

Initial Public Offerings: Biopharma (Biotech and Pharma) IPOs Through 2020

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Table 4b: Profitability and Median Sales of Technology and Biotech IPOs, 1980-2020

Table 4g: Biotech IPOs (Median age, Mean underpricing, # with sales>0, # with EPS>0), 1980-2020

Table 4b (updated December 28, 2020)

Technology and Biotechnology (Biopharma) Company IPOs, 1980-2020

There are 3,176 tech and 911 biotech IPOs from 1980-2020, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, partnerships, acquisition companies, REITs, bank and S&L IPOs, and firms not listed on CRSP. Biotech includes pharmaceutical firms.

Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006. Tech stocks are defined as internet-related stocks plus other technology stocks including telecom, but not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes that I created: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions. I have also added the S.E.C.'s computer communications equipment code of 3576 for 21 companies, including Cisco Systems.

Biotech is defined as SIC=2830, 2833, 2834, 2835, 2836, and 8731.

Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, are expressed in dollars of 2014 purchasing power using the CPI. Pro forma numbers are usually used if there have been recent mergers or mergers that coincide with the IPO. The percentage of IPOs that are profitable measures profitability using trailing LTM earnings (usually using after extraordinary items earnings, and usually using pro forma numbers that are computed assuming that any recent or concurrent mergers have already occurred, and the conversion of convertible preferred stock into common stock). In some cases, last fiscal year earnings are used when LTM earnings are unavailable.

(table on the next page)

Year	Number of IPOs			% Profitable			Median sales (\$2014, millions)		
	Tech	Biotech	Other	Tech	Biotech	Other	Tech	Biotech	Other
1980	22	3	46	91%	67%	70%	48.8	17.1	64.4
1981	72	10	110	88%	30%	85%	34.8	4.1	36.1
1982	42	2	33	83%	50%	79%	26.2	3.3	24.9
1983	173	21	257	71%	43%	86%	20.6	6.1	73.9
1984	50	2	119	80%	100%	85%	22.4	113.4	57.9
1985	37	5	144	84%	40%	87%	29.7	10.4	88.5
1986	77	25	291	74%	32%	84%	27.8	9.0	79.2
1987	59	11	215	86%	18%	85%	37.4	5.9	92.6
1988	28	2	75	79%	0%	85%	48.5	8.2	191.1
1989	35	4	77	77%	0%	82%	60.9	2.2	101.7
1990	32	4	74	94%	0%	87%	52.5	3.8	107.3
1991	71	33	182	75%	15%	88%	60.2	5.7	129.1
1992	115	33	264	65%	18%	80%	38.0	2.2	118.1
1993	127	28	355	74%	21%	75%	44.3	2.6	100.7
1994	115	20	267	70%	20%	80%	33.6	2.6	89.1
1995	205	22	235	71%	14%	75%	33.3	4.2	98.9
1996	276	47	354	47%	17%	73%	25.2	3.9	82.7
1997	174	22	278	50%	14%	77%	31.1	8.2	93.0
1998	113	12	156	36%	42%	69%	32.0	18.9	104.1
1999	370	11	95	14%	27%	63%	17.2	16.9	162.9
2000	260	56	64	14%	11%	50%	16.6	5.5	164.9
2001	23	6	51	30%	0%	66%	32.9	0.2	475.3
2002	20	5	41	40%	40%	63%	125.8	189.7	569.9
2003	18	8	37	39%	0%	76%	111.0	0.1	519.1
2004	61	30	82	44%	7%	70%	70.1	4.4	250.2
2005	45	16	98	36%	13%	70%	83.5	15.2	266.3
2006	48	24	85	50%	8%	80%	67.9	4.0	393.3
2007	76	19	64	30%	5%	73%	79.8	1.6	268.8
2008	6	1	14	67%	0%	57%	173.6	0.3	223.6
2009	14	3	24	71%	67%	71%	193.1	41.7	498.2
2010	33	11	47	64%	0%	70%	129.0	0.0	348.6
2011	36	8	37	36%	0%	59%	150.1	3.3	343.4
2012	40	10	43	43%	0%	77%	117.1	0.5	353.3
2013	45	41	72	27%	10%	58%	107.5	10.9	432.1
2014	51	74	81	16%	7%	57%	88.7	0.0	271.0
2015	38	42	38	26%	0%	66%	130.9	0.0	171.3
2016	21	25	29	29%	8%	59%	108.2	0.9	645.4
2017	30	32	44	17%	0%	42%	181.5	0.0	429.5
2018	39	58	37	15%	0%	51%	169.1	0.0	445.7
2019	37	48	27	30%	2%	50%	182.8	0.0	149.1
2020	42	77	45	19%	5%	47%	187.5	0.0	265.6
2001-20	723	538	996	34%	5%	65%	108.2	0.0	341.5
1980-2020	3,176	911	4,687	49%	12%	76%	37.5	2.6	112.6

Table 4g (updated December 28, 2020)

Biotechnology (Biopharma) Company IPOs, 1980-2020

IR is the initial return (underpricing), measured as the equally weighted average of the first-day return from the offer price to close. There are 911 biotech IPOs from 1980-2020, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, partnerships, special purpose acquisition companies (SPACs), REITs, bank and S&L IPOs, and firms not listed on CRSP. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006.

Biotech includes pharmaceutical firms. Biotech is defined as SIC=2830, 2833, 2834, 2835, 2836, and 8731, but .

Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, are expressed in dollars of 2014 purchasing power using the CPI. Pro forma numbers are usually used if there have been recent mergers or mergers that coincide with the IPO. The percentage of IPOs that are profitable measures profitability using trailing LTM earnings (usually using after extraordinary items earnings, and usually using pro forma numbers that are computed assuming that any recent or concurrent mergers have already occurred, and the conversion of convertible preferred stock into common stock). In some cases, last fiscal year earnings are used when LTM earnings are unavailable. EPS is earnings per share. Age is the median age in years, defined as the calendar year of the IPO minus the calendar year of founding.

Many of the biotech companies with positive sales have research contracts producing revenue, rather than product sales.

(table on the next page)

Year	Number of IPOs		Biotech IR,%	Biotech IPOs		Biotech sales (\$2014, millions)		
	Total	Biotech		EPS>0	Age	# zero	% zero	Median
1980	71	3	44.3%	67%	4	0	0.0%	17.1
1981	192	10	14.1%	30%	4.5	2	20.0%	4.1
1982	77	2	16.0%	50%	2	0	0.0%	3.3
1983	451	21	6.2%	43%	3	1	4.8%	6.1
1984	171	2	0.0%	100%	16	0	0.0%	113.4
1985	186	5	2.4%	40%	3	1	20.0%	10.4
1986	393	25	10.1%	32%	5	0	0.0%	9.0
1987	285	11	6.0%	18%	4	0	0.0%	5.9
1988	105	2	-1.6%	0%	9	1	50.0%	8.2
1989	116	4	3.8%	0%	5.5	0	0.0%	2.2
1990	110	4	0.8%	0%	4	2	50.0%	3.8
1991	286	33	12.6%	15%	4	3	9.1%	5.7
1992	412	33	9.9%	18%	5	6	18.2%	2.2
1993	510	28	7.4%	21%	5	3	10.7%	2.6
1994	402	20	3.4%	20%	7.5	3	20.0%	2.6
1995	462	22	6.7%	14%	5	5	22.7%	4.2
1996	677	47	11.4%	17%	4	7	14.9%	3.9
1997	474	22	8.3%	14%	6	3	13.6%	8.2
1998	281	12	7.1%	42%	7	0	0.0%	18.9
1999	476	11	30.5%	27%	8	1	9.1%	16.9
2000	380	56	33.4%	11%	6	11	19.6%	5.5
2001	80	6	9.6%	0%	5	3	50.0%	0.2
2002	66	5	-4.9%	40%	9	0	0.0%	189.7
2003	63	8	2.6%	0%	6	4	62.5%	0.1
2004	173	30	7.8%	7%	7	6	20.0%	4.4
2005	159	16	8.0%	13%	6	1	6.3%	15.2
2006	157	24	4.2%	8%	8	4	16.7%	4.0
2007	159	19	2.2%	5%	8	8	42.1%	1.6
2008	21	1	-5.7%	0%	9	0	0.0%	0.3
2009	41	3	1.3%	67%	14	0	0.0%	41.7
2010	91	11	0.9%	0%	6	6	54.5%	0.0
2011	81	8	6.4%	0%	5.5	3	37.5%	3.3
2012	93	10	7.8%	0%	7	5	50.0%	0.5
2013	158	41	19.5%	10%	10	12	29.3%	10.9
2014	206	74	13.3%	7%	9	40	54.1%	0.0
2015	118	42	22.9%	0%	6.5	26	61.9%	0.0
2016	75	25	7.0%	8%	6	8	32.0%	0.9
2017	106	32	7.0%	0%	6.5	23	71.9%	0.0
2018	134	58	14.2%	0%	4	37	63.8%	0.0
2019	112	48	20.2%	2%	5	33	68.8%	0.0
2020	165	77	36.9%	5%	6	49	63.6%	0.0
2001-20	2,258	538	15.8%	5%	7	268	49.8%	0.1
1980-2020	8,775	911	14.8%	12%	6	317	34.8%	2.2