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Company Comment	Investment/Holding	06 June 2023
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## Historical premium to NAV no longer present

**BB Biotech's shares, which historically have traded at a double-digit premium relative to the net asset value of its underlying investment portfolio, now is priced in line with its NAV. When this has happened in the past, the premium has quickly rebounded.**

### NAV and share price at comparable levels

Because all but one of the companies in BB Biotech's investment portfolio are listed, it is straightforward to use market values and calculate the net asset value of the portfolio. We have valued the one private position (Rivus Pharmaceuticals) by its book value, although we note its insignificance for the overall valuation due to the negligible weighting on total NAV (<1%).

We also note that our valuation is based on the number of shares held as of 31 March 2023, as BB Biotech releases the updated portfolio on a quarterly basis. We must therefore assume that no changes to the portfolio have been made since. Prices are as of 5 June 2023.

## Net Asset Value of BB Biotech's portfolio

Main listing	SIX Swiss Exchange	Market cap (CHFm)	2,341
Share Price (CHF)	42	No. of shares	55,400,000
Net Asset Value per share (CHF)	42	Net Asset Value (CHFm)	2,343
Premium (%)	-0.1%	Dividend 2022 (CHF)	2.85
12 month avg. premium ratio	14.3%	Yield (%)	6.7
5 year avg. premium ratio	14.8%		

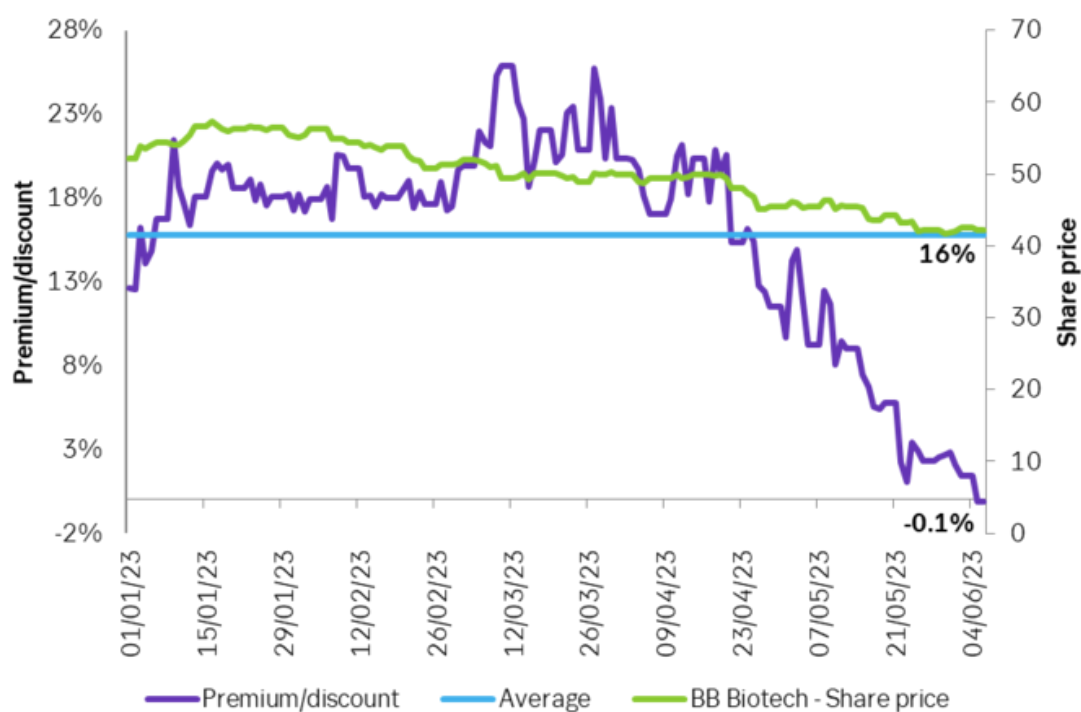
  

Company	Number of Shares	CCY	Price	Value (CHFm)	erShare (CHF)	Share of GAV	Share of NAV
Ionis Pharmaceuticals Inc	9,430,000	USD	36	305	5.5	11.9%	13.0%
Argenx SE	872,000	USD	373	294	5.3	11.5%	12.5%
Neurocrine Biosciences Inc	2,590,000	USD	101	237	4.3	9.2%	10.1%
Vertex Pharmaceuticals Inc	903,000	USD	315	257	4.6	10.0%	11.0%
Alnylam Pharmaceuticals Inc	855,000	USD	200	155	2.8	6.0%	6.6%
Incyte Corp	2,800,000	USD	72	183	3.3	7.1%	7.8%
Moderna Inc	1,475,000	USD	154	205	3.7	8.0%	8.7%
Intra-Cellular Therapies Inc	3,215,000	USD	54	157	2.8	6.1%	6.7%
Sage Therapeutics Inc	3,080,000	USD	42	117	2.1	4.6%	5.0%
Agiros Pharmaceuticals Inc	4,000,000	USD	23	83	1.5	3.2%	3.5%
Arvinas Inc	2,120,000	USD	27	52	0.9	2.0%	2.2%
Relay Therapeutics Inc	4,100,000	USD	16	61	1.1	2.4%	2.6%
REVOLUTION Medicines Inc	4,675,000	USD	22	92	1.7	3.6%	3.9%
Fate Therapeutics Inc	4,839,779	USD	6	25	0.5	1.0%	1.1%
CRISPR Therapeutics AG	880,000	USD	45	36	0.6	1.4%	1.5%
Celldex Therapeutics Inc	1,800,000	USD	36	59	1.1	2.3%	2.5%
Exelixis Inc	2,600,000	USD	19	46	0.8	1.8%	1.9%
Esperion Therapeutics Inc	4,194,064	USD	2	6	0.1	0.2%	0.3%
Beam Therapeutics Inc	693,121	USD	31	19	0.3	0.7%	0.8%
Mersana Therapeutics Inc	4,189,719	USD	4	16	0.3	0.6%	0.7%
MacroGenics Inc	9,579,963	USD	7	62	1.1	2.4%	2.7%
Generation Bio Co	3,608,280	USD	4	14	0.3	0.5%	0.6%
WaVe Life Sciences Ltd	4,494,458	USD	4	18	0.3	0.7%	0.8%
Scholar Rock Holding Corp	2,132,725	USD	8	15	0.3	0.6%	0.7%
Essa Pharma Inc	7,879,583	USD	3	21	0.4	0.8%	0.9%
Molecular Templates Inc	11,192,003	USD	0	4	0.1	0.1%	0.2%
Black Diamond Therapeutics Inc	5,377,839	USD	2	9	0.2	0.4%	0.4%
Rivus Pharmaceuticals	Unlisted	USD		16	0.3	0.6%	0.7%
<b>Total shares</b>				<b>2,564</b>	<b>46.3</b>	<b>100%</b>	<b>109.4%</b>
Radius Health - Contingent Value Right	8,733,538	USD	0.0	0.0	0.0	0.0%	0.0%
<b>Total derivative instruments</b>				<b>0.0</b>	<b>0.0</b>	<b>0.0%</b>	<b>0.0%</b>
<b>GAV (excl. cash)</b>				<b>2,564</b>	<b>46.3</b>		
Net cash				-220	-4.0		-9.4%
<b>NAV</b>				<b>2,343</b>	<b>42.3</b>		

Source: SEB, Bloomberg, BB Biotech

As of market close on 5 June 2023, the NAV of BB Biotech's portfolio was CHF 2,343m or CHF 42.3 per share. With a current share price of CHF 42.25, this means that BB Biotech is trading at a similar level to its NAV. Since the beginning of Q2, the NAV has fluctuated around a somewhat constant level. Meanwhile, the share price of BB Biotech has been going downwards, significantly underperforming relative to its benchmark, the Nasdaq Biotech Index (-19% vs. -1%). This has together led a complete erosion of the premium at which the share of BB Biotech trades relative to its underlying portfolio value. The average premium for the current year to date is 16%, and the five-year average is 15%.

### Premium development, YTD (CHF)



Source: SEB, Bloomberg

### Upside potential

As noted, all but one of BB Biotech's holding companies are listed, meaning that those are followed companies. Valuing BB Biotech's investment portfolio based on consensus target prices implies a significant potential upside to the NAV. The NAV per share of BB Biotech's portfolio implied by current consensus target prices is 67, which compared to the current NAV of 42 implies 59% upside.

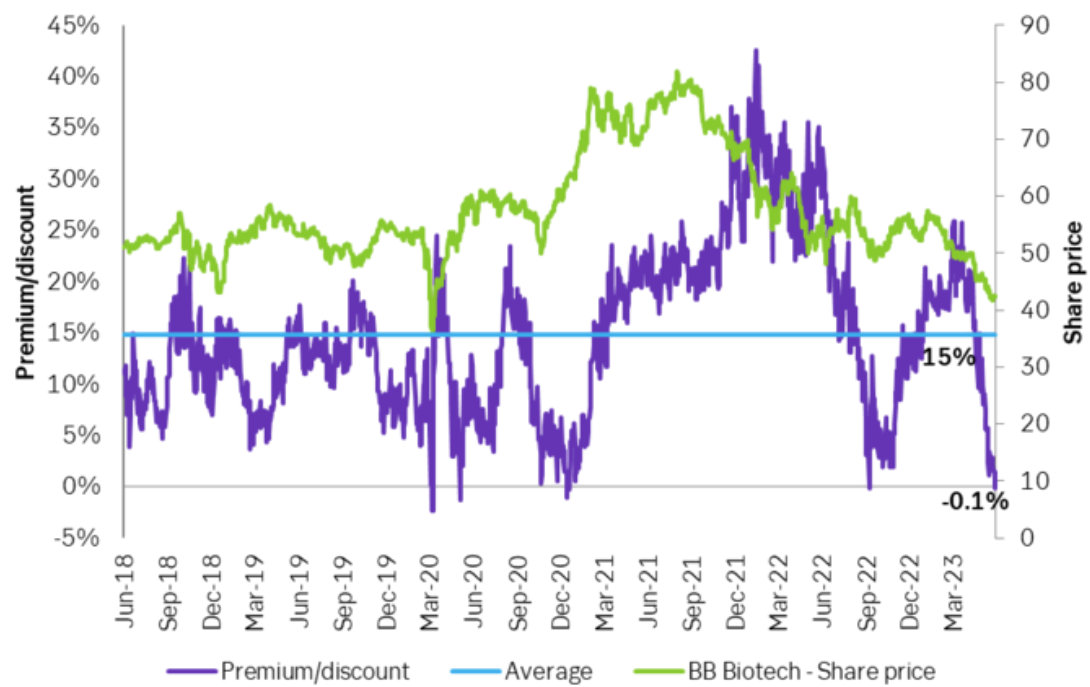
## Title

Company name	Position (#shares)	Price	Value of holding	# analysts	Cons. TP	Value using cons.	% upside/downside
Ionis Pharmaceuticals Inc	9,430,000	35.7	304.8	23	47	400.8	31.5%
Argenx SE	872,000	372.6	293.8	22	459	362.0	23.2%
Neurocrine Biosciences Inc	2,590,000	101.2	237.1	28	125	292.8	23.5%
Vertex Pharmaceuticals Inc	903,000	315.1	257.3	33	380	310.3	20.6%
Alnylam Pharmaceuticals Inc	855,000	200.3	154.9	28	250	193.3	24.8%
Incyte Corp	2,800,000	72.3	183.0	22	82	207.7	13.5%
Moderna Inc	1,475,000	153.6	204.9	22	200	266.8	30.2%
Intra-Cellular Therapies Inc	3,215,000	54.2	157.4	14	74.0	215.2	36.7%
Sage Therapeutics Inc	3,080,000	42.0	116.9	21	60.5	168.5	44.2%
Agiros Pharmaceuticals Inc	4,000,000	23.0	83.1	9	40.0	144.7	74.1%
Arvinas Inc	2,120,000	27.3	52.4	22	72	138.0	163.5%
Relay Therapeutics Inc	4,100,000	16.5	61.1	13	29.0	107.5	76.1%
REVOLUTION Medicines Inc	4,675,000	21.7	91.6	10	32.0	135.3	47.7%
Fate Therapeutics Inc	4,839,779	5.7	24.9	23	7.5	32.8	31.6%
CRISPR Therapeutics AG	880,000	45.2	36.0	31	71	56.5	57.0%
Celldex Therapeutics Inc	1,800,000	36.0	58.6	6	67.5	109.9	87.6%
Exelixis Inc	2,600,000	19.4	45.6	17	25	58.8	28.8%
Esperion Therapeutics Inc	4,194,064	1.6	6.0	10	10.0	37.9	528.9%
Beam Therapeutics Inc	693,121	30.6	19.2	16	66	41.4	115.5%
Mersana Therapeutics Inc	4,189,719	4.1	15.6	8	15.0	56.8	265.0%
MacroGenics Inc	9,579,963	7.2	62.1	11	12.0	104.0	67.4%
Generation Bio Co	3,608,280	4.3	14.0	8	11.0	35.9	155.8%
WaVe Life Sciences Ltd	4,494,458	4.3	17.6	7	5.0	20.3	15.5%
Scholar Rock Holding Corp	2,132,725	8.0	15.4	8	24.0	46.3	200.0%
Essa Pharma Inc	7,879,583	3.0	21.2	4	16.0	114.0	438.7%
Molecular Templates Inc	11,192,003	0.4	3.8	3	2.5	25.3	558.1%
Black Diamond Therapeutics Inc	5,377,839	1.9	9.2	6	3.0	14.6	58.7%
Rivus Pharmaceuticals			16.2			16.2	n.a
NAV			2,343			3,714	
NAV per share			42.3			67.0	

Source: SEB, Bloomberg, BB Biotech

We do, however, note that many of the investment companies are small-to-medium sized biotech companies, meaning that also relatively few analysts are providing recommendations on the stocks. Assuming that the target price of the companies with less than 15 followed analysts is the same as the current share price, reduces the implied NAV to 57 and the potential upside to 35%. This valuation method is therefore quite sensitive and should only be viewed as an indication that analysts of the individual investment companies see an upside to their current price. This immediately implies an upside to the NAV of BB Biotech's portfolio, with further implies an upside to the share of BB Biotech, even if it as a minimum is expected to trade in line with its NAV.

In the past five years, the share price relative to the NAV has dipped to today's level a couple of times, though it every time quickly rebounded to a high single-digit or double-digit premium.

**5-year premium development (CHF)**

Source: SEB, Bloomberg

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