

# Initial Public Offerings: VC-backed IPO Statistics Through 2023

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

**Median Age and Fraction of IPOs with VC and Buyout Backing, 1980-2023**

There are 9,181 IPOs after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, oil & gas limited partnerships, acquisition companies, REITs, bank and S&L IPOs, and firms not listed on CRSP. Missing numbers 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, the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006, and the Stanford GSB microfiche collection of registration statements from the 1980s. Tech stocks are defined as internet-related stocks plus other technology stocks, not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. Age is defined as the year of the IPO minus the year of founding. For buyout-backed IPOs, the founding date of the predecessor company is used. For rollups, the founding date of the oldest acquired company is used in most cases. Private equity (PE) or buyout-backed IPOs were restricted to "reverse LBOs" in the 1980s and 1990s. Jerry Cao has assisted with providing information on which IPOs are buyout-backed.

The financial backers of some companies are easy to classify, such as when Sequoia Capital and Kleiner Perkins invested in Google, or when KKR invested in Dollar General. But other situations involve growth capital investing, as when Warburg Pincus finances a company that rolls up some doctors' offices. With just two categories (VC and buyout), there is some arbitrariness in the categorization of IPOs backed by growth capital investors. 467 growth capital-backed IPOs are classified as VC-backed.

The last column gives the percentage of tech stocks that have VC backing.

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: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions.

(table on the next page)

Year	Number of IPOs	Median Age	VC-backed		Buyout-backed		Technology IPOs	
			No.	%	No.	%	No.	% VC-backed
1980	71	6	23	32%	1	1%	22	64%
1981	192	8	53	28%	1	1%	72	40%
1982	77	5	21	27%	2	3%	42	36%
1983	451	7	116	26%	17	4%	173	39%
1984	171	8	45	26%	5	3%	50	52%
1985	186	9	39	21%	18	10%	37	43%
1986	393	8	79	20%	42	11%	77	40%
1987	285	8	66	23%	41	14%	59	66%
1988	105	8	32	30%	9	9%	28	61%
1989	116	8	40	34%	10	9%	35	66%
1990	110	9	42	38%	13	12%	32	75%
1991	286	10	115	40%	73	26%	71	63%
1992	412	10	138	33%	98	24%	115	58%
1993	510	9	172	34%	79	15%	127	69%
1994	402	9	129	32%	22	5%	115	56%
1995	462	8	190	41%	30	6%	205	56%
1996	677	8	266	39%	34	5%	276	56%
1997	474	10	134	28%	38	8%	174	42%
1998	283	9	80	28%	30	11%	113	49%
1999	476	5	280	59%	30	6%	370	68%
2000	380	6	245	64%	32	8%	261	70%
2001	80	12	32	40%	21	26%	24	70%
2002	66	15	23	35%	20	30%	20	65%
2003	63	11	25	40%	21	33%	18	67%
2004	173	8	79	46%	43	25%	61	66%
2005	159	13	45	28%	68	43%	45	49%
2006	157	13	56	36%	66	42%	48	56%
2007	159	9	79	50%	30	19%	76	76%
2008	21	14	9	43%	3	14%	6	67%
2009	41	15	12	29%	19	46%	14	43%
2010	91	10	40	44%	28	31%	33	73%
2011	81	11	46	57%	17	21%	36	83%
2012	93	12	49	53%	28	30%	40	87%
2013	158	12	81	52%	37	23%	45	78%
2014	206	11	132	64%	38	18%	53	75%
2015	118	10	78	65%	20	17%	38	76%
2016	75	10	49	65%	13	17%	21	71%
2017	106	12	64	60%	18	17%	30	80%
2018	134	10	91	68%	15	11%	39	77%
2019	113	10	77	69%	11	10%	37	70%
2020	165	9	113	68%	22	13%	46	73%
2021	311	11	175	56%	67	22%	121	64%
2022	38	8	14	37%	0	0%	6	17%
2023	54	10	23	43%	7	13%	9	44%
<b>1980-2023</b>	<b>9,181</b>	<b>9</b>	<b>3,697</b>	<b>40%</b>	<b>1,237</b>	<b>13%</b>	<b>3,320</b>	<b>60%</b>

1980-1989	2,047	8	514	25%	146	7%	595	47%
1990-1998	3,616	9	1,266	35%	417	12%	1,228	56%
1999-2000	856	5	525	61%	62	7%	631	68%
2001-2023	2,662	11	1,392	52%	612	23%	866	69%
<b>1980-2023</b>	<b>9,181</b>	<b>9</b>	<b>3,697</b>	<b>40%</b>	<b>1,237</b>	<b>13%</b>	<b>3,320</b>	<b>60%</b>

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**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 4c** (updated January 1, 2024)

**VC-backed, Growth Capital-backed, and Buyout-backed IPOs, 1980-2023**

There are 9,181 IPOs after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, natural resource limited partnerships, special purpose acquisition companies (SPACs), REITs, bank and S&L IPOs, small best efforts offerings, and firms not listed on CRSP within six months of the IPO. Missing numbers in the Thomson Reuters new issues database are found by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1989, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-1996. Some foreign company IPOs from 1997-2001 that did not use ADRs but did not file electronically, and therefore do not have a prospectus available on EDGAR, were also accessed from the Graeme Howard-Todd Huxster database. Additional information was collected from microfiches at Stanford's GSB library. 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, and I have slightly updated the classifications.

Growth capital-backed IPOs are IPOs with a financial sponsor that, unlike a buyout-sponsored deal, typically owns far less than 90% of the equity prior to the IPO. Furthermore, many growth capital-backed IPOs have debt in their capital structure. The main criteria for classifying a financial sponsor as growth capital rather than venture capital is whether the company is investing in tangible assets (e.g., stores or hospitals) or intangibles (e.g., R&D); this is highly correlated with the industry of the company: restaurants, retail operations such as clothing store chains, healthcare operations (doctors' offices and dental offices), and retirement homes are generally classified as growth capital-backed. Many growth capital-backed IPOs are involved in rollups of a fragmented industry, where the financial sponsor has provided capital to make acquisitions to consolidate a fragmented industry, such as funeral homes. If a company is growing via acquisitions, it would generally be categorized as growth capital-backed rather than venture-backed. Jerry Cao has provided some information on which IPOs are buyout-backed. **467 growth capital-backed IPOs are not classified as VC-backed in this table.** See my article "Growth Capital-backed IPOs" in *The Financial Review* (November 2015) for further details.

(table on the next page)

Year	Number of IPOs	Financial sponsor- backed		VC-backed		Growth capital- backed		Buyout-backed	
		No.	%	No.	%	No.	%	No.	%
1980	71	24	34%	20	28%	3	4%	1	1%
1981	192	54	28%	44	23%	9	5%	1	1%
1982	77	23	30%	19	25%	2	3%	2	3%
1983	451	128	28%	104	23%	12	3%	17	4%
1984	171	48	28%	38	22%	7	4%	5	3%
1985	186	57	31%	28	15%	11	6%	18	10%
1986	393	121	31%	72	18%	7	2%	42	11%
1987	285	107	38%	61	21%	5	2%	41	14%
1988	105	41	39%	25	24%	7	7%	9	9%
1989	116	50	43%	30	26%	10	9%	10	9%
1990	110	55	50%	37	34%	5	5%	13	12%
1991	286	187	65%	97	34%	18	6%	73	26%
1992	412	236	57%	118	29%	20	5%	98	24%
1993	510	251	49%	159	31%	13	3%	79	15%
1994	402	151	38%	111	28%	18	4%	22	5%
1995	462	220	48%	157	34%	33	7%	30	6%
1996	677	300	44%	218	32%	48	7%	34	5%
1997	474	172	36%	100	21%	34	7%	38	8%
1998	283	110	39%	61	22%	19	7%	30	11%
1999	476	310	65%	264	55%	16	3%	30	6%
2000	380	277	73%	242	64%	3	1%	32	8%
2001	80	53	66%	22	28%	10	13%	21	26%
2002	66	43	65%	11	17%	12	18%	20	30%
2003	63	46	73%	21	33%	4	6%	21	33%
2004	173	122	71%	73	42%	6	3%	43	25%
2005	159	113	71%	40	25%	5	3%	68	43%
2006	157	123	78%	53	34%	3	2%	66	42%
2007	159	109	69%	71	45%	8	5%	30	19%
2008	21	12	57%	7	33%	2	10%	3	14%
2009	41	31	76%	12	29%	0	0%	19	46%
2010	91	68	74%	37	42%	3	3%	28	29%
2011	81	63	78%	41	51%	5	6%	17	21%
2012	93	77	83%	46	49%	3	3%	28	30%
2013	158	118	75%	70	44%	11	7%	37	23%
2014	206	170	83%	115	56%	17	8%	38	18%
2015	118	98	83%	70	59%	8	7%	20	17%
2016	75	62	83%	38	51%	11	15%	13	17%
2017	106	82	77%	55	52%	9	8%	18	17%
2018	134	105	78%	80	60%	11	8%	15	11%
2019	112	88	79%	74	66%	3	3%	11	10%
2020	165	135	82%	99	60%	14	8%	22	13%
2021	311	242	78%	156	50%	19	6%	67	22%
2022	38	14	37%	14	37%	0	0%	0	0%
2023	54	30	56%	20	37%	3	6%	7	13%
1980-1989	2,047	659	32%	441	22%	73	4%	146	7%
1990-1998	3,616	1,683	47%	1,058	29%	208	6%	417	12%
1999-2000	856	587	69%	506	59%	19	2%	62	7%
2001-2023	2,662	2,004	75%	1,225	46%	167	6%	612	23%
<b>1980-2023</b>	<b>9,181</b>	<b>4,933</b>	<b>54%</b>	<b>3,230</b>	<b>35%</b>	<b>467</b>	<b>5%</b>	<b>1,237</b>	<b>13%</b>



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

**VC-backed IPOs, U.S.-headquartered Companies Only, 1980-2023**

There are 3,539 venture capital-backed IPOs of U.S. headquartered companies, 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. VC-backed includes growth capital-backed IPOs. 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 1975-1996.

The public float is calculated as the shares issued multiplied by the first closing market price, and does not include over-allotment shares. All numbers use the undiluted number of shares outstanding. For dual-class companies such as Facebook, all share classes are included, with the assumption that the price per share is the same for each class.

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.

Example: For 1980, the 23 VC-backed IPOs raised a total of \$388 million (not including over-allotment options), the shares of which had a market cap of \$500 million using the first closing market price. The market cap, using all shares outstanding, was \$3.374 billion in total. Of this, Apple Computer issued 4.6 million shares at \$22 per share (proceeds of \$101.2 million), closing at \$28.75 per share (public float value of \$132.25 million), with 55.136 million shares outstanding (\$1,585 million market cap).

(table on the next page)

Year	U.S.-headquartered VC-backed IPOs			At first market price, \$millions	
	Number	% Profitable	Proceeds, \$m	Public float	Market cap
1980	23	78%	388	500	3,374
1981	53	79%	648	718	3,535
1982	21	57%	490	575	2,640
1983	115	65%	2,740	3,088	14,200
1984	43	77%	563	606	2,840
1985	38	63%	660	682	2,751
1986	79	59%	1,559	1,671	7,081
1987	66	68%	1,315	1,446	5,921
1988	31	81%	658	709	3,039
1989	39	69%	843	941	3,611
1990	41	83%	1,057	1,177	4,926
1991	113	62%	3,724	4,290	15,872
1992	137	55%	4,934	5,561	18,537
1993	169	63%	5,827	6,866	24,931
1994	126	62%	3,528	4,011	14,023
1995	188	65%	7,114	9,298	35,726
1996	259	39%	11,137	13,465	57,203
1997	132	45%	4,900	5,937	26,917
1998	79	24%	4,005	5,050	23,725
1999	278	12%	22,187	46,532	318,588
2000	227	6%	21,855	40,648	289,861
2001	30	27%	2,406	2,895	15,825
2002	23	35%	1,956	2,216	10,563
2003	25	48%	1,824	2,150	8,556
2004	76	28%	7,042	8,306	54,443
2005	41	34%	3,110	3,759	14,986
2006	54	35%	4,436	5,214	22,609
2007	76	22%	10,386	13,238	74,343
2008	9	44%	863	936	4,428
2009	12	58%	1,697	2,057	8,302
2010	37	38%	4,104	4,271	20,184
2011	43	28%	6,601	7,941	62,870
2012	49	33%	21,096	22,959	125,886
2013	75	15%	10,946	14,888	92,898
2014	116	16%	16,107	19,831	98,782
2015	68	13%	8,552	11,147	58,497
2016	45	20%	4,929	6,135	32,605
2017	55	13%	10,017	12,585	76,298
2018	83	10%	13,492	16,856	105,811
2019	71	3%	25,149	28,913	227,544
2020	106	10%	38,773	63,652	483,158
2021	155	10%	60,419	75,744	614,787
2022	13	0%	1,481	1,718	7,223
2023	19	11%	3,568	4,324	33,058
<b>1980-2023</b>	<b>3,539</b>	<b>37%</b>	<b>358,775</b>	<b>485,614</b>	<b>3,133,047</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.

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 2021 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 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 17** (updated April 10, 2024)

**Long-run Returns on IPOs Categorized by VC-backing or Buyout Fund-backing**

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2023 purchasing power using the Consumer Price Index. IPOs from 1980-2022 are used, with returns calculated through the end of December 2023. In Panel A, the sample size is 9,127 firms. Growth capital-backed IPOs are included in the VC-backed category. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offerings, ADRs, REITs, closed-end funds, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. In Panel B, one additional screen is implemented, reducing the sample size. This additional screen is that the last twelve months (LTM) sales of the issuing firm is at least \$50 million (2023 purchasing power). Buy-and-hold returns are calculated from the first close until the earlier of the three-year anniversary or the delisting date (Dec. 29 of 2023 for IPOs from 2022). 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. All returns include dividends and capital gains, including the index returns. Jerry Cao of Sun Yat-sen University has assisted in providing data on the classification of IPOs as buyout-backed. Growth capital-backed IPOs are classified as VC-backed.

**Panel A: IPOs from 1980-2022 categorized by venture capital 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	3,673	27.2%	21.9%	-12.5%	-3.3%
NonVC-backed	5,454	13.5%	18.0%	-24.2%	-12.4%
NonVC and nonBuyout	4,224	14.6%	14.8%	-31.1%	-15.4%
1980-2022	9,127	19.0%	19.6%	-19.5%	-8.7%

Note: The nonVC- and nonBuyout-backed IPOs do not include a minimum sales screen, unlike in Panel B.

**Panel B: IPOs with at least \$50 million in LTM sales (2023 purchasing power) from 1980-2022 categorized by private equity (buyout fund) backing**

Buyout-backed or not	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Buyout-backed	1,174	9.5%	30.3%	-0.0%	1.0%
NonBuyout-backed	4,035	16.1%	36.6%	-6.3%	1.1%
All	5,209	14.6%	35.2%	-4.9%	1.1%

**Table 17a** (updated April 10, 2024)

**Long-run Returns on IPOs Categorized by VC-, Growth Capital-, or Buyout Fund-backing**

9,127 IPOs from 1980-2022 are used, with returns calculated through the end of December 2023. Buy-and-hold returns are calculated from the first closing price until the earlier of the three-year anniversary or the delisting date (Friday, Dec. 29 of 2023 for IPOs from 2021 and 2022). Market-adjusted returns use the CRSP value-weighted index. All returns include dividends and capital gains. 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. This table is an updated version of Table 3 of my “Growth Capital-backed IPOs” published in the 2015 *Financial Review*. Growth capital-backed IPOs are defined to be IPOs with a financial sponsor that is financing investments in tangible assets and/or acquisitions are a major part of its growth strategy. Buyouts involve the financial sponsor taking control by buying out prior shareholders. Corporate venture capital and angel investors are not included as financial sponsors.

	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
VC-backed	3,209	29.0%	18.9%	-14.3%	-4.3%
Growth capital-backed	464	14.4%	42.7%	-0.4%	3.6%
Buyout-backed	1,230	9.5%	29.3%	-0.8%	-2.0%
Financial Sponsored	4,903	22.7%	23.7%	-9.6%	-3.0%
Non-Financial Sponsored	4,224	14.6%	14.8%	-31.1%	-15.4%
All	9,127	19.0%	19.6%	-19.5%	-8.7%

Note: The high average 3-year buy-and-hold return for growth capital-backed IPOs is partly attributable, in a mechanical sense, to the six IPOs with the highest buy-and-hold returns in this subsample: The May 10, 1984 IPO of restaurant chain This Can’t Be Yogurt (4,076.6%); the April 10, 1997 IPO of middleware software developer and distributor BEA Systems (2,562.2%); the November 15, 1989 IPO of original equipment manufacturer Solectron (944.0%); the April 24, 1996 IPO of outdoor advertising (billboards) operator Outdoor Systems (935.1%); the February 9, 1983 IPO of health care provider United States Health Care (636.6%); and the September 19, 1989 IPO of health care provider Vencor (635.8%).

**Table 18** (updated April 10, 2024)

**Long-run Returns on IPOs Categorized by VC-backing, by Subperiod**

The sample is composed of 9,127 IPOs from 1980-2022, with returns calculated through the end of December 2023. Growth capital-backed IPOs are classified as venture capital (VC)-backed in all panels. 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 until the earlier of the three-year anniversary or the delisting date (Dec. 29 of 2023 for IPOs from 2021 and 2022). Market-adjusted returns use the CRSP value-weighted index. All returns include dividends and capital gains. 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. Market capitalization (size) is calculated using the first closing market price after the IPO. All returns include dividends and capital gains, including the index returns.

**Panel A: IPOs from 1980-2022 categorized by venture capital 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	3,673	27.2%	21.9%	-12.5%	-3.3%
NonVC-backed	5,454	13.5%	18.0%	-24.2%	-12.4%
All	9,127	19.0%	19.6%	-19.5%	-8.7%

**Panel B: IPOs from 1980-1989**

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	513	8.6%	31.9%	-14.0%	14.0%
NonVC-backed	1,534	6.8%	19.3%	-25.5%	-1.8%
All	2,047	7.2%	22.5%	-22.6%	2.2%

**Panel C: IPOs from 1990-1998**

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	1,266	17.3%	60.7%	-1.1%	27.0%
NonVC-backed	2,350	13.5%	28.4%	-31.7%	-14.8%
All	3,616	14.8%	39.7%	-21.0%	-0.2%

**Panel D: IPOs from 1999-2000**

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	525	80.9%	-62.3%	-40.5%	-62.5%
NonVC-backed	331	38.7%	-38.6%	-17.9%	-53.3%
All	856	64.6%	-53.1%	-31.8%	-58.9%

**Panel E: IPOs from 2001-2022**

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	1,369	22.6%	14.5%	-11.8%	-15.0%
NonVC-backed	1,239	15.0%	11.8%	-10.2%	-9.9%
All	2,608	19.0%	13.2%	-11.0%	-12.6%



**Table 18a** (updated April 10, 2024)  
**Long-run Returns on IPOs Categorized by VC-backing and Real Sales**

The sample is composed of 9,127 IPOs from 1980-2022, with returns calculated through the end of December 2023. 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. 29 of 2023 for IPOs from 2021 and 2022). 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 2023 purchasing power using the CPI.

**Panel A: IPOs with Sales<\$100 million from 1980-2022 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	2,724	28.8%	12.4%	-20.9%	-8.3%
NonVC-backed	2,599	17.3%	1.8%	-43.6%	-24.4%
All	5,323	23.2%	7.2%	-32.0%	-16.2%

**Panel B: IPOs with Sales>\$100 million from 1980-2022 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%	49.2%	11.5%	11.1%
NonVC-backed	2,855	10.0%	32.8%	-6.6%	-1.4%
All	3,804	13.1%	36.9%	-2.1%	1.7%

**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	2,724	28.8%	34.8%	1.6%	14.2%
NonVC-backed	2,599	17.3%	14.6%	-30.8%	-11.6%
All	5,323	23.2%	25.0%	-14.2%	1.6%

**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%	79.9%	42.2%	41.8%
NonVC-backed	2,855	10.0%	44.6%	5.2%	10.4%
All	3,804	13.1%	53.4%	14.4%	18.2%

**Table 18b** (updated April 10, 2024)**Long-run Returns on VC-backed and other IPOs Segmented by Industry, 1980-2022**

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*. 9,127 IPOs from 1980-2022 are used, with returns calculated through December 29, 2023. IPOs with an offer price below \$5.00 per share, unit offers, SPACs, 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. 29 of 2023 for IPOs from 2021 and 2022). The captions to Tables 2 and 6 provide industry classification details. 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. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding.

**Panel A: Long-run Returns on VC-backed IPOs, by Industry, 1980-2022**

Sector	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Tech	1,992	0.4%	26.4%	-4.4%	5.7%
Life science	788	0.2%	9.1%	-22.9%	-19.5%
Other	893	0.1%	23.1%	-21.5%	-9.0%
All	3,673	0.3%	21.9%	-12.5%	-3.3%

**Panel B: Long-run Returns on nonVC-backed IPOs, by Industry, 1980-2022**

Sector	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Tech	1,319	0.2%	15.1%	-23.5%	-9.0%
Life science	199	0.2%	35.7%	1.1%	26.0%
Other	3,936	0.1%	18.1%	-25.8%	-15.4%
All	5,454	0.1%	18.0%	-24.2%	-12.4%

Note: The high life science 3-year buy-and-hold return for the 199 nonVC-backed IPOs in Panel B is partly driven by the 2,444.8% return on the June 1980 IPO of Enzo Biochem and the 1,606.1% return on the August 2003 IPO of New River Pharmaceutical, which used a WR Hambrecht + Co auction to go public. Of the 971 life science IPOs during 1980-2021, these are two of the three top long-run performers, with the VC-backed July 1998 IPO of Abgenix being the third, with a 2,071.1% return. Moderna, a December 2018 VC-backed IPO, produced the fifth-highest return.

**Table 18c** (updated April 10, 2024)**Long-run Returns on VC-backed and other IPOs Segmented by Industry, 1999-2022**

This table appears as Table 8 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*, edited by Brian Broughman and Elisabeth de Fontenay.

3,464 IPOs from 1999-2022 are used, with returns calculated through December 29, 2023. See the captions to Tables 2 and 6 in the book chapter above for a description of the sample and industry definitions.

**Panel A: Long-run Returns on VC-backed IPOs, by Industry, 1999-2022**

Sector	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Tech	1,030	54.4%	-13.7%	-18.9%	-28.2%
Life science	579	18.6%	2.2%	-21.2%	-25.5%
Other	285	23.4%	0.0%	-19.8%	-33.6%
All	1,894	38.8%	-6.8%	-19.8%	-28.2%

**Panel B: Long-run Returns on nonVC-backed IPOs, by Industry, 1999-2022**

Sector	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Tech	458	32.8%	-21.5%	-23.4%	-34.4%
Life science	113	21.9%	3.5%	-15.1%	-10.7%
Other	999	13.9%	11.3%	-6.2%	-13.0%
All	1,570	20.0%	1.2%	-11.8%	-19.1%