Markedsobservationer februar 2023

Var det bunden?

Onsdag d. 22. februar 2023

V/Steen Albrechtsen, Redaktør og Porteføljemanager

LIFE SCIENCE
Økonomisk Ugebrev

DISCLAIMER

Alt er på eget ansvar

og stol ikke på noget af hvad jeg siger

Fra juni 2022

Markedsobservationer maj 2022

Er vi der snart?

Onsdag d. 1. juni 2022

V/Steen Albrechtsen, Redaktør og Porteføljemanager

LIFE SCIENCE
Økonomisk Ugebrev

XBI (S&P Biotech ETF)
(Primo 2021 til idag)

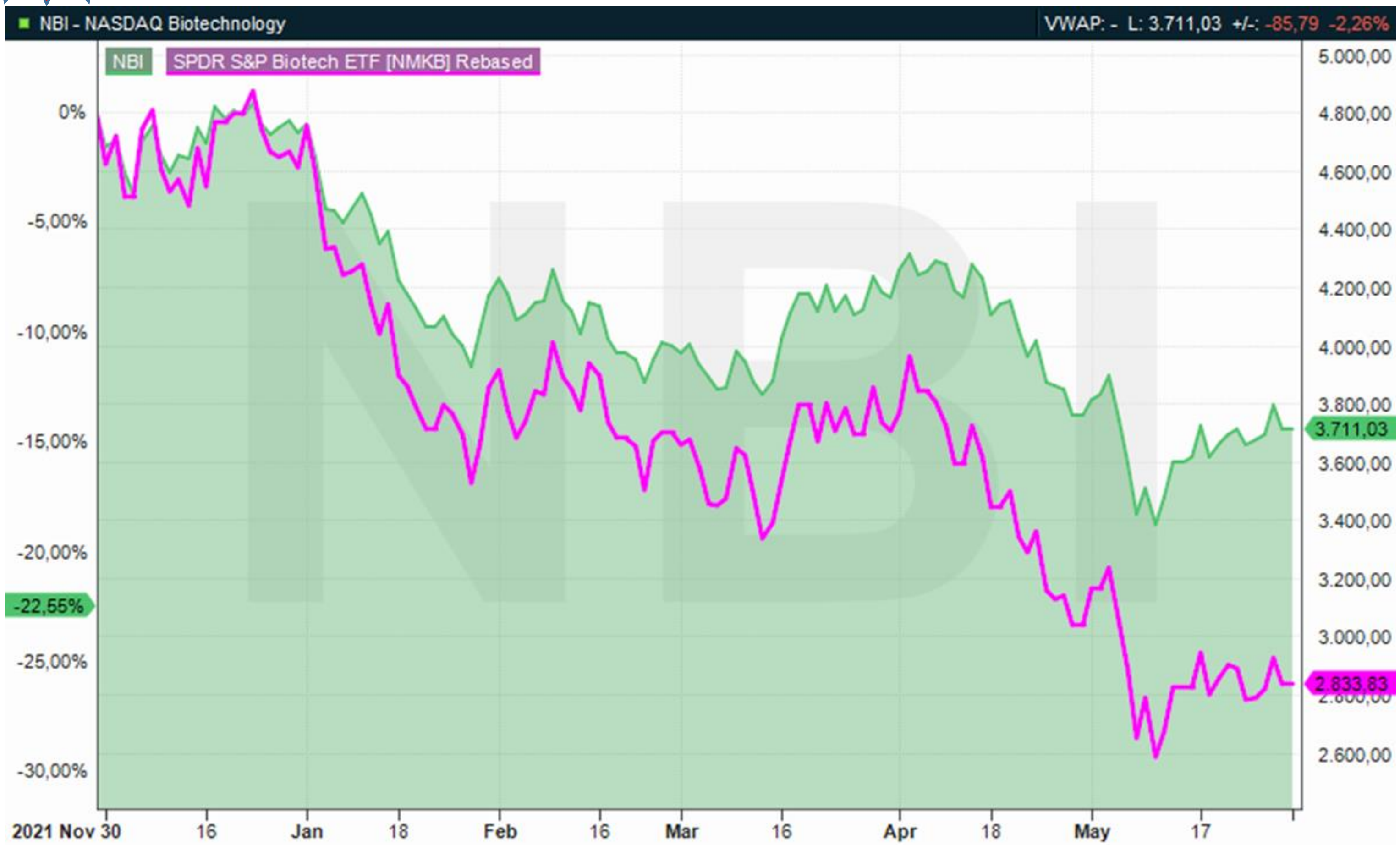
LIFE SCIENCE
Økonomisk Ugebrev

XBI (S&P Biotech ETF)
(Seneste 6 mdr.)

LIFE SCIENCE
Økonomisk Ugebrev

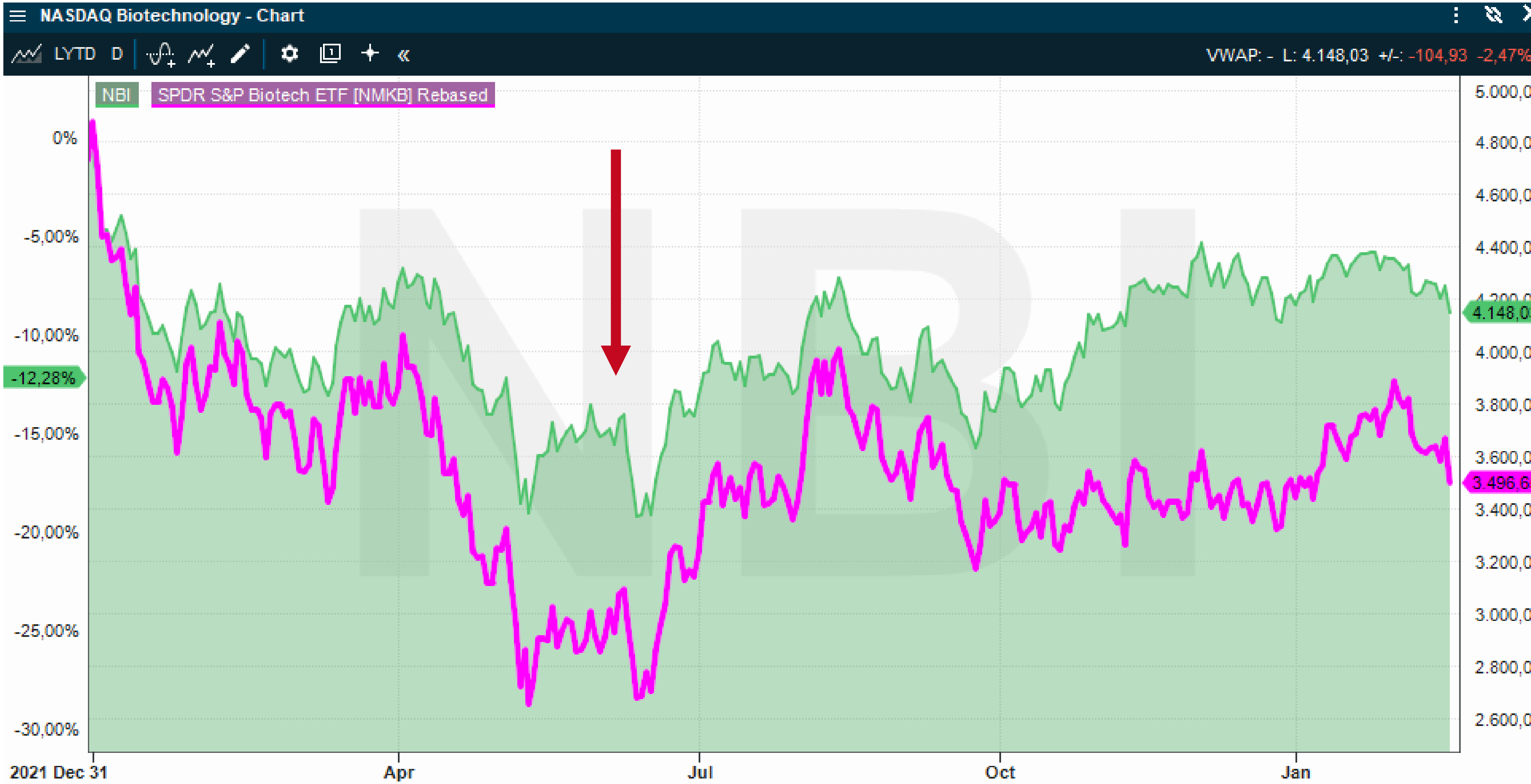
Fra juni 2022

Nasdaq Bio vs. XBI (S&P Biotech ETF)
(Primo 2021 til idag)



LIFE SCIENCE
Økonomisk Ugebrev

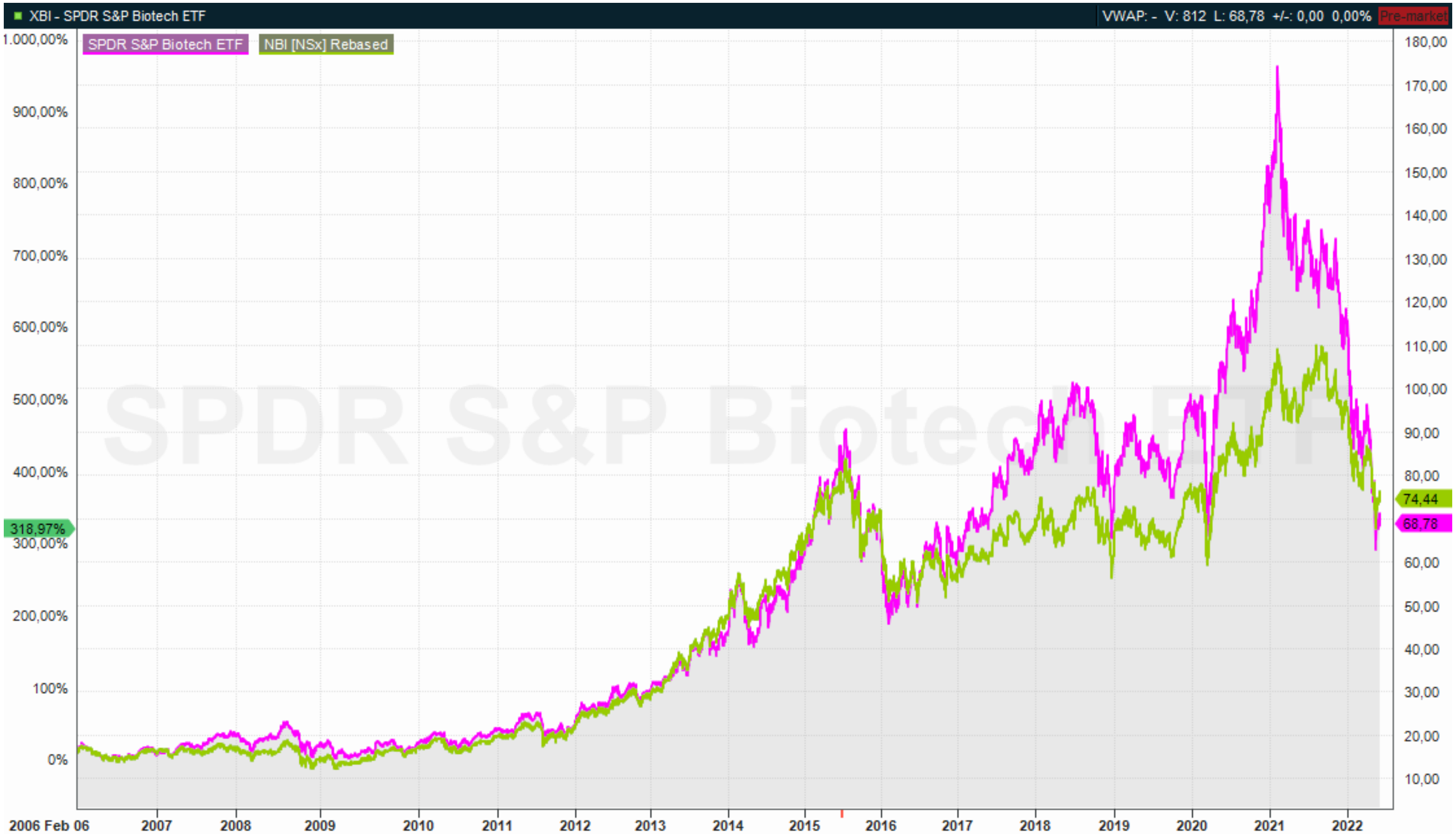
Nasdaq Bio vs. XBI (S&P Biotech ETF)
(Seneste 6 mdr.)



LIFE SCIENCE
Økonomisk Ugebrev

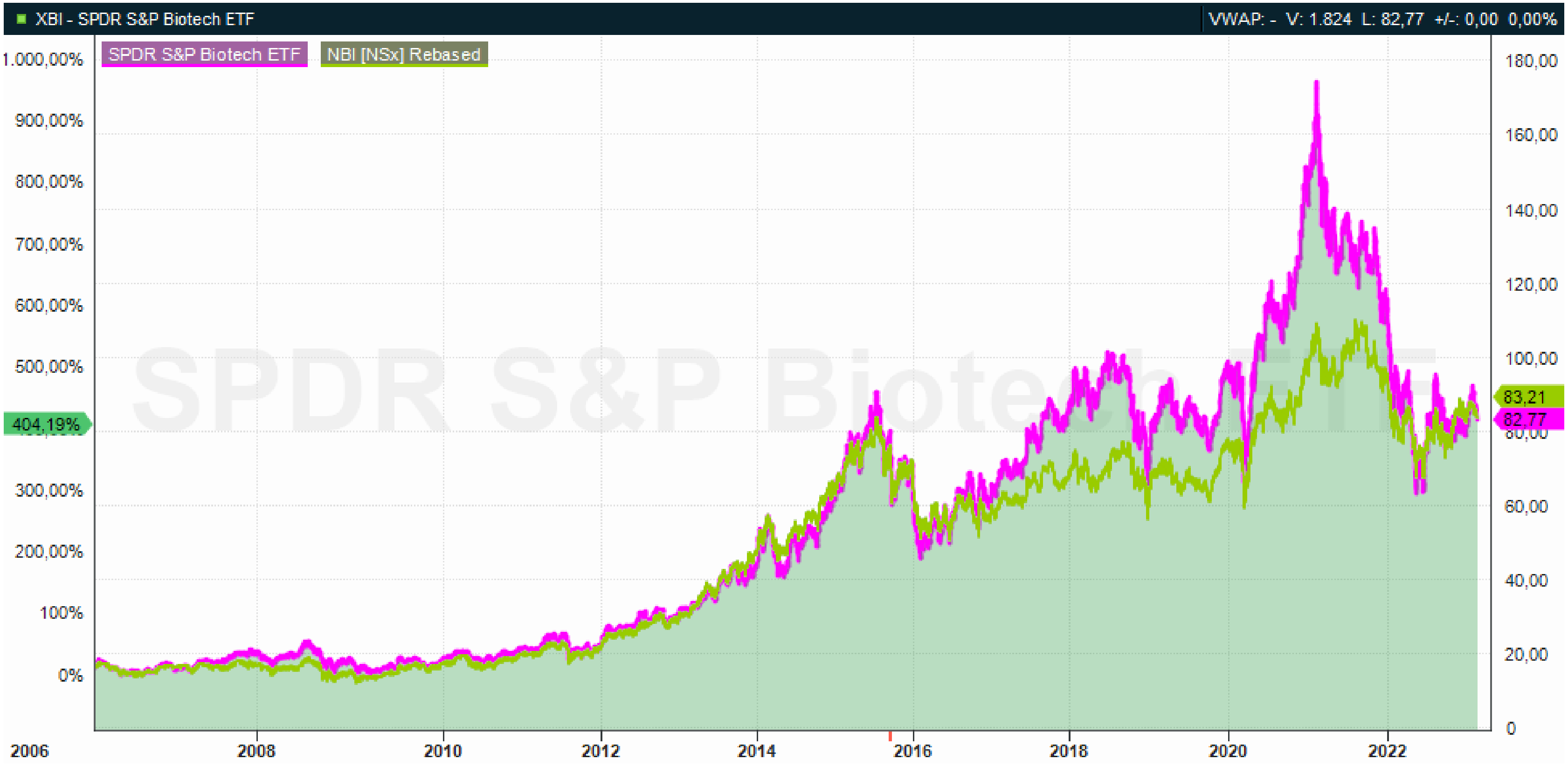
Fra juni 2022

Nasdaq Bio og XBI (S&P Biotech ETF) (Det lange perspektiv)



LIFE SCIENCE Økonomisk Ugebrev

Nasdaq Bio og XBI (S&P Biotech ETF)
(Det lange perspektiv)



Fra juni 2022

Nasdaq Bio vs. XBI (S&P Biotech ETF)

Figure 2: Weekly ETF (IBB) fund flows in biotech

	Week Ending	IBB ($ M)
1Q22	6-Jan-22	(720.3)
	13-Jan-22	(134.6)
	20-Jan-22	(454.0)
	27-Jan-22	(509.9)
	3-Feb-22	350.3
	10-Feb-22	98.3
	17-Feb-22	(476.7)
	24-Feb-22	(191.5)
	3-Mar-22	(15.9)
	10-Mar-22	(68.0)
	17-Mar-22	504.0
	24-Mar-22	372.1
	31-Mar-22	(196.7)
	Q1 flows	(1,443.1)

	Week Ending	IBB ($ M)
2Q22	7-Apr-22	272.1
	14-Apr-22	(339.8)
	21-Apr-22	(433.3)
	28-Apr-22	(468.8)
	5-May-22	(173.0)
	12-May-22	(383.1)
	19-May-22	407.3
	26-May-22	(59.8)
	2-Jun-22	
	9-Jun-22	
	16-Jun-22	
	23-Jun-22	
	30-Jun-22	
	Q2 flows	(1,178.5)
	Total YTD	(2,621.5)

Source: Bloomberg Finance L.P.

Figure 3: iShares Biotechnology ETF (IBB) Holdings

Top 10 Holdings (54.26% of Total Assets)	Weight (%)
Amgen	9.83%
Gilead Sciences	8.57%
Regeneron Pharmaceuticals	7.54%
Vertex Pharmaceuticals	7.22%
Moderna	4.79%
IQVIA Holdings	3.89%
Illumina	3.27%
BioNTech	3.12%
Biogen	3.12%
Mettler-Toledo International	2.91%

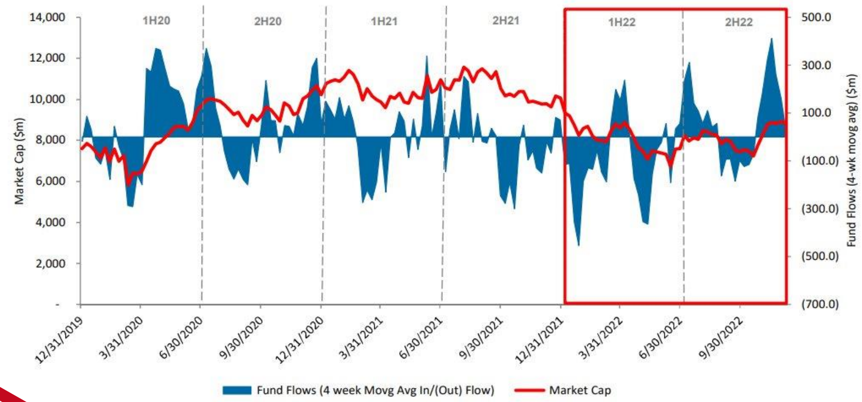
Source: Bloomberg Finance L.P. as of 26-May-2022

2022 – risk off

A Quick Look Back at 2022 – Fund Flows

Significant fund outflows in 1H22

Biotech ETF flows: The sector saw net outflows in 2022, despite pockets of inflows in 4Q. YTD flows stand at a net ~$1,250MM outflow



1Q22

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28-Apr-22	(468.8)
5-May-22	(173.0)
12-May-22	(383.1)
19-May-22	407.3
26-May-22	(59.8)
2-Jun-22	(57.1)
9-Jun-22	(65.4)
16-Jun-22	(587.0)
23-Jun-22	845.5
30-Jun-22	34.4
Q2 flows	(1,008.1)

3Q22

Week Ending	IBB ($ M)
7-Jul-22	649.0
14-Jul-22	(279.3)
21-Jul-22	157.0
28-Jul-22	(94.7)
4-Aug-22	444.5
11-Aug-22	(65.5)
18-Aug-22	(119.7)
25-Aug-22	(30.9)
1-Sep-22	(434.5)
8-Sep-22	213.6
15-Sep-22	(111.2)
22-Sep-22	(403.9)
29-Sep-22	(90.9)
Q3 flows	(166.6)

4Q22

Week Ending	IBB ($ M)
6-Oct-22	112.0
13-Oct-22	(77.4)
20-Oct-22	(235.7)
27-Oct-22	530.5
3-Nov-22	515.4
10-Nov-22	473.3
17-Nov-22	126.9
23-Nov-22	(68.8)
1-Dec-22	114.8
9-Dec-22	(123.9)
16-Dec-22	
23-Dec-22	
30-Dec-22	
Q4 flows	1,367.1
Total YTD	(1,250.6)

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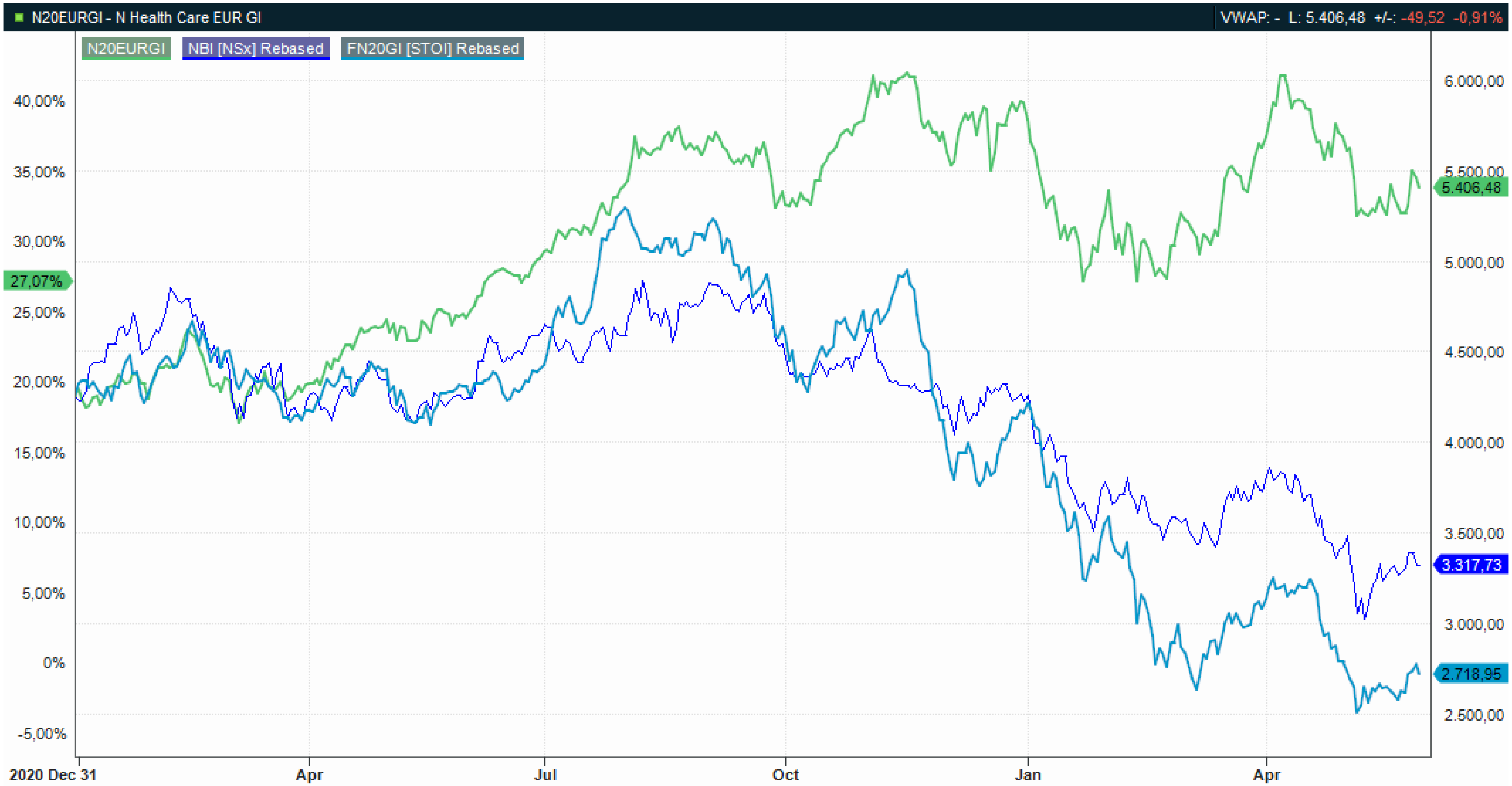
J.P.Morgan

LIFE SCIENCE Økonomisk Ugebrev

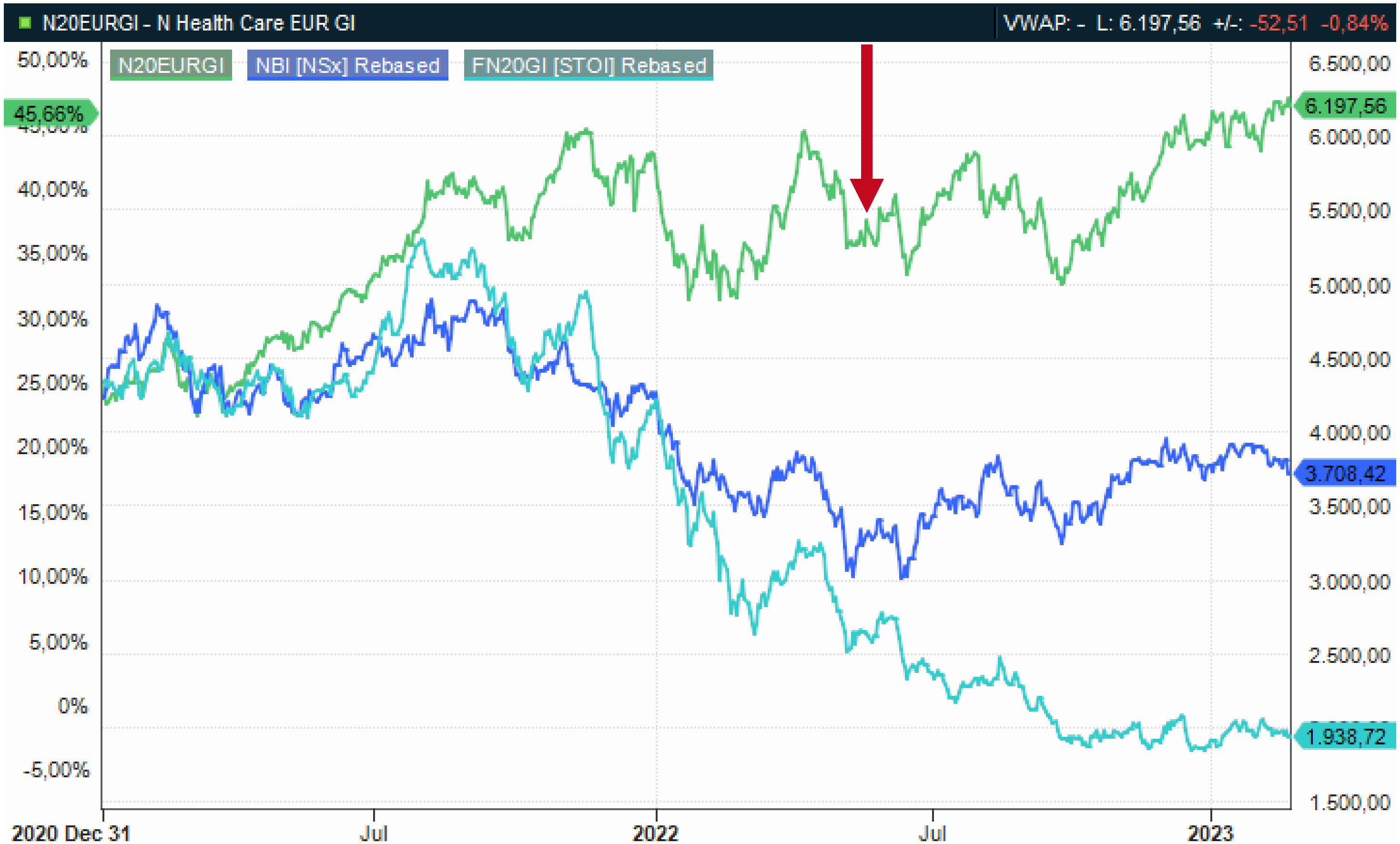
Fra juni 2022

Pharma vs Biotech



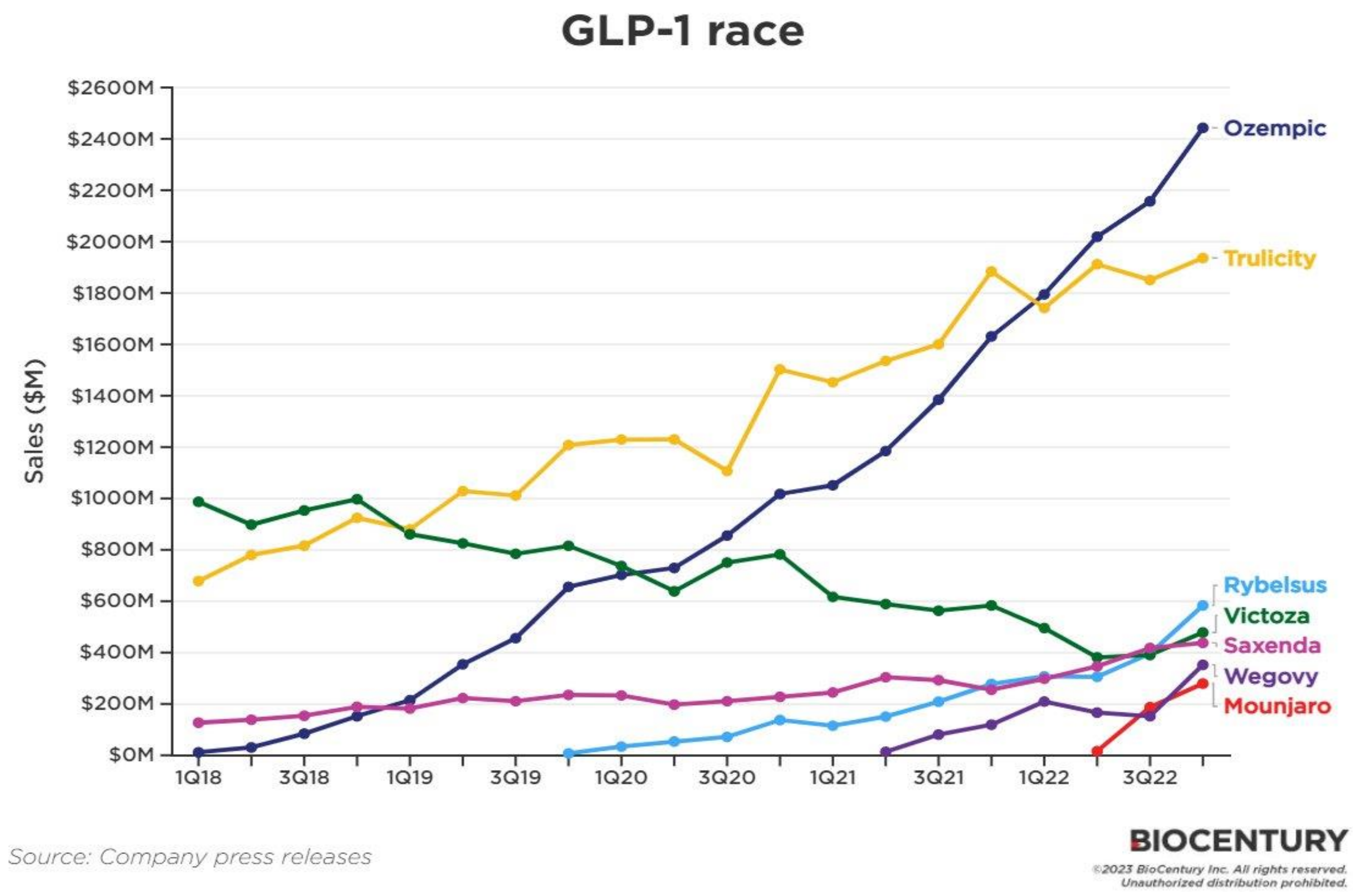
LIFE SCIENCE Økonomisk Ugebrev

Pharma vs Biotech



LIFE SCIENCE Økonomisk Ugebrev

Novo på vej mod kurs 1000



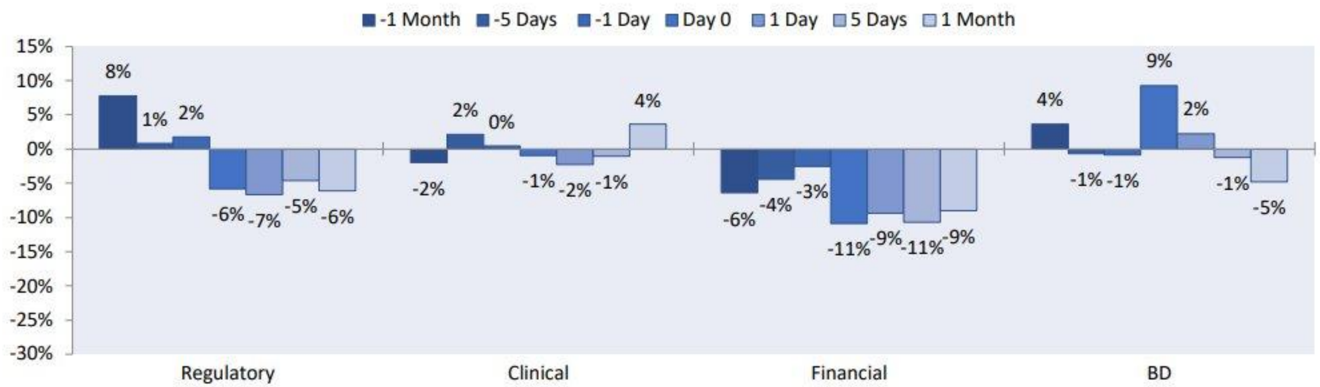
2022 – alt var surt

A Quick Look Back at 2022 – Binary Event Reaction by Type

“Events” in general skewed towards the negative for Biotech in 2022 with the exceptions being clinical readouts and more visible BD activities

BD activities carried more upside, *on average*, than clinical readouts, regulatory events, or financial updates

Return profiles by type of event



LIFE SCIENCE Økonomisk Ugebrev

Ingen er gået ram forbi
Kilde: Baird

IPO Recap	# of Deals	Amount Raised ($M)	Raise/Deal ($M)
2011	1	$139	$139
2012	9	$636	$71
2013	48	$6,266	$131
2014	83	$7,216	$87
2015	61	$5,557	$91
2016	34	$3,015	$89
2017	40	$3,826	$96
2018	70	$7,289	$104
2019	54	$6,901	$128
2020	94	$17,073	$182
2021	119	$16,232	$136
2022	8	$599	$75

LIFE SCIENCE
Økonomisk Ugebrev

Ingen er gået ram forbi

Year	Total IPOs	Total raised (millions)
2018	54	$5,678
2019	50	$5,091
2020	79	$14,873
2021	104	$14,671
2022	22	$2,230

Yearly totals of new stock offerings, and dollars raised, since 2018

Table: Ben Fidler • Source: BioPharma Dive • Created with Datawrapper

IPO - 2021

Biotechnology: Capital Markets

The 2021 IPO class on track for a -50% mean and -77% median return (1/2)

Pricing Date	Lockup Expiration	Ticker	Issuer Name	Offer Size (M)	Offer Price	Last Price	Mkt Cap ($M)	Mkt Cap At IPO ($M)	Performance To Date	Day 1 %	Week 1 %	Month 1%	Key Focus Area	Lead Product	Stage at IPO	Lead Indication
3/12/21	9/8/21	RXDX	Prometheus Biosciences	$190	$10.00	$109.73	$5,091	$389	997%	153%	112%	129%	Autoimmune	PRA023	Phase I	UC, Crohn's
2/5/21	8/4/21	IMCR	Immunocore	$258	$26.00	$58.59	$2,807	$1,100	125%	66%	83%	58%	Oncology	Tebentafusp	Phase III	Uveal melanoma
7/16/21	1/12/22	IMGO	Imago BioSciences	$134	$16.00	$35.87	$1,213	$514	124%	2%	4%	29%	Oncology	Bomedemstat	Phase II	Essential Thrombocythemia
10/21/21	4/19/22	VTYX	Ventyx Biosciences	$152	$16.00	$34.28	$1,941	$783	114%	17%	25%	37%	Autoimmune	VTX958	Preclinical	Crohn's, Psoriasis, PsA
9/15/21	3/14/22	DICE	DICE Therapeutics	$204	$17.00	$33.84	$1,292	$618	99%	104%	92%	57%	Autoimmune	S011806	Preclinical	Psoriasis
6/30/21	12/27/21	AVTE	Aerovate Therapeutics	$122	$14.00	$26.30	$647	$324	88%	39%	23%	-8%	Pulmonary	AV-101	Phase II	PAH
7/29/21	1/25/22	NUVL	Nuvalent	$156	$17.00	$31.12	$1,756	$796	83%	7%	46%	104%	Oncology	NVL-520	Preclinical	NSCLC (ROS1)
5/14/21	11/10/21	VERA	Vera Therapeutics	$48	$11.00	$19.50	$539	$234	77%	5%	80%	33%	Rare Diseases	Atacicept	Phase II	IgA Nephropathy (Kidney)
6/17/21	12/14/21	VERV	Verve Therapeutics	$267	$19.00	$22.45	$1,383	$876	18%	100%	92%	156%	Cardiovascular	VERVE-101	Preclinical	HeFH
10/29/21	4/27/22	TRDA	Entrada Therapeutics	$182	$20.00	$20.50	$642	$598	2%	20%	24%	45%	Rare Diseases	ENTR-601-44	Preclinical	DMD, DM1
10/29/21	4/27/22	AURA	Aura Biosciences	$76	$14.00	$12.07	$353	$398	-14%	6%	34%	62%	Oncology	AU-011	Phase II	Choroidal Melanoma
6/11/21	12/8/21	JANX	Janux Therapeutics	$194	$17.00	$14.31	$596	$678	-16%	48%	16%	63%	Oncology	PSMA-TRACT	Preclinical	Prostate Cancer (mCRPC)
7/29/21	1/25/22	RANI	Rani Therapeutics	$73	$11.00	$8.20	$203	$528	-25%	0%	7%	82%	Various	RT-101	Phase I	NETs/ Acromegaly
6/25/21	12/22/21	GHRS	GH Research	$160	$16.00	$10.87	$565	$808	-32%	20%	33%	8%	Neurology	GH001	Phase I/II	TRD Depression
6/25/21	12/22/21	ACXP	Acurx Pharmaceuticals	$15	$6.00	$3.60	$34	$57	-40%	32%	-3%	-7%	Antibiotics	Ibezapolstat	Phase II	Clostridium difficile
1/8/21	7/7/21	CGEM	Cullinan Management	$250	$21.00	$11.85	$542	$869	-44%	42%	67%	73%	Oncology	CLN-081	Phase I/II	NSCLC (Exon 20)
5/6/21	11/2/21	VALN-US	Valneva SE	$61	$26.41	$14.39	$994	$1,293	-46%	12%	8%	2%	Infectious	Ixiaro	Marketed	Japanese encephalitis
12/16/21	6/14/22	BNOX	Bionomics	$20	$12.35	$6.66	$54	$93	-46%	5%	0%	1%	Neurology	BNC210	Phase II	PTSD, SAD
7/23/21	1/19/22	CRBU	Caribou Biosciences	$304	$16.00	$8.20	$500	$907	-49%	2%	1%	63%	Oncology	CB-010	Phase I	NHL
4/9/21	10/6/21	VECT	VectivBio Holding	$128	$17.00	$8.49	$345	$578	-50%	43%	-5%	-21%	Rare Diseases	Apraglutide	Phase III	Short Bowel Syndrome
3/26/21	9/22/21	EWTX	Edgewise Therapeutics	$176	$16.00	$7.98	$504	$761	-50%	88%	88%	72%	Rare Diseases	EDG-5506	Phase I	DMD, BMD, LGMD
4/16/21	10/13/21	RXRX	Recursion Pharma	$436	$18.00	$8.85	$1,678	$2,919	-51%	74%	66%	18%	Various	REC-4881	Phase I	FAP (cancer)
6/24/21	12/21/21	GLUE	Monte Rosa Therapeutics	$222	$19.00	$9.03	$437	$808	-52%	-1%	17%	23%	Various	Undisclosed	Preclinical	NSCLC, SCLC
12/15/21	6/13/22	GNTA	Genenta Science	$28	$11.50	$5.31	$97	$208	-54%	-2%	1%	-11%	Oncology	Temferon	Phase I/II	GBM
7/29/21	1/25/22	RLYB	Rallybio	$81	$13.00	$5.90	$219	$406	-55%	31%	80%	0%	Various	RLYB211	Phase I/II	Maternal Fetal Blood Disorders
3/26/21	9/22/21	DSGN	Design Therapeutics	$240	$20.00	$9.03	$505	$1,076	-55%	107%	49%	-4%	Rare Diseases	Undisclosed	Preclinical	Friedreich Ataxia
4/23/21	10/20/21	RAIN	Rain Therapeutics	$126	$17.00	$7.56	$196	$441	-56%	-7%	-4%	-6%	Oncology	RAIN-32	Phase I	Solid Tumors
5/7/21	11/3/21	ANEB	Anebulo Pharmaceuticals	$21	$7.00	$3.07	$79	$163	-56%	1%	0%	5%	Abuse/Addiction	ANEB-001	Phase I	Cannabinoid Overdose
6/18/21	12/15/21	IPSC	Century Therapeutics	$211	$20.00	$8.73	$515	$1,096	-56%	14%	12%	38%	Oncology	CNTY-101	Preclinical	Lymphoma
2/5/21	8/4/21	PHVS	Pharvaris N.V.	$165	$20.00	$8.57	$284	$637	-57%	45%	33%	44%	Rare Diseases	PHA121	Phase I	HAE
4/16/21	10/13/21	BMEA	Biomea Fusion	$153	$17.00	$7.21	$212	$489	-58%	9%	-1%	-7%	Oncology	BMF-219	Preclinical	Menin Dependent Cancers
9/16/21	3/15/22	TYRA	Tyra Biosciences	$173	$16.00	$6.69	$282	$655	-58%	24%	13%	2%	Oncology	TYRA-300	Preclinical	Bladder and Solid Tumors
2/5/21	8/4/21	VOR	Vor Biopharma	$177	$18.00	$7.43	$287	$624	-59%	108%	171%	85%	Oncology	VCAR33	Phase I/II	AML
11/4/21	5/3/22	EVO	Evotech SE	$435	$21.75	$8.49	$3,000	$890	-61%	4%	8%	3%	Various	EVT-201	Phase III	Insomnia
7/29/21	1/25/22	OMGA	Omega Therapeutics	$126	$17.00	$6.49	$312	$794	-62%	-6%	-2%	12%	Various	OTX-2002	Preclinical	Hepatocellular Carcinoma
7/1/21	12/28/21	ABOS	Acumen Pharmaceuticals	$160	$16.00	$5.83	$239	$618	-64%	27%	11%	-3%	Neurology	ACU193	Phase I	Alzheimer's
10/7/21	4/5/22	THRX	Theseus Pharmaceuticals	$160	$16.00	$5.50	$213	$600	-66%	5%	-1%	2%	Oncology	THE-630	Preclinical	GIST
2/12/21	8/11/21	LGVN	Longeveron	$27	$10.00	$3.36	$71	$187	-66%	-26%	-38%	-19%	Anti-Aging	Lomecel-B	Phase II	Aging Frailty
7/30/21	1/26/22	IMRX	Immuneering	$113	$15.00	$5.00	$132	$366	-67%	17%	88%	78%	Oncology	IMM-1-104	Preclinical	Solid Tumors (RAS)
6/16/21	12/13/21	MOLN	Molecular Partners	$64	$21.25	$6.91	$249	$683	-67%	-7%	-9%	-14%	Various	Abicipar	Phase III	Neovascular AMD
3/25/21	9/21/21	LVTX	Lava Therapeutics	$101	$15.00	$4.64	$120	$380	-69%	-17%	-13%	-19%	Oncology	LAVA-051	Preclinical	CLL, MM, AML
7/16/21	1/12/22	ERAS	Erasca	$300	$16.00	$4.93	$679	$1,858	-69%	9%	20%	26%	Oncology	ERAS-007	Phase II	Solid Tumors

Source: Jefferies estimates, FactSet
Data as of 12.13.22

IPO - 2021

Biotechnology: Capital Markets

The 2021 IPO class on track for a -50% mean and -77% median return (1/2)

Pricing Date	Lockup Expiration	Ticker	Issuer Name	Offer Size (M)	Offer Price	Last Price	Mkt Cap ($M)	Mkt Cap At IPO ($M)	Performance To Date	Day 1 %	Week 1 %	Month 1%	Key Focus Area	Lead Product	Stage at IPO	Lead Indication
12/16/21	6/14/22	IMMX	Immix Biopharma	$21	$5.00	$1.46	$20	$38	-71%	-20%	-41%	17%	Oncology	IMX-110	Phase I/II	Soft Tissue Sarcoma
7/29/21	1/25/22	ICVX	Icosavax	$182	$15.00	$4.20	$168	$563	-72%	66%	120%	164%	Infectious	IVX-411	Phase I/II	COVID19
3/18/21	9/14/21	GANX	Gain Therapeutics	$40	$11.00	$3.05	$36	$125	-72%	11%	13%	32%	Rare Diseases	GLB1	Preclinical	GM1 Gangliosidosis
12/9/21	6/7/22	NRSN	NeuroSense Therapeutics	$12	$6.00	$1.57	$18	$66	-74%	-47%	-45%	-57%	Neurology	PrimeC	Phase II	ALS
3/12/21	9/8/21	LBPH	Longboard Pharmaceutical	$80	$16.00	$4.00	$69	$271	-75%	4%	2%	0%	Neurology	LP352	Phase I	Rare Epilepsy (DEEs)
4/23/21	10/20/21	IMPL	Impel NeuroPharma	$80	$15.00	$3.68	$71	$297	-75%	0%	1%	-9%	Neurology	Trudhesa	Filed	Acute Migraine
7/20/21	1/16/22	HCWB	HCW Biologics	$56	$8.00	$1.93	$69	$285	-76%	-36%	-32%	-46%	Oncology	HCW9201	Phase II	AML
1/29/21	7/28/21	NLSP	NLS Pharmaceuticals	$20	$4.15	$0.95	$17	$49	-77%	-30%	-27%	-31%	Neurology	Quilience	Phase II	Daytime Sleepiness/ ADHD
8/10/21	2/6/22	ELYM	Eliem Therapeutics	$80	$12.50	$2.85	$76	$317	-77%	65%	35%	105%	Neurology	ETX-810	Phase II	DPNP and Lumbar Pain
8/26/21	2/22/22	RNXT	RenovoRx	$17	$9.00	$2.00	$18	$75	-78%	-14%	-4%	-22%	Oncology	RenovoGem	Phase III	Pancreatic Cancer
7/30/21	1/26/22	INAB	In8bio	$40	$10.00	$2.17	$53	$188	-78%	0%	-3%	-27%	Oncology	INB-200	Phase I	GBM
10/1/21	3/30/22	EXAI	Exscientia	$305	$22.00	$4.73	$581	$2,603	-79%	23%	9%	1%	Various	EXS21546	Phase I	Solid Tumors
10/8/21	4/6/22	CGTX	Cognition Therapeutics	$46	$12.00	$2.56	$61	$256	-79%	6%	-1%	0%	Neurology	CT1812	Phase II	Alzheimer's
6/15/21	12/12/21	ALZN	Alzamend Neuro	$13	$5.00	$1.06	$101	$425	-79%	107%	68%	40%	Neurology	AL001	Preclinical	Alzheimer's
6/17/21	12/14/21	LYEL	Lyell Immunopharma	$425	$17.00	$3.60	$898	$4,070	-79%	-5%	-6%	-1%	Oncology	Undisclosed	Preclinical	NSCLC, TNBC, other
2/11/21	8/10/21	BVS	Bioventus	$104	$13.00	$2.74	$213	$723	-79%	32%	5%	10%	Musculoskeletal	BMP Asset	Preclinical	TLIF, PLIF
6/18/21	12/15/21	ATAI	ATAI Life Sciences	$225	$15.00	$3.10	$514	$2,289	-79%	30%	13%	16%	Neurology	PCN-101	Phase I	TRD Depression
2/5/21	8/4/21	EVAX	Evaxion Biotech	$30	$10.00	$2.02	$47	$192	-80%	-1%	-8%	-30%	Oncology	EVX-01	Phase I/II	Melanoma, NSCLC, bladder
11/5/21	5/4/22	IOBT	IO Biotech	$100	$14.00	$2.78	$80	$388	-80%	12%	-18%	-22%	Oncology	IO102-103	Phase I/II	Melanoma
10/15/21	4/13/22	INKT	MiNK Therapeutics	$40	$12.00	$2.30	$78	$402	-81%	0%	0%	37%	Oncology	AGENT-797	Phase I	Solid Tumors, Multiple Myeloma
6/25/21	12/22/21	GRPH	Graphite Bio	$238	$17.00	$3.19	$186	$952	-81%	9%	67%	44%	Rare Diseases	GPH101	Preclinical	Sickle Cell Disease (SCD)
5/28/21	11/24/21	CNTA	Centessa Pharma	$330	$20.00	$3.75	$355	$330	-81%	9%	14%	23%	Various	Lixivaptan	Phase III	Polycystic Kidney Disease
2/4/21	8/3/21	SANA	Sana Biotechnology	$588	$25.00	$4.52	$862	$4,558	-82%	56%	73%	-4%	Various	SG295	Preclinical	NHL/ALL/CLL
10/29/21	4/27/22	BFRI	Biofrontera	$18	$5.00	$0.90	$21	$58	-82%	-12%	-35%	58%	Dermatology	Ameluz	Marketed	Actinic Keratosis
3/26/21	9/22/21	IKNA	Ikena Oncology	$125	$16.00	$2.79	$97	$553	-83%	100%	63%	31%	Oncology	IK-930	Preclinical	Hippo-Mutated Cancers
12/8/21	6/6/22	CING	Cingulate	$25	$6.00	$1.01	$11	$68	-83%	-35%	-50%	-59%	Neurology	CTx-1301	Phase I/II	ADHD
9/15/21	3/14/22	KTTA	Pasithea Therapeutics	$24	$5.00	$0.82	$11	$65	-84%	-33%	-45%	-40%	Neurology	Undisclosed	Preclinical	Undisclosed
7/30/21	1/26/22	TNYA	Tenaya Therapeutics	$180	$15.00	$2.37	$152	$590	-84%	2%	23%	78%	Cardiology	MYBPC3	Preclinical	gHCM
10/20/21	4/18/22	CNTX	Context Therapeutics	$25	$5.00	$0.78	$12	$51	-84%	23%	34%	-2%	Oncology	ONA-XR	Phase I/II	Breast Cancer, Solid Tumors
10/22/21	4/20/22	XLO	Xilio Therapeutics	$118	$16.00	$2.41	$66	$427	-85%	0%	5%	42%	Oncology	XTX101	Phase I	Solid Tumors
7/13/21	1/9/22	UNCY	Unicycive Therapeutics	$25	$5.00	$0.74	$11	$87	-85%	-24%	-43%	-44%	Renal	Renazorb	Phase I	CKD Hyperphosphatemia
5/26/21	11/22/21	DYNS	Day One Biopharma	$200	$10.00	$1.44	$94	$257	-86%	1%	0%	-1%	Oncology	DAY101	Phase II	Brain cancer (pLGG)
4/9/21	10/6/21	RPHM	Reneo Pharmaceuticals	$94	$15.00	$2.11	$52	$363	-86%	-7%	-13%	0%	Rare Diseases	REN001	Phase II	PMM
4/30/21	10/27/21	VACC	Vaccitech	$111	$17.00	$2.37	$81	$579	-86%	-17%	-20%	-13%	Various	VTP-800	Phase I/II	Prostate Cancer
7/16/21	1/12/22	TCRX	TScan Therapeutics	$100	$15	$2.01	$38	$359	-87%	-30%	-33%	-31%	Oncology	TSC-100	Preclinical	AML, MDS, ALL
1/8/21	7/7/21	GRCL	Gracell Biotechnologies	$209	$19.00	$2.48	$163	$1,245	-87%	32%	26%	61%	Oncology	GC012F	Phase I	Multiple Myeloma
4/30/21	10/27/21	HOWL	Werewolf Therapeutics	$120	$16.00	$2.05	$63	$441	-87%	1%	-11%	-7%	Oncology	WTX-124	Preclinical	Solid Tumors
7/9/21	1/5/22	RNAZ	Transcode Therapeutics	$25	$4.00	$0.49	$6	$48	-88%	32%	-20%	-21%	Oncology	TTX-MC138	Preclinical	Metastatic Cancer, GBM
6/18/21	12/15/21	AMAM	Ambrx Biopharma	$126	$18.00	$2.04	$79	$678	-89%	-5%	-4%	9%	Various	ARX201	Phase II	Growth Hormone Deficiency
8/6/21	2/2/22	ADGI	Adagio Therapeutics	$309	$17.00	$1.76	$192	$1,836	-90%	23%	57%	149%	Infectious	ADG20	Phase I	COVID19
11/1/21	4/30/22	LIAN	LianBio	$325	$16.00	$1.44	$156	$325	-91%	-16%	-12%	-25%	Various	Mavacamten	Filed	Obstructive HCM
2/17/21	8/16/21	VRPX	Virpax Pharmaceuticals	$18	$10.00	$0.82	$4	$49	-92%	-39%	-41%	-47%	Neurology	Epoladerm	Preclinical	Acute Pain
10/8/21	4/6/22	PYXS	Pyxis Oncology	$168	$16.00	$1.16	$38	$524	-93%	-18%	-26%	-25%	Oncology	PYX-201	Preclinical	NSCLC, Breast
2/9/21	8/8/21	ADAG	Adagene	$140	$19.00	$1.36	$59	$801	-93%	38%	35%	13%	Oncology	ADG106	Phase I	Solid Tumors, NHL
2/5/21	8/4/21	BOLT	Bolt Therapeutics	$230	$20.00	$1.32	$50	$690	-93%	61%	67%	50%	Oncology	BDC-1001	Phase I/II	HER2 Breast/Gastric Cancer
6/25/21	12/22/21	ELEV	Elevation Oncology	$100	$16.00	$0.93	$22	$372	-94%	-29%	-4%	-45%	Oncology	Seribantumab	Phase II	Solid Tumors
2/5/21	8/4/21	ANGN	Angion Biomedica	$80	$16.00	$0.87	$26	$460	-95%	6%	22%	0%	Various	ANG-3777	Phase III	Kidney Injury
3/19/21	9/15/21	FNCH	Finch Therapeutics	$128	$17.00	$0.89	$43	$801	-95%	25%	-6%	-6%	Microbiome	CP101	Phase II	Recurrent C. Difficile
3/19/21	9/15/21	CNTB	Connect Biopharma	$191	$17.00	$0.86	$47	$191	-95%	9%	-6%	2%	Autoimmune	CBP-201	Phase II	Atopic Dermatitis
3/19/21	9/15/21	TIL	Instil Bio	$320	$20.00	$0.67	$87	$2,516	-97%	32%	35%	-5%	Oncology	ITIL-168	Phase I	Melanoma
2/10/21	8/9/21	VLON	Vallon Pharmaceuticals	$18	$8.00	$0.25	$2	$49	-97%	-5%	-7%	-31%	Neurology	ADAIR	Phase I	ADHD, Narcolepsy
8/13/21	2/9/22	DRMA	Dermata Therapeutics	$18	$7.00	$0.19	$2	$58	-97%	-26%	-34%	-35%	Dermatology	DMT310	Phase II	Acne
2/10/21	8/9/21	BPTS	Biophytis	$20	$16.75	$0.40	$5	$192	-98%	0%	-9%	-13%	Rare Diseases	Sarconeos	Phase II	Sarcopenia
2/4/21	8/3/21	LABP	Landos Biopharma	$100	$16.00	$0.33	$13	$627	-98%	-31%	-16%	-22%	Autoimmune	BT-11	Phase II	UC, Crohn's, Lupus, etc
2/12/21	8/11/21	NEXI	NexImmune	$110	$17.00	$0.31	$8	$366	-98%	49%	35%	46%	Oncology	NXEI-001	Phase I	AML, MDS
Total:		**105 IPOs**		**$14,550**					**Average: -50%**	**15%**	**15%**	**14%**				
									Median: -77%	**6%**	**5%**	**1%**				

Source: Jefferies estimates, FactSet
Data as of 12.13.22

Siden 2000 har 17 selskaber leveret +750% afkast fra IPO

IPO Year	Company	Status	Performance Since IPO
2001	Seagen	Active	1700%
2001	American Pharma Partners	Acquired	790%
2004	Alnylam	Active	2400%
2004	New River	Acquired	1500%
2007	Pharmasset	Acquired	2950%
2010	Anacor	Acquired	1885%
2011	Pacira	Active	820%
2011	Horizon	Active	975%
2013	Receptos	Acquired	1560%
2013	Acceleron	Acquired	1100%
2014	Kite	Acquired	960%
2014	Loxo	Acquired	1700%
2015	Myokardia	Acquired	2150%
2016	Beigene	Active	750%
2016	Avexis	Acquired	990%
2017	Argenyx	Active	1550%
2019	BioNTech	Active	930%

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2023 – sløv start

Biotechnology

Outflows Decelerate but Continue Into Third Week of the Year

CONCLUSION

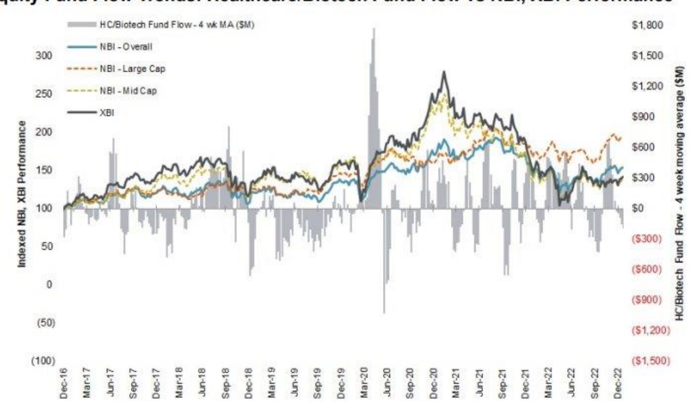
Fund flows: a key biotech metric. Each week, we track the flow of funds into a sample of healthcare/biotech-dedicated funds as reported by Lipper/AMG Data Services. As we see it, this is a key dynamic to monitor as periods of net inflows historically correspond with biotech outperformance while periods of net outflows typically correspond with sector underperformance. This week's data point encompasses 140 funds (including ETFs) with ~$124B in assets.

- **Biotech outflows continue.** For the weekly period ending Wednesday, January 18th, healthcare/biotech funds saw ~$24M of net outflows, representing a 0.02% decrease in assets. YTD net fund flow stands at ~$659M in outflows.

- **"All Equities" remains negative.** Over the same weekly period, "All Equities" saw net outflows representing a 0.04% decrease in assets.

- **Breadth ratio increases.** We also monitor the breadth ratio for healthcare/biotech funds, which compares the number of funds reporting inflows to the number reporting outflows in a given week. This week the breadth ratio increased from 0.67 to 0.75, which was well above the four-week moving average of 0.63. This remains above the 0.3 level that has served as a capitulation signal (historically, the breadth ratio rarely dips below 0.3, and when it does, has been associated with trough NBI levels - see chart on pg. 2), and is something we will continue to watch closely.

Equity Fund Flow Trends: Healthcare/Biotech Fund Flow vs NBI, XBI Performance



Source: Lipper (a Thomson Reuters company), FactSet, Piper Sandler

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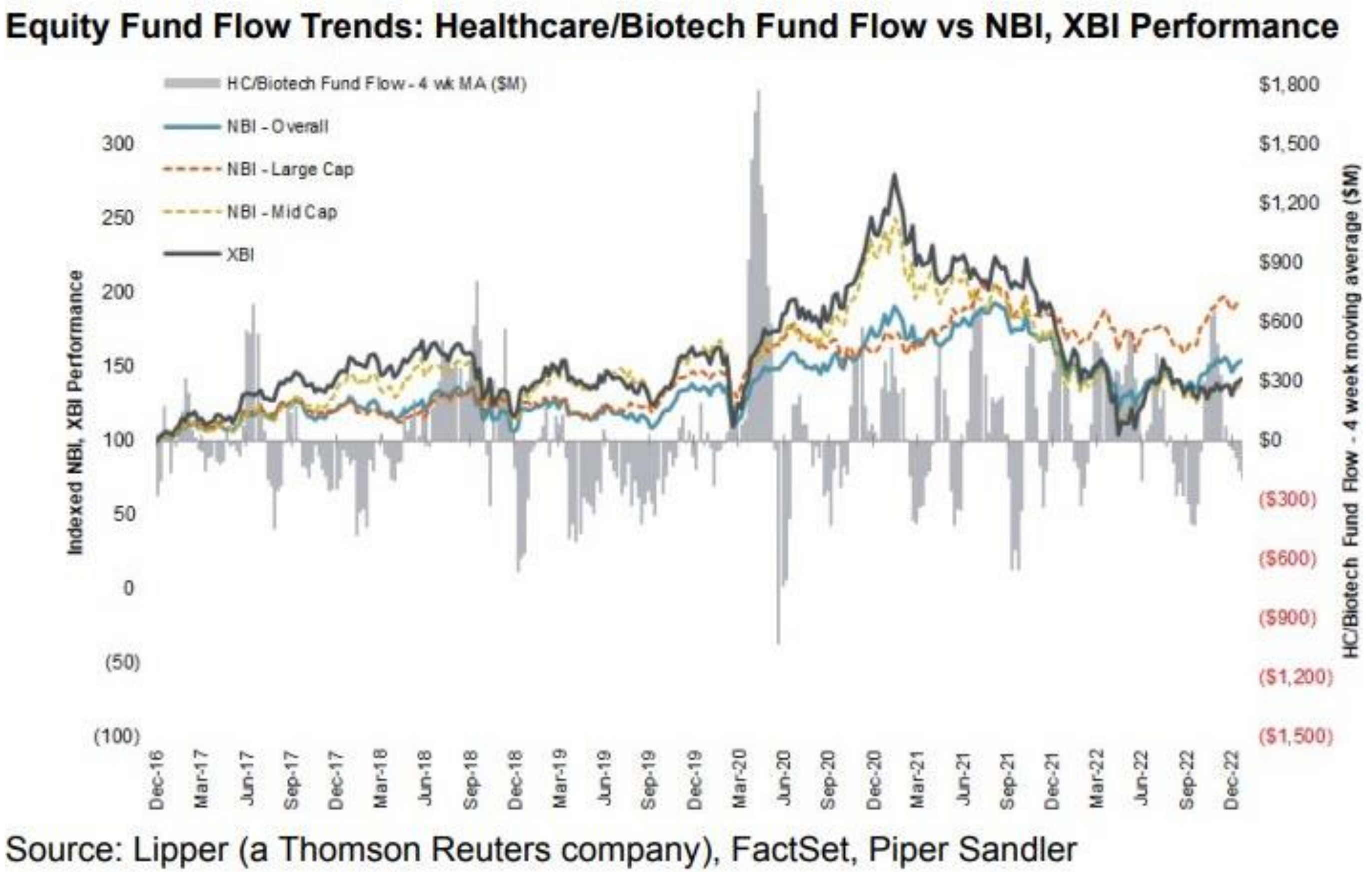
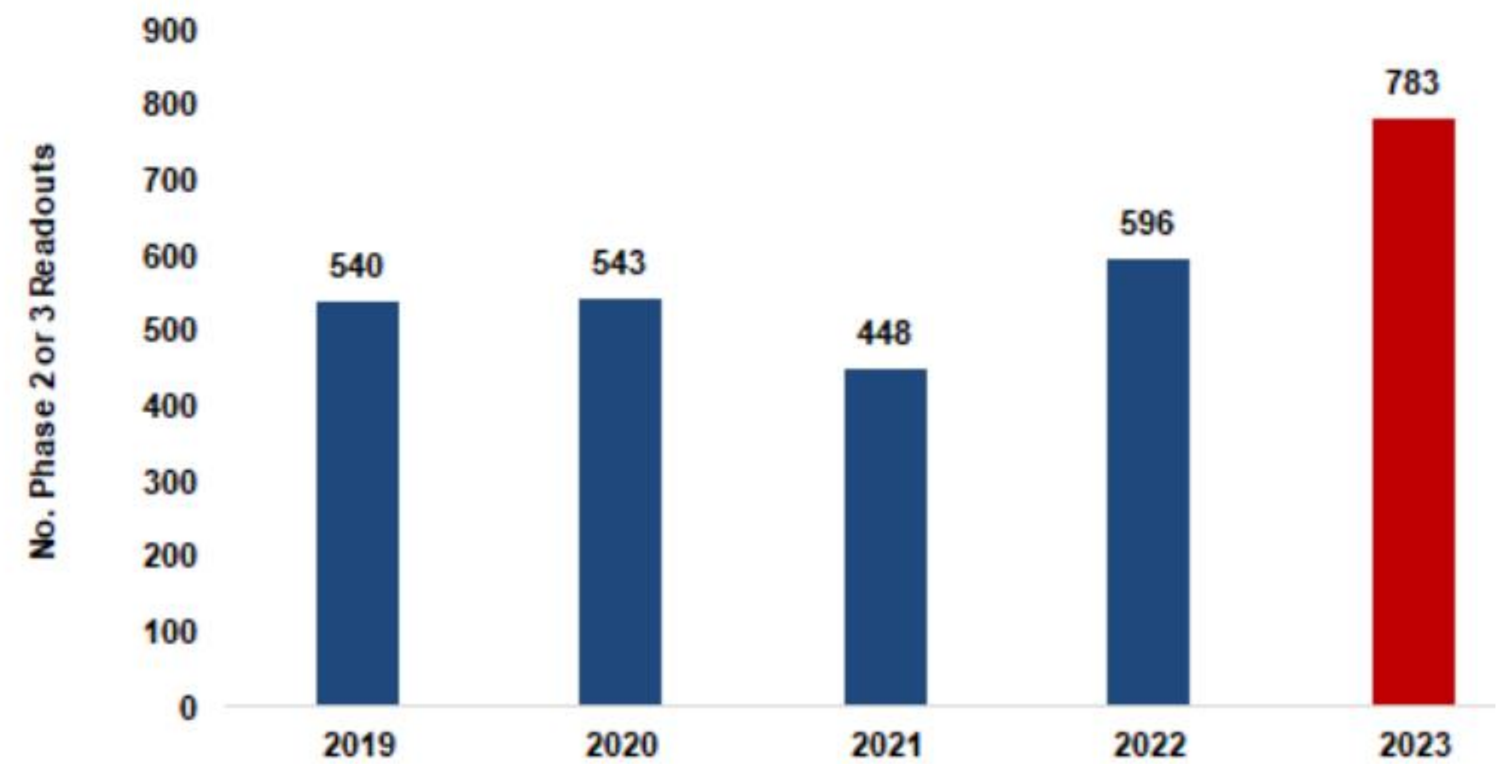
2023 – sløv start



2023



Source: EvaluatePharma; Wedbush Securities, Inc. Research

XBI afkast-matrix

Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	2,58%	0,28%	-0,26%	0,47%	1,38%	3,48%	3,41%	-0,11%	-0,61%	-1,37%	4,07%	-0,03%	12,14%
2023	7,11%	-6,90%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0,28%
2022	-16,69%	-3,80%	0,32%	-18,08%	-6,84%	7,98%	9,24%	3,17%	-5,23%	3,57%	1,79%	-0,74%	-25,95%
2021	8,16%	-2,95%	-8,34%	0,85%	-6,21%	5,69%	-8,80%	7,54%	-5,37%	-0,83%	-6,50%	-3,95%	-20,50%
2020	-6,30%	0,07%	-13,16%	20,60%	10,89%	8,10%	-2,34%	2,27%	-0,34%	1,27%	18,57%	5,38%	48,25%
2019	16,52%	6,63%	1,57%	-5,90%	-6,76%	10,41%	-2,31%	-6,20%	-5,13%	7,06%	14,72%	1,56%	32,56%
2018	10,02%	-3,22%	-2,91%	-0,85%	8,84%	0,55%	0,11%	5,09%	-4,26%	-17,48%	3,21%	-12,12%	-15,46%
2017	9,65%	8,18%	-1,24%	3,03%	-5,22%	13,99%	1,28%	7,24%	3,27%	-3,38%	-0,54%	2,02%	43,39%
2016	-28,02%	-5,19%	7,93%	4,29%	7,64%	-6,84%	14,77%	-3,19%	10,32%	-15,30%	11,61%	-5,55%	-15,68%
2015	7,07%	7,46%	2,63%	-6,24%	15,56%	5,73%	1,24%	-12,93%	-16,01%	7,21%	8,29%	-2,86%	12,95%
2014	15,37%	8,99%	-12,97%	-9,65%	2,77%	16,39%	-5,15%	10,58%	-3,43%	9,80%	4,98%	3,70%	43,21%
2013	8,17%	-1,20%	6,31%	5,94%	4,96%	-6,12%	17,56%	-2,70%	8,30%	-7,87%	9,66%	-0,22%	48,11%
2012	15,38%	0,33%	4,68%	1,09%	-1,11%	9,98%	1,59%	-1,50%	5,51%	-10,27%	6,02%	-1,08%	32,39%
2011	-2,01%	1,23%	6,71%	10,51%	1,92%	-2,79%	-2,68%	-11,24%	-5,76%	11,09%	-1,26%	1,72%	5,26%
2010	3,06%	1,86%	7,16%	0,02%	-10,31%	-4,36%	6,01%	-4,43%	13,19%	0,29%	-0,44%	6,41%	17,60%
2009	-1,59%	-11,31%	2,91%	-6,02%	3,73%	7,60%	10,45%	-2,67%	-1,20%	-13,03%	7,50%	6,92%	0,04%
2008	-5,59%	-3,81%	-0,71%	4,35%	7,34%	-3,90%	20,10%	-7,02%	-6,53%	-11,04%	-8,24%	9,25%	-9,67%
2007	3,55%	0,82%	0,17%	8,91%	2,28%	-5,36%	-1,10%	10,67%	4,26%	4,39%	0,19%	-2,23%	28,65%
2006	N/A	7,92%	-5,42%	-4,93%	-5,98%	2,09%	-1,94%	3,38%	-2,00%	11,26%	-0,37%	-8,65%	-6,31%

NBI afkast-matrix

Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	1,64%	-0,28%	-0,01%	1,08%	0,89%	1,45%	4,05%	0,00%	0,25%	-1,06%	3,23%	0,20%	11,07%
2023	3,50%	-4,88%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-1,55%
2022	-11,87%	-4,12%	4,25%	-9,73%	-1,32%	1,02%	4,11%	-1,06%	-2,44%	8,91%	5,87%	-3,01%	-10,91%
2021	6,25%	-2,37%	-4,29%	2,97%	-2,03%	8,00%	-0,20%	4,09%	-4,91%	-1,89%	-3,95%	-1,31%	-0,63%
2020	-5,60%	0,30%	-5,36%	14,97%	8,45%	1,61%	-1,70%	0,90%	-0,13%	-3,73%	11,14%	4,49%	25,69%
2019	13,40%	2,67%	-0,88%	-4,82%	-6,10%	9,20%	-3,08%	-2,64%	-3,30%	7,73%	11,44%	0,84%	24,41%
2018	6,96%	-5,36%	-1,28%	-2,97%	4,69%	1,35%	6,17%	4,81%	-0,19%	-14,60%	4,69%	-11,25%	-9,32%
2017	4,96%	6,79%	-1,23%	1,48%	-3,95%	8,49%	2,90%	4,53%	0,06%	-5,81%	0,54%	1,47%	21,06%
2016	-21,01%	-4,87%	2,51%	2,87%	4,22%	-7,88%	12,43%	-2,98%	3,02%	-11,36%	6,78%	-3,21%	-21,68%
2015	5,90%	4,90%	1,91%	-2,75%	9,24%	1,13%	3,58%	-10,58%	-11,46%	7,61%	2,57%	1,21%	11,42%
2014	8,41%	7,63%	-10,70%	-2,69%	4,21%	7,30%	-2,34%	10,26%	-1,16%	8,52%	2,48%	-0,07%	34,10%
2013	7,96%	1,39%	8,33%	7,73%	4,10%	-3,15%	13,93%	-2,08%	8,21%	-2,06%	9,15%	1,26%	68,31%
2012	11,22%	2,54%	3,56%	1,63%	-1,65%	5,55%	2,95%	1,86%	4,85%	-7,45%	5,14%	-2,65%	29,79%
2011	0,41%	0,97%	5,83%	7,33%	1,63%	-2,37%	-2,51%	-7,44%	-3,06%	5,26%	4,17%	2,03%	11,81%
2010	1,96%	2,18%	6,85%	0,19%	-10,96%	-4,51%	4,51%	-2,86%	10,24%	3,61%	-2,17%	6,90%	15,01%
2009	-0,11%	-7,16%	0,94%	-1,20%	3,67%	7,17%	8,22%	-0,32%	3,84%	-9,87%	6,76%	4,41%	15,63%
2008	-3,58%	-2,62%	-0,40%	2,35%	2,33%	-2,99%	15,67%	-3,46%	-5,63%	-12,13%	-8,27%	8,25%	-12,63%
2007	2,47%	-3,38%	-1,71%	8,33%	-0,77%	-3,89%	-2,29%	3,75%	5,00%	4,39%	-2,86%	-3,62%	4,58%
2006	4,21%	4,40%	-2,17%	-5,64%	-5,35%	-1,13%	-1,38%	2,96%	0,35%	7,66%	0,91%	-2,91%	1,02%
2005	-4,30%	-4,29%	-6,28%	-0,59%	5,53%	1,16%	11,96%	0,26%	1,27%	-3,83%	3,76%	0,91%	4,28%

2023 – emissioner

- 2022: Cantargia, IRRAS, WNT, Biovica, Scandion, m.fl.
- 2023: Immunovia, (InDex), (GN Store Nord), m.fl.

- Fortegning IKKE en fordel for de eksisterende aktionærer
- Dyrt, herunder høje garantiomk. og meget lav kurs

- Udskilningsløb i gang mellem lav- og højkvalitet

→ **Skaber meget interessante indgangsmuligheder i de rette selskaber**

Redningskransene

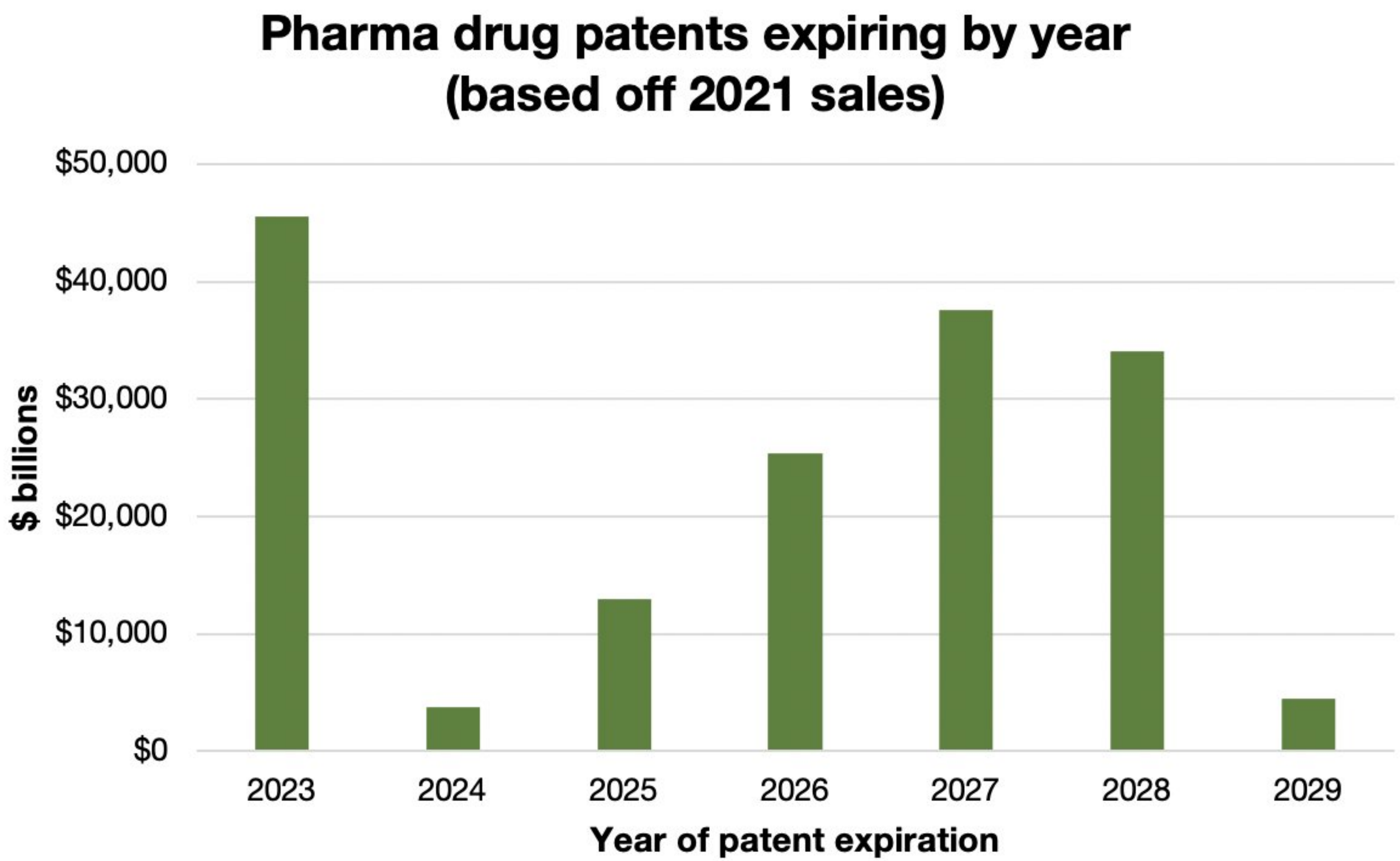
- Ny patentkløft på vej i 2025-2030 (200 mia. USD / 46%)
- Big Pharma har masser af cash (kan købe hele XBI)
- Platform-selskaber og/eller "ny" teknologi/MOA
- Udskilningsløb i gang mellem lav- og højkvalitet
- Kig på kassebeholdningen
- Emissioner → temperaturmåler på markedet
- Generalist-fonde på vej ind?

- **<u>Rente/Inflation/Risk bestemmer dog i lang tid alt</u>**

Patentudløb

2023: Gilenya, Humira, Januvia, Promacta, Saxenda, Stelara, Tasinga, and Victoza

Kilde: S&P Global



Patentudløb

Notable LOEs through 2028

2023		2024		2025		2026		2027		2028	
Company	Product ('22 Sales)	Company	Product ('23 Sales)	Company	Product ('24 Sales)	Company	Product ('25 Sales)	Company	Product ('26 Sales)	Company	Product ('27 Sales)
abbvie	Humira ($21B)	REGENERON	Eylea ($10B)	AstraZeneca	Soliris ($2.7B)	NOVARTIS	Entresto ($7B)	Pfizer / Bristol Myers Squibb	Eliquis ($15B)	MERCK	Keytruda ($30B)
Johnson&Johnson	Stelara ($10B)	AstraZeneca	Brilinta ($1.4B)	Bristol Myers Squibb	Yervoy ($3B)	EXELIXIS / IPSEN	Cabometyx ($1B)	abbvie / J&J	Imbruvica ($12B)	Bristol Myers Squibb	Opdivo ($13B)
Jazz Pharmaceuticals	Xyrem ($1B)	J&J / BAYER	Xarelto ($3B)	Pfizer	Xeljanz ($2B)	Bristol Myers Squibb	Pomalyst ($2.5B)	Pfizer	Ibrance ($9B)	AMGEN	Otezla ($3B)
Biogen	Tysabri ($1.9B)	novo nordisk	Victoza ($1.3B)	AMGEN	Prolia / Xjeva ($6B)	MERCK	Januvia / Janumet ($1B)	Lilly	Trulicity ($8B)	GSK	Tivicay ($4.5B)
sunovion	Latuda ($2B)					Roche	Perjeta ($5.5B)				
NOVARTIS	Gilenya ($1.6B)										
Takeda	Vyvanse ($3.4B)										
Total 'At-Risk' Revenue:	~$41B		~$16B		~$14B		~$17B		~$44B		~$50B

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Modelporteføljen

ØU LIFE SCIENCE PORTEFØLJEN DKK

Dato	Navn	Vægt	Kurs (08feb)	Købskurs	Købssum DKK	+/-	+/-
1. jul.+30. nov. 2016	Zealand Pharma	10,0%	212,00	114,67	45.938	38.735	84,3%
31. oktober 2016	Immunovia	2,5%	21,70	106,50	118.165	-96.884	-82,0%
2. feb 2017 + 19 jan. 2022	Cantargia	4,8%	5,33	7,58	65.815	-25.199	-38,3%
29. august 2018	Calliditas Th.	3,7%	94,25	48,10	16.846	13.965	82,9%
11. august 2022	IRRAS	5,7%	0,48	0,304	33.369	14.448	43,3%
28. juni 2019	Nordic Nanovector	0,1%	0,87	31,58	50.935	-49.710	-97,6%
24. sep. 2019 + 9. feb 2021	InDex Pharmaceuticals	2,1%	0,46	2,18	93.800	-75.794	-80,8%
13. jan + 11. mar 2020	Elekta B	10,7%	76,60	91,64	115.430	-25.281	-21,9%
26. okt. 2020 + 19. jan. 2022	Lundbeck	8,6%	145,32	176,45	88.357	-15.806	-17,9%
11. nov. 2020 + 22. jan. 2021	Xspray	4,9%	63,80	129,70	95.214	-53.501	-56,2%
11. juni 2021	Infant Bacterial Therap.	4,0%	51,20	96,00	70.685	-37.210	-52,6%
19. jan. 2022	Bavarian Nordic	4,1%	231,50	217,00	32.583	2.090	6,4%
19. jan. 2022 + 2. nov. 2022	Ascelia	5,5%	14,08	19,51	67.279	-21.250	-31,6%
19. jan. 2022	Saniona	1,2%	3,15	8,35	30.073	-19.776	-65,8%
19. jan. 2022	Camurus	6,1%	263,60	132,50	28.633	23.071	80,6%
21. apr. 2022 + 6. feb. 2023	Hansa Biopharma	7,0%	56,35	60,00	66.374	-7.425	-11,2%
		81,1%					

Gevinst/tab på seneste solgte aktier		Antal					
2. november 2022	Zealand Pharma	200	201,000	114,672	22.969	17.191	74,8%
13. september 2022	Zealand Pharma	300	143,000	114,672	34.453	8.404	24,4%
11. august 2022	IRRAS	37.500	2,330	2,323	62.009	1.452	2,3%
16. december 2021	Calliditas	500	115,000	48,100	16.846	24.837	147,4%
30. august 2021	Allarity TO 3	12.500	0,120	0,000	0	1.092	
10. august 2021	Allarity Therapeutics	37.500	2,330	2,323	62.009	1.452	2,3%

Porteføljeresultat

					Siden start	2023	Seneste uge
Startkapital pr. 26. marts 2015	500.000	Investerbar kapital	1.179.014				
+ realiseret gevinst	679.014	Investeret	1.019.495	Porteføljen	68,7%	3,8%	1,1%
+ urealiseret gevinst	-335.525	Kontant	159.519	OMX Nordic Health Care Index	159,2%	3,4%	3,2%
= kapital d.d.	843.488	Investeringsgrad	86,5%	OMX Nordic 40 Index	41,0%	5,1%	2,4%

OBS! Lundbeck kurs opgjort fiktivt som 1 x ny A-aktie + 4 x ny B-aktie

Modelporteføljen

ØU LIFE SCIENCE PORTEFØLJEN							DKK
Dato	**Navn**	**Vægt**	**Kurs (08feb)**	**Købskurs**	**Købssum DKK**	**+/-**	**+/-**
1. jul.+30. nov. 2016	Zealand Pharma	10,0%	212,00	114,67	45.938	38.735	84,3%
31. oktober 2016	Immunovia	2,5%	21,70	106,50	118.165	-96.884	-82,0%
2. feb 2017 + 19 jan. 2022	Cantargia	4,8%	5,33	7,58	65.815	-25.199	-38,3%
29. august 2018	Calliditas Th.	3,7%	94,25	48,10	16.846	13.965	82,9%
11. august 2022	IRRAS	5,7%	0,48	0,304	33.369	14.448	43,3%
28. juni 2019	Nordic Nanovector	0,1%	0,87	31,58	50.935	-49.710	-97,6%
24. sep. 2019 + 9. feb 2021	InDex Pharmaceuticals	2,1%	0,46	2,18	93.800	-75.794	-80,8%
13. jan + 11. mar 2020	Elekta B	10,7%	76,60	91,64	115.430	-25.281	-21,9%
26. okt. 2020 + 19. jan. 2022	Lundbeck	8,6%	145,32	176,45	88.357	-15.806	-17,9%
11. nov. 2020 + 22. jan. 2021	Xspray	4,9%	63,80	129,70	95.214	-53.501	-56,2%
11. juni 2021	Infant Bacterial Therap.	4,0%	51,20	96,00	70.685	-37.210	-52,6%
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		81,1%					

LIFE SCIENCE
Økonomisk Ugebrev

Ekstern ekspertgruppe

- Stadig åben for medlemmer
- Nøgleord er viden, interesse og investeringserfaring
- Stor frihed ift. dækning/frekvens (160 selskaber)
- Ansvar for 1-10 selskaber
- Nyhedskommentar
- Honorar, men det er ikke lønnen der driver værket

- Skriv til sa@ugebrev.dk

LIFE SCIENCE
Økonomisk Ugebrev

Annonce

Advice Capital

1. Udbyder aktivt styrede investeringsforeninger i partnerskab med dedikerede porteføljemanagers
2. Managers er medinvestorer i fonden og har sammenfaldende interesser med vores kunder
3. Advice har i dag 3 børsnoterede fonde indenfor Global Value, Balanceret risiko* og Biotek*

ADVICE CAPITAL BREAKTHROUGH BIOTECH
ISIN: DK0061813250

ADVICE CAPITAL GLOBALE
ISIN NUMMER:
DK0060696656

ADVICE CAPITAL VISION
ISIN NUMMER:
DK0061813177

* Ligger nr. 1 2023 Morningstar i henholdsvis kategorierne biotek og balanceret moderat risiko global

Breakthrough Biotech

Specialist fond designet til at finde de mest lovende lægemidler og opnå godkendelse i USA indenfor 3 år.

Derefter høste værditilvæksten ved at lade kommercialiseringen udfolde sig i 4 år.

35 selskaber primært i cancer og sjældne sygdomme

68% af fondens midler placeret i kommercielle biotekselskaber.

ADVICE CAPITAL
BREAKTHROUGH BIOTECH
ISIN: DK0061813250

Tak for i dag!

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Spørgsmål, abonnement, ris/ros eller kommentarer

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