

Markedsobservationer maj 2023

~~*Var det bunden?*~~
Skal vi op?

Onsdag d. 31. maj 2023

V/Steen Albrechtsen, Redaktør og Porteføljemanager



LIFE SCIENCE
Økonomisk Ugebrev

DISCLAIMER

Al investering er på eget ansvar

og stol ikke på noget af hvad jeg siger 😊

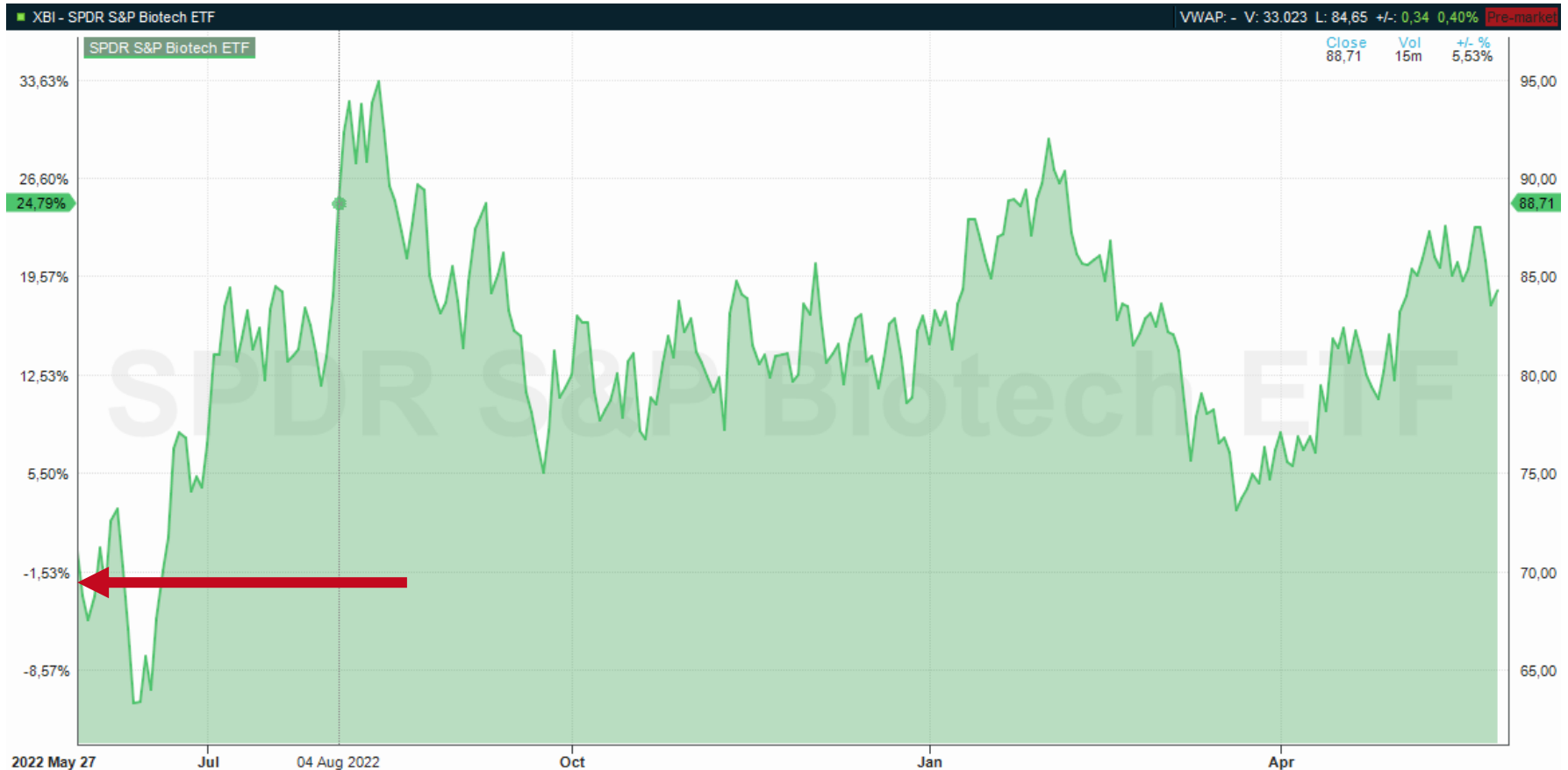
Fra juni
2022

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



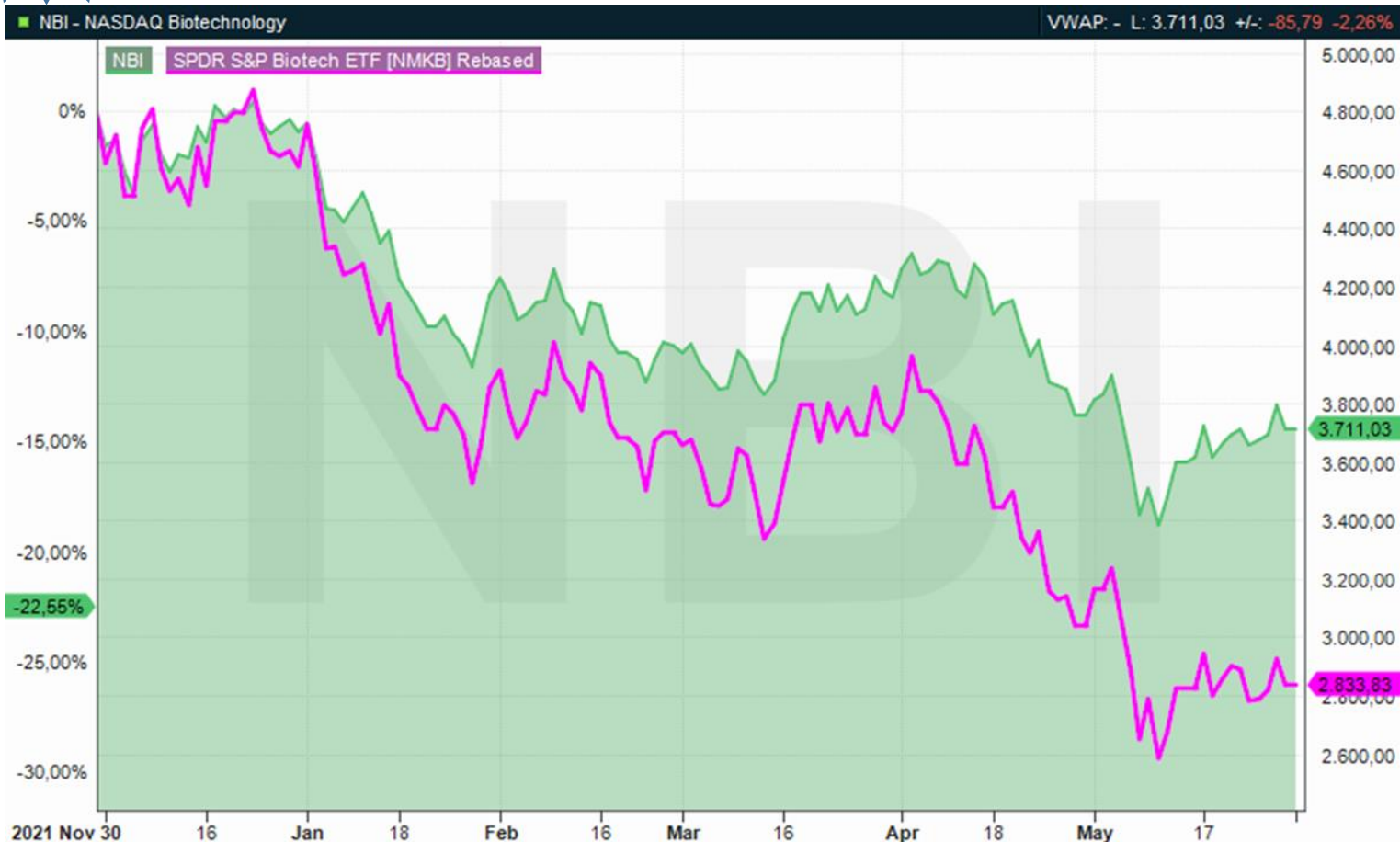
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Økonomisk Ugebrev

XBI (S&P Biotech ETF) (Seneste 12 mdr.)

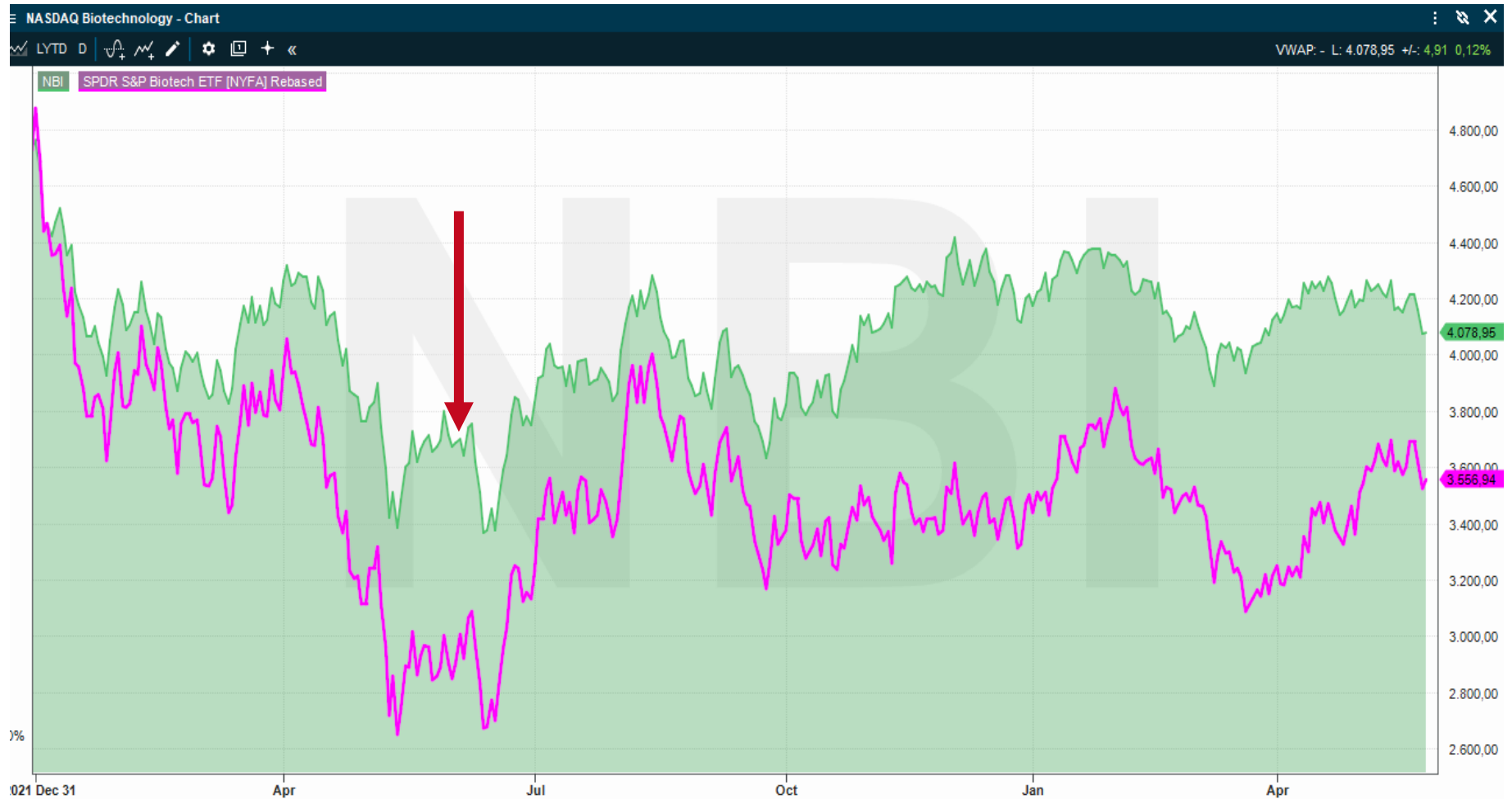


Fra juni
2022

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



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

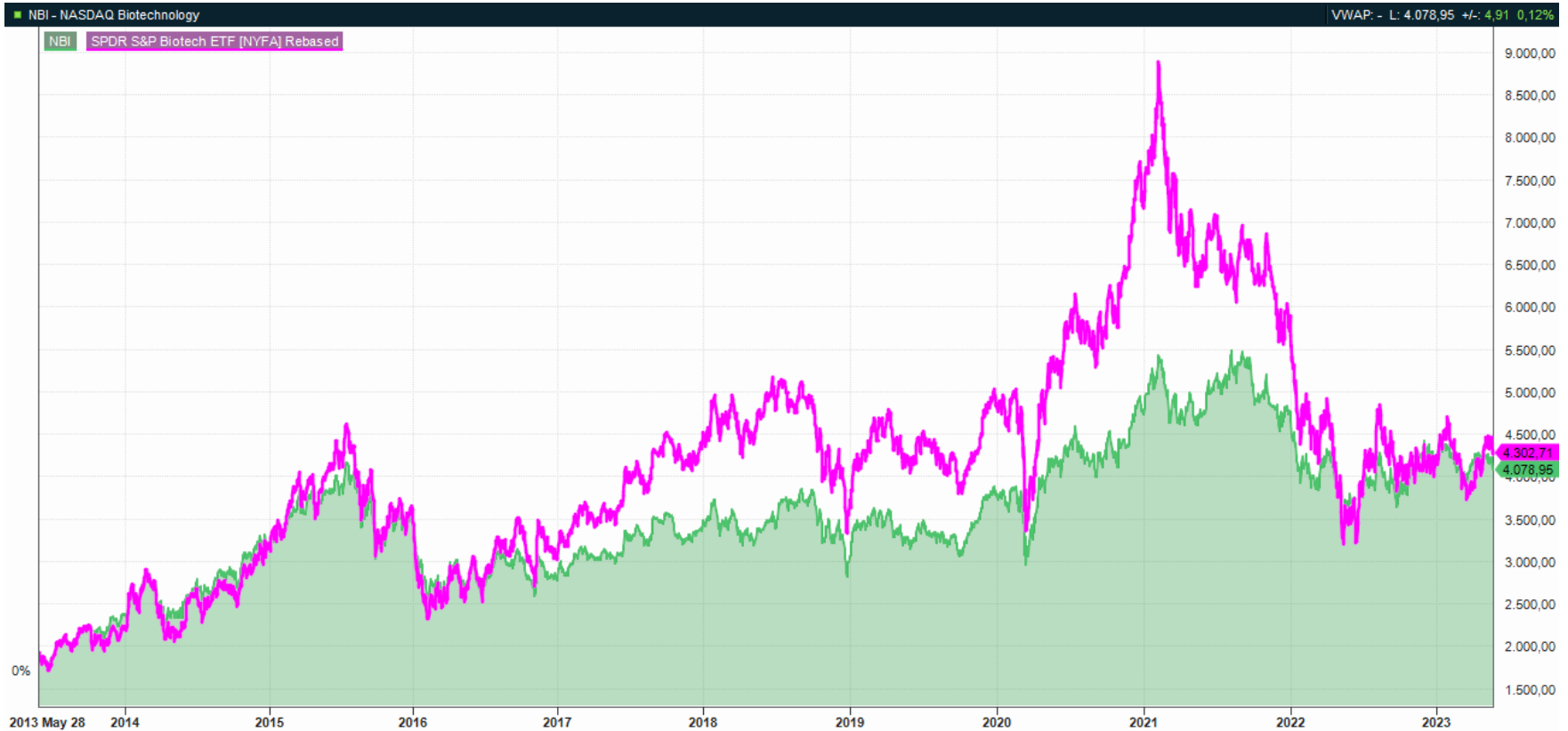


Nasdaq Bio og XBI (S&P Biotech ETF)

Det lange perspektiv 5år (NBI klart stærkere?)

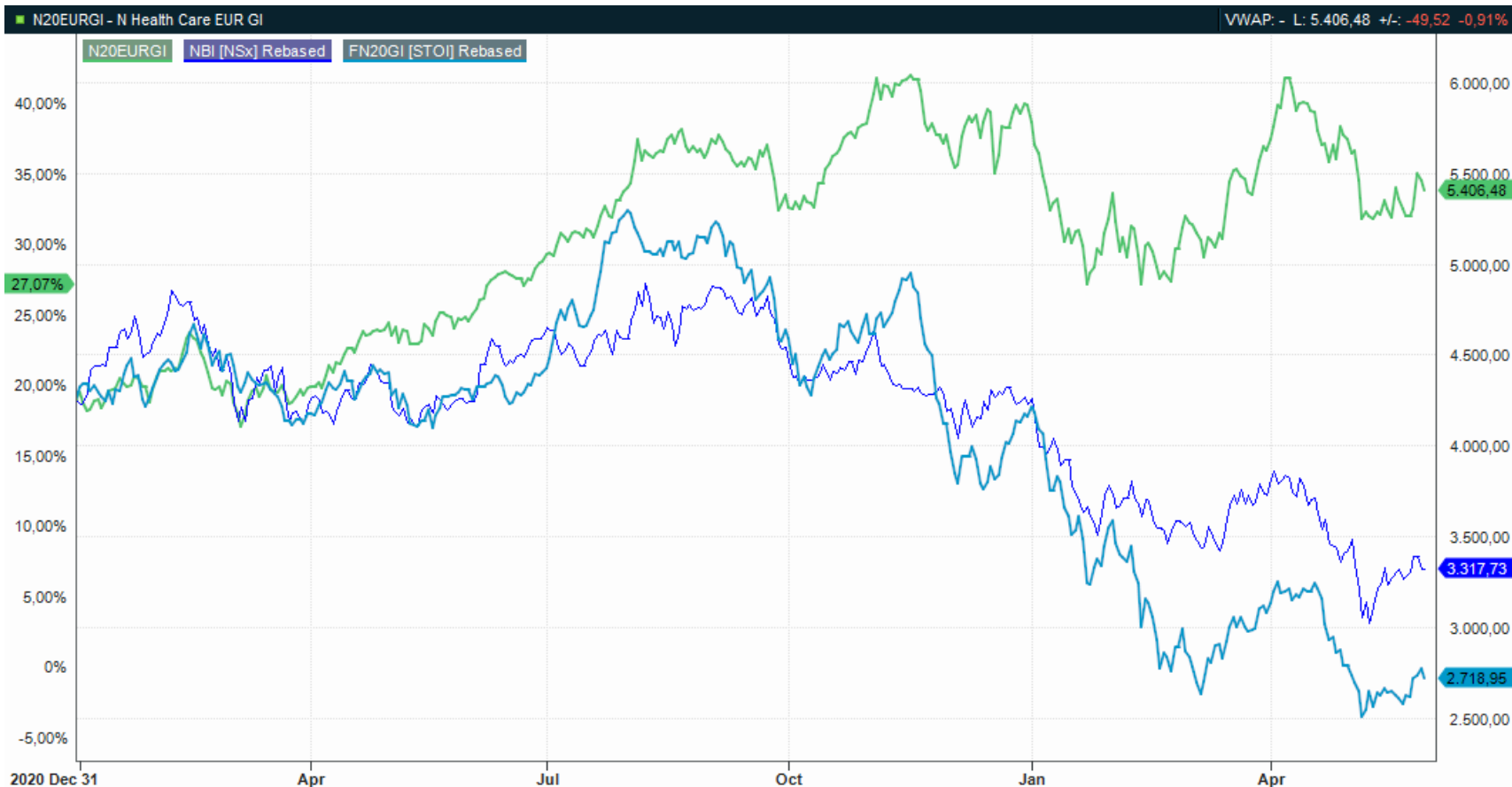


Nasdaq Bio og XBI (S&P Biotech ETF) 10 å – Perspektivet ændrer sig



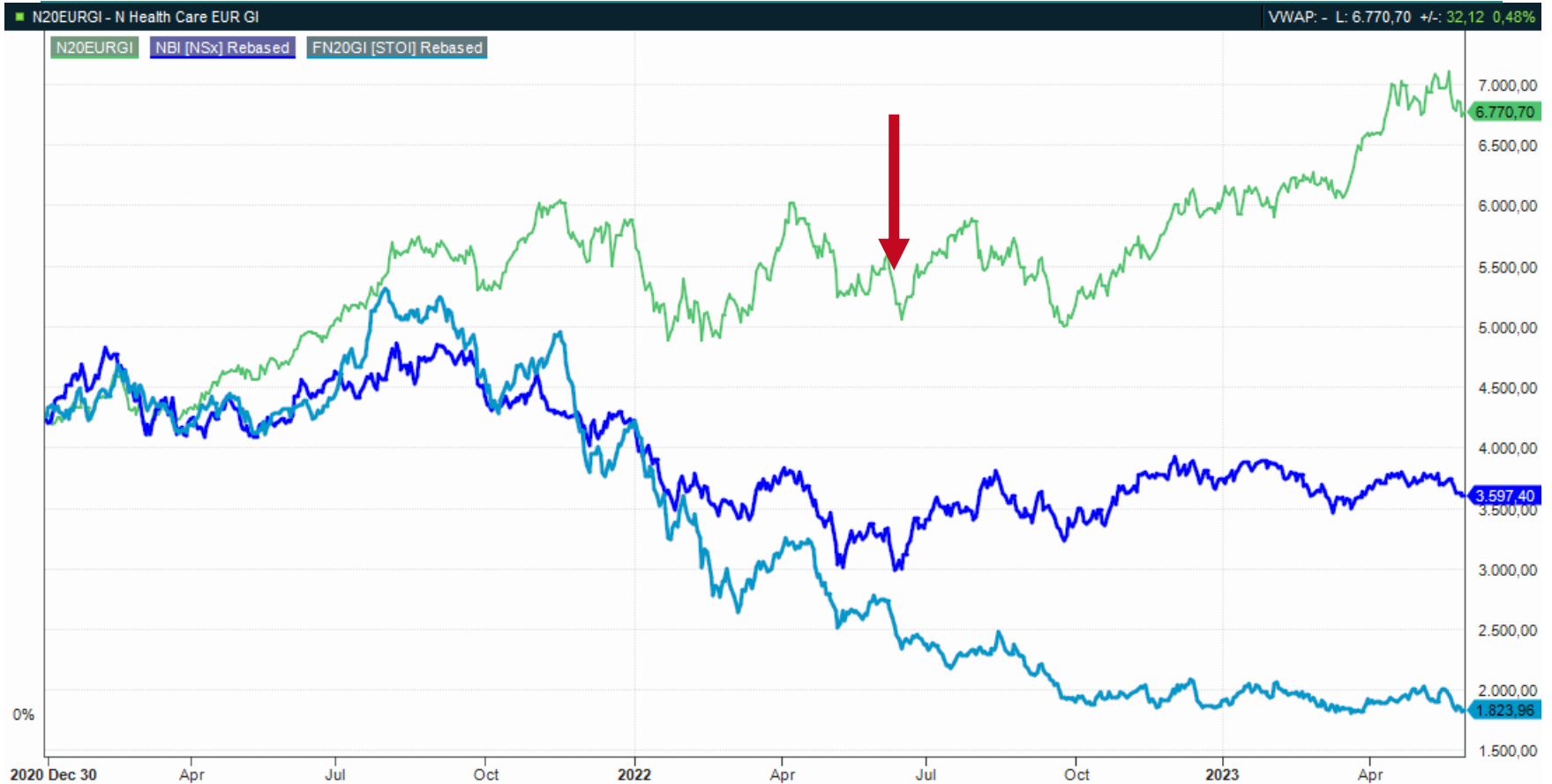
Fra juni
2022

Pharma vs Biotech

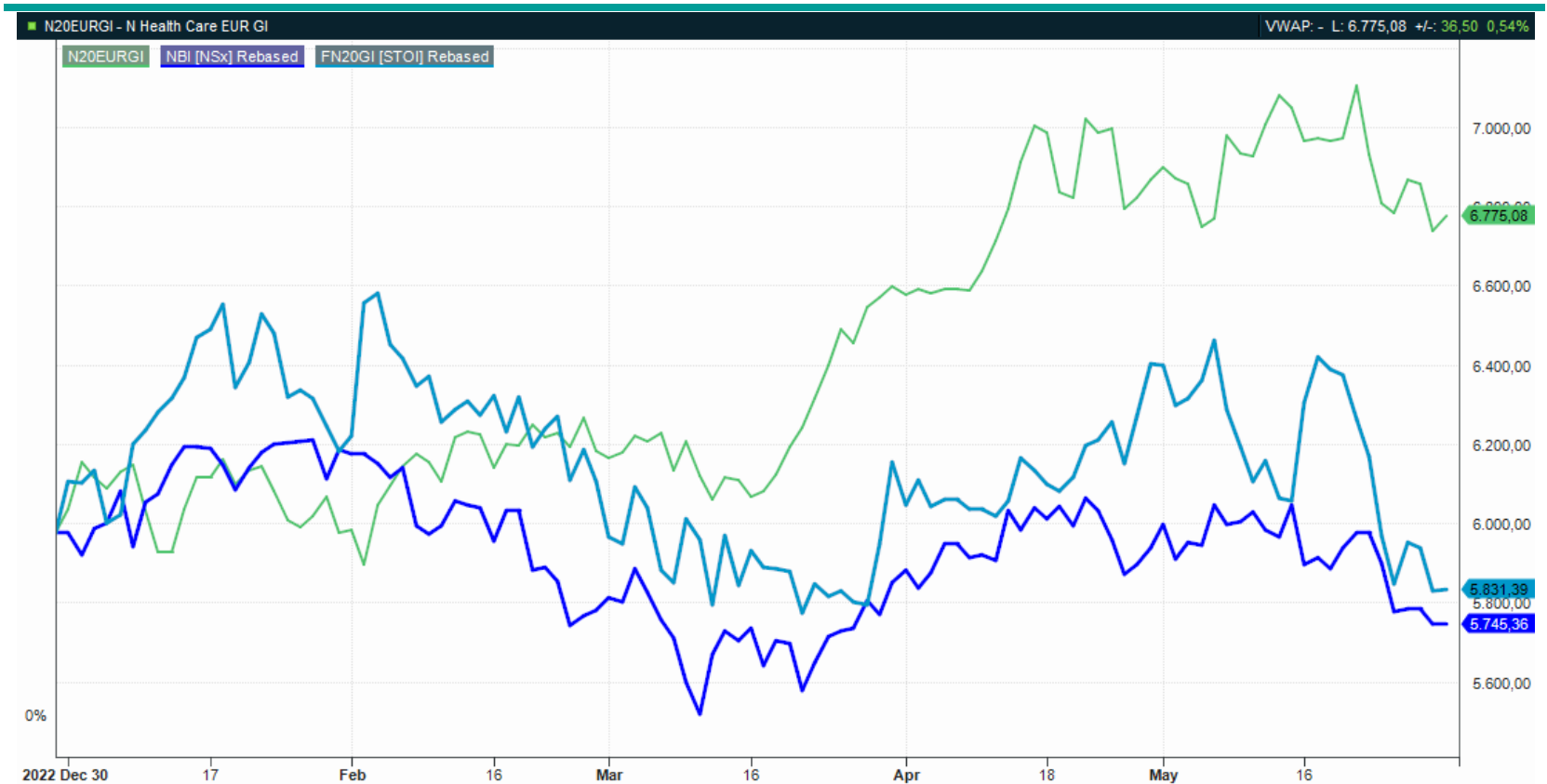


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Økonomisk Ugebrev

Pharma vs Biotech



Pharma vs Biotech - 2023 ÅTD



Outflow i Q1 fra NBI og XBI

Week Ending	IBB Fund Flows (\$M)	Week Ending	IBB Fund Flows (\$M)
1/7/23	\$ (0)	4/8/23	\$ (6)
1/14/23	\$ (54)	4/15/23	\$ (13)
1/21/23	\$ 6	4/22/23	\$ (80)
1/28/23	\$ 28	4/29/23	\$ (118)
2/4/23	\$ (267)	5/6/23	
2/11/23	\$ 88	5/13/23	
1Q23 2/18/23	\$ (153)	2Q23 5/20/23	
2/25/23	\$ (7)	5/27/23	
3/4/23	\$ (128)	6/3/23	
3/11/23	\$ 63	6/10/23	
3/18/23	\$ (100)	6/17/23	
3/25/23	\$ 69	6/24/23	
4/1/23	\$ (127)	7/1/23	
QTD	\$ (581)	QTD	\$ (216)

Week Ending	XBI Fund Flows (\$M)	Week Ending	XBI Fund Flows (\$M)
1/7/23	\$ 150	4/8/23	\$ (324)
1/14/23	\$ 109	4/15/23	\$ 99
1/21/23	\$ 477	4/22/23	\$ (285)
1/28/23	\$ (1,151)	4/29/23	\$ 172
2/4/23	\$ 281	5/6/23	
2/11/23	\$ (136)	5/13/23	
1Q23 2/18/23	\$ (192)	2Q23 5/20/23	
2/25/23	\$ (301)	5/27/23	
3/4/23	\$ (284)	6/3/23	
3/11/23	\$ (33)	6/10/23	
3/18/23	\$ (57)	6/17/23	
3/25/23	\$ 288	6/24/23	
4/1/23	\$ (190)	7/1/23	
QTD	\$ (1,038)	QTD	\$ (338)

Status i dag?

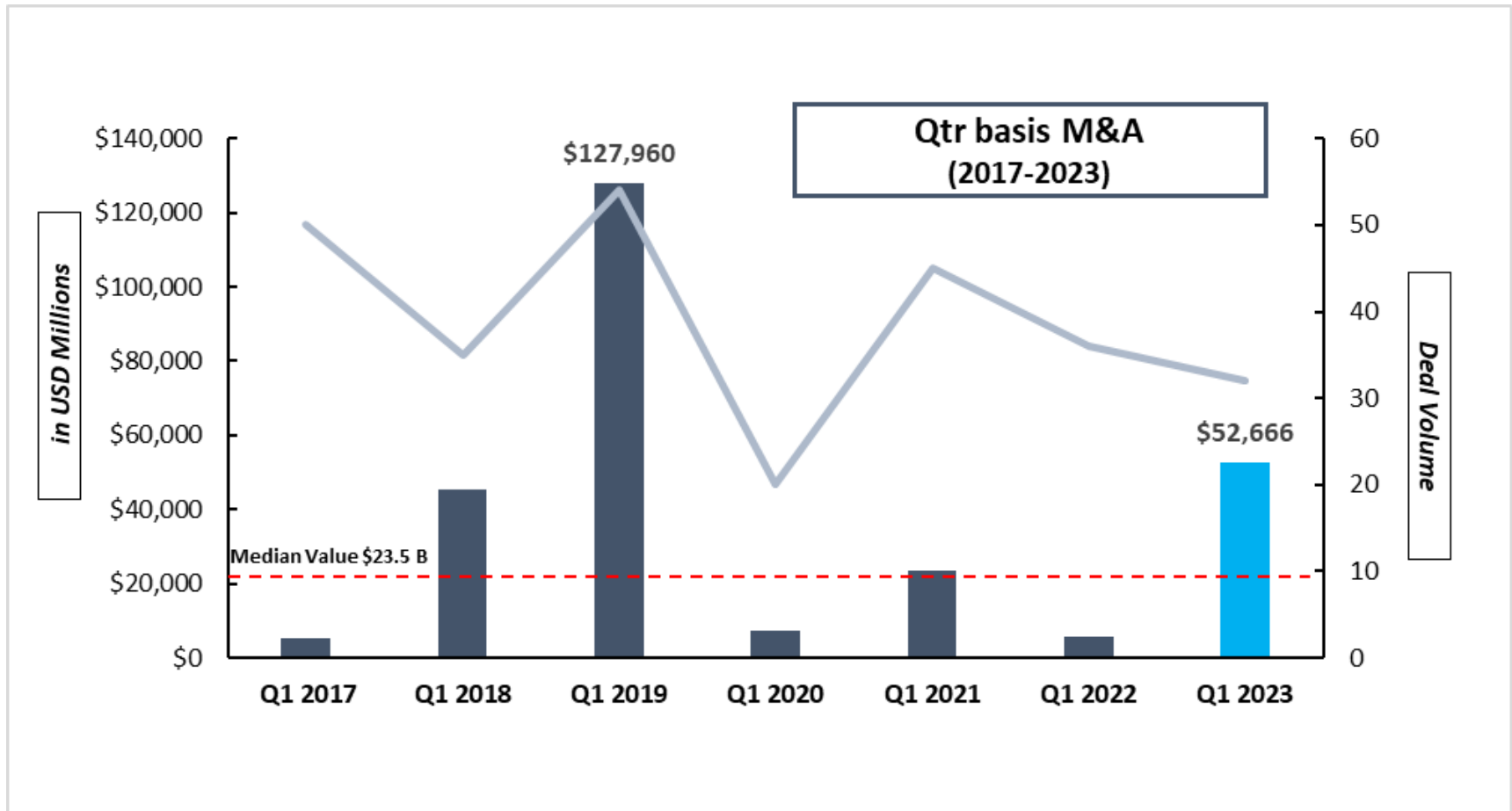
Description	Last	1W +/-	1M +/-	3M +/-	1Y +/-	YTD +/-
Copenhagen Health Care	8.246,20	-2,03%	-0,98%	10,27%	30,76%	15,95%
Nordic Health Care EUR	6.770,52	-2,28%	-1,39%	8,06%	23,09%	13,30%
Nordic 40	2.297,56	-2,26%	-2,23%	-1,78%	6,68%	5,64%
Next Biotech	2.348,58	-4,49%	5,35%	3,83%	-0,25%	1,60%
XBI	83,24	-4,86%	3,79%	1,29%	17,09%	0,29%
First North Health Care	1.039,94	-5,48%	-8,97%	-5,78%	-33,36%	-2,45%
NASDAQ Biotechnology	4.050,70	-3,88%	-3,26%	-0,38%	6,69%	-3,86%
Oslo Health Care	629,93	-2,70%	0,14%	-1,14%	-16,78%	-10,53%
Helsinki Health Care GI	2.972,75	-3,62%	-5,33%	-6,71%	-4,38%	-13,95%

Lang nedtur (data per 1. maj)

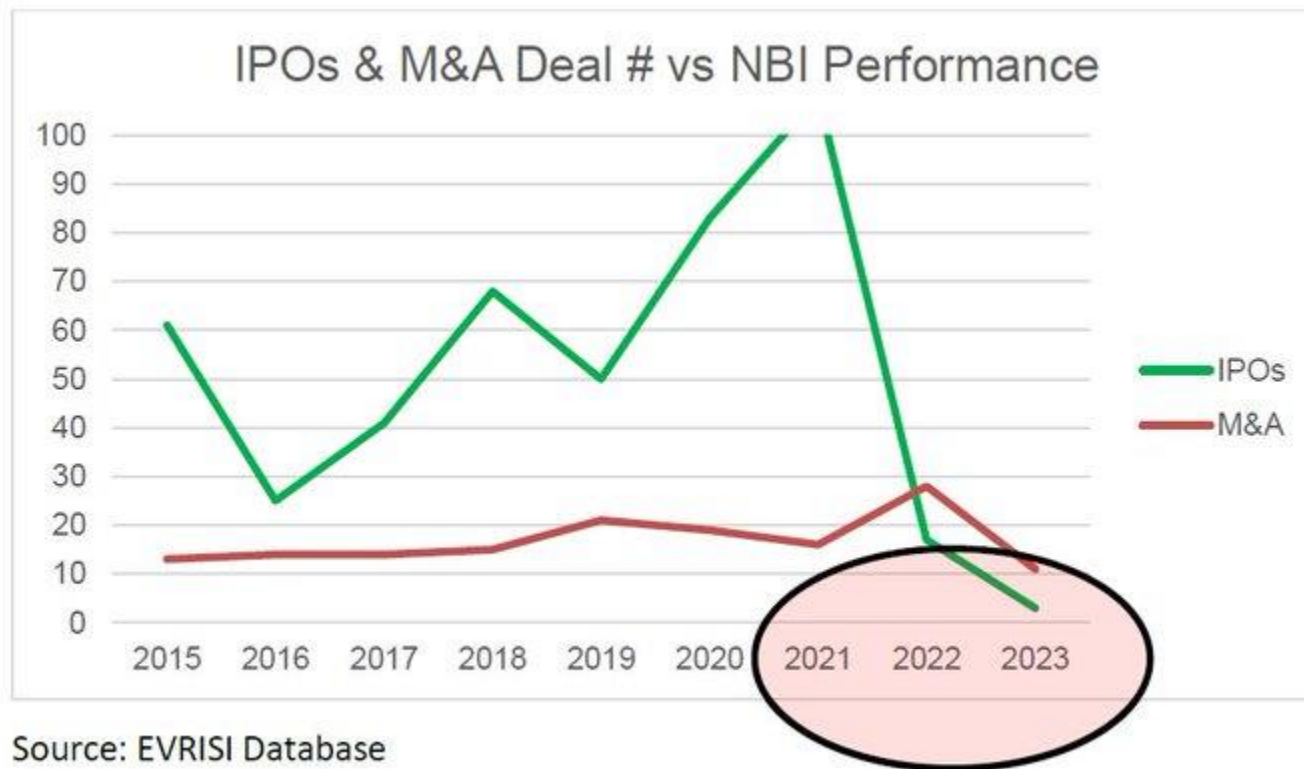


Source: S&P 500 Biotech Index (XBI) used for 2008, 2015, 2021 cycles; Nasdaq Biotech Index used for 2001 cycle, Credit Suisse

M&A på vej tilbage?



2 år i træk med M&A > IPO



Gennemsnit 10,4 år fra profit til salg

Ticker	1 st Yr of Profit	Year of Acquisition	Yrs from profit to sale	Deal Size
CELG-US	2003	2019	16	\$74B
SHPG-US	2000	2018	18	\$62B
ALXN-US	2008	2020	12	\$39B
BIVV-US	2015	2018	3	\$12B
HZNP-US	2018	2022**	3	\$28B
SGEN-US	n/a	2023**	n/a	\$43B

M&A på vej tilbage?

Cash positions of largest pharmas at YE22

Top pharms by market cap (>\$30B). All values in \$B

Company	Total	Cash & cash equivalents	Short-term/ marketable securities	Market Cap
Johnson & Johnson	23.5	14.1	9.4	471
Pfizer	22.7	0.4	22.3	227
Novartis	18.9	7.5	11.4	176
Sanofi	13.9	13.9	0.0	129
Merck	13.2	12.7	0.5	265
Vertex	10.8	10.5	0.3	78
Roche	10.6	5.4	5.2	226
Moderna	9.9	3.2	6.7	58
Amgen	9.3	7.6	1.7	124
Bristol-Myers Squibb	9.3	9.1	0.1	141
AbbVie	9.2	9.2	-	274
Bayer	7.9	3.9	4.0	60
Regeneron	7.7	3.1	4.6	88
Gilead	6.4	5.4	1.0	98
AstraZeneca	6.3	6.2	0.2	209
Takeda	5.2	5.2	-	51
Biogen	4.9	3.4	1.5	38
GSK	4.6	4.5	0.1	72
Chugai	3.8	1.7	2.1	41
Novo Nordisk	3.5	1.9	1.6	338
Daiichi Sankyo	3.0	3.0	0.0	68
Eli Lilly	2.2	2.1	0.1	317
CSL	1.5	1.5	-	97

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Økonomisk Ugebrev

IPO 2021 - selskaberne skal hente kapital

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	RDX	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	Nuvelent	\$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	-29%	0%	7%	82%	Various	RT-101	Phase I	NETs/ Acromegaly
6/25/21	12/22/21	GHRH	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	Acux Pharmaceuticals	\$15	\$6.00	\$3.60	\$34	\$57	-40%	32%	-3%	-7%	Antibiotics	Ibezapostat	Phase II	Clotridium 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	Valvea 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	RXR	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	THR	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	MLN	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)

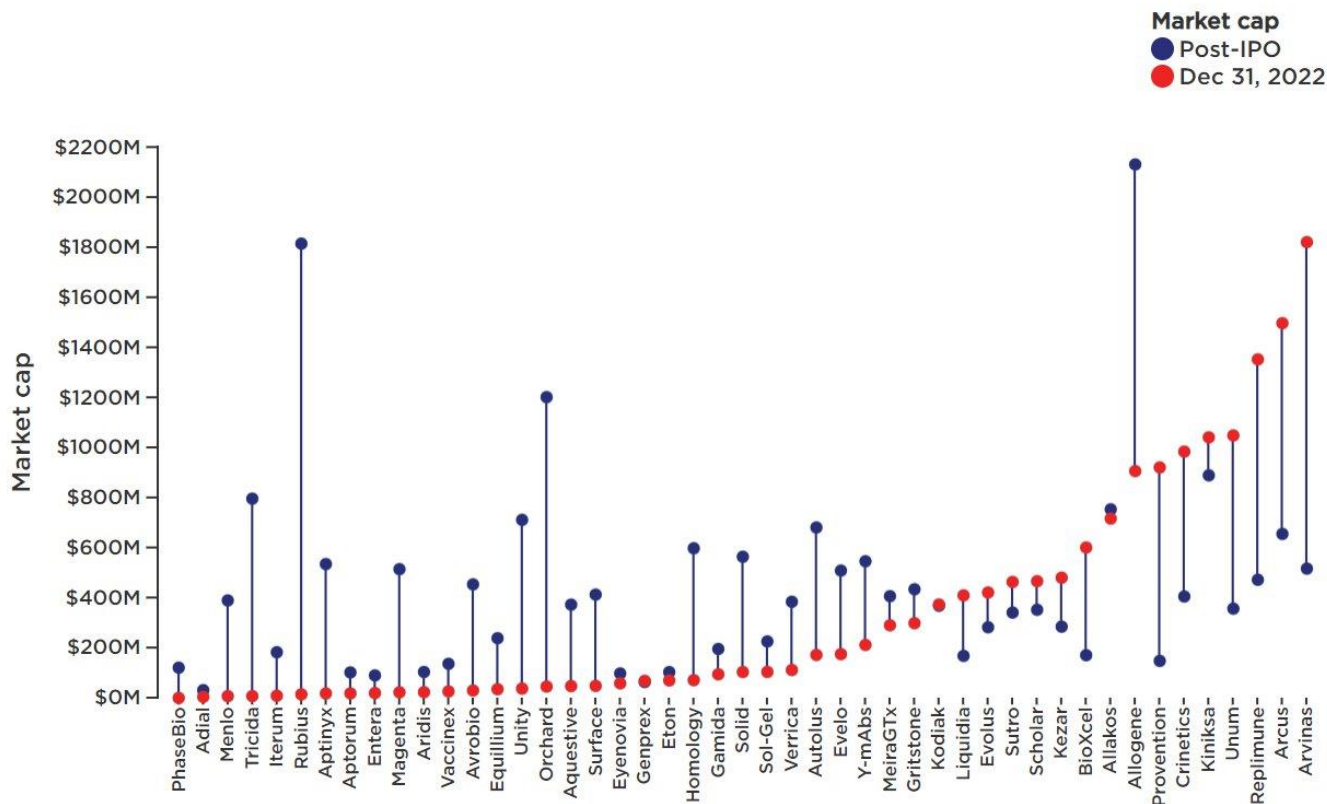
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12/16/21	6/14/22	IMMX	Immix Biopharma	\$21	\$5.00	\$1.46	\$20	\$38	-71%	-20%	-41%	17%	Oncology	IMX-110	Phase III	Soft Tissue Sarcoma
7/29/21	1/25/22	ICVX	Icosavax	\$182	\$15.00	\$4.20	\$168	\$663	-72%	66%	120%	164%	Infectious	IVX-411	Phase III	COVID19
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	\$68	-74%	-47%	-45%	-57%	Neurology	PrimeC	Phase II	ALS
3/12/21	9/8/21	LBPB	Longboard Pharmaceuticals	\$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	2/8/22	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	RNKT	RenovoRx	\$17	\$9.00	\$2.00	\$18	\$75	-78%	-14%	-4%	-22%	Oncology	RenovoGem	Phase III	Pancreatic Cancer
7/30/21	1/26/22	NAB	InBio	\$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	EXS21548	Phase I	Solid Tumors
10/8/21	4/8/22	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	Lylell 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	TLF, 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 III	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 III	Melanoma
10/15/21	4/13/22	NKT	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%	4%	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	BFR1	Bifrontera	\$18	\$5.00	\$0.90	\$21	\$58	-82%	-12%	-36%	58%	Dermatology	Ameluz	Marketed	Actinic Keratosis
3/26/21	9/22/21	KNA	Ikena Oncology	\$125	\$16.00	\$2.79	\$97	\$553	-83%	100%	63%	31%	Oncology	IK-930	Preclinical	Hippo-Mutated Cancers
12/8/21	6/8/22	CING	Cingulate	\$25	\$6.00	\$1.01	\$11	\$68	-83%	-35%	-50%	-59%	Neurology	CtX-1301	Phase III	ADHD
9/15/21	3/14/22	KTTA	Pasithea Therapeutics	\$24	\$5.00	\$0.82	\$17	\$85	-84%	-45%	-40%	-59%	Neurology	Undisclosed	Preclinical	Undisclosed
7/30/21	1/26/22	TNYA	Tenaya Therapeutics	\$180	\$15.00	\$2.37	\$152	\$690	-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 III	Breast Cancer, Solid Tumors
10/22/21	4/20/22	XLO	Xlilo 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	Unicyclo Therapeutics	\$25	\$5.00	\$0.74	\$11	\$87	-85%	-24%	-43%	-44%	Renal	Renazorb	Phase I	CKD Hyperphosphatemia
5/26/21	11/22/21	DPNS	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	Renovo 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	\$573	-86%	-17%	-20%	-13%	Various	VTP-800	Phase III	Prostate Cancer
7/16/21	1/12/22	TCCR	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	GO012F	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	WDX-124	Preclinical	Solid Tumors
7/9/21	1/5/22	RNAZ	Renascence 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	\$128	\$18.00	\$2.04	\$79	\$678	-88%	-5%	-4%	5%	Various	ARX201	Phase I	Growth Hormone Deficiency
8/6/21	2/2/22	ADGI	Adagio Therapeutics	\$309	\$17.00	\$1.76	\$192	\$1,636	-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	\$18.00	\$0.82	\$4	\$49	-92%	-39%	-41%	-47%	Neurology	Epiladrem	Preclinical	Acute Pan
10/8/21	4/8/22	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 III	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	Instill Bio	\$320	\$20.00	\$0.67	\$87	\$2,518	-97%	32%	35%	-5%	Oncology	ITL168	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%	-26%	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	\$827	-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	\$368	-98%	49%	35%	46%	Oncology	NXE1-001	Phase I	AML, MDS
Total:	105 IPOs			\$14,600					Average: -50%	15%	15%	14%				
									Median: -77%	6%	6%	1%				

Source: Jefferies estimates, FactSet
Data as of 12.13.22

IPO – 2018, sådan er det gået

U.S. IPO class of 2018: Mcap performance

Change in market cap of biotechs that went public on U.S. exchanges in 2018



Source: BCIQ, SEC filings • Pop-ups show % difference in Mcap since IPO
 Moderna's market cap, which grew 812% to \$69 billion, was not shown for display purposes

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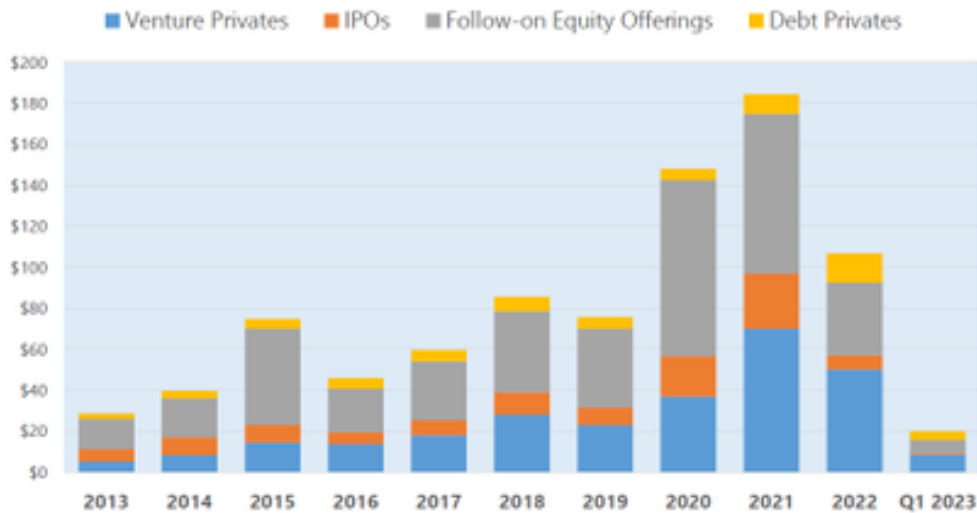
Økonomisk Ugebrev

Kapitalrejsning tilbage på 2018-19 niveau

Capital Raising Pace in 2023 Below Levels of 2022

Equity and Private Debt Raised in the Biopharma Sector, 2013 - Q1 2023

(\$ Billions, Worldwide)



Source: CapitalIQ, Stifel internal databases and Crunchbase.

By our calculations, biopharma companies raised \$20 billion in equity and debt capital (excluding public bond issues) in Q1 2023. This corresponds to a \$80 billion run rate on an annualized basis.

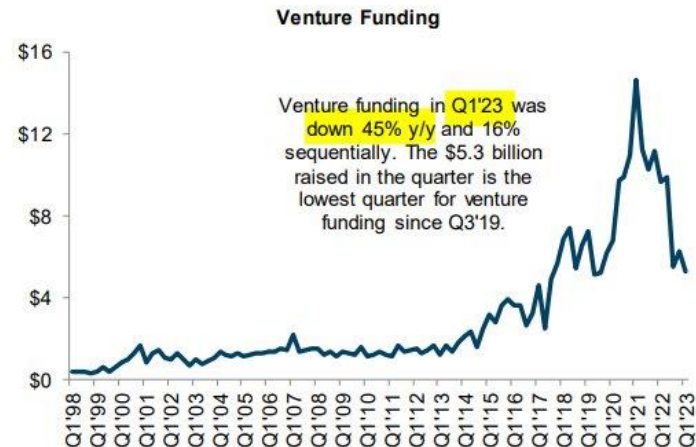
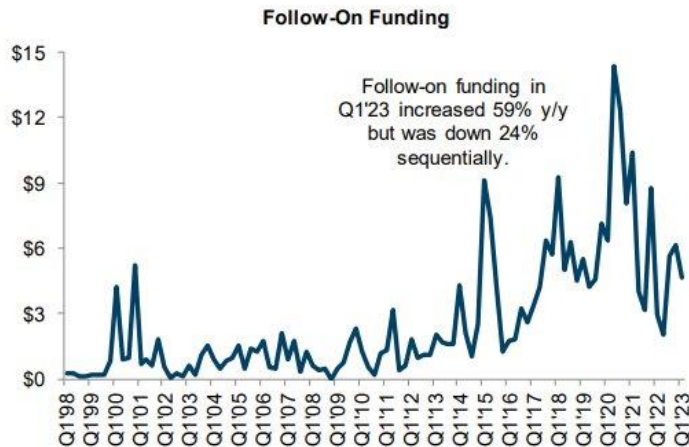
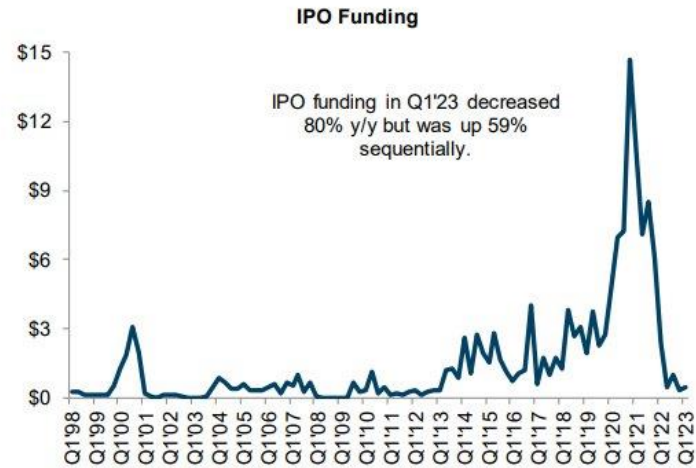
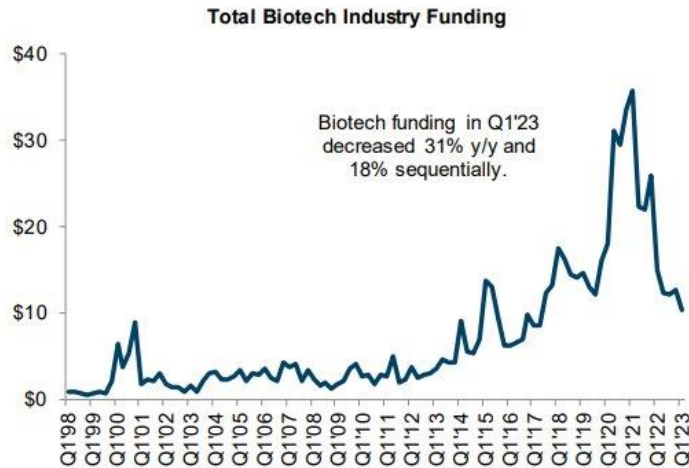
The annualized volume is below that of 2021 and a far cry from the \$175 billion raised in 2021.

It's worth noting that volume of 2023 year-to-date is roughly similar to what it was before the Pandemic in 2018 and 2019.

Obviously, the number of companies is also above where it was before the Pandemic – implying that there is less money to go around for the average company.

Kapitalrejsning tilbage før covid

Biotech Industry Funding, 1998 to Present (\$ in billions)

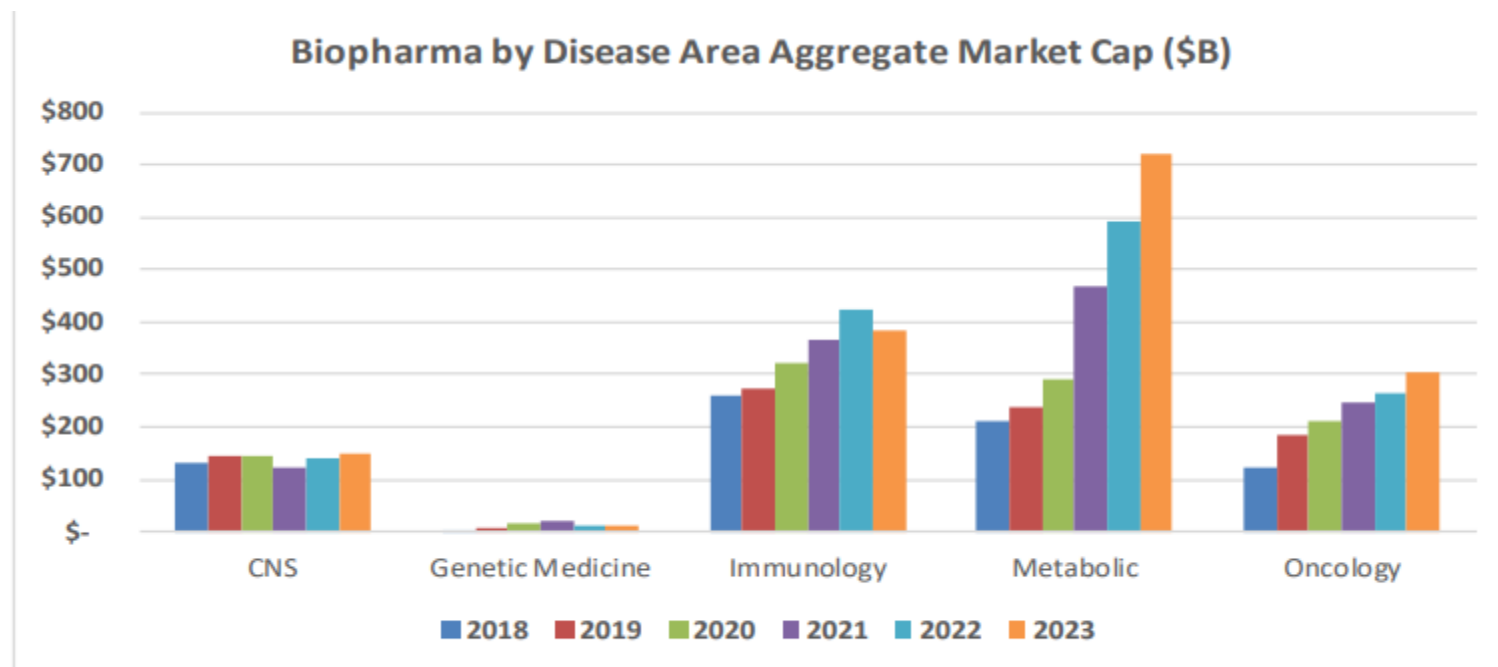


Sources: BioCentury, Inc. and William Blair Equity Research

Novo og Lilly løber fra alle

Pharma				
Ticker	Current			% Premium/ (Discount)
	P/E	10-yr Avg	Std Dev	
LLY	38.9x	22.3x	6.1x	75%
NVO	33.1x	22.4x	4.4x	48%
ABBV	14.5x	11.6x	2.6x	25%
AZN	19.0x	17.8x	3.3x	7%
MRK	15.2x	14.5x	1.8x	5%
AMGN	13.8x	13.9x	1.2x	-1%
JNJ	15.4x	16.3x	1.0x	-6%
PFE	11.4x	12.2x	1.7x	-7%
NVS	14.1x	15.3x	1.7x	-8%
SNY	12.2x	13.3x	1.3x	-9%
RHHBY	13.9x	15.7x	1.5x	-12%
BMY	8.6x	17.7x	8.8x	-51%
mean	17.5x	16.1x	2.9x	9%
median	14.3x	15.5x	1.7x	-8%

Novo og Lilly løber fra alle



Source: Evaluate, FactSet, Oppenheimer & Co.

Novo og Lilly løber fra alle, men...

Potential Drugs Under IRA in '26		Potential Drugs Under IRA in '27		Potential Drugs Under IRA in '28	
Eliquis	PFE	Ozempic / Rybelsus	NVO	Keytruda	MRK
Jardiance	LLY	Trelegy Ellipta	GSK	Biktarvy	GILD
Xarelto	JNJ	Tagrisso	AZN	Opdivo	BMY
Xtandi	PFE	Vraylar	ABBV	Orencia	BMY
Entresto	NVS	Creon	ABBV	Erleada	JNJ
Invega	JNJ	Linzess	ABBV	Kisqali	NVS
Spiriva	Private/Other	Calquence	AZN	Botox	ABBV
Ibrance	PFE	Verzenio	LLY	Fasenra	GSK
Enbrel	AMGN	Rexulti	OTSKY	Krystexxa	AMGN
Imbruvica	ABBV/JNJ	Breo Ellipta	GSK	Austedo	TEVA
		Cabometyx	EXEL	Descovy	GILD
		Lynparza	AZN/MRK	Genvoya	GILD
		Venclexta	ABBV	Adempas	BAYRY
		Anoro Ellipta	GSK	Tivicay	GSK
		Xifaxan	BHC	Triumeq	GSK

Source: Wells Fargo Securities, LLC Estimates

Novo og Lilly løber fra alle, men...

Potential Range of Medicare Costs for the Use of Antiobesity Medications.*							
Obesity Prevalence		Medication Users		Phentermine and Topiramate Cost		Semaglutide Cost	
Identification Method	People with Obesity (%)	People with Obesity Treated (%)	No. of Beneficiaries	Estimated Annual Total Cost (\$)	Percentage of Part D Net Spending	Estimated Annual Total Cost (\$)	Percentage of Part D Net Spending
Diagnosis in Medicare claims	21	1	99,568	66,710,261	0.05	1,355,910,952	0.94
		5	497,838	333,551,306	0.23	6,779,554,759	4.68
		10	995,676	667,102,612	0.46	13,559,109,517	9.35
		100	9,956,755	6,671,026,125	4.60	135,591,095,173	93.51
CDC estimate of adults 60 years of age or older	41.5	1	196,764	131,832,183	0.09	2,679,538,309	1.85
		5	983,822	659,160,915	0.45	13,397,691,547	9.24
		10	1,967,645	1,318,321,829	0.91	26,795,383,094	18.48
		100	19,676,445	13,183,218,294	9.09	267,953,830,938	184.80

....Medicares kasse bliver tømt, hvis alle overvægtige skal have fedmemedicin

Kilde: <https://www.nejm.org/doi/full/10.1056/NEJMp2300516>

XBI afkast-matrix

SPDR S&P Biotech ETF [NYFA] - Seasonality Matrix													
Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	2,58%	0,29%	-0,69%	0,73%	1,59%	3,48%	3,41%	-0,11%	-0,61%	-1,37%	4,07%	-0,03%	12,24%
2023	7,11%	-6,81%	-8,01%	5,24%	5,12%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	1,58%
2022	-16,69%	-3,80%	0,32%	-16,08%	-8,84%	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%	16,57%	5,38%	48,25%
2019	16,52%	6,63%	1,57%	-5,90%	-8,76%	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%	-3,36%	-0,54%	2,02%	43,39%
2016	-26,02%	-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%	15,58%	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%	17,58%	-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

NASDAQ Biotechnology [NSX] - Seasonality Matrix													
Periods	January	February	March	April	May	June	July	August	September	October	November	December	Full-year
Average	1,64%	-0,37%	0,06%	1,10%	0,70%	1,45%	4,05%	0,00%	0,25%	-1,06%	3,23%	0,20%	10,99%
2023	3,50%	-6,55%	1,23%	1,50%	-2,59%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-3,18%
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%	-5,38%	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%	-11,38%	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%	-7,18%	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%	15,87%	-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%
2004	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0%	0%

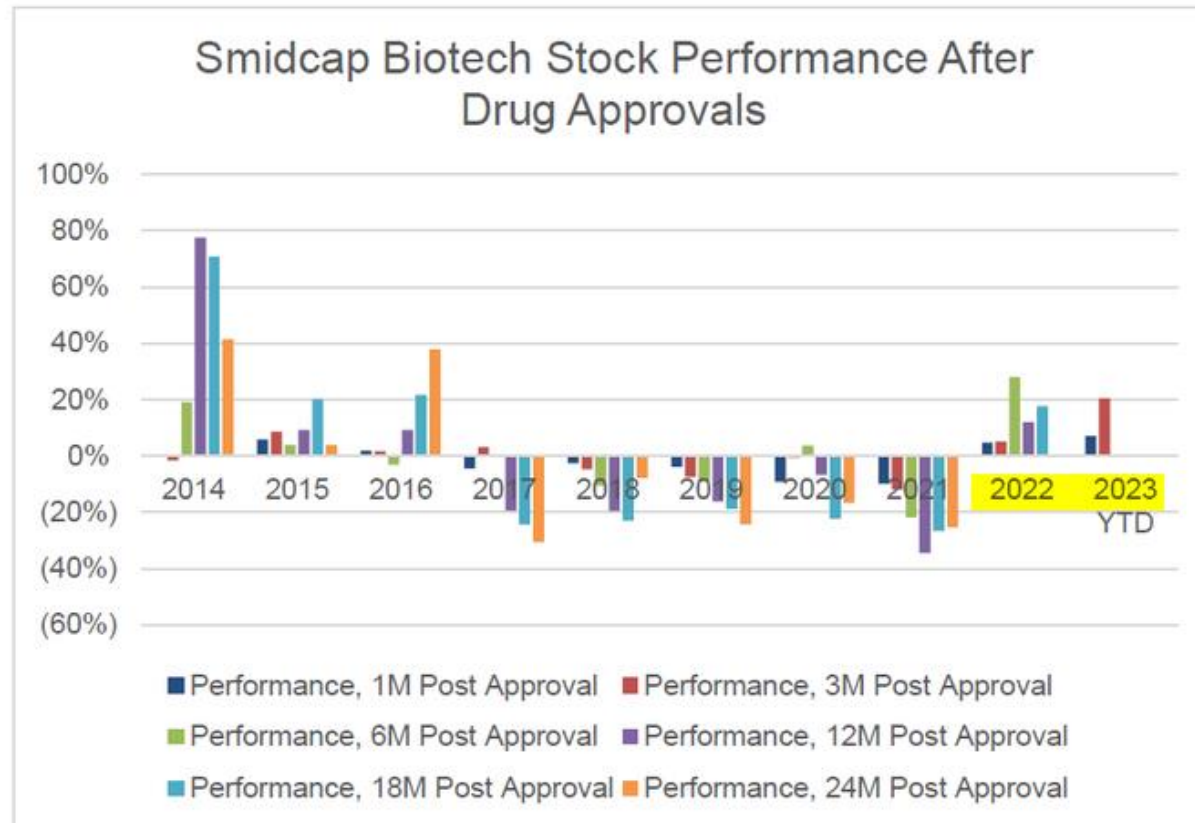
Noget positivt at slutte med? Juni er historisk en god biotech-måned

	XBI	IBB	S&P500	Δ
Jun-22	10%	2%	-8%	18%
Jun-21	7%	8%	2%	5%
Jun-20	8%	2%	1%	6%
Jun-19	10%	9%	7%	4%
Jun-18	-2%	0%	-1%	-1%
Jun-17	11%	7%	0%	11%
Jun-16	-7%	-8%	0%	-7%
Jun-15	6%	1%	-2%	8%
Jun-14	16%	7%	2%	14%
Jun-13	-6%	-3%	-2%	-5%
Average	5%	2%	0%	5%

Source: S&P CapIQ; priced as of 5/25/2023 after market close.

Noget positivt at slutte med?

Aktiekursen for small/midcap selskaber bliver belønnet for lægemiddelgodkendelser



Redningskransene – gælder stadig

- 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 høj kvalitet
- Kig på kassebeholdningen
- Emissioner → temperaturmåler på markedet
- Generalist-fonde på vej ind?

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

2023 – emissioner i fokus

- 2022: Cantargia, IRRAS, WNT, Biovica, Scandion, m.fl.
 - 2023: Immunovia, Alligator, Xspray, Prostatype Genomics, BioBergen, m.fl.

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

 - Udskilningsløb i gang mellem lav- og høj kvalitet eller store og små selskaber (alt andet lige)
- Skaber meget interessante indgangsmuligheder i de rette selskaber for nye investorer

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*



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BREAKTHROUGH BIOTECH
ISIN: DK0061813250

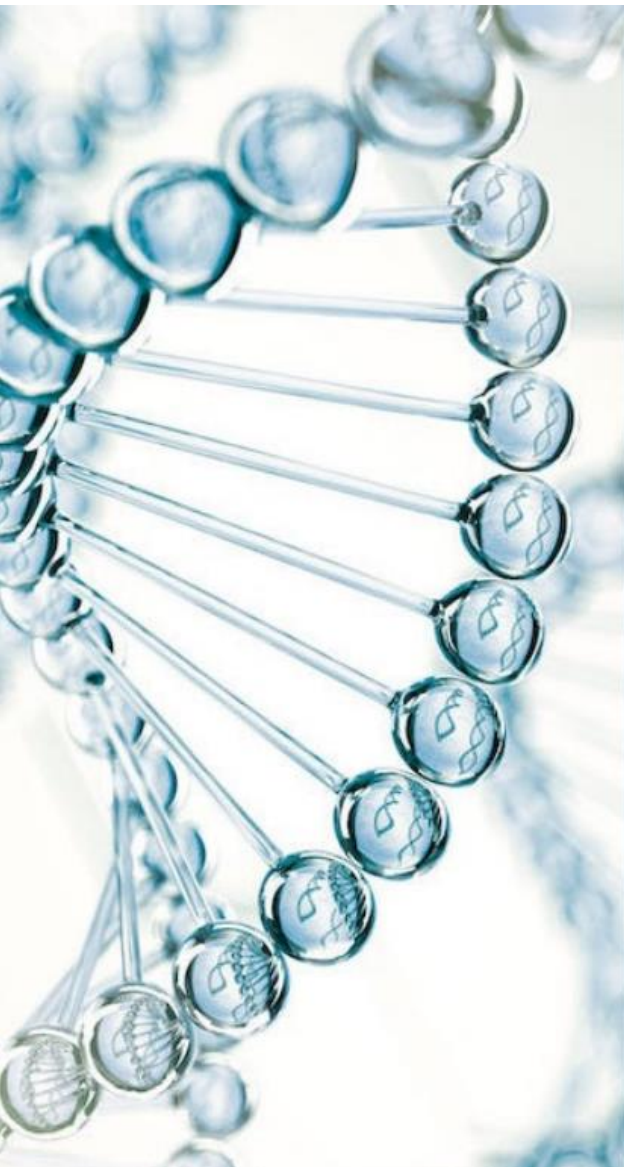


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DK0061813177

* 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.



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Advice Capital er en dansk investeringsrådgiver, som er etableret i 2009. Vi giver investorer en række muligheder for at investere i unikke og overlegne investeringsstrategier. Advice Capital Breakthrough Biotech investerer udelukkende i selskaber med Breakthrough Therapy Designation (BTD) eller Regenerative Medicine Advanced Therapy Designation (RMAT).

Tak for i dag!

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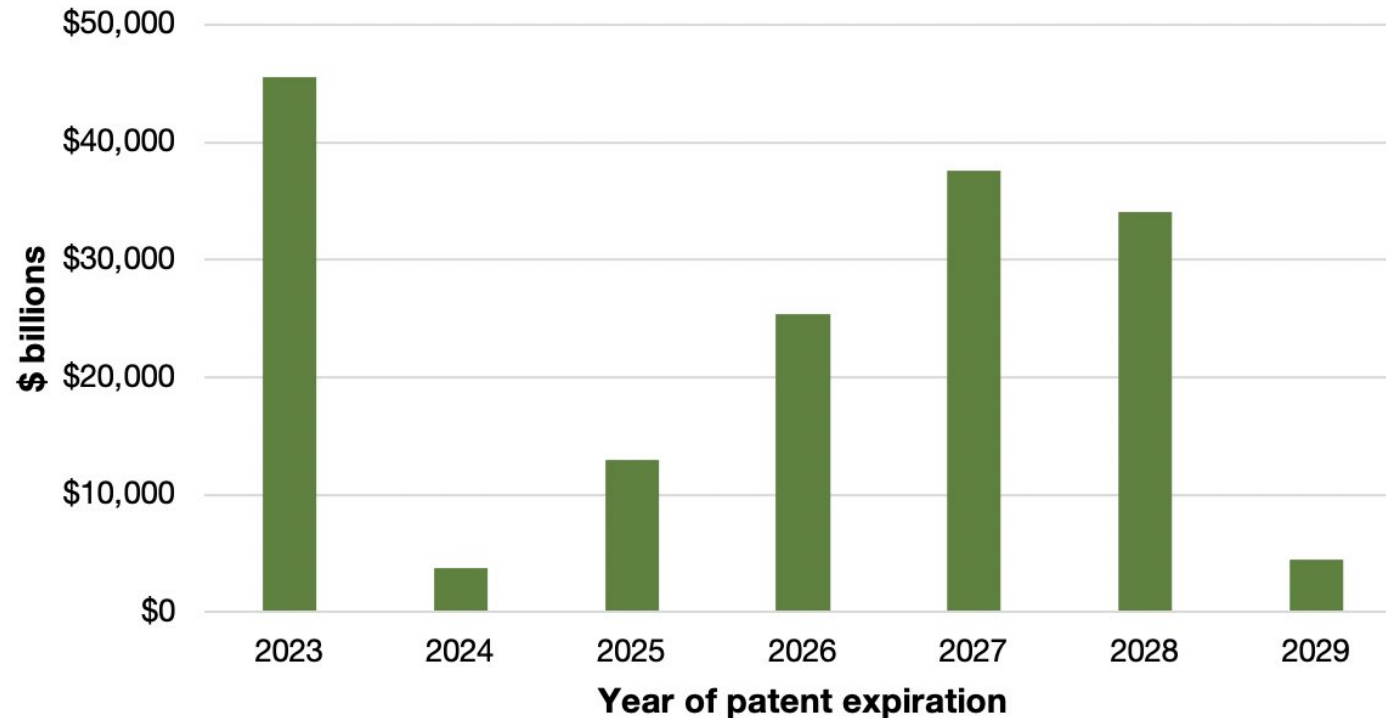
sa@ugebrev.dk

Patentudløb

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

Kilde: S&P Global

**Pharma drug patents expiring by year
(based off 2021 sales)**



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	Eliquis (\$15B)	MERCK	Keytruda (\$30B)
Johnson & Johnson	Stelara (\$10B)	AstraZeneca	Brilinta (\$1.4B)	Bristol Myers Squibb	Yervoy (\$3B)	EXELIXIS IPSEN <small>innovation for patient care</small>	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

@andrewpannu