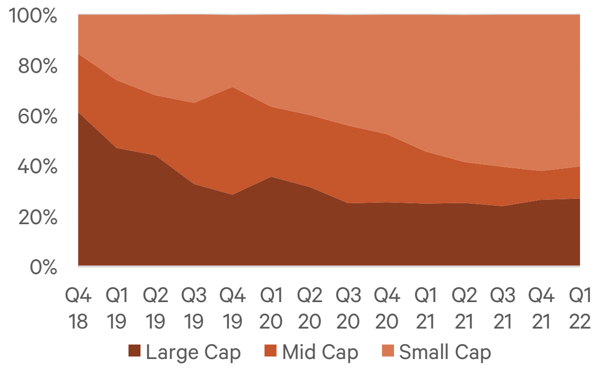
Compounding this small cap underperformance for BIOG was a significant drawdown in the Chinese markets, including Hong Kong, between September 2021 and March 2022. The sell-off was precipitated by regulatory tightening by the Chinese government across a variety of sectors, including the internet tech industry and the for-profit education industry. Even though there were no new significant regulations targeting Chinese biotech, the broad market downturn in China adversely affected our Chinese biotech positions. Importantly, much of the weakness in the portfolio was simply due to the general market rerating downward rather than any negative fundamental news about the companies themselves.

Figure 37: Geographic exposure at 31 March 2022



Source: Company data. Note: Net of private exposure

Figure 38: Market cap breakdown between 2018 and 2022



Source: Company data. Note: Strategic change in 2019 focused more on smaller-cap, emerging biotech names

Top 10 portfolio holdings

BIOG currently has 70 holdings at 31 May 2022, with the top 10 accounting for 42% of the portfolio. This number is coming down from a peak of around 92 holdings in July 2021, and management has been consolidating and trimming the name count down on the back of a hot IPO market which has presented buying opportunities for the portfolio. In FY 2021, BIOG invested in 39 IPOs, which was a key driver to the increasing number of underlying holdings.

Figure 39: Top 10 holdings at 30 April 2022

Company	Weighting	Currency	Market cap (bn)	Current price	Consensus Rating	Consensus target price	Upside to target price
BioMarin Pharmaceutical	5.0	USD	15	83.2	BUY	112.6	35%
Seagen	4.4	USD	33	178.5	BUY	165.2	-7%
Horizon Therapeutics	4.3	USD	19	81.7	BUY	137.6	68%
Keros Therapeutics	4.3	USD	1	26.0	STRONG BUY	93.8	260%
Syndax Pharmaceuticals	3.8	USD	1	18.5	BUY	31.3	69%
GH Research	3.7	USD	1	10.1	BUY	46.0	357%
Yisheng	3.7	N/A	N/A	N/A	N/A	N/A	N/A
Xenon Pharmaceuticals	3.5	USD	2	30.1	STRONG BUY	45.7	52%
Gilead Sciences	3.4	USD	78	62.2	HOLD	69.2	11%
Vaxcyte	3.2	USD	1	20.8	BUY	48.5	133%
Sum	39.3	Average	17			Average	109%

Source: Company data, Datastream

Investing in crossover, pre-IPO investments

c9% exposure to unquoteds

BIOG's c9% exposure to unquoted is predominantly via direct unquoted holdings with three private investments totalling 8.2% of NAV and 0.4% of NAV invested in OrbiMed Asia Partners Fund. With depressed valuations in SMID cap biotech names, BIOG is actively monitoring potential investments in quality assets at lower-than-usual valuations.

Performance

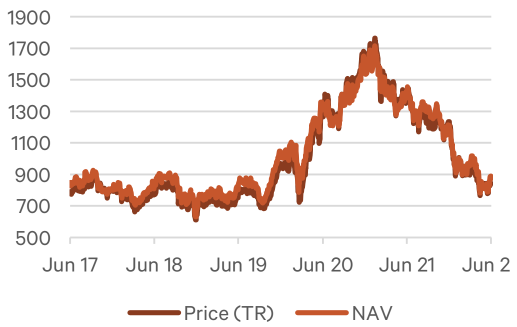
BIOG's full-year results for 2020 and 2021 were strong. The NAV total return for 2020 (+19%) and 2021 (+55%) materially outperformed the benchmark returns by 18% and 30% respectively. However, BIOG's strategic overweights in 1) small cap biotech and 2) China have led to material underperformance for the financial year to 31 March 2022, on both an absolute and relative basis. Financial year results to 31 March 2022 saw a NAV total return of -34% (underperforming the benchmark by -26%).

Underperformed the benchmark

This particularly strong reversal has eroded much of the longer-term performance metrics (particularly relative to the benchmark), with BIOG returning +3% over the last five years (versus +24% for the index). However, on an absolute basis, the annualised NAV total return of +12% pa over the last decade remain attractive.

As we discussed in the comparative section of this note, BIOG's focus on emerging companies and emerging markets has led to significant volatility and underperformance in the share price performance over the last three years. We therefore note that investors should expect higher volatility if investing in this vehicle.

Figure 40: Price (total return) and NAV over five years



Source: Datastream

Figure 41: Cumulative NAV total returns of BIOG versus Index

	1m	3m	6m	1y	3y	5y	10y
BIOG	5	-9	-27	-39	4	3	217
INDEX	2	-2	-12	-16	17	24	279
Relative perf.	3	-7	-15	-23	-13	-21	-62

Source: Datastream. Note: Index is the Nasdaq Biotech. Index (£)

Investment manager and fees

The Biotech Growth Trust (BIOG) is managed by Geoff Hsu of OrbiMed Capital, which is a specialist healthcare investor with 11 offices across the globe, including in Hong Kong and Shanghai. OrbiMed has assets under management of $17bn, which is allocated across a number of public equity funds and investment trusts ($5.8bn), private equity ($9.8bn), and royalty and debt ($1.4bn).

The management fee is: 0.65% of NAV plus 0.3% pa on the company's market cap, up to £500m; 0.2% on market cap between £500m-£1bn; and 0.1% on market cap over £1bn. There is also a performance fee of 15.0% of outperformance versus the benchmark.

Dividends

Dividend, if any, likely to be small

As BIOG aims to generate long-term capital growth and has strategic overweights in emerging biotech companies, it does not focus on income and has not paid a dividend since 2001.

Leverage

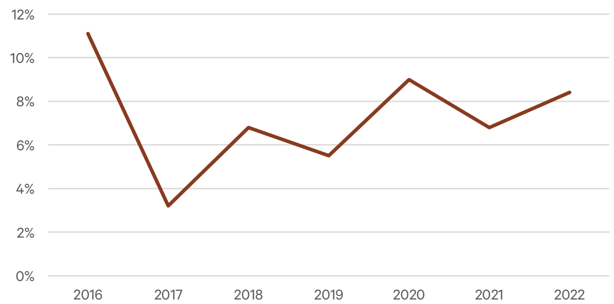
Leverage currently 10%

BIOG targets leverage of between 5-10%, with a limit of up to 20% of NAV. As of 30 April 2022, leverage stood at 10.1%.

Management is bullish on the long-term potential of the sector and thus expects to use constant leverage; however, it is cognisant of the sector's volatility. Leverage will predominantly be used on a bottom-up basis to build up positions and will not be used as a market timing tool.

BIOG has a leverage facility provided by JP Morgan Securities, with interest of the US Federal Funds Rate of +45bp.

Figure 42: BIOG yearly leverage between 2016 and 2022



Source: Company data

High-conviction approach

- **BB Biotech (BION) is a CHF3.2bn Swiss-listed investment company that takes a highly concentrated approach, investing into 20-35 small and mid-cap companies and typically holding them for the longer-term. This approach has generated impressive returns over the longer term (+16% pa over the last decade). However, we calculate BION has been underperforming the benchmark on a 1, 3 and 5 year view and thus cannot currently justify BION's 26% premium to NAV.**
- **High conviction approach:** BION takes a differentiated, high-conviction approach, investing into fast-growing companies with innovative drugs. BION's portfolio generally consists of 20-35 holdings; it currently has 31 positions, with the top 10 holdings accounting for 69% of the total portfolio.
- **Target 15% pa returns:** Management favours initiating positions in earlier-stage platform companies (ie companies that have multiple "shots on goal" as technologies are scalable and target agnostic). BION then holds these emerging companies for the long term as they mature into larger positions. Over the longer term, BION has been successfully generating NAV total returns of 16% pa. However, with the SMID cap biotech sell-off and a number of BION's core larger-cap holdings falling 42% ytd (eg Moderna), BION's high-conviction approach has led to a sustained period of underperformance.
- **Valuation:** BION's premium to NAV has consistently been higher than peers over the last five years, at times trading at significant premiums of up to 43% (January 2022). We think the key drivers of this are twofold. First, BION has an impressive track record over multiple economic cycles, generating an annualised NAV total return of +13.6% pa for almost 30 years. The second reason comes from the supply-demand dynamic for BION's shares. BION has not issued new shares since 2000 and thus supply has been constrained. However, based on recent performance (-27% over the last two years) and given that headwinds to small and mid-cap stocks are likely to persist in the near to mid-term, we believe that the shares' current 27% premium to NAV appears expensive, in our view.
- **Leverage:** BION can utilise leverage up to 15%. As of 31 March 2022, leverage stood at 13% and has been steadily increasing from 2% at 31 December 2020 as biotech valuations have been falling. BION's macro considerations are close to zero in terms of portfolio allocation; however, management will utilise leverage as a tactical tool to take advantage of depressed valuations when they occur. The increasing investment level in the past 12 months has been driven by management's stance that many companies are attractively valued after the biotech correction we have witnessed.
- **Dividend:** In 2013, BION introduced a dividend policy corresponding to a 5% dividend yield on the volume weighted average price of its shares in December of the respective fiscal year. The dividend is normally paid out annually after the annual general meeting in March each year.

BION's strengths	BION's weaknesses
High-conviction approach led to 16% pa NAV total return over last decade	High conviction leads to greater volatility
Dividend yield of 5%	High premium despite poor recent performance
Leverage could increase returns if there is a wider biotech rebound	Leverage near top end of range 15% could increase volatility
	Some of larger-cap core holdings have not exhibited more defensive qualities (eg Moderna -42% ytd)

29 June 2022

Initiation

Share price CHF56.8
Close: 29/06/2022 SIX Swiss Close

Premium/Discount: 26% premium to NAV

Yield: 5% dividend yield

Background: BB Biotech invests in fast-growing biotechnology companies that are developing and marketing innovative drugs. It focuses on biotech companies whose products address areas of significant unmet medical needs and thus have above-average sales and profit-growth potential. Besides profitable large cap companies, BB Biotech is building up its investments in promising small and mid-cap companies.

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Portfolio overview

High-conviction approach to SMID cap companies

BION takes a very high-conviction approach, investing into fast-growing companies that develop and market innovative biotech drugs. BION's key differentiator is that management keeps underlying holdings between 20-35 names; as of 31 May 2022, the portfolio consisted of 31 holdings, with the top 10 positions accounting for 69% of the total portfolio (Figure 43).

Figure 43: BION top 10 holdings at May 2022

Company	Weighting	Currency	Market cap (bn)	Current price	Consensus Rating	Consensus target price	Upside to target price
Ionis Pharmaceuticals	10.7	USD	5	38.0	HOLD	47.3	25%
Argenx SE	8.6	EUR	19	346.3	BUY	346.6	0%
Moderna	8.1	USD	57	142.2	BUY	219.3	54%
Neurocrine Biosciences	7.9	USD	9	96.9	BUY	111.8	15%
Vertex Pharmaceuticals	7.6	USD	71	276.2	BUY	293.5	6%
Incyte	6.5	USD	17	75.6	BUY	91.9	21%
Intra-Cellular Therapies	6.1	USD	5	55.2	BUY	72.1	31%
Alnylam Pharmaceuticals	5.1	USD	17	142.2	BUY	209.6	47%
Arvinas	4.2	USD	2	42.7	BUY	101.2	137%
Fate Therapeutics	4.0	USD	2	24.8	BUY	81.5	229%
Sum	68.8	Average	20			Average	57%

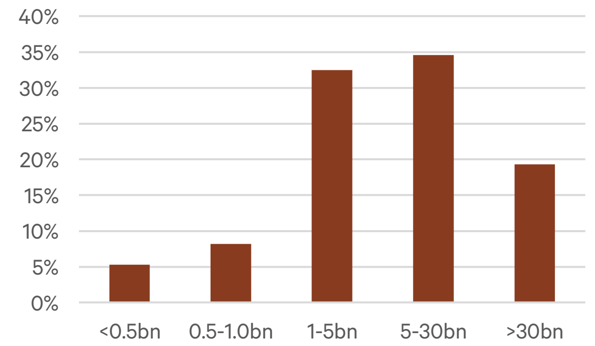
Source: Company data, Datastream

Target 15% pa returns

Given a target total return over the medium to longer term of 15% pa when investing, the portfolio will invariably be focused on small and mid-cap companies. Positions are typically initiated into companies with market caps less than CHF5bn with a holding of c0.5-4% of NAV, which are then held for the long term as long as the 15% cost of capital assumption holds in BION's DCF model.

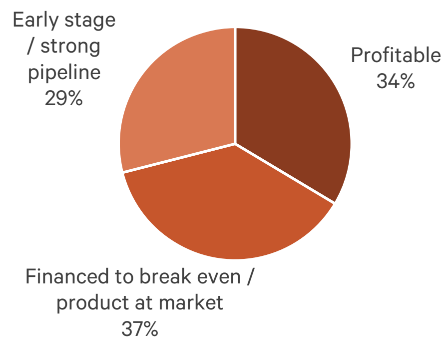
Thus, BION does not actively allocate into larger cap holdings per se, but instead looks to grow its smaller-cap holdings into larger core positions as the business develops and milestones such as positive Phase 3 outcomes, drug approvals and successful marketing are achieved. By following this process, management hopes to de-risk its high-conviction core holdings (typically top 5-8 top holdings) as the sizing of larger positions will be driven by how successful the value creation has been.

Figure 44: Market cap breakdown at 31 December 2021



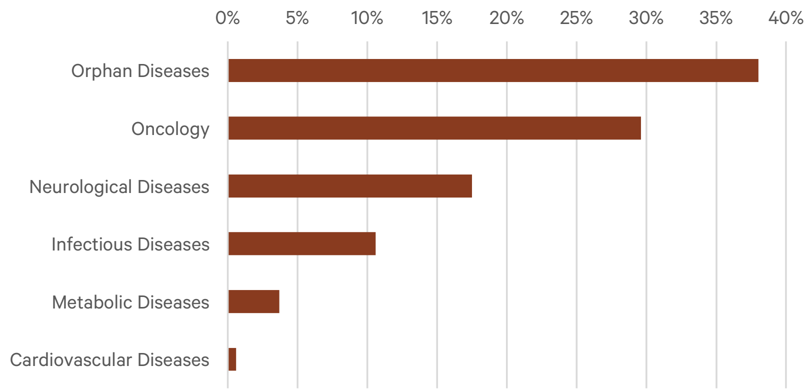
Source: Company data

Figure 45: Development stage of holdings at 31 December 2021



Source: Company data

Figure 46: Therapeutic breakdown at 31 December 2021



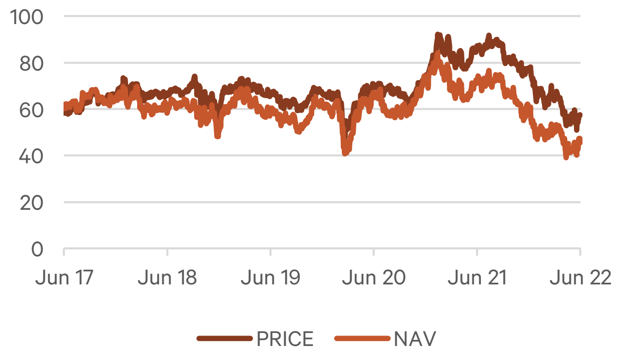
Source: Company data

Performance

Poor relative and absolute performance over last five years

It has been a difficult year for BION on an absolute and relative basis, generating a NAV total return of -29% compared to the benchmark index returning -14%. We attribute this to 1) the broader biotech sell-off that has particularly affected SMID cap companies; 2) BION's high-conviction approach; 3) a number of BION's larger-cap high conviction holdings falling by up to 42% ytd (eg Moderna); and 4) increasing leverage. Over the longer term, however, BION continues to reach its target 15% pa returns, having generated NAV total returns of 16% pa over the last 10 years.

Figure 47: Price and NAV over five years



Source: Datastream

Figure 48: Cumulative absolute and relative performance

	3M	6M	1Y	3Y	5Y	10Y
NAV TR	-2.4	-15.9	-26.3	-2.2	2.0	333.4
INDEX	-2.2	-12.2	-16.1	16.5	23.6	279.2
Relative performance	**-0.2**	**-3.6**	**-10.2**	**-18.7**	**-21.6**	**54.2**

Source: Datastream

Investment manager track record and fees

The investment manager, Bellevue Asset Management, offers a select range of active equity strategies in fast-growing markets and is fully owned by Bellevue Group, an independent financial boutique listed on the SIX Swiss Exchange and founded in 1993.

Bellevue Asset Management includes a team of biotech specialists with a successful track record. Dr Daniel Koller heads the management team at BION and works alongside a further six portfolio managers dedicated to BION and spread between Zurich (four people) and New York (three).

Since 1 January 2014, the remuneration paid to the investment manager has been based on a 1.1% pa all-in fee on the average market capitalisation, without any additional fixed or performance-based elements of compensation, which is paid on a monthly basis.

Dividend

In 2013, BION introduced a dividend policy corresponding to a 5% dividend yield on the volume weighted average price of its shares in December of the respective fiscal year. The dividend is normally paid out annually after the annual general meeting in March each year. BION also conducts share buybacks between 0-5% of share capital pa (if the shares are trading at a discount to NAV) to give shareholders a potential return of up to 10% pa.

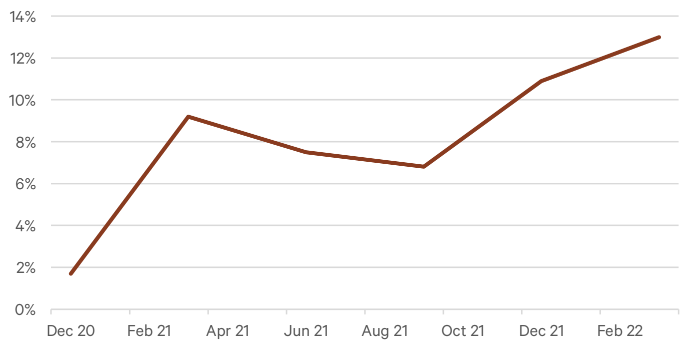
Leverage

Leverage currently 13%

BION can utilise between 5% cash and 15% leverage (investment degree between 95% and 115%), and, over the long term, management expect leverage to fall between 3-5%. As of 31 March 2022, leverage stood at 13% and has been steadily increasing from 2% at 31 December 2020 (Figure 49) as biotech valuations have been falling.

BION's macro considerations are close to zero in terms of portfolio allocation; however, management will utilise leverage as a tactical tool to take advantage of depressed valuations when they occur. The increasing investment level in the past 12 months has been driven by management's stance that many companies are attractively valued after the biotech correction we have witnessed.

Figure 49: BION leverage between December 2020 and March 2022



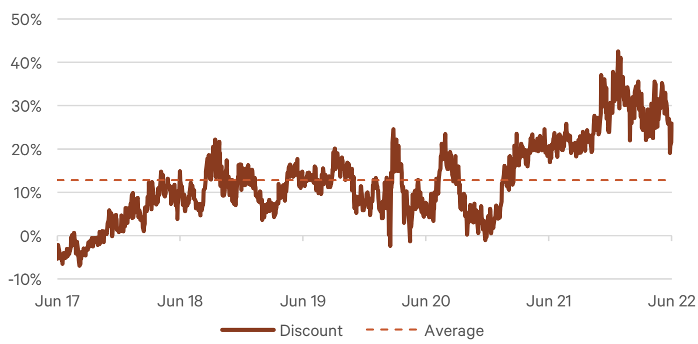
Source: Company data

Valuation

BION currently trades on a high premium to NAV of 27%, having peaked at a premium of 43% to NAV in January 2022. BION has a strong long-term track record, generating NAV total returns of +14.7% pa over the past decade, and this will increase demand for shares. Furthermore, as the biotech market has slumped in 2021 and ytd 2022, we expect there would have been increased demand to gain entry into the BION portfolio as valuations began to fall. This is compounded by the fact that BION has not issued any new shares since 2000, over 20 years ago, which means the premium/discount is particularly affected by supply-demand dynamics.

Taking this into account, however, and given BION's weak absolute and relative performance in 2021 and ytd (down 14% and 22% respectively), we do not currently feel that a c26% premium to NAV is justified and would look for the premium to fall back in line with average which it has started to do over the last few days.

Figure 50: Premium/(discount) to NAV (%) over BION over five years to 29/06/22



Source: Datastream

ESG

Mapping to the UN Sustainable Development Goals (SDGs)

Berenberg Adjusted SDG Framework

In January 2020, Berenberg's ESG team launched the Berenberg Adjusted Sustainable Development Goal (BSDG) Framework, based on the UN Sustainable Development Goals (SDGs). The SDGs are a roadmap for sustainable economic growth, incorporating a balance of environmental, social and economic development factors. They are a "universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030".

The framework was created by analysing each of the 169 targets supporting the UN's 17 SDGs, converting them into criteria that reflect corporate strategies. See the following notes for more information on Berenberg's SDG mapping: Taking the BSDG Framework to continental Europe (dated 1 June 2020) and Impact and Valuation in Focus (dated 5 November 2020).

How does BIOG, IBT, BION and HBMN map to the BSDG Framework?

BIOG, IBT, BION and HBMN BSDG Profile

	Goal 3
SDG	Good Health and Well-Being
BSDG criteria being met	"Improve the quality and accessibility of health and social care products and services" "Provide products and services that promote health and well being"
Revenue alignment band	Band 1: 71-100%
Direction of Travel	Positive
Our SDG view	Investment trusts are focused on new innovative drugs and medical technologies, providing healthcare products and improving the quality of healthcare

Source: Berenberg

As the coverage is all investment trusts, we aligned it to SDGs based on proportion of the portfolio holdings. The trusts solely focus on quoted and unquoted biotech companies globally, concentrating on new, innovative drugs and medical techn solutions for unmet medical needs. Their portfolios consist of companies in the fields of oncology, mRNA, infectious diseases, autoimmune diseases and more. Given the high positive contribution to quality and accessibility of healthcare products and services, we align the entire portfolios of investments to SDG 3 "Good Health and Wellbeing". In the future, we are keen to see the trusts quantifying the positive impact of its investments.

Governance

Figure 51: BIOG governance profile

Metric	The Biotech Growth	Does Biotech Growth have?	View
Board structure	7 members. Chairperson, 5 independent NEDs, and 1 NED	Independent board	✓
Male/Female board representation	71% / 29%	At least 30% female board representation	×
Average board tenure	5.1 years	Average board tenure of 2-7 years	✓
Separate chairperson / CEO	Yes	Separate CEO and Chairperson	✓
Shareholder structure	99.5% free float	Largest shareholder <50% voting rights	✓
CEO-to-worker pay ratio	n/a		
Board committees	Nominations, renumerations, Audit		
Management shareholdings	Geoff Hsu does not own any shareholdings in the Company		
Management compensation linked to ESG?	No		

Source: Company data, Eikon, Bloomberg

Figure 52: IBT governance profile

Metric	International Biotechnology	Does International Biotechnology have?	View
Board structure	5 members. Chairperson and 4 independent NEDs	Independent board	✓
Male/Female board representation	60% / 40%	At least 30% female board representation	✓
Average board tenure	4.0 years	Average board tenure of 2-7 years	✓
Separate chairperson / CEO	Yes	Separate CEO and Chairperson	✓
Shareholder structure	92.1% free float	Largest shareholder <50% voting rights	✓
CEO-to-worker pay ratio	n/a		
Board committees	Nominations, renumerations, Audit		
Management shareholdings	n/a		
Management compensation linked to ESG?	No		

Source: Company data, Eikon, Bloomberg

Figure 53: BION governance profile

Metric	BB Biotech	Does BB Biotech have?	View
Board structure	6 members. Chairperson and 5 independent NEDs	Independent board	✓
Male/Female board representation	66% / 33%	At least 30% female board representation	✓
Average board tenure	4.2 years	Average board tenure of 2-7 years	✓
Separate chairperson / CEO	Yes	Separate CEO and Chairperson	✓
Shareholder structure	98.2% free float	Largest shareholder <50% voting rights	✓
CEO-to-worker pay ratio	n/a		
Board committees	Nominations, renumerations, Audit		
Management shareholdings	n/a		
Management compensation linked to ESG?	No		

Source: Company data, Eikon, Bloomberg

Figure 54: HBMN governance profile

Metric	HBM Healthcare	Does HBM Healthcare have?	View
Board structure	5 members. Chairperson and 4 independent NEDs	Independent board	✓
Male/Female board representation	60% / 40%	At least 30% female board representation	✓
Average board tenure	9.0 years	Average board tenure of 2-7 years	✓
Separate chairperson / CEO	Yes	Separate CEO and Chairperson	✓
Shareholder structure	82.7% free float	Largest shareholder <50% voting rights	✓
CEO-to-worker pay ratio	n/a		
Board committees	Nominations, renumerations, Audit		
Management shareholdings	Dr Andreas Wicki (CEO) holds 53290 shares and Erwin Troxler (CFO) holds 5500 shares		
Management compensation linked to ESG?	No		

Source: Company data, Eikon, Bloomberg

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Disclosures in respect of Article 20 of Regulation (EU) No. 596/2014 of the European Parliament and of the Council of 16 April 2014 on market abuse and the UK Market Abuse Regulation (market abuse regulation – MAR)

Company	Disclosures
HBM Healthcare Investments AG	no disclosures
International Biotechnology Trust plc	2
The Biotech Growth Trust plc	2
BB Biotech AG	no disclosures

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Production of the recommendation completed: 29.06.2022, 17:42 GMT

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