

# **Initial Public Offerings: Sales Statistics Through 2023**

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**Table 2** (updated January 1, 2024)**Mean First-day Returns, Categorized by Sales, for IPOs from 1980-2023**

Sales, measured in millions, are for the last twelve months prior to going public. All sales have been converted into dollars of 2003 purchasing power, using the Consumers Price Index. From January 2003 to January 2023, the CPI has increased by 63%, so \$10 million in 2003 is equivalent to \$16.3 million in 2023. There are 9,180 IPOs, after excluding IPOs with an offer price of less than \$5.00 per share, units, REITs, SPACs, ADRs, closed-end funds, banks and S&Ls, small best efforts offers, firms not listed on CRSP within six months of the offering, and natural resource limited partnerships. Sales are from Thomson Financial's SDC, EDGAR, and the Graeme Howard-Todd Huxster collection of pre-EDGAR prospectuses. The average first-day return is 18.9%.

	1980-1989		1990-1998		1999-2000		2001-2023	
	Return	N	Return	N	Return	N	Return	N
0≤sales<\$10m	10.3%	425	17.4%	742	68.7%	332	21.0%	721
\$10m≤sales<\$20m	8.6%	242	18.5%	395	81.4%	138	20.2%	109
\$20m≤sales<\$50m	7.8%	500	18.8%	789	75.5%	154	20.2%	272
\$50m≤sales<\$100m	6.3%	356	12.8%	590	62.9%	85	22.3%	358
\$100m≤sales<\$200m	5.1%	234	11.8%	454	35.8%	56	22.7%	319
\$200m≤sales	3.4%	290	8.7%	646	25.0%	91	13.9%	880
All	7.2%	2,047	14.8%	3,616	64.6%	856	18.9%	2,662

**Table 4a (updated December 22, 2023)**

**Technology Company IPOs, 1980-2023 including Direct Listings**

There are 3,320 IPOs and 9 direct listings that are tech stocks, for a total of 3,329 listings, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, natural resource limited partnerships (and most other LPs, but not buyout firms such as Carlyle Group), acquisition companies, 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. 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, 3844, 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 have made up: 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.

For the column with VC-backed IPOs, there are 3,707 IPOs including both technology and non-technology companies.

Total proceeds are nominal and do not include overallotment shares, and are zero for direct listings. Price-to-sales ratios are computed using both the offer price (OP) and the first closing market price (MP) for computing the market capitalization of equity. Market cap is calculated using the post-issue shares outstanding, with all share classes included in the case of dual-class companies. The undiluted number of shares is used, which in some cases (e.g., Facebook, Twitter, and Castlight Health) understates the market cap due to the existence of substantial amounts of in-the-money employee stock options that are highly likely to be exercised. Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, is expressed in both nominal dollars and in dollars of 2014 purchasing power using the CPI. The median age, in years, is the number of years since the calendar year of the founding date and the calendar year of 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.

Even concepts like market cap (for the price-to-sales ratios) become ambiguous when you realize that companies like Facebook have many deep in-the-money options outstanding, so whether you use the fully diluted number of shares or the undiluted number can affect the calculations substantially for some companies.

(table on the next page)

Year	Number of Tech IPOs	Proceeds in \$millions		Median Price-to-sales		Median sales, \$mm		Median age	% profitable
		VC-backed	Technology	OP	MP	Nominal	\$2014		
1980	22	388	378	3.4	3.8	16.2	48.8	6.5	91%
1981	72	648	838	3.5	3.6	12.9	34.8	9	88%
1982	42	490	648	4.2	4.5	10.5	26.2	5	83%
1983	173	2,798	3,271	5.9	6.6	8.6	20.6	6	71%
1984	50	614	551	2.4	2.5	9.8	22.4	6.5	80%
1985	37	667	375	2.3	2.4	13.4	29.7	7	84%
1986	77	1,558	1,217	3.4	3.6	13.0	27.8	6	74%
1987	59	1,315	1,330	3.2	3.2	17.8	37.4	5	86%
1988	28	674	888	3.0	3.4	24.0	48.5	5.5	79%
1989	35	869	748	3.4	4.0	31.5	60.9	6	77%
1990	32	1,085	764	3.6	4.0	28.6	52.5	8.5	94%
1991	71	3,887	2,760	3.2	3.6	34.6	60.0	9	75%
1992	115	4,970	5,875	3.5	3.7	22.4	38.0	8	65%
1993	127	5,929	5,715	3.0	3.6	27.0	44.3	8	74%
1994	115	3,691	3,583	3.7	4.2	21.0	33.7	9	70%
1995	205	7,165	9,786	4.6	5.8	21.4	33.3	8	71%
1996	276	11,681	16,256	6.8	8.2	16.7	25.2	7	47%
1997	174	5,016	7,479	5.2	5.7	21.2	31.1	8	50%
1998	113	4,037	8,118	8.8	11.9	22.1	32.0	7	36%
1999	370	22,298	33,512	26.5	43.0	12.1	17.2	4	14%
2000	261	23,598	42,537	31.7	49.5	12.0	16.6	5	14%
2001	24	2,658	5,833	8.1	13.4	24.6	32.9	9	30%
2002	20	1,956	2,587	2.9	3.1	95.2	125.8	9	40%
2003	18	1,824	2,242	3.5	4.0	86.2	111.0	8.5	39%
2004	61	7,183	9,064	6.4	7.1	55.5	70.1	8	44%
2005	45	3,458	6,993	4.5	4.5	68.0	83.5	9	36%
2006	48	4,860	4,873	5.5	6.3	57.6	67.9	9	50%
2007	76	10,566	12,572	6.5	7.8	71.2	79.8	8	30%
2008	6	863	1,194	4.9	5.7	156.7	173.6	14	67%
2009	14	1,697	4,126	3.0	3.6	174.3	193.1	11	71%
2010	33	4,038	4,347	3.4	3.9	119.5	129.0	11	64%
2011	36	8,764	9,412	6.1	6.6	141.3	150.1	10	36%
2012	40	21,096	20,887	4.5	5.0	113.4	117.1	9.5	43%
2013	45	11,935	8,662	5.3	6.1	105.8	107.5	9	27%
2014	53	18,542	9,965	6.1	6.8	90.5	90.5	11	17%
2015	38	9,890	10,087	5.3	6.2	130.8	130.9	11	26%
2016	21	6,181	2,510	4.2	4.3	109.5	108.2	10	29%
2017	30	11,269	7,844	5.0	6.3	188.4	181.5	13	17%
2018	40	16,706	12,246	7.6	11.3	182.1	171.8	12	15%
2019	38	27,534	22,881	8.1	10.6	205.8	191.3	11	29%
2020	48	41,423	29,557	13.6	21.8	211.2	191.7	12	20%
2021	126	72,300	59,375	15.2	17.8	207.7	185.8	12	22%
2022	6	1,681	1,163	5.6	6.0	92.7	77.5	15	33%
2023	9	4,351	1,925	13.6	13.6	6.5	5.1	6	33%
<b>1980-2023</b>	<b>3,329</b>	<b>394,859</b>	<b>396,974</b>	<b>6.1</b>	<b>7.4</b>	<b>24.3</b>	<b>39.4</b>	<b>8</b>	<b>47%</b>

**Table 4b** (updated January 1, 2024)

**Technology and Life Science Company IPOs, 1980-2023**

There are 3,320 tech and 1,000 life science IPOs from 1980-2023, 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. Life science includes biotech and pharmaceutical firms. Life science is defined as SIC=2830, 2834, 2835, 2836, and 8731. In prior years, I had included 2833 (medical chemicals and botanical products) as well, but I am not including this industry in life science since in recent years it has been mainly cannabis-related companies.

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.

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.

Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, are expressed in dollars of 2022 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 (\$2022, mm)		
	Tech	Life Sci	Other	Tech	Life Sci	Other	Tech	Life Sci	Other
1980	22	3	46	91%	67%	70%	58.6	20.5	77.3
1981	72	10	110	88%	30%	85%	41.8	4.9	43.3
1982	42	2	33	83%	50%	79%	31.4	4.0	29.9
1983	173	21	257	71%	42%	86%	24.8	7.4	88.8
1984	50	2	119	80%	100%	85%	27.0	136.3	69.5
1985	37	5	144	84%	40%	87%	35.7	12.5	106.3
1986	77	23	293	74%	35%	84%	33.4	10.8	95.2
1987	59	10	216	86%	20%	85%	45.0	7.8	110.9
1988	28	2	75	79%	0%	85%	58.3	9.9	229.7
1989	35	4	77	77%	0%	82%	73.2	2.7	122.2
1990	32	4	74	94%	0%	87%	63.0	4.5	129.0
1991	71	32	183	75%	16%	88%	72.3	7.0	154.8
1992	115	33	264	65%	18%	80%	45.6	2.6	142.0
1993	127	27	356	74%	22%	75%	53.2	3.0	120.2
1994	115	20	267	70%	20%	80%	40.4	3.2	107.1
1995	205	21	236	71%	14%	75%	40.0	5.8	118.8
1996	276	44	357	47%	14%	73%	30.3	4.1	99.4
1997	174	22	278	50%	14%	77%	37.4	9.9	111.7
1998	113	10	160	36%	30%	69%	38.5	13.4	123.8
1999	370	10	96	14%	20%	63%	20.7	10.1	194.1
2000	261	50	69	14%	12%	50%	20.2	6.6	153.2
2001	24	5	51	30%	0%	66%	38.1	0.3	571.2
2002	20	5	41	40%	40%	63%	151.2	228.0	684.8
2003	18	8	37	39%	0%	76%	160.4	0.1	623.8
2004	61	30	82	44%	7%	70%	84.3	5.3	300.6
2005	45	16	98	36%	13%	70%	100.3	18.2	320.0
2006	48	24	85	50%	8%	80%	81.7	4.8	472.6
2007	76	19	64	30%	5%	73%	95.9	1.9	323.0
2008	6	1	14	67%	0%	57%	208.7	0.4	268.7
2009	14	3	24	71%	67%	71%	232.1	50.1	598.8
2010	33	11	47	64%	0%	70%	155.1	0.0	419.0
2011	36	8	37	36%	0%	59%	180.4	4.0	412.6
2012	40	10	43	43%	0%	77%	140.7	0.5	424.6
2013	45	40	73	27%	7%	58%	129.2	11.9	507.1
2014	53	71	82	17%	7%	57%	108.8	0.0	286.2
2015	38	42	38	26%	0%	66%	157.4	0.0	205.8
2016	21	25	29	29%	8%	59%	130.1	1.1	775.6
2017	30	32	44	17%	0%	42%	218.2	0.0	516.2
2018	39	59	36	15%	0%	51%	203.3	0.0	536.2
2019	37	42	27	30%	0%	50%	219.7	0.0	121.5
2020	46	76	43	22%	5%	47%	220.0	0.0	311.5
2021	121	89	101	22%	2%	49%	202.4	0.0	325.4
2022	6	16	16	33%	0%	38%	92.7	0.0	7.2
2023	9	13	32	33%	0%	48%	6.2	0.0	20.4
2001-23	866	645	1,151	32%	4%	62%	134.6	0.0	371.3
<b>1980-23</b>	<b>3,320</b>	<b>1,000</b>	<b>4,861</b>	<b>47%</b>	<b>10%</b>	<b>75%</b>	<b>46.9</b>	<b>1.4</b>	<b>135.2</b>

**Table 4g** (updated January 1, 2024)

**Life Science Company IPOs, 1980-2023**

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 1,000 biotech IPOs from 1980-2023, 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.

Life science includes biotech and pharmaceutical firms, defined as SIC=2830, 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 2022 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		Life Sci IR,%	Life Science IPOs		Life Sci sales (\$2022, millions)		
	Total	Life Sci		EPS>0	Age	# zero	% zero	Median
1980	71	3	44.3%	67%	4	0	0.0%	20.5
1981	192	10	14.1%	30%	4.5	2	20.0%	4.9
1982	77	2	16.0%	50%	2	0	0.0%	4.0
1983	451	21	6.2%	42%	3	1	4.8%	7.4
1984	171	2	0.0%	100%	16	0	0.0%	136.3
1985	186	5	2.4%	40%	3	1	20.0%	12.5
1986	393	23	7.0%	35%	5	0	0.0%	10.8
1987	285	10	5.1%	20%	4	0	0.0%	7.8
1988	105	2	-1.6%	0%	9	1	50.0%	9.9
1989	116	4	3.8%	0%	6	0	0.0%	2.7
1990	110	4	0.8%	0%	4	2	50.0%	4.5
1991	286	32	12.8%	16%	4	3	9.4%	7.0
1992	412	33	9.9%	18%	5	6	18.2%	2.6
1993	510	27	7.7%	22%	5	3	11.1%	3.0
1994	402	20	3.4%	20%	7.5	3	15.0%	3.2
1995	462	21	6.6%	14%	5	5	23.8%	5.8
1996	677	44	12.2%	14%	4	7	15.9%	4.1
1997	474	22	8.3%	14%	6	3	13.6%	9.9
1998	283	10	6.2%	30%	7	0	0.0%	13.4
1999	476	10	31.8%	20%	5.5	1	10.0%	10.1
2000	380	50	31.9%	12%	6	10	20.0%	6.6
2001	80	5	10.7%	0%	5	2	40.0%	0.3
2002	66	5	-4.9%	40%	9	0	0.0%	228.0
2003	63	8	2.6%	0%	6	4	50.0%	0.1
2004	173	30	7.8%	7%	7	6	20.0%	5.3
2005	159	16	8.0%	13%	6	1	6.3%	18.2
2006	157	24	4.2%	8%	8	4	16.7%	4.8
2007	159	19	2.2%	5%	8	8	42.1%	2.0
2008	21	1	-5.7%	0%	9	0	0.0%	0.4
2009	41	3	1.3%	67%	14	0	0.0%	50.0
2010	91	11	0.9%	0%	6	6	54.5%	0.0
2011	81	8	6.4%	0%	5.5	3	37.5%	4.0
2012	93	10	7.8%	0%	7	5	50.0%	0.5
2013	158	40	19.3%	7%	10	12	30.0%	11.9
2014	206	71	13.8%	7%	10	38	53.5%	0.0
2015	118	42	22.9%	0%	7	26	61.9%	0.0
2016	75	25	7.0%	8%	8	8	32.0%	1.1
2017	106	32	7.0%	0%	6.5	23	71.9%	0.0
2018	134	59	13.8%	0%	5	39	66.1%	0.0
2019	113	42	21.7%	0%	4	33	78.6%	0.0
2020	165	76	37.6%	5%	6	49	64.5%	0.0
2021	311	89	24.4%	2%	5	55	61.8%	0.0
2022	38	16	49.4%	0%	4	13	81.3%	0.0
2023	54	13	5.4%	0%	4	10	76.9%	0.0
2001-23	2,662	645	17.7%	4%	7	345	53.5%	0.0
<b>1980-2023</b>	<b>9,181</b>	<b>1,000</b>	<b>15.9%</b>	<b>10%</b>	<b>6</b>	<b>393</b>	<b>39.3%</b>	<b>1.4</b>



**Table 4i** (updated January 1, 2024)

**VC-backed Tech IPOs, 1980-2023**

There are 1,996 Venture Capital-backed tech IPOs, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, best effort offers, natural resource limited partnerships (and most other LPs, but not buyout firms such as Carlyle Group), special purpose acquisition companies (SPACs), direct listings, 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. 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, 3844, 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 have made up: 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.

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Even concepts like market cap (for the price-to-sales ratios) become ambiguous when you realize that companies like Facebook have many deep in-the-money options outstanding, so whether you use the fully diluted number of shares or the undiluted number can affect the calculations substantially for some companies.

(table on the next page)

Year	Number of VC-backed tech IPOs	Median Price-to-sales		Median sales, \$mm		Median age	% profitable
		OP	MP	Nominal	\$2021		
1980	14	3.0	3.4	16.9	56.9	6.5	93%
1981	29	3.8	4.3	11.9	35.8	9	90%
1982	15	6.1	7.6	18.9	52.6	3	67%
1983	67	7.2	8.1	11.7	31.2	5	66%
1984	26	2.3	2.3	21.9	56.1	5	81%
1985	16	3.0	3.3	17.1	42.5	5	81%
1986	31	4.3	4.7	17.0	40.6	5	71%
1987	39	3.2	3.2	22.0	51.7	5	87%
1988	17	2.6	2.7	28.2	63.7	6	94%
1989	23	3.4	3.7	35.5	76.7	7	83%
1990	24	3.9	4.5	28.6	58.6	7.5	100%
1991	45	3.2	3.5	35.9	69.8	9	71%
1992	67	3.9	4.4	22.0	41.7	7	61%
1993	88	3.1	3.6	24.3	44.6	8	72%
1994	64	4.3	5.2	18.9	33.8	8	66%
1995	115	5.5	6.9	19.7	34.3	8	70%
1996	154	9.8	11.3	14.3	24.2	7	35%
1997	73	6.9	8.3	19.3	31.7	6	38%
1998	55	11.6	14.8	18.8	30.4	6	22%
1999	250	30.9	56.6	11.0	17.6	4	9%
2000	183	41.4	65.7	9.3	14.4	5	6%
2001	17	14.9	17.4	22.8	34.1	6	12%
2002	13	3.5	3.9	87.3	128.9	6	31%
2003	12	5.2	6.1	65.0	93.6	7	50%
2004	40	6.9	7.9	41.0	57.9	7	30%
2005	22	6.4	7.2	46.5	63.8	7.5	23%
2006	27	6.2	8.1	51.2	67.6	8	52%
2007	58	7.3	8.3	66.5	83.2	8	26%
2008	4	4.1	4.7	156.7	194.1	12	50%
2009	6	4.6	5.8	105.7	130.9	9.5	50%
2010	23	3.2	3.9	112.9	136.2	10	61%
2011	30	6.8	7.2	117.2	139.2	9.5	37%
2012	35	4.6	5.0	103.7	119.7	9	37%
2013	35	5.8	7.1	104.2	118.3	9	17%
2014	40	6.5	8.2	86.8	97.1	10	18%
2015	29	6.0	7.5	76.6	85.7	10	21%
2016	15	4.5	5.9	101.7	112.3	9	27%
2017	24	5.0	6.9	158.4	170.6	13	13%
2018	30	8.6	12.4	173.6	183.1	12	13%
2019	26	9.8	13.7	146.6	152.4	10.5	15%
2020	33	15.7	27.2	201.3	204.1	11	18%
2021	77	20.3	26.6	136.4	136.4	11	16%
2022	1	20.6	24.0	70.4	65.5	14	0%
2023	4	12.7	13.5	243.8	214.5	8.5	25%
<b>1980-2023</b>	<b>1,996</b>	<b>7.6</b>	<b>9.7</b>	<b>24.0</b>	<b>43.8</b>	<b>7</b>	<b>39%</b>

**Table 12** (updated January 1, 2024)  
**Number of IPOs Categorized by the LTM Sales (in millions of 2005 \$), 1980-2023**

LTM is last twelve months. MV is the post-issue market value valued at **the offer price**. Sales and market value are in millions. PSR is the price-to-sales ratio, and is the median ratio, not the ratio of medians.

Year	Number of IPOs		Percentage of IPOs		Medians, \$2005		
	<\$50 mm	>\$50 mm	<\$50 mm	>\$50mm	Sales	MV	PSR
1980	38	33	54%	46%	44	74	2.2
1981	140	52	73%	27%	28	72	2.9
1982	54	23	70%	30%	21	65	3.0
1983	286	165	63%	37%	28	88	2.8
1984	99	72	58%	42%	39	53	1.6
1985	95	91	51%	49%	46	68	1.3
1986	199	194	51%	49%	49	77	1.5
1987	137	148	48%	52%	53	96	1.5
1988	44	61	42%	58%	83	116	1.5
1989	49	67	42%	58%	60	111	2.0
1990	44	66	40%	60%	56	124	2.0
1991	118	168	41%	59%	69	127	1.6
1992	191	221	46%	54%	58	119	1.8
1993	230	280	45%	55%	61	115	1.9
1994	214	188	53%	47%	47	92	1.8
1995	258	204	56%	44%	39	134	3.0
1996	411	266	61%	39%	32	137	3.9
1997	273	201	58%	42%	41	133	3.0
1998	148	135	52%	48%	47	187	3.4
1999	342	134	72%	28%	19	361	18.4
2000	279	101	73%	27%	14	460	30.1
2001	25	54	31%	69%	146	479	2.3
2002	16	50	24%	76%	263	517	2.1
2003	14	49	22%	78%	173	370	2.7
2004	70	103	40%	60%	87	298	3.8
2005	46	113	29%	71%	133	360	2.6
2006	54	103	34%	66%	105	325	3.8
2007	59	100	37%	63%	81	373	6.1
2008	4	17	19%	81%	172	375	4.0
2009	4	37	10%	90%	239	517	1.8
2010	22	69	24%	76%	132	355	2.7
2011	24	57	30%	70%	131	614	4.9
2012	19	74	20%	80%	126	377	3.4
2013	58	100	37%	63%	94	441	5.0
2014	98	108	48%	52%	60	286	7.2
2015	60	58	51%	49%	46	403	9.8
2016	34	41	45%	55%	65	422	5.0
2017	47	59	45%	55%	90	470	6.2
2018	71	63	53%	47%	33	398	12.8
2019	58	55	51%	49%	46	428	14.4
2020	96	69	58%	42%	21	572	23.5
2021	140	171	45%	55%	79	852	18.4
2022	29	9	76%	24%	0.6	179	233
2023	36	18	67%	33%	10	272	27.2
<b>1980-2023</b>	<b>4,733</b>	<b>4,449</b>	<b>51%</b>	<b>49%</b>	<b>25.9</b>	<b>141</b>	<b>5.4</b>

**Table 12a (updated January 1, 2024)**  
**Number of IPOs Categorized by the LTM Sales (in 2005 \$), 1980-2023**

MV is the post-issue market value valued at the **first closing price**. Sales and MV are in millions. PSR is the price-to-sales ratio. There has been 46.8% CPI inflation since 2005, and thus the cutoff would be \$73.4 million in 2022 dollars.

Year	Number of IPOs		Percentage of IPOs		Medians, \$2005		
	<\$50 mm	>\$50 mm	<\$50 mm	>\$50 mm	Sales	MV	PSR
1980	38	33	54%	46%	44	83	2.5
1981	140	52	73%	27%	28	77	2.9
1982	54	23	70%	30%	21	68	3.1
1983	286	165	63%	37%	28	93	3.2
1984	99	73	58%	42%	39	54	1.6
1985	95	92	51%	49%	46	69	1.5
1986	199	194	51%	49%	49	78	1.6
1987	137	148	48%	52%	53	99	1.6
1988	44	60	42%	58%	83	126	1.6
1989	49	67	42%	58%	60	122	2.4
1990	44	66	40%	60%	56	131	2.2
1991	118	168	41%	59%	69	144	1.8
1992	191	221	46%	54%	58	133	2.0
1993	230	280	45%	55%	61	124	2.1
1994	214	188	53%	47%	47	98	2.1
1995	258	204	56%	44%	39	161	3.5
1996	411	266	61%	39%	32	158	4.5
1997	273	201	58%	42%	41	149	3.4
1998	148	135	52%	48%	47	223	3.6
1999	342	134	72%	28%	19	551	30.3
2000	279	101	73%	27%	14	641	40.9
2001	25	55	31%	69%	146	507	2.8
2002	16	50	24%	76%	263	560	2.3
2003	14	49	22%	78%	173	392	2.7
2004	70	103	40%	60%	87	352	4.2
2005	46	113	29%	71%	133	347	2.7
2006	54	103	34%	66%	105	353	3.9
2007	59	100	37%	63%	83	457	6.7
2008	4	17	19%	81%	172	425	3.9
2009	4	37	10%	90%	239	622	2.0
2010	22	69	24%	76%	132	379	2.8
2011	24	57	30%	70%	131	747	5.6
2012	19	74	20%	80%	126	503	4.4
2013	58	100	37%	63%	94	571	5.4
2014	98	108	48%	52%	60	350	8.9
2015	60	58	51%	49%	46	437	12.2
2016	34	41	45%	55%	65	409	6.5
2017	47	59	44%	56%	90	509	7.5
2018	71	63	53%	47%	33	481	17.5
2019	58	55	52%	48%	46	599	18.3
2020	96	69	58%	42%	21	815	38.2
2021	140	171	45%	55%	79	1,040	23.1
2022	29	9	76%	24%	0.6	312	526
2023	36	18	67%	33%	10	249	24.9
<b>1980-2023</b>	<b>4,733</b>	<b>4,449</b>	<b>52%</b>	<b>48%</b>	<b>25.9</b>	<b>158</b>	<b>6.1</b>

**Table 12b** (updated January 1, 2024)  
**Number of IPOs Categorized by the LTM Sales (in 2011 \$), 1980-2023**

Year	Number of IPOs	Number of IPOs		Percentage of IPOs	
		<\$1 billion	>\$1 billion	<\$1 billion	>\$1 billion
1980	71	71	0	100%	0%
1981	192	190	2	99%	1%
1982	77	77	0	100%	0%
1983	451	440	11	98%	2%
1984	171	169	2	99%	1%
1985	186	182	4	98%	2%
1986	393	375	18	95%	5%
1987	285	267	18	94%	6%
1988	105	94	11	90%	10%
1989	116	108	8	93%	7%
1990	110	103	7	94%	6%
1991	286	270	16	94%	6%
1992	412	385	27	93%	7%
1993	510	481	29	94%	6%
1994	402	384	18	96%	4%
1995	462	437	25	95%	5%
1996	677	658	19	97%	3%
1997	474	450	24	95%	5%
1998	283	264	19	93%	7%
1999	476	455	21	96%	4%
2000	380	366	14	96%	4%
2001	80	60	20	75%	25%
2002	66	50	16	76%	24%
2003	63	58	5	92%	8%
2004	173	151	22	87%	13%
2005	159	139	20	87%	13%
2006	157	138	19	88%	12%
2007	159	142	17	89%	11%
2008	21	18	3	86%	14%
2009	41	28	13	68%	32%
2010	91	78	13	86%	14%
2011	81	67	14	83%	17%
2012	93	77	16	83%	17%
2013	158	128	30	81%	19%
2014	206	175	31	85%	15%
2015	118	107	11	91%	9%
2016	75	61	14	81%	19%
2017	106	90	16	85%	15%
2018	134	122	12	91%	9%
2019	112	103	9	92%	8%
2020	165	148	17	90%	10%
2021	311	286	25	92%	8%
2022	39	36	3	92%	8%
2023	54	47	7	87%	13%
<b>1980-2023</b>	<b>9,181</b>	<b>8,535</b>	<b>646</b>	<b>93%</b>	<b>7%</b>

**Table 16** (updated March 8, 2023)**Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2021**

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2022 purchasing power using the Consumer Price Index. 9,089 IPOs from 1980-2021 are used, with returns calculated through the end of December 2022. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. mm is millions of dollars. Buy-and-hold returns are calculated until the earlier of the three-year anniversary or the delisting date (no later than Dec. 31 of 2022 for IPOs from 2020 and 2021). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Specifically, the firm with the closest book-to-market ratio within the size decile of the IPO is used for the matching firm. For post-issue book value of equity numbers, I use the post-issue common equity numbers from SDC with corrections by checking the prospectus, and for the remaining missing numbers I use the equity book values reported for the nearest quarter after the IPO on COMPUSTAT, and further missing numbers are calculated using the reported pre-IPO equity book values plus the amount of the proceeds (assuming that over-allotment option shares and costs of issuing offset each other) times the fraction of the primary shares. For dual-class shares, the post-issue book-to-market ratio is calculated using the larger of the post-issue number of shares reported from SDC (with corrections to account for all share classes) and the total shares outstanding reported from CRSP at end of the IPO date. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding. If a matching firm is delisted before the IPO, it is assumed that the proceeds of the delisted firm are then invested in the next-best matching firm at the time of the IPO. All returns include dividends and capital gains, including the index returns.

Sales (in 2022\$)	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
0-9.999 mm	1,766	23.6%	-14.0%	-47.4%	-32.4%
10-19.999 mm	677	27.1%	-1.3%	-38.1%	-17.5%
20-49.999 mm	1,454	24.5%	15.2%	-26.2%	-10.1%
50-99.999 mm	1,405	18.8%	30.5%	-12.1%	-0.6%
100-499.999 mm	2,450	14.5%	39.6%	-0.5%	6.2%
500 mm and up	1,337	10.4%	31.0%	-3.0%	-3.4%
0-99.999 mm	5,302	23.0%	7.4%	-31.1%	-16.0%
100 mm and up	3,787	13.1%	36.6%	-1.4%	2.8%
<b>1980-2021</b>	<b>9,089</b>	<b>18.9%</b>	<b>19.6%</b>	<b>-18.7%</b>	<b>-8.1%</b>

**Table 16a** (updated March 8, 2023)

**Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2021**

The caption to Table 16 describes the return calculations in more detail. The average 3-year buy-and-hold returns are calculated starting at the closing market price on the first day of trading.

Sales (in 2021\$)	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Less than \$1 billion	8,321	19.7%	18.4%	-20.4%	-9.2%
\$1 billion and up	768	9.3%	32.5%	0.2%	3.5%
<b>1980-2021</b>	9,089	18.9%	19.6%	-18.7%	-8.1%

Note: The -18.7% 3-year market-adjusted buy-and-hold return for all IPOs corresponds to an annualized market-adjusted return of -5.0% per year, with an average holding period of 2.8 years, because  $1.196/1.383=0.865$  (which is the wealth relative, or public market equivalent), and  $0.865^{0.357}=0.950$ . The 38.3% buy-and-hold market return is 18.7% above the 19.6% average buy-and-hold return, and 0.357 is equal to  $1/2.8$ . Alternatively stated, underperformance of 5.0% per year for 2.8 years results in a wealth relative of 0.865.

**Table 16b** (updated March 8, 2023)**Long-run Returns on IPOs Categorized by the Profitability of the Firm, 1980-2021**

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2022 purchasing power using the Consumer Price Index. 9,089 IPOs (including the 2016 IPO of BATS Global Markets, which listed on BATS) from 1980-2021 are used, with returns calculated through the end of December 31, 2022. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2022 for IPOs from 2020 and 2021). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. The market-adjusted and style-adjusted returns are the average buy-and-hold return on the IPOs minus the average compounded return on the benchmark. For post-issue book value of equity numbers, I use the post-issue common equity numbers from SDC with corrections by checking the prospectus, and for the remaining missing numbers I use the equity book values reported for the nearest quarter after the IPO on COMPUSTAT, and further missing numbers are calculated using the reported pre-IPO equity book values plus the amount of the proceeds (assuming that overallotment option shares and costs of issuing offset each other) times the fraction of the primary shares. For dual-class shares, the post-issue book-to-market ratio is calculated using the larger of the post-issue number of shares reported from SDC (with corrections to account for all share classes) and the total shares outstanding reported from CRSP at end of the IPO date. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding. Earnings per share (EPS) is for the pre-IPO last twelve months (LTM). All returns include dividends and capital gains, including the index returns.

Trailing LTM EPS	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Unprofitable	3,811	26.6%	-0.3%	-27.8%	-22.3%
Profitable	5,278	13.3%	34.0%	-12.1%	2.1%
Sales less than \$100 million (\$2022)					
Unprofitable	2,866	29.5%	-8.7%	-36.9%	-28.3%
Profitable	2,436	15.4%	26.5%	-24.2%	-1.4%
All less than \$100m	5,302	23.0%	7.4%	-31.1%	-16.0%
Sales more than \$100 million (\$2022)					
Unprofitable	945	17.5%	25.1%	-0.2%	-4.0%
Profitable	2,842	11.6%	40.4%	-1.8%	5.1%
All more than \$100m	3,787	13.1%	36.6%	-1.4%	2.8%
<b>1980-2021</b>	<b>9,089</b>	<b>18.9%</b>	<b>19.6%</b>	<b>-18.7%</b>	<b>-8.1%</b>



**Table 16c** (updated August 7, 2023)  
**Long-run Returns Measured from the Offer Price on Tech and non-Tech Stock IPOs**  
**Excluding the Internet Bubble, 1980-2021**

**Panel A: IPOs from 1980-2021, excluding 1999-2000, categorized by industry**

Industry	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Tech	2,674	20.0%	72.9%	27.1%	46.1%
Non-Tech	5,558	11.3%	30.9%	-12.9%	-0.6%
All	8,232	14.1%	44.6%	0.1%	14.6%

**Panel B: Categorized by sales and industry (sales in \$2021)**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Sales < \$100 million					
Tech	1,840	20.0%	67.7%	17.0%	41.5%
Non-Tech	2,925	13.1%	16.4%	-28.4%	-10.6%
Sales > \$100 million					
Tech	834	19.9%	84.4%	49.5%	56.4%
Non-Tech	2,633	9.3%	47.1%	4.4%	10.6%

**Panel C: Profitable issuers, categorized by sales and industry**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Sales < \$100 million					
Tech	1,010	17.6%	70.6%	15.2%	43.0%
Non-Tech	1,452	11.8%	28.8%	-22.5%	0.2%
Sales > \$100 million					
Tech	467	16.4%	96.6%	53.4%	63.5%
Non-Tech	2,161	9.2%	49.6%	5.1%	12.9%

**Panel D: Unprofitable issuers, categorized by sales and industry**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Sales < \$100 million					
Tech	830	22.9%	64.2%	19.1%	39.6%
Non-Tech	1,473	14.4%	4.2%	-34.3%	-21.3%
Sales > \$100 million					
Tech	367	24.4%	68.4%	44.7%	47.4%
Non-Tech	472	9.5%	35.7%	1.2%	-0.1%

**Table 16d** (updated August 7, 2023)  
**Long-run Returns Measured from the First Closing Market Price on Tech and non-Tech  
Stock IPOs Excluding the Internet Bubble, 1980-2021**

**Panel A: IPOs from 1980-2021, excluding 1999-2000, categorized by industry**

Industry	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market- adjusted	Style- adjusted
Tech	2,674	20.0%	42.0%	-3.8%	15.2%
Non-Tech	5,558	11.3%	20.0%	-23.8%	-11.5%
All	8,232	14.1%	27.2%	-17.3%	-2.8%

**Panel B: Categorized by sales and industry (sales in \$2021)**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market- adjusted	Style- adjusted
Sales < \$100 million					
Tech	1,840	20.0%	36.7%	-14.1%	10.4%
Non-Tech	2,925	13.1%	6.3%	-38.6%	-20.8%
Sales > \$100 million					
Tech	834	19.9%	53.8%	18.9%	25.8%
Non-Tech	2,633	9.3%	35.3%	-7.4%	-1.2%

**Panel C: Profitable issuers, categorized by sales and industry**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market- adjusted	Style- adjusted
Sales < \$100 million					
Tech	1,010	17.6%	42.4%	-13.0%	14.8%
Non-Tech	1,452	11.8%	18.2%	-33.1%	-10.5%
Sales > \$100 million					
Tech	467	16.4%	66.8%	23.2%	33.4%
Non-Tech	2,161	9.2%	37.4%	-7.1%	0.7%

**Panel D: Unprofitable issuers, categorized by sales and industry**

LTM Sales	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market- adjusted	Style- adjusted
Sales < \$100 million					
Tech	830	22.9%	29.8%	-15.3%	5.2%
Non-Tech	1,473	14.4%	-5.5%	-44.0%	-31.0%
Sales > \$100 million					
Tech	367	24.4%	37.1%	13.4%	16.1%
Non-Tech	472	9.5%	25.6%	-8.9%	-10.2%

**Table 18a****Long-run Returns on IPOs Categorized by VC-backing and Real Sales**

This table appears as Table 7 in “Going Public with IPOs and SPAC Mergers” by Rongbing Huang, Jay R. Ritter, and Donghang Zhang, forthcoming in *Research Handbook on the Structure of Private Equity and Venture Capital*. The sample is composed of 9,088 IPOs from 1980-2021, with returns calculated through the end of December 2022. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price in Panels A and B, and from the offer price in Panels C and D, until the earlier of the three-year anniversary or the delisting date (Dec. 30 of 2022 for IPOs from 2020 and 2021). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Sales are the trailing twelve month revenues listed in the IPO prospectus, measured in terms of dollars of January 2022 purchasing power using the CPI.

**Panel A: IPOs with Sales<\$100 million from 1980-2021 categorized by VC-backing**

VC-backed or not	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
VC-backed	2,710	28.6%	12.4%	-19.9%	-8.1%
NonVC-backed	2,582	17.1%	2.4%	-42.7%	-24.1%
All	5,292	23.0%	7.5%	-31.0%	-15.9%

**Panel B: IPOs with Sales>\$100 million from 1980-2021 categorized by VC-backing**

VC-backed or not	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
VC-backed	949	22.5%	48.1%	12.5%	12.2%
NonVC-backed	2,847	10.0%	32.6%	-6.1%	-0.5%
All	3,796	13.1%	36.4%	-1.5%	2.7%

**Panel C: IPOs with Sales<\$100 million, with returns measured from the offer price**

VC-backed or not	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
VC-backed	2,710	28.6%	34.9%	2.6%	14.4%
NonVC-backed	2,582	17.1%	15.4%	-29.7%	-11.1%
All	5,292	23.0%	25.4%	-13.2%	2.0%

**Panel D: IPOs with Sales>\$100 million, with returns measured from the offer price**

VC-backed or not	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
VC-backed	949	22.5%	78.4%	42.8%	42.5%
NonVC-backed	2,847	10.0%	44.3%	5.6%	11.2%
All	3,796	13.1%	52.8%	14.9%	19.0%