

# Initial Public Offerings: VC-backed IPO Statistics Through 2018

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## Table 4 (updated Dec. 20, 2018)

### Median Age and Fraction of IPOs with VC and Buyout Backing, 1980-2018

There are 8,497 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. 387 growth capital-backed IPOs are classified as VC-backed.

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	193	8	53	27%	1	1%	73	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	7	66	23%	42	15%	58	66%
1988	105	8	32	30%	9	9%	28	61%
1989	116	8	40	34%	10	9%	35	66%
1990	110	8	42	38%	14	13%	31	74%
1991	286	9	116	41%	72	25%	70	63%
1992	412	10	138	33%	98	24%	113	59%
1993	510	9	172	34%	79	15%	126	70%
1994	402	8	129	32%	22	5%	116	55%
1995	461	7	186	40%	30	7%	204	55%
1996	677	7	264	39%	35	5%	274	55%
1997	474	9	133	28%	38	8%	173	42%
1998	281	8	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	79	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	46	29%	67	42%	45	49%
2006	157	13	54	34%	68	43%	48	52%
2007	159	9	71	45%	31	19%	75	67%
2008	21	14	9	43%	3	14%	6	67%
2009	41	15	12	29%	19	46%	14	43%
2010	91	10	40	44%	26	29%	33	73%
2011	81	11	44	54%	18	22%	36	81%
2012	93	12	48	52%	28	30%	39	87%
2013	157	12	76	48%	36	23%	43	72%
2014	206	11	129	63%	38	18%	53	72%
2015	118	10	72	61%	21	18%	38	71%
2016	75	10	46	61%	14	19%	21	71%
2017	107	11	62	58%	19	18%	30	77%
2018	134	10	88	66%	16	12%	38	79%
1980-1989	2,048	8	513	25%	140	7%	595	46%
1990-1998	3,613	8	1,257	35%	418	12%	1,220	55%
1999-2000	856	5	517	60%	63	7%	630	68%
2001-2018	1,980	11	955	48%	509	26%	641	68%
<b>1980-2018</b>	<b>8,497</b>	<b>8</b>	<b>3,242</b>	<b>38%</b>	<b>1,130</b>	<b>13%</b>	<b>3,086</b>	<b>59%</b>

**Table 4a** (updated Dec. 21, 2018)

**Technology Company IPOs, 1980-2018**

There are 3,086 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, 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.

For the column with VC-backed IPOs, there are 3,091 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 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	Price-to-sales		Nominal	\$2014		
				OP	MP				
1980	22	388	378	3.4	3.8	16.2	48.8	6.5	91%
1981	73	648	845	3.5	3.6	12.8	34.5	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	58	1,315	1,324	3.2	3.2	18.3	38.4	5.5	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	31	1,085	747	3.6	3.7	29.1	53.5	9	94%
1991	70	3,887	2,738	3.2	3.7	34.5	59.9	9	74%
1992	113	4,970	5,847	3.4	3.6	22.8	38.6	8	65%
1993	126	5,929	5,416	3.0	3.6	27.0	44.2	8	74%
1994	116	3,691	3,624	3.7	4.0	21.1	33.7	8	70%
1995	204	7,023	9,781	4.6	5.7	21.6	33.6	8	71%
1996	274	11,594	16,185	6.9	8.3	16.7	25.2	7	47%
1997	173	4,994	7,447	5.2	5.7	21.5	31.6	7	50%
1998	113	3,882	8,118	8.8	11.9	22.1	32.0	6	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	75	9,820	11,371	6.5	8.0	70.0	78.4	8	29%
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	39	21,031	20,250	4.4	4.9	108.1	111.7	9	44%
2013	43	11,553	8,486	5.3	6.1	105.8	107.5	9	28%
2014	53	18,289	9,965	6.1	6.8	90.5	90.5	11	17%
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	184.1	13	17%
2018	38	16,787	11,983	7.6	11.3	173.6	167.3	12	16%
<b>1980-2018</b>	<b>3,086</b>	<b>242,942</b>	<b>279,209</b>	<b>5.8</b>	<b>6.9</b>	<b>22.5</b>	<b>37.0</b>	<b>7</b>	<b>49%</b>

## Table 4b (updated March 29, 2019)

### Technology and Biotechnology Company IPOs, 1980-2018

There are 3,087 tech and 788 biotech IPOs from 1980-2018, 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. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006. Tech stocks are defined as internet-related stocks plus other technology stocks including telecom, but not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes that I created: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions.

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

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

(table on the next page)

Year	Number of IPOs			% Profitable			Median sales (\$2014, millions)		
	Tech	Biotech	Other	Tech	Biotech	Other	Tech	Biotech	Other
1980	22	3	46	91%	67%	70%	48.8	17.1	64.4
1981	73	10	110	88%	30%	85%	34.5	4.1	36.1
1982	42	2	33	83%	50%	79%	26.2	3.3	24.9
1983	173	21	257	71%	43%	86%	20.6	6.1	73.9
1984	50	2	119	80%	100%	85%	22.4	113.4	57.9
1985	37	5	144	84%	40%	87%	29.7	10.4	88.5
1986	77	25	291	74%	32%	84%	27.8	9.0	79.2
1987	58	11	216	86%	18%	85%	38.4	5.9	92.3
1988	28	2	75	79%	0%	87%	48.5	8.2	191.1
1989	35	4	77	77%	0%	83%	60.9	2.2	101.7
1990	31	4	75	94%	0%	87%	53.5	3.8	106.4
1991	70	33	183	74%	15%	88%	59.9	5.7	128.8
1992	113	33	266	65%	18%	80%	38.6	2.2	116.7
1993	126	28	356	74%	21%	75%	44.2	2.6	100.8
1994	116	20	266	70%	20%	80%	33.7	2.6	87.5
1995	204	22	235	71%	14%	75%	33.6	4.2	98.9
1996	274	47	356	47%	17%	73%	25.2	3.9	82.7
1997	173	22	279	50%	14%	77%	31.6	8.2	93.0
1998	113	12	156	36%	42%	69%	32.0	18.9	104.1
1999	370	11	95	14%	27%	63%	17.2	16.9	162.9
2000	260	56	64	14%	11%	50%	16.6	5.5	164.9
2001	23	6	50	30%	0%	66%	32.9	0.2	473.9
2002	20	5	41	40%	40%	63%	125.8	189.7	569.9
2003	18	8	37	39%	0%	76%	111.0	0.1	519.1
2004	61	30	82	44%	7%	70%	70.1	4.4	250.2
2005	45	16	98	36%	13%	70%	83.5	15.2	266.3
2006	48	24	85	50%	8%	80%	67.9	4.0	393.3
2007	75	19	65	29%	5%	74%	78.4	1.6	272.7
2008	6	1	14	67%	0%	57%	173.6	0.3	223.6
2009	14	3	24	71%	67%	71%	193.1	41.7	498.2
2010	33	11	47	64%	0%	70%	129.0	0.0	348.6
2011	36	8	37	36%	0%	59%	150.1	3.3	343.4
2012	39	10	44	44%	0%	75%	111.7	0.5	347.1
2013	43	41	73	28%	10%	56%	107.5	10.9	420.3
2014	53	74	79	17%	7%	57%	90.5	0.0	271.0
2015	38	42	38	26%	0%	66%	130.9	0.0	171.3
2016	21	25	29	29%	8%	59%	108.2	0.9	645.4
2017	30	32	45	17%	0%	44%	181.5	0.0	421.1
2018	38	58	39	16%	0%	51%	167.3	0.0	452.4
2001-18	641	413	927	35%	6%	66%	104.3	0.4	340.8
<b>1980-2018</b>	<b>3,087</b>	<b>788</b>	<b>4,626</b>	<b>49%</b>	<b>13%</b>	<b>76%</b>	<b>37.0</b>	<b>2.</b>	<b>111.3</b>

## Table 4c (updated Dec. 31, 2018)

### VC-backed, Growth Capital-backed, and Buyout-backed IPOs, 1980-2018

There are 8,497 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. 403 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	193	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	108	38%	61	21%	5	2%	42	15%
1988	105	41	39%	25	24%	7	7%	9	9%
1989	116	50	43%	30	26%	10	9%	10	9%
1990	110	56	51%	37	34%	5	5%	14	13%
1991	286	188	66%	97	34%	19	7%	72	25%
1992	412	236	57%	121	29%	17	4%	98	24%
1993	510	251	49%	160	31%	12	2%	79	15%
1994	402	151	38%	113	28%	16	4%	22	5%
1995	461	216	47%	157	34%	29	6%	30	7%
1996	677	299	44%	219	32%	45	7%	35	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	79	53	67%	22	28%	10	13%	21	27%
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%	6	4%	67	42%
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	66	73%	38	42%	2	2%	26	29%
2011	81	62	77%	40	49%	4	5%	18	22%
2012	93	76	82%	45	48%	3	3%	28	30%
2013	157	112	71%	64	41%	12	8%	36	23%
2014	206	166	81%	110	53%	19	9%	38	18%
2015	118	93	79%	68	58%	4	3%	21	18%
2016	75	60	80%	36	48%	10	13%	14	19%
2017	107	81	76%	54	50%	8	7%	19	18%
2018	134	101	75%	81	60%	7	5%	16	12%
1980-1989	2,048	653	32%	440	21%	73	4%	140	7%
1990-1998	3,613	1,675	46%	1,065	29%	192	5%	418	12%
1999-2000	856	580	68%	498	58%	19	2%	63	7%
2001-2018	1,980	1,460	74%	836	42%	119	6%	509	26%
<b>1980-2018</b>	<b>8,497</b>	<b>4,368</b>	<b>51%</b>	<b>2,839</b>	<b>33%</b>	<b>403</b>	<b>5%</b>	<b>1,130</b>	<b>13%</b>

## Table 4d (updated Dec. 31, 2018)

### VC-backed IPOs, U.S.-headquartered Companies Only, 1980-2018

There are 3,123 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 1975-2006.

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)

**Table 17** (updated April 9, 2019)**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 1980-2017 are used, with returns calculated through the end of December, 2018. In Panel A, the sample size is 8,363 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 2018 for IPOs from 2016 and 2017). 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 1980-2017 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	3,153	26.6%	25.1%	-9.8%	-0.4%
NonVC-backed	5,210	12.6%	20.0%	-22.8%	-11.6%
NonVC and nonBuyout	4,095	13.5%	16.7%	-29.6%	-14.6%
All	8,363	17.9%	21.9%	-17.9%	-7.1%

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 1980-2017 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	1,047	8.8%	34.0%	3.5%	3.2%
NonBuyout-backed	3,572	14.7%	36.5%	-7.1%	0.1%
All	4,619	13.4%	35.9%	-4.7%	0.8%

**Table 17a** (updated April 9, 2019)**Long-run Returns on IPOs Categorized by VC-, Growth Capital-, or Buyout Fund-backing**

8,363 IPOs from 1980-2017 are used, with returns calculated through the end of December, 2018. 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 2018 for IPOs from 2016 and 2017). 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	2,759	28.4%	21.0%	-12.6%	-1.9%
Growth capital-backed	394	14.3%	53.5%	10.3%	16.6%
Buyout-backed-backed	1,115	9.1%	32.3%	2.3%	0.5%
Financial Sponsored	4,268	22.0%	27.0%	-6.6%	-0.2%
Non-Financial Sponsored	4,095	13.5%	16.7%	-29.6%	-14.6%
All	8,363	17.9%	21.9%	-17.9%	-7.1%

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 April 9, 2019)

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

The sample is composed of 8,363 IPOs from 1980-2017, with returns calculated through the end of December, 2018. 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 2018 for IPOs from 2016 and 2017). 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 1980-2017 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	3,153	26.6%	25.1%	-9.8%	0.4%
NonVC-backed	5,210	12.6%	20.0%	-22.8%	-11.6%
All	8,363	17.9%	21.9%	-17.9%	-7.1%

**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	1,535	6.8%	19.3%	-25.5%	-1.7%
All	2,048	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	1,257	17.3%	60.1%	-1.8%	26.3%
NonVC-backed	2,357	13.5%	28.9%	-31.3%	-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%	-62.1%
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 2001-2017**

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	866	18.1%	22.4%	-0.6%	-7.7%
NonVC-backed	979	10.3%	20.3%	0.6%	-5.6%
All	1,845	14.0%	21.3%	0.0%	-6.6%