Initial Public Offerings: VC-backed IPO Statistics Through 2020

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Table 4 (updated December 28, 2020)

Median Age and Fraction of IPOs with VC and Buyout Backing, 1980-2020

There are 8,775 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 form 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. 426 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	27%	1	1%	72	40%
1982	77	5	21	27%	2	3%	42	36%
1983	451	7	115	25%	12	3%	173	38%
1984	171	8	45	26%	3	2%	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	116	41%	72	25%	71	63%
1992	412	10	138	33%	98	24%	115	58%
1993	510	9	172	34%	79	15%	127	69%
1994	402	8	129	32%	22	5%	115	56%
1995	462	8	186	40%	30	7%	205	55%
1996	677	7	265	39%	34	5%	276	55%
1997	474	10	133	28%	38	8%	174	41%
1998	281	9	77	27%	30	11%	113	48%
1999	476	5	275	58%	31	7%	370	66%
2000	380	6	242	64%	32	8%	260	69%
2001	80	12	32	41%	21	27%	23	70%
2002	66	15	23	35%	20	30%	20	65%
2003	63	11	24	38%	21	33%	18	61%
2004	173	8	79	46%	43	25%	61	66%
2005	159	13	45	28%	67	42%	45	49%
2006	157	13	54	34%	68	43%	48	52%
2007	159	9	71	45%	31	19%	76	66%
2008	21	14	9	43%	3	14%	6	67%
2009	41	15	12	29%	19	46%	14	43%
2010	91	10	40	44%	27	30%	33	73%
2011	81	11	44	54%	18	22%	36	81%
2012	93	12	48	52%	28	30%	40	87%
2013	158	12	76	48%	36	23%	45	73%
2014	206	11	128	62%	38	18%	51	71%
2015	118	10	73	62%	22	19%	38	74%
2016	75	10	47	63%	14	19%	21	71%
2017	106	12	63	59%	19	18%	30	77%
2018	134	10	89	66%	14	10%	39	77%
2019	112	10	76	68%	11	9%	37	70%
2020	165	9	110	67%	22	13%	42	69%
1980-1989	2,047	8	513	25%	139	7%	595	46%
1990-1998	3,614	8	1,258	35%	416	12%	1,228	55%
1999-2000	856	5	517	60%	63	7%	630	68%
2001-2020	2,258	11	1,143	51%	543	24%	723	68%
1980-2020	**8,775**	**8**	**3,431**	**39%**	**1,160**	**13%**	**3,176**	**59%**

Table 4a (updated December 28, 2020)

Technology Company IPOs, 1980-2020

There are 3,176 tech stock IPOs, 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 IPOs including both technology and non-technology companies.

For buyout-backed IPOs, the founding date of the predecessor company is used. 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 is 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 VC-backed	Proceeds in $millions Technology	Median Price-to-sales OP	Median Price-to-sales MP	Median sales, $mm Nominal	Median sales, $mm $2014	Median age	% profitable
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	2,768	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	8	70%
1995	205	7,023	9,786	4.6	5.8	21.4	33.3	8	71%
1996	276	11,623	16,256	6.8	8.2	16.7	25.2	7	47%
1997	174	4,994	7,479	5.2	5.7	21.2	31.1	8	50%
1998	113	3,882	8,118	8.8	11.9	22.1	32.0	7	36%
1999	370	22,012	33,512	26.5	43.0	12.1	17.2	4	14%
2000	260	23,304	42,442	31.7	49.5	12.0	16.6	5	14%
2001	23	2,658	5,773	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	1,789	2,242	4.1	4.6	86.2	111.0	7	39%
2004	61	7,183	9,064	6.4	7.1	55.5	70.1	8	44%
2005	45	3,676	6,994	4.5	4.5	68.0	83.5	9	36%
2006	48	4,662	4,873	5.5	6.3	57.6	67.9	9	50%
2007	76	9,820	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	3,873	4,347	3.4	3.9	119.5	129.0	11	64%
2011	36	8,603	9,412	6.1	6.6	141.3	150.1	10	36%
2012	40	21,031	20,887	4.5	5.0	113.4	117.1	9.5	43%
2013	45	11,553	8,662	5.3	6.1	105.8	107.5	9	27%
2014	51	18,058	9,551	5.4	6.6	88.7	88.7	11	16%
2015	38	9,319	10,087	5.3	6.2	130.8	130.9	11	26%
2016	21	5,945	2,510	4.2	4.3	109.5	108.2	10	29%
2017	30	10,878	7,844	5.0	6.3	188.4	181.5	13	17%
2018	39	16,412	12,246	7.7	11.7	179.2	169.1	12	15%
2019	37	26,693	22,881	7.9	10.4	196.6	182.8	11	30%
2020	42	40,655	28,269	13.4	23.3	201.7	187.5	12.5	19%
1980-2020	**3,176**	**310,012**	**332,655**	**5.9**	**7.0**	**23.2**	**37.5**	**7**	**48%**

Table 4c (Dec. 28, 2020)

VC-backed, Growth Capital-backed, and Buyout-backed IPOs, 1980-2020

There are 8,775 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. 425 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	127	28%	103	23%	12	3%	12	3%
1984	171	48	28%	38	22%	7	4%	3	2%
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	51%	37	34%	5	5%	13	12%
1991	286	188	66%	97	34%	19	7%	72	25%
1992	412	236	57%	119	29%	19	5%	98	24%
1993	510	251	49%	160	31%	12	2%	79	15%
1994	402	151	38%	113	28%	16	4%	22	5%
1995	462	216	47%	156	34%	30	7%	30	6%
1996	677	299	44%	220	32%	45	7%	34	5%
1997	474	171	36%	102	22%	31	7%	38	8%
1998	281	107	38%	59	21%	18	6%	30	11%
1999	476	306	64%	259	54%	16	3%	31	7%
2000	380	274	72%	239	63%	3	1%	32	8%
2001	80	53	67%	22	28%	10	13%	21	26%
2002	66	43	65%	11	17%	12	18%	20	30%
2003	63	45	71%	20	32%	4	6%	21	33%
2004	173	122	71%	73	42%	6	3%	43	25%
2005	159	113	71%	40	25%	5	4%	68	43%
2006	157	122	78%	52	33%	2	1%	68	43%
2007	159	102	64%	63	40%	8	5%	31	19%
2008	21	12	57%	7	33%	2	10%	3	14%
2009	41	31	76%	12	29%	0	0%	19	46%
2010	91	67	73%	38	42%	2	2%	27	30%
2011	81	62	77%	40	49%	4	5%	18	22%
2012	93	76	82%	45	48%	3	3%	28	30%
2013	158	112	71%	64	41%	12	8%	36	23%
2014	206	166	81%	111	54%	17	9%	38	18%
2015	118	94	79%	65	57%	8	7%	21	18%
2016	75	60	80%	36	48%	11	15%	13	17%
2017	106	81	76%	54	50%	9	8%	18	17%
2018	134	103	75%	80	60%	9	7%	14	10%
2019	112	87	78%	74	66%	2	2%	11	10%
2020	165	132	80%	97	60%	13	8%	22	13%
1980-1989	2,047	652	32%	440	21%	73	4%	139	7%
1990-1998	3,614	1,674	46%	1,063	29%	195	5%	416	12%
1999-2000	856	580	68%	498	58%	19	2%	63	7%
2001-2020	2,258	1,681	75%	1,004	45%	139	6%	540	24%
1980-2020	**8,775**	**4,589**	**52%**	**3,005**	**34%**	**426**	**5%**	**1,158**	**13%**

Table 4d (updated December 28, 2020)

VC-backed IPOs, U.S.-headquartered Companies Only, 1980-2020

There are 3,301 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 overallotment 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 $388 million, 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	No. of VC-backed	Proceeds in $millions VC-backed	At first market price, $millions Public float	Market cap
1980	23	388	500	3,374
1981	53	648	718	3,535
1982	21	490	575	2,640
1983	114	2,710	3,046	14,106
1984	44	605	626	2,936
1985	38	660	682	2,751
1986	79	1,558	1,671	7,081
1987	66	1,315	1,446	5,921
1988	31	658	709	3,039
1989	39	843	941	3,611
1990	41	1,057	1,177	4,925
1991	114	3,765	4,339	16,079
1992	137	4,934	5,561	18,529
1993	169	5,828	6,866	24,931
1994	126	3,528	4,011	14,023
1995	184	6,972	9,130	35,126
1996	258	11,080	13,370	56,781
1997	131	4,877	5,912	26,860
1998	77	3,882	4,928	23,380
1999	273	21,901	45,842	314,946
2000	224	21,631	40,409	288,086
2001	30	2,406	2,895	15,825
2002	23	1,956	2,216	10,563
2003	24	1,789	2,099	8,326
2004	76	7,042	8,306	54,443
2005	41	3,110	3,759	14,986
2006	52	4,238	4,934	21,329
2007	68	9,640	12,320	69,650
2008	9	863	936	4,428
2009	12	1,697	2,057	8,302
2010	37	3,627	4,171	19,922
2011	41	6,439	7,753	61,951
2012	48	21,031	22,884	125,539
2013	70	10,666	14,428	90,412
2014	112	15,623	19,174	94,684
2015	64	8,294	10,835	56,697
2016	43	4,858	6,049	32,232
2017	54	9,901	12,445	75,152
2018	82	13,447	16,858	95,651
2019	70	23,803	27,937	221,129
2020	103	38,154	62,834	477,240
1980-2020	**3,301**	**287,914**	**397,349**	**2,431,122**

Table 17 (updated March 10, 2020)

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 2019 purchasing power using the Consumer Price Index. IPOs from 1980-2018 are used, with returns calculated through the end of December, 2019. In Panel A, the sample size is 8,497 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 (2019 purchasing power). Buy-and-hold returns are calculated until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2019 for IPOs from 2017 and 2018). 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. 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 1980-2018 categorized by venture capital backing

			Average 3-year Buy-and-hold Return		
VC-backed or not	Number of IPOs	Average First-day Return	IPOs	Market-adjusted	Style-adjusted
VC-backed	3,240	26.5%	26.0%	-9.3%	1.2%
NonVC-backed	5,257	12.5%	20.3%	-22.6%	-11.3%
NonVC and nonBuyout	4,129	13.5%	17.0%	-29.3%	-14.1%
All	8,497	17.9%	22.4%	-17.5%	-6.6%

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 (2019 purchasing power) from 1980-2018 categorized by private equity (buyout fund) backing

			Average 3-year Buy-and-hold Return		
Buyout-backed or not	Number of IPOs	Average First-day Return	IPOs	Market-adjusted	Style-adjusted
Buyout-backed	1,060	8.8%	34.1%	3.0%	2.4%
NonBuyout-backed	3,625	14.9%	37.3%	-6.3%	1.0%
All	4,685	13.5%	36.6%	-4.2%	1.3%

Table 17a (updated March 10, 2020)

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

8,497 IPOs from 1980-2018 are used, with returns calculated through the end of December, 2019. Buy-and-hold returns are calculated from the first closing price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2019 for IPOs from 2017 and 2018). 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	2,839	28.3%	22.2%	-11.8%	-0.9%
Growth capital-backed	401	14.1%	52.8%	8.8%	16.1%
Buyout-backed	1,128	9.1%	32.3%	1.8%	-1.2%
Financial Sponsored	4,368	22.0%	27.6%	-6.4%	0.6%
Non-Financial Sponsored	4,129	13.5%	17.0%	-29.3%	-14.1%
All	8,497	17.9%	22.4%	-17.5%	-6.6%

Note: The high average 3-year buy-and-hold return for growth capital-backed IPOs is partly attributable, in a mechanical sense, to the five 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 March 10, 2020)

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

The sample is composed of 8,497 IPOs from 1980-2018, with returns calculated through the end of December 2019. 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. 31 of 2019 for IPOs from 2017 and 2018). 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 1980-2018 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	3,240	26.5%	26.0%	-9.3%	1.2%
NonVC-backed	5,257	12.5%	20.3%	-22.6%	-11.3%
All	8,497	17.9%	22.4%	-17.5%	-6.6%

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	8.5%	31.9%	-14.0%	13.9%
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	1,258	17.3%	60.0%	-1.9%	26.3%
NonVC-backed	2,356	13.5%	29.0%	-31.2%	-14.4%
All	3,614	14.8%	39.8%	-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	517	81.3%	-62.1%	-40.4%	-62.5%
NonVC-backed	339	39.1%	-39.4%	-18.6%	-53.4%
All	856	64.6%	-53.1%	-31.8%	-58.9%

Panel E: IPOs from 2001-2018

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	952	18.7%	25.6%	0.4%	-4.3%
NonVC-backed	1,028	10.2%	21.3%	-0.1%	-4.6%
All	1,980	14.3%	23.4%	0.2%	-4.5%