Initial Public Offerings: Updated Statistics

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134 operating companies went public in the U.S. in 2018, excluding ADRs, natural resource limited partnerships and trusts, closed-end funds, REITs, SPACs, banks and S&Ls, unit offers, penny stocks (offer price of less than $5 per share), and stocks not listed on Nasdaq or the NYSE (including NYSE MKT LLC, the former American Stock Exchange). For 2016, I have included BATS Global Markets, which went public in April, but was listed on BATS rather than the NYSE or Nasdaq. In 2017, BATS was acquired by CBOE Holdings.

Of these 134 operating companies, 120 were from the U.S. A higher volume figure has been reported in many sources (239 counting all offerings), but the higher numbers typically include not only operating companies (mostly domestic), but also some companies that were already traded in other countries and are thus actually follow-on offerings, banks and S&Ls (7 offerings, most of which are mutual conversions with depositors buying the stock), oil & gas partnerships or unit trusts (1 offerings), ADRs (32 offerings), REITs (6 offerings), 44 special purpose acquisition companies (SPACs), 0 closed-end funds, other unit offerings (5 offerings), IPOs that do not trade on the NYSE (including NYSE MKT) or Nasdaq (0 offering), IPOs with an offer price below $5.00 (3 offering), and small best efforts deals (4 offerings). Some of the IPOs could be excluded from the 134 count for more than one reason. There are also several bulletin board-traded issues that I (and Dealogic) classify as follow-ons, and thus don't count, but which Thomson-Reuters classifies as IPOs.

Note: Many of these tables have been updated to include 2018 numbers with the assistance of Jing Lu. Some of the tables may have slightly different counts for the number of IPOs in some years. These inconsistencies are because I periodically add or delete a company that had been misclassified or find some missing data. I do not immediately update every table. I rely on data from Thomson Reuters (SDC) and Dealogic, but also use information from IPOScoop.com and Renaissance Capital and the prospectuses, and other sources. For IPOs from June 1996 and later, the prospectuses (S.E.C. form 424B) are available on EDGAR. For IPOs from 1975-1996 (the pre-EDGAR days), I have most of the original paper prospectuses courtesy of Graeme Howard and Todd Huxster. For foreign IPOs from 1996-2000, the S.E.C. did not require electronic filing, so they are not available on EDGAR, but I have the paper copies for many of them. In November 2013 I stopped at the Stanford Business School library, which has a microfiche collection of prospectuses of deals from the 1980s, and filled in the missing numbers for pre-IPO sales, earnings per share, and founding dates for a handful of "problem children" for which I did not have the numbers. The tables reflect the fact that I now have complete information on these variables for all but one of the 8,497 IPOs from 1980-2018.

In almost all of my tables, I use a more conservative definition of what is an IPO than most other data providers. Partly, the definition that is appropriate depends upon what one is focusing on. From an underwriter's point of view, anything that generates fees is relevant, including closed-end funds, REITs, and SPACs. I exclude these, as well as penny stocks, banks and S&Ls (mainly conversions of mutual to stock companies), ADRs, natural resource LPs, unit offers, penny stocks, small best efforts deals, and stocks that are not listed on the NYSE (including NYSE MKT and its predecessor, the Amex) or Nasdaq. I exclude some of these categories (such as LPs) partly because it is difficult to determine the founding date of the underlying assets, and I do not like to have a different number of firms in different tables. Another motivation is that I am focusing on operating companies that potentially create jobs.

Table 1: Mean First-day Returns and Money Left on the Table, 1980-2018

The sample is IPOs with an offer price of at least $5.00, excluding ADRs, unit offers, closed-end funds, REITs, natural resource limited partnerships, small best efforts offers, banks and S&Ls, and stocks not listed on CRSP (CRSP includes Amex, NYSE, and NASDAQ stocks). Proceeds exclude overallotment options, but include the global offering size. The amount of money left on the table is defined as the closing market price on the first-day of trading minus the offer price, multiplied by the shares offered.

		Mean First-day Return			
Year	**Number of IPOs**	**Equal-weighted**	**Proceeds-weighted**	**Aggregate Amount Left on the Table**	**Aggregate Proceeds**
1980	71	14.3%	20.0%	$0.18 billion	$0.91 billion
1981	193	5.9%	5.7%	$0.13 billion	$2.31 billion
1982	77	11.0%	13.3%	$0.13 billion	$1.00 billion
1983	451	9.9%	9.4%	$0.84 billion	$8.89 billion
1984	171	3.7%	2.5%	$0.05 billion	$2.02 billion
1985	186	6.4%	5.6%	$0.23 billion	$4.09 billion
1986	393	6.1%	5.1%	$0.68 billion	$13.40 billion
1987	285	5.6%	5.7%	$0.66 billion	$11.68 billion
1988	105	5.5%	3.4%	$0.13 billion	$3.88 billion
1989	116	8.0%	4.7%	$0.27 billion	$5.81 billion
1990	110	10.8%	8.1%	$0.34 billion	$4.27 billion
1991	286	11.9%	9.7%	$1.50 billion	$15.39 billion
1992	412	10.3%	8.0%	$1.82 billion	$22.69 billion
1993	510	12.7%	11.2%	$3.52 billion	$31.44 billion
1994	402	9.6%	8.3%	$1.43 billion	$17.17 billion
1995	461	21.2%	17.5%	$4.90 billion	$27.95 billion
1996	677	17.2%	16.1%	$6.76 billion	$42.05 billion
1997	474	14.0%	14.4%	$4.56 billion	$31.76 billion
1998	281	21.9%	15.6%	$5.25 billion	$33.65 billion
1999	476	71.2%	57.4%	$37.11 billion	$64.67 billion
2000	380	56.4%	46.0%	$29.81 billion	$64.80 billion
2001	79	14.2%	8.7%	$2.97 billion	$34.24 billion
2002	66	9.1%	5.1%	$1.13 billion	$22.03 billion
2003	63	11.7%	10.4%	$1.00 billion	$9.54 billion
2004	173	12.3%	12.4%	$3.86 billion	$31.19 billion
2005	159	10.3%	9.3%	$2.64 billion	$28.23 billion
2006	157	12.1%	13.0%	$3.95 billion	$30.48 billion
2007	159	14.0%	13.9%	$4.95 billion	$35.66 billion
2008	21	5.7%	24.8%	$5.63 billion	$22.76 billion
2009	41	9.8%	11.1%	$1.46 billion	$13.17 billion
2010	91	9.4%	6.2%	$1.84 billion	$29.82 billion
2011	81	13.9%	13.0%	$3.51 billion	$26.97 billion
2012	93	17.8%	8.9%	$2.77 billion	$31.11 billion
2013	157	21.1%	20.5%	$7.94 billion	$38.75 billion
2014	206	15.5%	12.8%	$5.40 billion	$42.20 billion
2015	118	19.2%	18.9%	$4.16 billion	$22.00 billion
2016	75	14.6%	14.4%	$1.80 billion	$12.52 billion
2017	107	13.0%	16.0%	$3.69 billion	$22.99 billion
2018	134	18.6%	19.1%	$6.39 billion	$33.45 billion
1980-1989	2,048	7.2%	6.1%	$3.30 billion	$53.99 billion
1990-1998	3,613	14.8%	13.3%	$30.07 billion	$226.38 billion
1999-2000	856	64.6%	51.7%	$66.92 billion	$129.47 billion
2001-2018	1,980	14.3%	13.4%	$65.08 billion	$487.10 billion
1980-2018	**8,497**	**17.9%**	**18.4%**	**$165.37 billion**	**$896.95 billion**

Table 1a (updated Dec. 31, 2018)
Mean First-day Returns and Money Left on the Table, 1980-2018
The market value includes the market value of all share classes using the post-issue no. of shares.

Year	Number of IPOs	Mean First-day Return: Equal-weighted	Mean First-day Return: Proceeds-weighted	Aggregate Amount Left on the Table	Aggregate Proceeds	Market value at 1st closing market price
1980	71	14.3%	20.0%	$0.18 billion	$0.91 billion	$5.87 billion
1981	193	5.9%	5.7%	$0.13 billion	$2.31 billion	$10.74 billion
1982	77	11.0%	13.3%	$0.13 billion	$1.00 billion	$5.11 billion
1983	451	9.9%	9.4%	$0.84 billion	$8.89 billion	$41.35 billion
1984	171	3.7%	2.5%	$0.05 billion	$2.02 billion	$8.76 billion
1985	186	6.4%	5.3%	$0.23 billion	$4.09 billion	$15.18 billion
1986	393	6.1%	5.1%	$0.68 billion	$13.40 billion	$46.77 billion
1987	285	5.6%	5.7%	$0.66 billion	$11.68 billion	$45.59 billion
1988	105	5.5%	3.4%	$0.13 billion	$3.88 billion	$21.65 billion
1989	116	8.0%	4.7%	$0.27 billion	$5.81 billion	$22.37 billion
1990	110	10.8%	8.1%	$0.34 billion	$4.27 billion	$17.79 billion
1991	286	11.9%	9.7%	$1.50 billion	$15.35 billion	$52.53 billion
1992	412	10.3%	8.0%	$1.82 billion	$22.69 billion	$74.35 billion
1993	510	12.7%	11.2%	$3.52 billion	$31.44 billion	$126 billion
1994	402	9.6%	8.3%	$1.43 billion	$17.19 billion	$63 billion
1995	461	21.2%	17.5%	$4.90 billion	$27.95 billion	$127 billion
1996	677	17.2%	16.1%	$6.76 billion	$42.05 billion	$215 billion
1997	474	14.0%	14.4%	$4.56 billion	$31.76 billion	$139 billion
1998	281	21.9%	15.6%	$5.25 billion	$33.65 billion	$164 billion
1999	476	71.2%	57.4%	$37.11 billion	$64.67 billion	$651 billion
2000	380	56.4%	46.0%	$29.81 billion	$64.80 billion	$643 billion
2001	79	14.2%	8.7%	$2.97 billion	$34.24 billion	$176 billion
2002	66	9.1%	5.1%	$1.13 billion	$22.03 billion	$84 billion
2003	63	11.7%	10.4%	$9.96 billion	$9.54 billion	$40 billion
2004	173	12.3%	12.4%	$3.86 billion	$31.19 billion	$148 billion
2005	159	10.3%	9.3%	$2.64 billion	$28.23 billion	$105 billion
2006	157	12.1%	13.0%	$3.95 billion	$30.48 billion	$135 billion
2007	159	14.0%	13.9%	$4.95 billion	$35.66 billion	$212 billion
2008	21	5.7%	24.8%	$5.63 billion	$22.76 billion	$63 billion
2009	41	9.8%	11.1%	$1.46 billion	$13.17 billion	$59 billion
2010	91	9.4%	6.2%	$1.84 billion	$29.82 billion	$113 billion
2011	81	13.3%	13.0%	$3.51 billion	$26.97 billion	$158 billion
2012	93	17.8%	8.9%	$2.77 billion	$31.11 billion	$181 billion
2013	157	21.1%	20.5%	$7.94 billion	$38.75 billion	$257 billion
2014	206	15.5%	12.8%	$5.40 billion	$42.20 billion	$238 billion
2015	118	19.2%	18.7%	$4.16 billion	$22.00 billion	$508 billion
2016	75	14.6%	14.4%	$1.80 billion	$12.52 billion	$79 billion
2017	107	13.0%	15.0%	$3.69 billion	$22.99 billion	$162 billion
2018	134	18.9%	19.2%	$6.41 billion	$33.30 billion	$225 billion
1980-1989	2,048	7.2%	6.1%	$3.30 billion	$53.99 billion	$223 billion
1990-1998	3,613	14.8%	13.3%	$30.07 billion	$226.38 billion	$983 billion
1999-2000	856	64.6%	51.7%	$66.92 billion	$129.47 billion	$1,294 billion
2001-2018	1,980	14.3%	13.4%	$65.08 billion	$486.95 billion	$2,586 billion
1980-2018	**8,497**	**17.9%**	**18.4%**	**$165.37 billion**	**$896.95 billion**	**$5,087 billion**

Table 2 (updated Dec. 31, 2018)

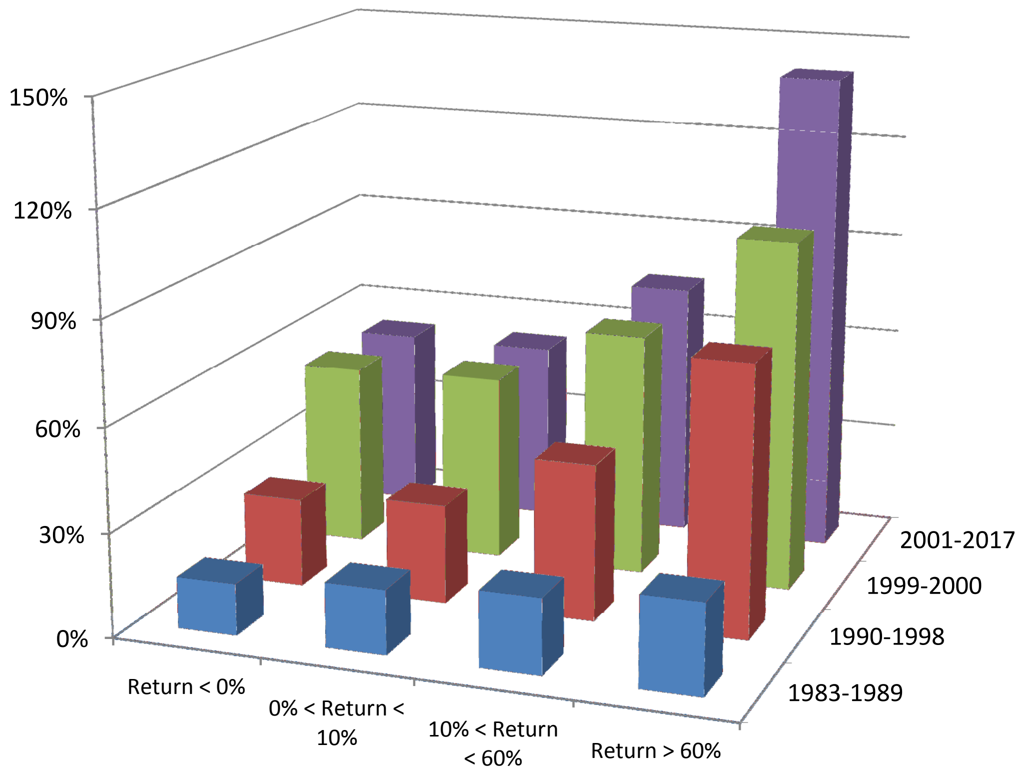
Mean First-day Returns, Categorized by Sales, for IPOs from 1980-2018

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 2003 to 2017, the CPI has increased by 33.6%, so $10 million in 2003 is equivalent to $13.36 million in 2017. There are 8,497 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, Dealogic, EDGAR, and the Graeme Howard-Todd Huxster collection of pre-EDGAR prospectuses. The average first-day return is 17.9%.

	1980-1989		1990-1998		1999-2000		2001-2017	
	Return	N	Return	N	Return	N	Return	N
0≤sales<$10m	10.3%	425	17.2%	741	68.9%	331	10.0%	429
$10m≤sales<$20m	8.6%	242	18.5%	393	81.4%	138	13.5%	85
$20m≤sales<$50m	7.8%	501	18.8%	789	75.5%	154	15.7%	228
$50m≤sales<$100m	6.3%	356	12.8%	590	62.2%	86	20.8%	293
$100m≤sales<$200m	5.1%	234	11.8%	454	35.8%	56	19.5%	259
$200m≤sales	3.4%	290	8.7%	646	25.0%	91	11.9%	686
All	7.2%	2,048	14.8%	3,613	64.6%	856	14.3%	1,980

Figure 1

IPO Turnover Categorized by Time Period and First-Day Return, 1983-2017



Turnover is calculated as the CRSP–reported first day volume divided by the number of shares issued (global issuance, excluding over allotment options). Nasdaq volume numbers are divided by 2 for 1983-January 2001, by 1.8 for the rest of 2001, and by 1.6 for 2002-2003 to make them comparable to Amex and NYSE volume. The four subperiods are 1983-1989, 1990-1998, 1999-2000, and 2001-2017. Returns are the first-day return, measured from the offer price to the closing market price. Closed-end funds, REITs, SPACs, unit offers, all IPOs by foreign firms, and bank and S&L IPOs are excluded. Table 3 reports the numbers that are graphed here.

Table 3 (updated May 14, 2018)

IPO Turnover Categorized by Decade and First-Day Return, 1983-2017

IPOs with an offer price below $5.00 per share, unit offers, closed-end funds, REITs, bank and S&L IPOs, SPACs, natural resource limited partnerships, all foreign companies, and those with missing volume numbers on CRSP (3 IPOs) are excluded. Turnover is defined as the maximum of the first three days' CRSP trading volume divided by the number of shares issued (not including the overallotment option). The highest of these first three days is almost always the first day. For Nasdaq-listed IPOs, the trading volume is divided by 2 for January1983-January 2001, by 1.8 for February 2001-December 2001, and by 1.6 for 2002-2003 to allow more meaningful comparisons with NYSE and Amex (now NYSE MKT)-listed IPOs. As explained in Appendix B of Gao and Ritter's 2010 *Journal of Financial Economics* article "The Marketing of Seasoned Equity Offerings," in 2001, Nasdaq changed its trade-reporting rules, and in 2002, institutions changed the way they reported Nasdaq trades. IPOs before 1983 are not included because CRSP has volume for very few of these stocks. For approximately 30 IPOs, the observation is deleted because the (adjusted) turnover is less than 1%.

For Republic Airways Holding (20040526), the CRSP volume of 131,952 is replaced with Bigcharts volume of 1,203,600; and for Nucryst Pharmaceuticals (20051222), the CRSP volume of 49,056 is replaced with Bigcharts volume of 714,500. For BATS Global Markets (20160415), which is listed on BATS, Yahoo Finance is the source of volume and long-run returns, and I have created a CRSP PERM of 12345 for it.

Panel A: Percentage of U.S. Operating Company IPOs with Turnover Greater Than 100%

Time Period	Number of IPOs	Percentage with Turnover>100%	Percentage of IPOs on Nasdaq
1983-1989	1,655	0.0%	87%
1990-1998	3,407	1.5%	84%
1999-2000	786	21.9%	91%
2001-2017	1,630	15.7%	64%
Total	7,478	6.4%	81%

Panel B: Average Turnover Categorized by First-Day Returns

Return Categories	Number of IPOs	Average First-Day Returns	Average Turnover
Return ≤ 0%	2,105	-2.9%	29.6%
0% < Return ≤ 10%	2,156	4.5%	32.1%
10% < Return ≤ 60%	2,703	25.5%	52.1%
Return > 60%	514	127.8%	99.0%
Total	7,478	18.5%	43.2%

Panel C: Average Turnover Categorized by First-Day Returns & Decade

Return Categories	1983-1989	1990-1998	1999-2000	2001-2017
Return ≤ 0%	15.0%	25.7%	53.0%	52.6%
0% < Return ≤ 10%	18.7%	28.8%	54.0%	52.4%
10% < Return ≤ 60%	21.9%	45.5%	70.9%	74.7%
Return > 60%	26.2%	78.5%	102.1%	141.0%
Total	18.0%	36.7%	76.6%	66.2%

Table 3b (updated May 14, 2018)

Mean First-day Turnover for NYSE and Nasdaq IPOs, 1983-2017

The sample is composed of the IPOs of U.S.-based companies with an offer price of at least $5.00 and listed on the NYSE or Nasdaq (excluding Nasdaq small cap issues before October 2005 and, after Sept. 2005, Nasdaq capital market issues), excluding ADRs, unit offers, closed-end funds, REITs, partnerships, banks and S&Ls, and stocks not listed on CRSP (CRSP includes Amex, NYSE, and NASDAQ stocks). Turnover is volume divided by shares issued. Volume is the maximum of the first three days, which is almost always the first day. Shares issued excludes over allotment options, but includes the global offering size. To adjust for institutional features of the way that Nasdaq and NYSE-Amex volume are computed, we use the procedure discussed in Appendix B of Xiaohui Gao and Jay Ritter's 2010 *Journal of Financial Economics* article "The Marketing of Seasoned Equity Offerings." Prior to February 1, 2001, we divide Nasdaq volume by 2.0. This accounts for the practice of counting as trades both trades with market makers and trades among market makers. On February 1, 2001, a "riskless principal" rule went into effect, that resulted in a reduction of approximately 10% in reported volume. Thus, for February 1, 2001 to December 31, 2001, we divide Nasdaq volume by 1.8. During 2002, securities firms began to charge institutional investors commissions on Nasdaq trades, rather than the prior practice of merely marking up or down the net price, resulting in a further reduction in reported volume of approximately 10%. Thus, for 2002 and 2003, we divide Nasdaq volume by 1.6. For 2004 and later years, in which much of the volume of Nasdaq (and NYSE) stocks has been occurring on crossing networks and other venues, we use a divisor of 1.0, reflecting the fact that there are no longer important differences in the reporting of Nasdaq and NYSE volume. Approximately 30 IPOs with adjusted first-day turnover of less than 1% of the issue size are excluded.

Year	Number of IPOs			Unadjusted			With Nasdaq Adjustment	
	Total	NYSE	Nasdaq	Total	NYSE	Nasdaq	Nasdaq	Total
1983	432	11	421	23.4%	17.6%	23.5%	12.0%	12.1%
1984	158	8	150	22.1%	12.5%	22.6%	11.4%	11.5%
1985	166	8	158	31.9%	18.7%	32.5%	16.3%	16.4%
1986	355	28	327	37.7%	27.2%	38.6%	19.4%	20.0%
1987	244	26	218	41.5%	26.7%	43.2%	21.8%	22.3%
1988	75	14	61	44.8%	25.5%	49.3%	24.6%	24.8%
1989	96	18	78	53.8%	29.3%	59.4%	29.7%	29.6%
1990	90	15	75	63.8%	28.4%	70.9%	35.5%	34.3%
1991	256	42	214	67.9%	42.7%	72.8%	36.4%	37.5%
1992	352	67	285	61.0%	37.5%	66.5%	33.2%	34.0%
1993	438	65	373	67.6%	49.9%	70.6%	35.3%	37.5%
1994	333	47	286	55.7%	32.8%	59.4%	29.7%	30.2%
1995	382	47	335	77.5%	49.7%	81.3%	40.8%	41.9%
1996	572	75	497	74.3%	60.1%	76.5%	38.2%	41.1%
1997	373	68	305	65.4%	51.6%	68.5%	34.5%	37.6%
1998	223	50	173	92.7%	55.6%	103.5%	51.7%	52.6%
1999	435	39	396	162.1%	74.1%	170.8%	85.4%	84.4%
2000	323	22	301	136.5%	58.5%	142.3%	71.1%	70.3%
2001	71	24	47	90.4%	57.6%	107.1%	59.1%	58.6%
2002	60	25	35	73.1%	62.1%	81.0%	50.6%	55.4%
2003	45	10	35	78.3%	58.8%	83.9%	52.4%	53.9%
2004	157	40	117	66.1%	57.8%	68.9%	68.9%	66.1%
2005	131	44	87	63.3%	62.4%	63.8%	63.8%	63.3%
2006	133	37	96	65.5%	77.5%	60.8%	60.8%	65.5%
2007	134	37	97	63.5%	64.4%	63.2%	63.2%	63.5%
2008	18	7	11	58.1%	73.8%	48.1%	48.1%	58.1%
2009	38	20	18	71.2%	65.1%	77.9%	77.9%	71.2%
2010	79	40	39	56.3%	59.0%	53.6%	53.6%	56.3%
2011	68	30	38	76.7%	87.8%	67.9%	67.9%	76.7%
2012	83	42	41	79.4%	86.5%	72.1%	72.1%	79.4%
2013	132	59	73	78.2%	91.9%	67.2%	67.2%	78.2%
2014	164	67	97	75.4%	79.1%	72.9%	72.9%	75.4%
2015	95	32	63	77.5%	96.7%	67.7%	67.7%	77.5%
2016	60	17	43	71.0%	84.9%	65.5%	65.5%	71.0%
2017	86	34	52	63.2%	67.6%	60.4%	60.4%	63.2%
2018	110	31	79					
1983-2000	5,303	650	4,653	70.8%	45.6%	74.3%	37.3%	38.3%
2001-2003	176	59	117	81.4%	59.7%	92.4%	54.6%	56.3%
2004-2017	1,378	506	872	69.4%	75.7%	65.8%	65.8%	69.4%
Total	**6,857**	**1,215**	**5,642**	**70.8%**	**58.8%**	**73.4%**	**42.0%**	**45.0%**

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 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. 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%
1980-2018	**8,497**	**8**	**3,242**	**38%**	**1,130**	**13%**	**3,086**	**59%**

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 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	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%
1980-2018	**3,086**	**242,942**	**279,209**	**5.8**	**6.9**	**22.5**	**37.0**	**7**	**49%**

Table 4b (updated Dec. 20, 2018)

Technology and Biotechnology Company IPOs, 1980-2018

There are 3,086 tech and 785 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%	3%	44%	181.5	0.0	421.1
2018	38	57	39	16%	0%	51%	167.3	0.0	452.4
2001-18	641	412	927	35%	6%	66%	104.3	0.4	340.8
1980-2018	**3,086**	**785**	**4,626**	**49%**	**13%**	**76%**	**37.0**	**2.7**	**111.3**

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. 396 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%
1980-2018	**8,497**	**4,368**	**51%**	**2,839**	**33%**	**403**	**5%**	**1,130**	**13%**

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)

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	719	3,534
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	708	3,039
1989	39	842	941	3,611
1990	41	1,057	1,177	4,926
1991	114	3,765	4,339	16,079
1992	137	4,934	5,560	18,529
1993	169	5,828	6,867	24,931
1994	126	3,528	4,011	14,023
1995	184	6,972	9,130	35,126
1996	257	11,051	13,342	56,650
1997	131	4,877	5,912	26,860
1998	77	3,882	4,928	23,380
1999	273	21,901	45,844	314,946
2000	224	21,630	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	42	3,327	4,013	15,450
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	22,885	125,538
2013	70	10,666	14,466	90,388
2014	112	15,623	19,174	94,684
2015	62	7,737	10,116	51,571
2016	42	4,693	5,842	31,678
2017	53	9,626	12,132	73,559
2018	81	13,553	17,009	109,386
1980-2018	**3,123**	**225,255**	**305,754**	**1,739,525**

Table 4e (MV not adjusted for inflation) Tech IPOs, 1980-2018

Year	No. of Tech IPOs	Proceeds, $millions	Number doubling	Market value, at first market price, $millions Total	Mean	Median
1980	22	378	0	$3,054	$139	$64
1981	73	845	0	$4,547	$62	$41
1982	42	648	0	$3,360	$80	$30
1983	173	3,271	2	$17,289	$100	$45
1984	50	551	1	$2,674	$53	$30
1985	37	375	0	$1,595	$43	$29
1986	77	1,217	0	$6,163	$80	$45
1987	58	1,324	0	$7,607	$131	$59
1988	28	888	0	$5,464	$195	$102
1989	35	748	0	$3,660	$105	$65
1990	31	747	0	$3,588	$116	$83
1991	70	2,738	0	$11,848	$169	$124
1992	113	5,847	1	$21,810	$193	$102
1993	126	5,416	1	$29,948	$238	$86
1994	116	3,624	1	$16,838	$145	$81
1995	204	9,781	10	$50,044	$245	$139
1996	274	16,185	5	$98,229	$359	$138
1997	173	7,447	2	$45,748	$264	$113
1998	113	8,118	12	$64,221	$568	$234
1999	370	33,512	114	$449,092	$1,214	$493
2000	260	42,442	69	$516,962	$1,988	$702
2001	23	5,773	0	$27,365	$1,190	$367
2002	20	2,587	0	$12,340	$617	$339
2003	18	2,242	0	$9,340	$519	$422
2004	61	9,064	0	$59,399	$974	$325
2005	45	6,994	0	$26,149	$581	$307
2006	48	4,873	0	$23,820	$496	$352
2007	75	11,371	0	$77,171	$1,029	$542
2008	6	1,194	0	$5,756	$959	$813
2009	14	4,126	0	$16,311	$1,165	$646
2010	33	4,347	0	$24,833	$753	$548
2011	36	9,412	1	$83,414	$2,317	$824
2012	39	20,250	1	$117,846	$3,022	$661
2013	43	8,486	1	$75,691	$1,760	$827
2014	53	9,965	2	$84,160	$1,588	$780
2015	38	10,087	0	$74,810	$1,969	$815
2016	21	2,510	1	$22,987	$1,095	$841
2017	30	7,844	0	$64,714	$2,157	$1,129
2018	38	11,983	1	$101,149	$2,662	$1,944
1980-2018	**3,086**	**279,209**	**225**	**$2,270,998**	**$736**	**$189**

Table 4f (MV adjusted for inflation, 2017 $)
IPOs, 1980-2018

Year	No. of IPOs	Proceeds, $millions Total	Proceeds, $millions Mean	Proceeds, $millions Median	Market value, at first close, $millions Total	Market value, at first close, $millions Mean	Market value, at first close, $millions Median
1980	71	$2,826	$40	$28	$18,338	$258	$105
1981	193	$6,454	$33	$23	$29,979	$155	$102
1982	77	$2,571	$33	$18	$13,159	$171	$86
1983	451	$22,070	$49	$29	$102,669	$228	$119
1984	171	$4,815	$28	$20	$20,862	$122	$69
1985	186	$9,414	$51	$25	$34,933	$188	$88
1986	393	$29,683	$76	$27	$103,595	$264	$99
1987	285	$25,507	$89	$33	$99,532	$349	$126
1988	105	$8,145	$78	$35	$45,432	$433	$160
1989	116	$11,645	$100	$43	$44,859	$387	$156
1990	110	$8,145	$74	$46	$33,914	$308	$166
1991	286	$27,756	$97	$52	$97,515	$341	$183
1992	412	$39,896	$97	$48	$130,761	$317	$169
1993	510	$53,526	$105	$48	$214,297	$420	$158
1994	402	$28,523	$71	$40	$105,742	$263	$125
1995	461	$45,144	$98	$52	$205,431	$446	$205
1996	677	$66,117	$98	$53	$377,944	$499	$201
1997	474	$48,460	$102	$51	$215,578	$455	$189
1998	281	$50,565	$180	$64	$246,201	$876	$285
1999	476	$95,547	$201	$91	$962,891	$2,023	$702
2000	380	$93,235	$245	$112	$924,452	$2,433	$816
2001	79	$47,492	$601	$158	$244,110	$3,090	$645
2002	66	$30,188	$457	$162	$114,629	$1,737	$714
2003	63	$12,745	$202	$154	$53,828	$854	$499
2004	173	$40,885	$236	$110	$194,092	$1,122	$448
2005	159	$35,949	$226	$147	$133,221	$838	$442
2006	157	$37,330	$238	$128	$165,163	$1,052	$450
2007	159	$41,442	$261	$125	$246,042	$1,547	$581
2008	21	$26,175	$1,246	$166	$72,691	$3,461	$542
2009	41	$15,150	$370	$178	$68,123	$1,662	$792
2010	91	$33,406	$367	$121	$126,816	$1,394	$482
2011	81	$29,732	$367	$167	$175,925	$2,172	$951
2012	93	$33,341	$359	$102	$193,938	$2,085	$641
2013	157	$40,842	$260	$122	$270,727	$1,724	$712
2014	206	$43,782	$213	$97	$246,739	$1,198	$445
2015	118	$22,849	$194	$106	$155,477	$1,318	$556
2016	75	$12,835	$171	$99	$80,959	$1,079	$521
2017	107	$22,991	$215	$120	$161,873	$1,513	$633
2018	134	$33,450	$250	$120	$225,410	$1,682	$626
80-18	**8,497**	**1,240,626**	**$146**	**$60**	**6,917,849**	**$814**	**$237**

Table 5
Number of U. S. IPOs (excluding ADRs) with an offer price of greater than $5.00 that doubled (offer to close) in price on the first day of trading, 1997-2018

A listing of each IPO since 1980 that doubled on the first day can be found elsewhere on Jay Ritter's IPO Data page.

Quarter	Number	Quarter	Number
1997, first	0	2007, first	0
1997, second	2	2007, second	0
1997, third	0	2007, third	0
1997, fourth	0	2007, fourth	0
1998, first	0	2008, first	0
1998, second	2	2008, second	0
1998, third	3	2008, third	0
1998, fourth	7	2008, fourth	0
1999, first	19	2009, first	0
1999, second	24	2009, second	0
1999, third	27	2009, third	0
1999, fourth	45	2009, fourth	0
2000, first	48	2010, first	0
2000, second	9	2010, second	0
2000, third	20	2010, third	0
2000, fourth	(Transmeta) 1	2010, fourth	(Youku.com ADR) 0
2001, first	0	2011, first	(Qihoo 360 ADR) 0
2001, second	0	2011, second	(LinkedIn) 1
2001, third	0	2011, third	(China Mobile Games ADR) 0
2001, fourth	0	2011, fourth	0
2002, first	0	2012, first	0
2002, second	0	2012, second	(Splunk) 1
2002, third	0	2012, third	0
2002, fourth	0	2012, fourth	0
2003, first	0	2013, first	0
2003, second	0	2013, second	(Noodles & Co.) 1
2003, third	0	2013, third	(Sprout, Benefitfocus) 2
2003, fourth	0	2013, fourth	(Potbelly, Container Store) 2
2004, first	0	2014, first	4
2004, second	(Jed Oil) 1	2014, second	0
2004, third	0	2014, third	1 (ReWalk Robotics) 1
2004, fourth	0	2014, fourth	1(Habit Restaurants) 1
2005, first	0	2015, first	(Spark Therapeutics, Shake Shack) 2
2005, second	0	2015, second	(Aduro Biotech, Seres Therapeutics)2
2005, third	(Baidu.com is ADR) 0	2015, third	(Global Blood Theraperutics) 1
2005, fourth	0	2015, fourth	0
2006, first	(Chipotle Mexican) 1	2016, first	0
2006, second	0	2016, second	0
2006, third	0	2016, third	1 (Nutanix)
2006, fourth	(Nymex Holdings) 1	2016, fourth	0

Table 5 (continued, as of December 21, 2018)

Number of U. S. IPOs (excluding ADRs) with an offer price of greater than $5.00 that doubled (offer to close) in price on the first day of trading, 1997-2018

The count does not include ADRs, penny stocks, and units.

2017, first	0	2018, first	(Zscalar) 1
2017, second	0	2018, second	0
2017, third	0	2018, third	0
2017, fourth	(Reto Eco-Solutions) 1	2018, fourth	0

Table 6 (updated Dec. 31, 2018)
Number of Initial Public Offerings, First-Day Return, and
Revisions from the File Price Range by Cohort Year, 1990-2018

Cohort Year	Number of IPOs	Percentage First-day Return	Percentage of IPOs with OP < Lo	Percentage of IPOs in the Middle	Percentage of IPOs with OP > Hi
1990	97	9.4	24.7	52.6	22.7
1991	262	11.2	19.8	55.3	24.4
1992	363	9.9	38.0	40.5	21.5
1993	461	11.6	21.3	54.0	24.7
1994	334	8.4	37.7	49.7	12.6
1995	390	19.9	19.7	45.4	34.9
1996	600	15.9	25.0	50.2	24.8
1997	421	13.8	29.9	45.8	24.2
1998	285	21.3	27.4	50.2	22.5
1999	466	70.4	14.8	37.3	47.9
2000	371	57.1	22.1	39.4	38.5
2001	77	14.3	26.0	57.1	16.9
2002	67	8.7	32.8	53.7	13.4
2003	65	12.4	15.4	55.4	29.2
2004	172	12.3	37.2	41.9	20.9
2005	161	10.1	34.2	42.9	23.0
2006	155	11.7	39.4	40.6	20.0
2007	155	14.5	32.3	41.3	26.5
2008	21	5.7	47.6	38.1	14.3
2009	43	10.6	32.6	41.9	25.6
2010	99	9.3	47.5	40.4	12.1
2011	81	14.1	37.0	30.9	32.1
2012	103	17.6	40.8	34.9	24.3
2013	160	20.8	30.0	41.9	28.1
2014	221	14.4	43.4	39.8	16.7
2015	123	18.9	35.8	38.2	26.0
2016	75	14.6	33.3	57.3	9.3
2017	111	11.8	23.4	60.4	16.2
2018	135	18.6	17.0	61.5	21.5
1990-2018	**6,074**	**20.9**	**28.1**	**46.1**	**25.8**

Banks and S&Ls are included in this table, which excludes IPOs with a midpoint of the original file price range of less than $8.00, as well as unit offers, small best efforts offers, ADRs, closed-end funds, REITs, partnerships, acquisition companies (SIC=6779), and stocks not listed on CRSP (CRSP includes firms listed on the NYSE, Amex (now NYSE MKT) and NYSE Arca, and NASDAQ). If a $5.00 offer price screen was used instead of the $8.00 midpoint screen, the sample size would increase by, for example, 20 IPOs in 1999 and 13 in 2000. Lo and Hi are the minimum and maximum of the original file price range. Because the average first-day return is lower on the firms that are added than on those that are deleted, the 10.1% average first-day return in 2005 is less than the 10.3% reported in other tables, such as Table 1.

Table 7

Percentage of IPOs relative to file price range:

	Below	Within	Above
1980-1989	30%	57%	13%
1990-1998	27%	49%	24%
1999-2000	18%	38%	44%
2001-2018	34%	45%	21%
1980-2018	28%	46%	26%

Average first-day returns relative to file price range:

	Below	Within	Above
1980-1989	0%	6%	20%
1990-1998	4%	11%	31%
1999-2000	8%	26%	122%
2001-2018	4%	11%	37%
1980-2018	3%	11%	50%

The sample used in this table is described in Table 6.

Table 8 (updated Dec. 31, 2018)

Number of Offerings, Average First-day Returns, and Gross Proceeds of Initial Public Offerings in 1960-2016

Data from 1960-1974 is taken from Table 1 of Roger Ibbotson, Jody Sindelar, and Jay R. Ritter's 1994 *Journal of Applied Corporate Finance* article "The Market's Problems with the Pricing of Initial Public Offerings" Vol. 7, No. 1 (Spring 1994), pp. 66-74. Data from 1975-2017 are compiled by Jay R. Ritter using Thomson Financial, Dealogic, and other sources. The 1975-1993 numbers are different from those reported in the 1994 *JACF* article because the published article included IPOs that did not qualify for listing on Nasdaq, the Amex, or NYSE (mainly penny stocks). Unlike other tables, bank and S&L IPOs are included in the counts in this table.

Year	Number of Offerings[1]	Average First-day Return[2]	Gross Proceeds, $ Millions[3]
1960	269	17.8%	553
1961	435	34.1%	1,243
1962	298	-1.6%	431
1963	83	3.9%	246
1964	97	5.3%	380
1965	146	12.7%	409
1966	85	7.1%	275
1967	100	37.7%	641
1968	368	55.9%	1,205
1969	780	12.5%	2,605
1970	358	-0.7%	780
1971	391	21.2%	1,655
1972	562	7.5%	2,724
1973	105	-17.8%	330
1974	9	-7.0%	51
1975	12	-0.2%	261
1976	26	1.9%	215
1977	15	3.6%	128
1978	19	13.3%	197
1979	39	8.9%	309
1980	71	14.3%	905
1981	193	5.9%	2,313
1982	79	10.7%	1,012
1983	521	9.0%	11,306
1984	213	3.0%	2,566
1985	217	6.6%	4,749
1986	478	6.1%	15,489
1987	337	5.7%	12,568
1988	132	5.3%	4,089
1989	124	7.7%	5,886

1990	116	10.4%	4,334
1991	293	11.8%	16,464
1992	416	10.2%	22,750
1993	527	12.7%	31,654
1994	410	9.6%	17,418
1995	464	21.1%	28,017
1996	689	17.1%	42,428
1997	485	14.0%	32,547
1998	308	20.6%	34,411
1999	484	70.0%	64,816
2000	382	56.1%	64,931
2001	79	14.2%	34,241
2002	70	8.6%	22,136
2003	68	11.9%	10,075
2004	181	12.4%	31,663
2005	167	10.0%	28,578
2006	162	12.0%	30,648
2007	160	14.0%	35,704
2008	21	5.7%	22,762
2009	42	10.6%	13,307
2010	100	9.2%	30,708
2011	82	13.8%	27,750
2012	105	17.3%	32,065
2013	162	20.9%	39,093
2014	225	15.0%	46,967
2015	122	18.7%	22,296
2016	78	14.2%	13,234
2017	119	12.5%	24,044
2018	143	17.8%	34,027
1960-69	2,661	21.2%	7,988
1970-79	1,536	7.1%	6,663
1980-89	2,365	6.9%	60,881
1990-99	4,194	21.0%	294,839
2000-18	2,471	20.5%	564,229
1960-2018	**13,227**	**16.8%**	**902,903**

[1] Beginning in 1975, the number of offerings excludes IPOs with an offer price of less than $5.00, ADRs, small best efforts offers, units, Regulation A offers (small issues, raising less than $1.5 million during the 1980s and $5 million until 2012), real estate investment trusts (REITs), natural resource limited partnerships, and closed-end funds. Banks and S&L IPOs are included. From 2012 and later, Regulation A offerings (issues raising up to $50 million are eligible) are included.
[2] First-day returns are computed as the percentage return from the offering price to the first closing market price.
[3] Gross proceeds exclude overallotment options but include the international tranche, if any. No adjustments for inflation have been made.

Table 9 (updated December 19, 2018)

Fraction of IPOs with Negative Earnings, 1980-2018

IPOs 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 within six months of the offer date are excluded. When available, I use the earnings per share for the most recent twelve months (commonly known as LTM for last twelve months) prior to going public. When a merger is involved, we use the pro forma numbers (as if the merger had already occurred). I am not completely consistent in the use of earnings before or after extraordinary items. Some extraordinary items are associated with the IPO, including gains or losses on conversion of convertible securities at the time of the IPO, or writeups or writedowns associated with mergers. I usually use the before extraordinary items EPS if the one-time charges are associated with the IPO. When the trailing twelve months EPS number is unavailable, I use the most recent fiscal year EPS number. Missing numbers are supplemented by direct inspection of prospectuses on EDGAR, EPS information from Dealogic for IPOs after 1991, and Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1995. Remaining missing numbers have been found in the Graeme Howard-Todd Huxster collection of IPO prospectuses and the Stanford Business School microfiche collection of prospectuses from the 1980s. Don Patton of UC-Davis has tracked down a couple of remaining missing numbers. 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.

Year	Number of IPOs	No. with missing EPS	Percentage Tech Stocks	Percentage of IPOs with EPS<0	Mean First-day Returns	
					EPS<0	EPS≥0
1980-1989	2,048	1	29%	19%	9.2%	6.8%
1990-1998	3,613	0	34%	32%	15.9%	14.3%
1999-2000	856	0	74%	78%	71.1%	41.6%
2001-2018	1,980	0	32%	57%	14.4%	14.1%
1980-2018	**8,496**	**1**	**36%**	**39%**	**25.6%**	**12.8%**

(year-by-year on the next page)

Year	Number of IPOs	No. with missing EPS	Percentage Tech Stocks	Percentage of IPOs with EPS<0	Mean First-day Returns	
					EPS<0	EPS≥0
1980	71	0	31%	24%	7.1%	16.5%
1981	193	0	38%	17%	8.0%	5.4%
1982	77	0	55%	19%	6.4%	12.1%
1983	451	0	38%	22%	14.0%	8.8%
1984	171	0	29%	16%	11.1%	2.2%
1985	186	0	20%	15%	5.2%	6.6%
1986	393	1	20%	21%	8.8%	5.4%
1987	285	0	20%	17%	5.1%	5.8%
1988	105	0	27%	18%	7.0%	5.4%
1989	116	0	30%	22%	9.4%	7.8%
1990	110	0	28%	15%	9.5%	11.0%
1991	286	0	24%	24%	9.4%	12.7%
1992	412	0	27%	29%	10.3%	10.3%
1993	510	0	25%	28%	12.6%	12.8%
1994	402	0	29%	26%	8.0%	10.2%
1995	461	0	44%	30%	21.8%	21.0%
1996	677	0	40%	41%	16.7%	17.6%
1997	474	0	36%	36%	12.6%	14.9%
1998	281	0	40%	46%	32.2%	13.2%
1999	476	0	78%	76%	81.0%	40.2%
2000	380	0	68%	81%	59.4%	43.8%
2001	79	0	29%	49%	15.3%	13.1%
2002	66	0	30%	45%	5.6%	12.0%
2003	63	0	29%	44%	10.0%	13.2%
2004	173	0	35%	50%	11.9%	12.7%
2005	159	0	28%	45%	7.3%	12.8%
2006	157	0	31%	40%	7.3%	15.4%
2007	159	0	47%	55%	13.8%	14.3%
2008	21	0	29%	43%	1.8%	8.7%
2009	41	0	34%	29%	12.8%	8.6%
2010	91	0	36%	41%	6.9%	11.1%
2011	81	0	44%	57%	11.0%	17.7%
2012	93	0	42%	46%	22.4%	13.9%
2013	157	0	27%	64%	20.4%	22.5%
2014	206	0	26%	71%	17.1%	11.4%
2015	118	0	32%	70%	19.1%	19.6%
2016	75	0	28%	67%	13.2%	17.4%
2017	107	0	28%	76%	12.3%	15.4%
2018	134	0	29%	81%	20.6%	10.3%
1980-2018	**8,497**	**1**	**36%**	**39%**	**25.6%**	**12.8%**

Table 10 (updated Dec. 20, 2018)

Gross Spreads Continue to Remain at 7% on Moderate-Size Deals

Here are the numbers for 2001-2018 for U.S. IPOs raising more than $25 million ($2011):

Panel A: Book building deals

	Proceeds Category	
	$25-100 million (inflation-adjusted in 2011 $)	more than $100 million (2011 $)
<7%	2.6% (21)	49.5% (525)
=7%	96.0% (769)	49.9% (529)
>7%	1.4% (11)	0.6% (6)
Total	100% (801 IPOs)	100% (1,060 IPOs)

Panel B: Auction deals

	Proceeds Category	
	$25-100 million (inflation-adjusted in 2011 $)	more than $100 million (2011 $)
<7%	60.0% (6)	83.3% (5)
=7%	40.0% (4)	16.7% (1)
>7%	0% (0)	0.0% (0)
Total	100% (10 IPOs)	100% (6 IPOs)

So, with a few exceptions (some of these are Canadian firms, and others were taken public by WRHambrecht using auctions), 7% gross spreads for moderate-size IPOs are as entrenched as ever. Indeed, in 1999-2000, deals above $100 million increasingly had 7% spreads, and this has stuck—in 2001-2016 49.9% of large IPOs also had spreads of exactly 7%. In contrast, during 1997-1998 only 53 of 158 large IPOs (33.5%) had a gross spread of exactly 7%.

Proceeds numbers do not include any shares issued through overallotment option exercise.

Table 11 (updated Dec. 19, 2018)

Mean and Median Gross Spreads and Number of Managing Underwriters, 1980-2018

IPOs with an offer price below $5.00 per share, unit offers, ADRs, closed-end funds, REITs, bank and S&L IPOs, energy limited partnerships, and firms not listed on CRSP within six months of the offer date are excluded. EW is equally weighted and PW is proceeds-weighted. The fraction=7% is the percentage of IPOs with a gross spread equal to exactly 7%. The number of managing underwriters is the sum of both leads and co-managers. The decrease in the fraction of IPOs with a 7% spread in 2001-2002 is due to the smaller fraction of deals with proceeds of less than $150 million. In 2008 (Visa with a spread of 2.8% on a $17.9 billion IPO), 2010 (General Motors with a spread of 0.75% on a $15.8 billion IPO), and 2012 (Facebook with a 1.1% spread on a $16 billion IPO) a higher fraction of IPOs were mega-deals with a gross spread far below 7%. UW is Underwriter.

Year	Number of IPOs	Gross Spreads Mean EW	Mean PW	Median	=7%	Fraction with Multiple Bookrunners	Number of Managing UWs Mean	Median
1980	71	8.0%	7.2%	7.5%	3%	0.0%	1.4	1.0
1981	193	7.9%	7.3%	7.5%	4%	0.0%	1.3	1.0
1982	77	8.1%	7.3%	7.9%	9%	0.0%	1.4	1.0
1983	451	7.7%	6.9%	7.3%	14%	0.0%	1.5	1.0
1984	171	7.9%	7.3%	7.5%	15%	0.0%	1.5	1.0
1985	187	7.7%	6.6%	7.5%	13%	0.0%	1.4	1.0
1986	393	7.5%	6.2%	7.2%	15%	0.0%	1.5	1.0
1987	285	7.5%	6.0%	7.1%	23%	0.0%	1.8	2.0
1988	105	7.3%	6.3%	7.0%	30%	0.0%	1.7	2.0
1989	116	7.3%	6.3%	7.0%	41%	0.0%	1.7	2.0
1990	110	7.3%	6.5%	7.0%	44%	0.0%	1.9	2.0
1991	286	7.1%	6.3%	7.0%	50%	0.0%	2.0	2.0
1992	412	7.2%	6.3%	7.0%	52%	0.0%	2.1	2.0
1993	510	7.2%	6.2%	7.0%	57%	0.4%	2.0	2.0
1994	402	7.3%	6.5%	7.0%	55%	0.0%	2.0	2.0
1995	461	7.2%	6.3%	7.0%	64%	0.0%	2.3	2.0
1996	677	7.2%	6.2%	7.0%	68%	0.0%	2.4	2.0
1997	474	7.2%	6.4%	7.0%	68%	0.8%	2.5	2.0
1998	281	7.1%	5.5%	7.0%	68%	1.8%	2.9	3.0
1999	476	6.9%	5.7%	7.0%	82%	4.6%	3.4	3.0
2000	380	6.9%	5.6%	7.0%	82%	7.4%	3.7	3.0
2001	79	6.6%	4.6%	7.0%	62%	19.0%	4.4	4.0
2002	66	6.7%	5.2%	7.0%	71%	28.8%	4.7	4.0
2003	63	7.0%	6.7%	7.0%	78%	31.7%	3.9	4.0
2004	173	6.8%	5.7%	7.0%	78%	37.0%	4.5	4.0
2005	159	6.7%	6.1%	7.0%	65%	50.3%	4.7	4.0
2006	157	6.8%	6.1%	7.0%	69%	54.1%	4.9	4.0
2007	159	6.7%	5.7%	7.0%	73%	60.4%	5.3	5.0
2008	21	6.4%	3.4%	7.0%	62%	76.2%	7.3	5.0
2009	41	6.4%	5.6%	7.0%	49%	85.4%	6.9	6.0
2010	91	6.7%	3.5%	7.0%	69%	83.5%	6.2	5.0
2011	81	6.4%	5.1%	7.0%	54%	87.7%	7.0	6.0
2012	93	6.7%	3.6%	7.0%	72%	93.5%	6.8	6.0
2013	157	6.6%	5.5%	7.0%	64%	91.7%	6.9	6.0
2014	206	6.6%	5.4%	7.0%	72%	90.3%	6.4	5.0
2015	118	6.7%	5.9%	7.0%	72%	90.7%	5.6	5.0
2016	75	6.7%	6.1%	7.0%	68%	94.7%	6.3	5.0
2017	107	6.6%	5.5%	7.0%	64%	89.7%	6.3	5.0
2018	134	6.5%	5.4%	7.0%	68%	95.5%	6.3	4.0
1980-2018	**8,497**	**7.2%**	**5.6%**	**7.0%**	**54%**	**15.1%**	**3.0**	**2.0**

Table 11a (same as Table 11 but starting in 1975)
Mean and Median Gross Spreads and Number of Managing Underwriters, 1975-2018

Year	Number of IPOs	Gross Spreads: Mean EW	Mean PW	Median	=7%	Fraction with Multiple Bookrunners	Number of Managing UWs: Mean	Median
1975	12	7.2%	6.1%	7.6%	8%	0.0%	1.4	1.0
1976	26	7.5%	7.1%	7.6%	4%	0.0%	1.4	1.0
1977	15	7.5%	7.3%	7.8%	0%	0.0%	1.5	1.0
1978	18	7.4%	7.1%	7.5%	6%	0.0%	1.8	1.0
1979	38	7.8%	7.6%	7.5%	0%	0.0%	1.3	1.0
1980	71	8.0%	7.2%	7.5%	3%	0.0%	1.4	1.0
1981	193	7.9%	7.3%	7.5%	4%	0.0%	1.3	1.0
1982	77	8.1%	7.3%	7.9%	9%	0.0%	1.4	1.0
1983	451	7.7%	6.9%	7.3%	14%	0.0%	1.5	1.0
1984	172	7.9%	7.3%	7.5%	15%	0.0%	1.5	1.0
1985	187	7.7%	6.6%	7.5%	13%	0.0%	1.4	1.0
1986	393	7.5%	6.2%	7.2%	15%	0.0%	1.5	1.0
1987	285	7.5%	6.0%	7.1%	23%	0.0%	1.8	2.0
1988	105	7.3%	6.3%	7.0%	30%	0.0%	1.7	2.0
1989	116	7.3%	6.3%	7.0%	41%	0.0%	1.7	2.0
1990	110	7.3%	6.5%	7.0%	44%	0.0%	1.9	2.0
1991	286	7.1%	6.3%	7.0%	50%	0.0%	2.0	2.0
1992	412	7.2%	6.3%	7.0%	52%	0.0%	2.1	2.0
1993	509	7.2%	6.2%	7.0%	57%	0.4%	2.0	2.0
1994	402	7.3%	6.5%	7.0%	55%	0.0%	2.0	2.0
1995	461	7.2%	6.3%	7.0%	64%	0.0%	2.3	2.0
1996	677	7.2%	6.2%	7.0%	68%	0.0%	2.4	2.0
1997	474	7.2%	6.4%	7.0%	68%	0.8%	2.5	2.0
1998	281	7.1%	5.5%	7.0%	68%	1.8%	2.9	3.0
1999	476	6.9%	5.7%	7.0%	82%	4.6%	3.4	3.0
2000	380	6.9%	5.6%	7.0%	82%	7.4%	3.7	3.0
2001	79	6.6%	4.6%	7.0%	62%	19.0%	4.4	4.0
2002	66	6.7%	5.2%	7.0%	71%	28.8%	4.7	4.0
2003	63	7.0%	6.7%	7.0%	78%	31.7%	3.9	4.0
2004	173	6.8%	5.7%	7.0%	78%	37.0%	4.5	4.0
2005	159	6.7%	6.1%	7.0%	65%	50.3%	4.7	4.0
2006	157	6.8%	6.1%	7.0%	69%	54.1%	4.9	4.0
2007	159	6.7%	5.7%	7.0%	73%	60.4%	5.3	5.0
2008	21	6.4%	3.4%	7.0%	62%	76.2%	7.3	5.0
2009	41	6.4%	5.6%	7.0%	49%	85.4%	6.9	6.0
2010	91	6.7%	3.5%	7.0%	69%	83.5%	6.2	5.0
2011	81	6.4%	5.1%	7.0%	54%	87.7%	7.0	6.0
2012	93	6.7%	3.6%	7.0%	72%	93.5%	6.8	6.0
2013	157	6.6%	5.5%	7.0%	64%	91.7%	6.9	6.0
2014	206	6.6%	5.4%	7.0%	72%	90.3%	6.4	5.0
2015	118	6.7%	5.9%	7.0%	72%	90.7%	5.6	5.0
2016	75	6.7%	6.1%	7.0%	68%	94.7%	6.3	5.0
2017	107	6.6%	5.5%	7.0%	64%	89.7%	6.3	5.0
2018	134	6.5%	5.4%	7.0%	68%	95.5%	6.3	4.0

Table 12 (Dec. 19, 2018)

Number of IPOs Categorized by the LTM Sales (in 2005 $), 1980-2018

LTM is last twelve months. MV is the post-issue market value valued at the offer price. PSR is the price-to-sales ratio, and is the median ratio, not the ratio of medians. There has been 24% inflation since 2005.

Year	Number of IPOs LTM Sales $2005		Percentage of IPOs LTM Sales $2005		Medians, $2005		
	<$50 mm	>$50 mm	<$50 mm	>$50mm	Sales	MV	PSR
1980	38	33	54%	46%	44	74	2.2
1981	141	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	257	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	146	135	52%	48%	47	194	3.4
1999	341	135	72%	28%	19	361	18.3
2000	279	101	73%	27%	14	460	30.1
2001	25	54	32%	68%	146	479	2.4
2002	16	50	24%	76%	263	517	2.1
2003	15	48	24%	76%	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	99	37%	63%	93	438	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	48	59	45%	55%	82	470	6.3
2018	71	63	53%	47%	33	408	12.3
1980-2017	**4,373**	**4,124**	**51%**	**49%**	**$47**	**$167**	**3.1**

Table 12a (updated Dec. 19, 2018)

Number of IPOs Categorized by the LTM Sales (in 2005 $), 1980-2018

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 24% inflation since 2005.

	Number of IPOs LTM Sales $2005		Percentage of IPOs LTM Sales $2005		Medians, $2005		
Year	**<$50 mm**	**>$50 mm**	**<$50 mm**	**>$50mm**	**Sales**	**MV**	**PSR**
1980	38	33	54%	46%	44	83	2.5
1981	141	52	73%	27%	28	77	3.0
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	257	204	56%	44%	39	161	3.5
1996	411	266	61%	39%	32	158	4.5
1997	273	201	58%	42%	41	149	3.3
1998	146	135	52%	48%	47	224	3.6
1999	341	135	72%	28%	19	551	30.2
2000	279	101	73%	27%	14	641	40.9
2001	25	54	32%	68%	146	507	2.9
2002	16	50	24%	76%	263	560	2.3
2003	15	48	24%	76%	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	99	37%	63%	93	551	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	48	59	45%	55%	82	497	7.7
2018	71	63	53%	47%	33	491	17.3
1980-2018	**4,373**	**4,124**	**51%**	**49%**	**$47**	**$186**	**3.4**

Table 12b
Number of IPOs Categorized by the LTM Sales (in 2011 $), 1980-2017

Year	Number of IPOs	Number of IPOs LTM Sales, $2011		Percentage of IPOs LTM Sales, $2011	
		<$1 billion	>$1 billion	<$1 billion	>$1 billion
1980	71	71	0	100%	0%
1981	193	191	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	403	384	18	96%	4%
1995	461	436	25	95%	5%
1996	677	658	19	97%	3%
1997	474	450	24	95%	5%
1998	281	262	19	93%	7%
1999	476	455	21	96%	4%
2000	380	366	14	96%	4%
2001	79	60	19	76%	24%
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	157	128	29	82%	18%
2014	206	175	31	85%	15%
2015	118	107	11	91%	9%
2016	75	61	14	81%	19%
2017	107	91	16	85%	15%
2018	134	121	13	90%	10%
1980-2018	**8,497**	**7,913**	**584**	**93%**	**7%**

Table 13

IPO Auctions in the U.S., 1999-2018

The average first-day return on WRHambrecht's 19 IPO auctions has been 12.6%. For IPO auctions for which WRHambrecht was the bookrunner, the numbers are as follows:

Name of IPO (ticker)	Date of IPO	Gross Spread	Gross Proceeds	First-day Return
1999: (3 out of 476 IPOs)				
Ravenswood Winery (RVWD)	19990408	4.00%	$10.5 million	3.62%
Salon.com (SALN)	19990622	5.00%	$26.25 million	-4.76%
Andover.net (ANDN)	19991208	6.50%	$72.0 million	252.08%
2000: (1 out of 381 IPOs)				
Nogatech (NGTC)	20000518	6.50%	$42.0 million	-21.58%
2001: (2 out of 79 IPOs)				
Peet's Coffee (PEET)	20010125	6.50%	$26.4 million	17.25%
Briazz (BRZZ)	20010502	6.00%	$16.0 million	0.38%
2002: (1 out of 66 IPOs)				
Overstock.com (OSTK)	20020529	4.00%	$39.0 million	0.23%
2003: (2 out of 63 IPOs)				
RedEnvelope (REDE)	20030925	6.00%	$30.8 million	3.93%
Genitope (GTOP)	20031029	7.00%	$33.3 million	11.11%

In 2003, WRHambrecht was also the joint bookrunner with JP Morgan on the Sunset Financial Resources IPO that did not use an auction.

Name of IPO (ticker)	Date of IPO	Gross Spread	Gross Proceeds	First-day Return
2004: (1 out of 173 IPOs)				
New River Pharmaceuticals (NRPH)	20040805	7.00%	$33.6 million	-6.25%

In 2004, WRHambrecht was a co-manager on the Google auction IPO for which CSFB and Morgan Stanley were the bookrunners. The IPO climbed 18.04% on its first day of trading.

Name of IPO (ticker)	Date of IPO	Gross Spread	Gross Proceeds	First-day Return
2005: (5 out of 160 IPOs)				
B of I Holding (BOFI)	20050315	6.00%	$35.1 million	0.00%
Morningstar (MORN)	20050502	2.00%	$140.83 million	8.38%
CryoCor (CRYO)	20050714	7.00%	$40.8 million	-1.18%
Avalon Pharmaceuticals (AVRX)	20050928	7.00%	$28.8 million	-5.10%
Dover Saddlery (DOVR)	20051117	5.00%	$27.5 million	2.50%
2006: (2 out of 157 IPOs)				
Traffic.com (TRFC)	20060125	6.00%	$78.6 million	1.25%
FortuNet (FNET)	20060131	4.50%	$22.5 million	0.56%

2007: (2 out of 159 IPOs)

Interactive Brokers Group (IBKR)	20070504	1.88%	$1,200.4 million	4.30%
Clean Energy Fuels (CLNE)	20070525	5.85%	$120.0 million	0.33%

In 2007, WRHambrecht was a co-manager on the Netsuite auction IPO for which Credit Suisse was the bookrunner. The IPO climbed 36.54% on the first day of trading.

2008: (0 out of 21 IPOs)
In 2008, WRHambrecht was a co-manager on the Rackspace Hosting auction IPO for which Credit Suisse, Goldman Sachs, and Merrill Lynch were joint bookrunners. The IPO dropped 19.92% on its first day of trading.

2009: (0 out of 41 IPOs)

2010: (0 out of 93 IPOs)

2011: (0 out of 81 IPOs)

2012: (0 out of 93 IPOs)

2013: (1 out 157 IPOs)

Truett-Hurst Inc (THST)	20130619	7.00%	$16.2 million	-5.33%

2014: (0 out of 206 IPOs)

2015: (0 out 118 IPOs)

2016: (0 out of 75 IPOs)

2017: (0 out of 107 IPOs)

2018: (0 out of 134 IPOs)

WR Hambrecht has also been a bookrunner on several other IPOs that did not use an auction. On 20150415, for example, they did a $76 million best efforts IPO of Xbiotech (XBIT), which increased 22.37% on the first day of trading.

Table 14 (updated Dec. 19, 2018)

The Market Share of Foreign Companies among U.S. Listings, 1980-2018

This table includes American Depositary Receipts (ADRs) as well as other IPOs, and so has a higher total number of U.S. IPOs. I continue to exclude IPOs with an offer price below $5.00 per share, unit offers, SPACs, REITs, closed-end funds, natural resource limited partnerships, small best efforts IPOs, banks and S&Ls, and IPOs not listed on CRSP (this last screen limits the sample to NASDAQ, Amex, and NYSE-listed issues) within six months of the offer date. Bermuda-domiciled companies are included as foreign, irrespective of the main country of operations. Bermuda, Canada, China, Greece, Israel, the Netherlands, and the United Kingdom are the most common countries for IPOs that list in the U.S. Dealogic is the main source of information on foreign IPOs, because Thomson Financial frequently classifies a follow-on offering that simultaneously includes a U.S. listing as an IPO, as does the NYSE. I have deleted these listings (a list of more than 110 of them can be found in "SDC Corrections" on my IPO Data page) from the IPO counts when I have been able to identify them. The count for Chinese IPOs does not include those from Hong Kong, and excludes "reverse mergers" and best efforts IPOs. There are six bank IPOs of ADRs that are not counted (1 in 1988, 1 in 1993, 2 in 1994, and 2 in 2009). There were 4 additional foreign issues in 1981, but they did not get listed on CRSP until more than six months after the IPO.

In addition to the IPOs listed in this table, there have been at least eleven Chinese IPOs with an offer price of below $5.00 per share, plus some unit offers. Those with an offer price below $5 per share include the following:

2007	2
2008	1
2009	2
2010	4
2017	2

Year	Number of IPOs	Domestic	Foreign		% Foreign	Chinese		% Chinese
			Total	ADRs		Total	ADRs	
1980	71	70	1	0	1.4%	0	0	0%
1981	193	192	1	0	0.5%	0	0	0%
1982	78	76	2	1	2.6%	0	0	0%
1983	453	446	7	2	1.5%	0	0	0%
1984	175	168	7	5	4.0%	0	0	0%
1985	186	183	3	0	1.6%	0	0	0%
1986	394	392	2	1	0.5%	0	0	0%
1987	285	281	4	0	1.4%	0	0	0%
1988	109	100	9	5	8.3%	0	0	0%
1989	119	110	9	3	7.6%	0	0	0%
1990	111	107	4	1	3.6%	0	0	0%
1991	288	278	10	2	3.5%	0	0	0%
1992	416	393	23	4	5.5%	0	0	0%
1993	527	487	40	17	7.6%	1	1	0.2%
1994	420	385	35	22	8.3%	3	2	0.7%
1995	477	436	41	16	8.6%	1	1	0.2%
1996	710	646	64	33	9.0%	1	1	0.1%
1997	504	430	74	34	14.7%	4	3	0.8%
1998	294	256	38	13	12.9%	2	1	0.7%
1999	501	450	51	26	10.2%	1	0	0.2%
2000	418	336	82	40	19.6%	7	4	1.7%
2001	83	74	9	4	10.8%	2	2	2.4%
2002	68	63	5	2	7.4%	1	1	1.5%
2003	66	60	6	3	9.1%	2	2	3.0%
2004	189	160	29	16	15.3%	9	9	4.8%
2005	172	142	30	13	17.4%	8	8	4.7%
2006	172	138	34	15	19.8%	9	7	5.2%
2007	190	138	52	31	27.4%	29	27	15.3%
2008	24	18	6	3	25.0%	4	4	16.7%
2009	49	38	11	8	22.4%	10	8	20.4%
2010	125	80	45	34	36.0%	33	32	26.4%
2011	93	70	23	12	24.7%	13	11	14.0%
2012	97	85	12	4	12.4%	2	2	2.1%
2013	167	139	28	10	16.8%	8	6	4.8%
2014	225	176	49	19	21.8%	14	14	6.2%
2015	126	103	23	8	18.3%	5	4	4.0%
2016	83	68	15	8	18.1%	6	6	7.2%
2017	127	95	32	20	25.2%	17	15	13.4%
2018	166	120	46	32	27.7%	28	27	16.9%
1980-2018	**8,952**	**7,989**	**962**	**467**	**10.7%**	**220**	**190**	**2.5%**

Table 15 (updated December 19, 2018)

How Many IPOs Are There?

The net number of IPOs excludes Special Purpose Acquisition Companies (SPACs), closed-end funds, Real Estate Investment Trusts (REITs), unit offers (typically composed of a share plus a warrant to buy a share), IPOs with an offer price of less than $5.00, commercial banks and savings and loans, companies not promptly listed on the Amex, NYSE, or Nasdaq, master limited partnerships, small best efforts offers (included in the other exclusions column), and foreign companies issuing American Depositary Receipts (6 of which are banks). For 1993-1994, 6 ADRs are missing a first-day return, and the "including ADRs" averages exclude them. SPACs that are unit offers are classified as SPACs rather than units. No CRSP listing refers to IPOs not listed on CRSP within six months of the IPO. CRSP covers stocks listed on Nasdaq, the NYSE, and the NYSE MKT (the Amex prior to May 10, 2012).

Table 15

Year	Number of IPOs Gross	Net	CEFs, SPACs, and REITs	Units and penny stocks	LPs	Banks and S&Ls	No CRSP listing or others	ADRs	Including ADRs No.	Mean return
1980	234	71	1	56	0	0	104	0	71	14.3%
1981	439	193	0	103	0	0	139	0	193	5.9%
1982	198	77	1	14	0	4	102	1	78	10.9%
1983	850	451	1	168	0	75	156	2	453	9.9%
1984	518	171	4	139	1	46	154	6	177	3.8%
1985	326	186	18	102	6	29	0	0	186	6.4%
1986	711	393	28	183	20	83	7	1	394	6.1%
1987	532	285	36	131	15	52	2	0	285	5.6%
1988	293	105	73	88	3	26	5	5	110	5.4%
1989	254	116	42	83	2	8	6	3	119	8.0%
1990	213	110	41	55	1	5	0	1	111	10.7%
1991	408	286	44	65	2	7	2	2	288	11.9%
1992	604	412	103	80	1	4	1	4	416	10.2%
1993	773	510	167	93	3	17	1	17	525	12.5%
1994	598	402	78	106	3	8	0	23	418	9.5%
1995	574	461	9	77	2	3	0	16	477	20.7%
1996	846	677	11	104	5	11	2	33	710	16.9%
1997	601	474	30	63	1	11	1	34	507	13.7%
1998	379	281	39	20	2	31	4	13	294	21.8%
1999	566	476	36	18	3	8	1	26	502	69.5%
2000	431	380	2	8	0	1	0	40	420	55.2%
2001	130	79	38	5	4	0	0	4	83	13.9%
2002	157	66	81	2	6	4	0	2	68	9.0%
2003	132	63	56	5	0	5	0	3	66	13.0%
2004	304	173	95	5	5	8	4	16	188	11.9%
2005	283	159	88	4	9	7	2	13	172	11.7%
2006	261	157	63	5	18	5	0	15	172	12.5%
2007	326	159	116	4	14	2	0	31	190	14.4%
2008	53	21	22	3	4	0	0	3	24	4.3%
2009	80	41	22	3	0	2	2	9	50	8.8%
2010	198	91	37	13	7	10	4	34	125	12.2%
2011	166	81	50	5	18	14	2	12	93	13.3%
2012	175	93	45	4	16	13	1	5	97	17.2%
2013	255	157	59	3	20	5	2	10	167	22.6%
2014	305	206	30	10	19	19	1	19	225	14.8%
2015	179	118	34	4	9	7	1	8	126	18.7%
2016	108	75	13	1	1	5	2	9	83	14.2%
2017	198	107	50	3	5	11	4	20	127	13.6%
2018	239	134	50	8	1	9	0	32	166	17.2%
	13,658	8,497	1,713	1,843	226	555	712	472	8956	17.8%

Table 15a (updated December 19, 2018)

IPO Volume and Average First-day Returns with Banks, LPs, and ADRs Included

In the last two columns of the table, the net number of IPOs is expanded to include LPs, banks and S&Ls, and ADRs. Only CRSP-listed IPOs that have first-day return information are included, and therefore the number of IPOs added is slightly less for many years than if the "net" IPO count is added to the LP count, the bank and S&L count, and the ADR count. CRSP covers IPOs that are listed on Nasdaq, NYSE, and NYSE Market (formerly Amex). If a stock takes more than six months before CRSP-listing, it is not included in the count. The sample size of 13,743 IPOs from 1980-2017 includes the 8,497 IPOs from 1980-2018 used in most tables, plus 466 ADRs with a first-day return, 225 natural resource industry limited partnerships, and 551 bank and S&L IPOs (6 of which are ADRs).

As with Table 15, the net number of IPOs in the first column excludes Special Purpose Acquisition Companies (SPACs), closed-end funds, Real Estate Investment Trusts (REITs), unit offers (typically composed of a share plus a warrant to buy a share), IPOs with an offer price of less than $5.00, commercial banks and savings and loans, companies not promptly listed on the Amex, NYSE, or Nasdaq, natural resource master limited partnerships, small best efforts offers (included in the other exclusions column), and foreign companies issuing American Depositary Receipts (6 of which are banks). SPACs that are unit offers are classified as SPACs rather than units.

Table 15a also differs from Table 15 in that the category of SPACs, closed-end funds, and REITs in Table 15 is decomposed into the three component parts. Blind pool offerings from the pre-2004 era are not included as SPACs. These blind-pool offers are almost always screened out of the net number of offerings because they are either unit offers, penny stocks (offer price below $5 per share), small best efforts deals, or were not CRSP-listed. The remaining blind pool offers are excluded in the "other reasons" category. A typical blind pool offering raised a few million dollars and investors never received anything in return.

The average first-day return on 551 bank and S&L IPOs is 6.1%, with a range of -20% to +57.5%. In most of my tables, I exclude Bank and S&L IPOs because, among other reasons, it is not always clear how many shares are sold to the general public versus sold to depositors and employees, since most of these offerings are demutualizations. The same can be said of some insurance IPOs, which I include.

The average first-day return on 466 ADR IPOs is 16.6%, with a range of -34.8% to 414.3%, with the 2000 internet company Crayfish Co. Ltd IPO having the highest return, at 414.3%. In most of my tables, I exclude ADRs because, among other reasons, the accounting data is not always reliable (SDC sometimes makes translation mistakes) and the U.S. tranche may be a small part of a larger offering, especially in the home country of the company.

The average first-day return on 226 limited partnerships is 3.7%, with a range of -6.8% to +33.3%. In most of my tables, I exclude natural resource company limited partnerships because it if frequently difficult to discern the founding date of the underlying business, since most of these IPOs are spinoffs partly motivated by tax minimization strategies. Also, most of these LPs are created at the time of the IPO, and identifying whether the LP is profitable, what its trailing sales are, and what its assets are, is sometimes problematic. The same can be said of rollups, which I include. I also include newly created reinsurance companies.

Table 15a

Year	Number of IPOs		CEFs, SPACs, and REITs	Closed-end funds	REITs	SPACs		LPs	Banks and S&Ls	Including LPs, Banks, & ADRs	
	Gross	Net				Non-unit	Unit			No.	Mean IR
1980	234	71	1	0	1	0	0	0	0	71	14.3%
1981	439	193	0	0	0	0	0	0	0	193	5.9%
1982	198	77	1	0	1	0	0	0	4	80	10.5%
1983	850	451	1	0	1	0	0	0	75	526	8.9%
1984	518	171	4	0	4	0	0	1	46	222	3.1%
1985	338	186	18	3	15	0	0	6	29	223	6.4%
1986	704	393	28	25	3	0	0	20	83	498	5.8%
1987	520	285	36	32	4	0	0	15	52	351	5.5%
1988	305	105	73	65	8	0	0	3	26	140	5.2%
1989	260	116	42	42	0	0	0	2	8	129	7.6%
1990	213	110	41	41	0	0	0	1	5	118	10.3%
1991	408	286	44	42	2	0	0	2	7	297	11.7%
1992	605	412	103	98	5	0	0	1	4	421	10.1%
1993	810	510	167	121	46	0	0	3	17	547	12.4%
1994	618	402	78	37	41	0	0	3	8	432	9.4%
1995	568	461	9	2	7	0	0	2	3	483	20.8%
1996	843	677	11	5	6	0	0	5	11	729	16.8%
1997	613	474	30	7	22	1	0	1	11	521	13.6%
1998	391	281	39	24	15	0	0	2	31	331	20.1%
1999	569	476	36	34	2	0	0	3	8	515	67.8%
2000	432	380	2	2	0	0	0	0	1	423	54.8%
2001	131	79	38	38	0	0	0	4	0	87	13.7%
2002	161	66	81	77	4	0	0	6	4	78	7.8%
2003	131	63	56	49	6	0	1	0	5	71	13.1%
2004	300	173	95	55	28	0	12	5	8	203	11.8%
2005	274	159	88	50	11	4	23	9	7	190	11.5%
2006	258	157	63	23	5	0	35	18	5	195	11.4%
2007	327	159	116	47	4	0	65	14	2	205	14.0%
2008	54	21	22	3	2	0	17	4	0	28	4.1%
2009	80	41	22	13	9	0	0	0	2	52	9.7%
2010	196	91	37	22	8	0	7	7	11	144	11.2%
2011	181	81	50	25	9	0	16	18	2	113	11.6%
2012	177	93	45	28	9	1	7	16	13	125	15.8%
2013	256	157	59	29	20	2	8	20	5	192	20.2%
2014	305	206	30	13	6	0	11	19	19	264	14.2%
2015	178	118	34	8	7	1	18	9	7	142	17.4%
2016	107	75	13	1	3	0	13	1	5	89	13.7%
2017	198	107	50	9	8	0	33	5	11	143	12.7%
2018	239	134	50	0	6	0	44	1	9	176	16.4%
Total	13,989	8,497	1,713	1,070	328	9	310	226	551	9,747	16.9%

Table 16 (updated April 25, 2018)

Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2016

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of 2015 purchasing power using the Consumer Price Index. 8,252 IPOs from 1980-2016 are used, with returns calculated through the end of December, 2017. 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. 29 of 2017 for IPOs from 2015 and 2016). 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. 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. All returns include dividends and capital gains, including the index returns.

			Average 3-year Buy-and-hold Return		
Sales (in 2015$)	Number of IPOs	Average First-day Return	IPOs	Market-adjusted	Style-adjusted
0-9.999 mm	1,573	22.2%	-10.2%	-46.1%	-30.1%
10-19.999 mm	706	28.1%	8.4%	-31.3%	-8.8%
20-49.999 mm	1,493	22.5%	20.0%	-23.2%	-6.9%
50-99.999 mm	1,368	17.6%	30.1%	-12.7%	-4.3%
100-499.999 mm	2,081	12.4%	39.0%	-3.5%	3.6%
500 mm and up	1,031	9.4%	37.1%	1.7%	-0.9%
0-99.999 mm	5,140	21.9%	11.9%	-28.5%	-13.5%
100 mm and up	3,112	11.4%	38.4%	-1.8%	2.1%
1980-2016	8,252	17.9%	21.9%	-18.4%	-7.6%

Table 16a (updated April 25, 2018)

Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2016

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of 2015 purchasing power using the Consumer Price Index. 8,252 IPOs from 1980-2016 are used, with returns calculated through the end of December, 29 2017. 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 from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 29 of 2017 for IPOs from 2015 and 2016). 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. All returns include dividends and capital gains, including the index returns.

Sales (in 2015$)	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return		
			IPOs	Market-adjusted	Style-adjusted
Less than $1 billion	7,654	18.6%	20.2%	-20.6%	-8.9%
$1 billion and up	598	8.6%	42.7%	9.0%	8.4%
1980-2016	8,252	17.9%	21.9%	-18.4%	-7.6%

Note: The 9.0% 3-year market-adjusted buy-and-hold return for large companies corresponds to an annualized market-adjusted return of 2.2% per year, with an average holding period of 2.9 years for the large companies, because 1.427/1.337=1.0666, and $1.0666^{0.34}$=1.022. The 1.337 is 9.0% below the 42.7% average buy-and-hold return, and 0.34 is equal to 1/2.9. The -20.6% 3-year market-adjusted buy-and-hold return for small companies, with an average holding period of 2.8 years, corresponds to an annualized market-adjusted return of -5.5% per year, since the wealth relative (public market equivalent) is 1.202/1.408=0.854.

Table 16b (July 14, 2017)

Distribution of 5-year Buy-and-Hold Returns on IPOs, 1975-2011

7,713 IPOs from 1975-2011 are used, with buy-and-hold returns calculated until the earlier of the five-year anniversary or the delisting date. All returns include dividends and capital gains. 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. The average first-day return in Panel A is 17.8%, with an average 5-year buy-and-hold return (BHR) of 38.8%, measured from the first close. In Panel B, the average first-day return is 10.3%, with a subsequent average 5-year buy-and-hold return of 59.2%. Sales is inflation-adjusted sales for the last twelve months (LTM) prior to the IPO, in dollars of 2016 purchasing power using the CPI.

Panel A: All 7,713 IPOs

5-year buy-and-hold return	From the first close		From the offer price	
	Number of IPOs	Percentage	Number of IPOs	Percentage
BHR<50%	3,246	42.1%	3,028	39.3%
-50%<BHR≤0%	1,397	18.1%	1,355	17.6%
0%<BHR≤50%	965	12.5%	973	12.6%
50%<BHR≤100%	627	8.1%	667	8.7%
100%<BHR≤200%	698	9.1%	749	9.7%
200%<BHR≤300%	284	3.7%	349	4.5%
300%<BHR≤400%	168	2.2%	196	2.5%
400%<BHR≤500%	90	1.2%	105	1.4%
500%<BHR≤1,000%	154	2.0%	181	2.3%
1,000%<BHR≤2,000%	64	0.8%	77	1.0%
2,000%<BHR≤3,000%	11	0.1%	22	0.3%
3,000%<BHR	9	0.1%	11	0.1%
1975-2011	7,713	100.0%	7,713	100.0%

Panel B: 2,814 IPOs with LTM Sales of $100 million or more ($2016)

5-year buy-and-hold return	From the first close		From the offer price	
	Number of IPOs	Percentage	Number of IPOs	Percentage
BHR<50%	804	28.6%	742	26.4%
-50%<BHR≤0%	532	18.9%	517	18.4%
0%<BHR≤50%	451	16.0%	439	15.6%
50%<BHR≤100%	326	11.6%	329	11.7%
100%<BHR≤200%	367	13.1%	378	13.4%
200%<BHR≤300%	128	4.5%	175	6.2%
300%<BHR≤400%	83	3.0%	83	2.9%
400%<BHR≤500%	37	1.3%	47	1.7%
500%<BHR≤1,000%	57	2.0%	67	2.4%
1,000%<BHR≤2,000%	26	0.9%	31	1.1%
2,000%<BHR≤3,000%	3	0.1%	6	0.2%
3,000%<BHR	0	0.0%	0	0.0%
1975-2011	2,814	100.0%	2,814	100.0%

Table 17 (updated April 25, 2018)

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 2005 purchasing power using the Consumer Price Index. IPOs from 1980-2016 are used, with returns calculated through the end of December, 2017. In Panel A, the sample size is 8,252 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 (2005 purchasing power). Buy-and-hold returns are calculated until the earlier of the three-year anniversary or the delisting date (Dec. 29 of 2017 for IPOs from 2015 and 2016). 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 1980-2016 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	3,091	26.8%	24.7%	-10.9%	-1.6%
NonVC-backed	5,161	12.6%	20.2%	-23.0%	-11.3%
NonVC and nonBuyout	4,048	13.5%	16.6%	-29.7%	-14.7%
All	8,252	17.9%	21.9%	-18.4%	-7.6%

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 (2005 purchasing power) from 1980-2016 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	994	8.9%	35.3%	4.5%	3.1%
NonBuyout-backed	3,004	13.8%	39.7%	-4.1%	2.6%
All	3,998	12.6%	38.6%	-2.0%	2.7%

Table 17a (updated April 25, 2018)

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

8,252 IPOs from 1980-2016 are used, with returns calculated through the end of December, 2017. Buy-and-hold returns are calculated from the first closing price until the earlier of the three-year anniversary or the delisting date (Dec. 29 of 2017 for IPOs from 2015 and 2016). 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.

		Average	Average 3-year Buy-and-hold Return		
	Number of IPOs	First-day Return	IPOs	Market-adjusted	Style-adjusted
VC-backed	2,703	28.6%	20.3%	-14.0%	-3.0%
Growth capital-backed	387	14.3%	55.4%	11.3%	15.5%
Buyout-backed-backed	1,096	9.2%	33.5%	3.0%	0.1%
Financial Sponsored	4,186	22.2%	26.9%	-7.3%	-1.2%
Non-Financial Sponsored	4,066	13.5%	16.6%	-29.9%	-14.3%
All	8,252	17.9%	21.9%	-18.4%	-7.6%

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 April 25, 2018)

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

The sample is composed of 8,252 IPOs from 1980-2016, with returns calculated through the end of December, 2017. 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 2017 for IPOs from 2015 and 2016). 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 1980-2016 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	3,091	26.8%	24.7%	-10.9%	-1.6%
NonVC-backed	5,161	12.6%	20.2%	-23.0%	-11.3%
All	8,252	17.9%	21.9%	-18.4%	-7.6%

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	1,535	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	1,258	17.3%	60.0%	-1.9%	24.1%
NonVC-backed	2,355	13.5%	29.0%	-31.2%	-13.2%
All	3,613	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 2001-2016

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	803	18.3%	20.6%	-3.9%	-12.6%
NonVC-backed	931	10.3%	20.9%	0.5%	-6.7%
All	1,734	14.0%	20.8%	-1.6%	-9.4%

Table 19: Updated Table I of Ritter and Welch 2002 *Journal of Finance* article

Number of IPOs, First-day Returns, and Long Run Performance, IPOs from 1980-2016

The equally weighted (EW) average first-day return is measured from the offer price to the first CRSP-listed closing price. EW average three-year buy-and-hold percentage returns (capital gains plus dividends) are calculated from the first closing market price to the earlier of the three-year anniversary price, the delisting price, or December 29, 2017. Buy-and-hold returns for initial public offerings (IPOs) occurring after Dec. 31, 2016 are not calculated. Market-adjusted returns are calculated as the buy-and-hold return on an IPO minus the compounded daily return on the CRSP value-weighted index of Amex, Nasdaq, and NYSE firms. Style-adjusted buy-and-hold returns are calculated as the difference between the return on an IPO and a style-matched firm. For each IPO, a non-IPO matching firm that has been CRSP-listed for at least five years with the closest market capitalization (size) and book-to-market ratio as the IPO is used. Market capitalization is calculated using the first closing market price after the IPO. If this stock is delisted prior to the IPO return's ending date, or if it conducts a follow-on stock offering, a replacement matching firm is spliced in on a point-forward basis. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offers, natural resource limited partnerships, REITs, closed-end funds, banks and S&Ls, ADRs, and IPOs not listed on CRSP within six months of issuing have been excluded. Data is from Thomson Financial Securities Data, with supplements from Dealogic and other sources, and corrections by the authors. The number of IPOs per year is much lower than in the 1995 *Journal of Finance* article "The New Issues Puzzle" by Loughran and Ritter because that paper used a \$1.00 offer price screen. The number is larger than in the 2002 *Journal of Finance* article "A Review of IPO Activity, Pricing, and Allocations" due to various data corrections and the back-filling of Nasdaq-listed foreign issuers by CRSP. (Updated April 25, 2018)

Year	Number of IPOs	Average First-day Return	Average 3-year Buy-and-hold Return: IPOs	Average 3-year Buy-and-hold Return: Market-adjusted	Average 3-year Buy-and-hold Return: Style-adjusted
1980	71	14.3%	89.8%	37.0%	18.5%
1981	193	5.9%	12.0%	-27.2%	11.1%
1982	77	11.0%	37.5%	-31.5%	-12.0%
1983	451	9.9%	15.9%	-37.7%	-4.4%
1984	171	3.7%	50.2%	-28.5%	29.0%
1985	186	6.4%	5.6%	-41.3%	-12.3%
1986	393	6.2%	16.9%	-22.6%	-1.3%
1987	285	5.6%	-2.6%	-19.1%	-11.2%
1988	105	5.5%	58.0%	9.7%	38.7%
1989	116	8.0%	48.1%	13.2%	7.2%
1990	110	10.8%	9.7%	-35.9%	-38.4%
1991	286	11.9%	31.2%	-1.8%	5.8%
1992	412	10.3%	37.4%	-0.2%	11.1%
1993	510	12.7%	44.1%	-8.7%	-9.5%
1994	402	9.6%	78.0%	-5.7%	-0.9%
1995	461	21.2%	28.9%	-57.8%	-24.6%
1996	677	17.2%	25.2%	-56.8%	7.0%
1997	474	14.0%	58.3%	-2.0%	22.0%
1998	281	21.9%	23.4%	5.7%	-5.2%
1999	476	71.2%	-47.6%	-32.5%	-60.6%
2000	380	56.3%	-60.1%	-30.9%	-56.9%
2001	79	14.2%	17.8%	14.4%	-28.1%
2002	66	9.1%	68.6%	39.0%	-0.4%
2003	63	11.7%	34.0%	-7.7%	-11.2%
2004	173	12.3%	51.4%	6.9%	-7.0%
2005	159	10.3%	14.6%	3.1%	-2.5%
2006	157	12.1%	-28.8%	-11.1%	-4.5%
2007	159	14.0%	-16.5%	-0.4%	0.5%
2008	21	5.7%	11.4%	8.1%	5.1%
2009	41	9.8%	37.0%	-5.1%	-18.3%
2010	91	9.4%	36.4%	-9.6%	-18.5%
2011	81	13.9%	38.6%	-8.7%	-11.7%
2012	93	17.8%	81.9%	31.8%	33.4%
2013	157	21.1%	12.4%	-14.1%	-14.0%
2014	206	15.5%	17.1%	-9.7%	-11.9%
2015	115	18.7%	6.9%	-23.3%	-43.4%
2016	74	14.6%	25.3%	-3.3%	-13.4%
2017					
1980-1989	2,049	7.2%	22.5%	-22.6%	2.2%
1990-1994	1,720	11.2%	46.1%	-6.6%	-1.9%
1995-1998	1,893	18.1%	34.1%	-34.1%	1.3%
1999-2000	856	64.6%	-53.1%	-31.8%	-59.1%
2001-2016	1,735	14.0%	20.8%	-1.6%	-9.4%
1980-2016	8,252	17.9%	21.9%	-18.4%	-7.6%

Table 20
Returns on IPOs during the five years after issuing, for IPOs from 1980-2016

These tables show that IPOs have underperformed other firms of the same size (market cap) by an average of 3.3% per year during the five years after issuing, not including the first-day return. The underperformance relative to other firms of the same size and book-to-market ratio has averaged 2.1% per year. Returns are through Dec. 29, 2017.

Table 20-1
Percentage returns on IPOs from 1980-2016 during the first five years after issuing

	First six months	Second six months	First Year	Second year	Third year	Fourth year	Fifth Year	Geometric Mean years 1-5
IPO firms	6.6%	0.6%	7.6%	6.5%	11.9%	19.0%	10.3%	11.0%
Size-matched	5.6%	5.9%	12.0%	14.5%	15.3%	16.3%	12.9%	14.2%
Difference	1.0%	-5.3%	-4.4%	-8.0%	-3.4%	2.7%	-2.6%	-3.2%
No of IPOs	8,251	8,225	8,251	8,099	7,360	6,444	5,540	
IPO firms	6.6%	0.7%	7.6%	6.5%	11.8%	18.7%	10.1%	10.9%
Size & BM-Matched	4.0%	4.5%	8.8%	13.4%	12.0%	17.6%	12.6%	12.8%
Difference	2.6%	-3.9%	-1.3%	-6.9%	-0.2%	1.0%	-2.5%	-2.0%
No. of IPOs	8,247	8,210	8,249	8,090	7,336	6,404	5,517	

All returns are equally weighted average returns for all IPOs that are traded on Nasdaq, the Amex (now NYSE MKT), or the NYSE at the start of a period. For the first and third columns, the returns are measured from the closing market price on the first day of CRSP-reported trading until the sixth-month or one-year anniversary. For years 2-5, each year the portfolios are rebalanced to equal weights. If an issuing firm is delisted within a year, its return for that year is calculated by compounding the CRSP value-weighted market index for the rest of the year. For the size-matched returns, each IPO is matched with the nonissuing firm having the same or next higher market capitalization (using the closing market price on the first day of trading for the IPO, and the market capitalization at the end of the previous month for the matching firms). For the size & BM-matched returns, each IPO with a book-to-market ratio higher than zero is matched with a nonissuing firm in the same size decile (using NYSE firms only for determining the decile breakpoints) having the closest book-to-market ratio. Each IPO with a zero or smaller book-to-market ratio is matched with a nonissuing firm of a book-to-market ratio of zero or smaller having the closest market capitalization. For the IPOs, book-to-market ratios are calculated using the first recorded post-issue book value and the post-issue market cap calculated using the closing market price on the first CRSP-listed day of trading. For nonissuing firms, the Compustat-listed book value of equity for the most recent fiscal year ending at least four months prior to the IPO date is used, along with the market cap at the close of trading at month-end prior to the month of the IPO with which it is matched. Nonissuing firms are those that have been listed on the Amex-Nasdaq-NYSE for at least five years, without issuing equity for cash during that time. If a nonissuer subsequently issues equity, it is still used as the matching firm. If a nonissuer gets delisted prior to the delisting (or the fifth anniversary), the second-closest matching firm on the original IPO date is substituted, on a point-forward basis. For firms with multiple classes of stock outstanding, market cap is calculated using the offer price and the total number of shares outstanding across all classes of stock as reported in Compustat. Firms with multiple classes of stock are excluded as potential matching candidates. The sample size is 8,252 IPOs from 1980-2016, excluding IPOs with an offer price of less than $5.00, ADRs, REITs, acquisition funds, closed-end funds, banks and S&Ls, unit offers, small best efforts deals, and oil & gas limited partnerships. For the 1980s and later, IPOs that are not listed on CRSP within six months of the IPO are excluded. For IPOs from 1980 and later, if book value numbers are missing so that no style-matched firm is available as a benchmark, the value-weighted market return is used for the matching firm return. Returns are measured through December 29, 2017. For partial event-years that end on this date, the last partial year is deleted from the computations. For example, for an IPO on March 15, 2015, its first-year return is included, but not the second-year return.

Table 20-2
Percentage returns on IPOs from 1980-1989 during the first five years after issuing

	First six months	Second six months	First year	Second year	Third Year	Fourth year	Fifth year	Geometric mean years 1-5
IPO firms	3.6%	-0.9%	3.5%	9.5%	12.1%	2.4%	8.1%	6.0%
Size-matched	3.7%	3.4%	7.0%	16.5%	16.7%	7.4%	10.2%	10.8%
Difference	-0.1%	-4.2%	-3.5%	-7.0%	-4.6%	-5.0%	-2.1%	-4.8%
No. of IPOs	2,048	2,039	2,048	2,010	1,866	1,701	1,546	
IPO firms	3.6%	-0.8%	3.4%	9.5%	11.8%	2.2%	7.6%	5.8%
Size & BM-Matched	-0.1%	1.4%	0.8%	14.5%	9.3%	4.4%	10.9%	5.5%
Difference	3.7%	-2.2%	2.6%	-4.9%	2.5%	-2.1%	-3.3%	0.3%
No. of IPOs	2,044	2,029	2,046	2,009	1,859	1,688	1,542	

Table 20-3
Percentage returns on IPOs from 1990-1999 during the first five years after issuing

	First six months	Second six months	First year	Second year	Third Year	Fourth year	Fifth year	Geometric mean years 1-5
IPO firms	12.9%	3.7%	15.1%	7.8%	9.1%	25.6%	13.0%	12.9%
Size-matched	6.6%	8.6%	15.8%	17.8%	16.4%	20.4%	15.9%	17.2%
Difference	6.3%	-4.9%	-0.7%	-10.0%	-7.3%	5.2%	-3.0%	-4.3%
No. of IPOs	4,090	4,084	4,090	4,015	3,630	3,184	2,752	
IPO firms	12.9%	3.6%	15.0%	7.9%	9.2%	25.1%	12.9%	12.8%
Size & BM-matched	7.1%	7.4%	14.9%	15.7%	12.3%	24.3%	13.6%	15.7%
Difference	5.8%	-3.8%	0.1%	-7.9%	-3.1%	0.8%	-0.8%	-2.9%
No. of IPOs	4,089	4,078	4,089	4,008	3,620	3,164	2,733	

Table 20-4
Percentage returns on IPOs from 2000-2016 during the first five years after issuing

	First six months	Second six months	First year	Second year	Third year	Fourth year	Fifth year	Geometric mean years 1-5
IPO firms	-2.8%	-3.7%	-2.8%	1.0%	17.3%	23.6%	7.2%	6.1%
Size-matched	5.5%	3.2%	9.5%	6.2%	11.8%	17.8%	9.4%	10.3%
Difference	-8.4%	-6.9%	-12.3%	-5.1%	5.5%	5.9%	-2.2%	-4.2%
No. of IPOs	2,114	2,103	2,114	2,075	1,865	1,560	1,242	
IPO firms	-2.8%	-3.7%	-2.8%	0.9%	16.8%	23.3%	7.2%	5.9%
Size & BM-matched	1.8%	2.4%	4.8%	7.8%	14.0%	18.6%	12.3%	10.4%
Difference	-4.7%	-6.1%	-7.6%	-6.9%	2.7%	4.8%	-4.5%	-4.5%
No. of IPOs	2,114	2,103	2,114	2,073	1,857	1,551	1,242	

Returns are through December 29, 2017. Thus, the fifth-year returns are only for those IPOs from 2000 to 2012, and the fourth-year returns are only for those IPOs from 2000 to 2013, etc. Note that the fifth-year returns are available only for those IPOs that survived for at least four years.

Table 21 (updated Dec. 19, 2018)

The Mean and Median Percentage Public Float, 1980-2018

The public float is calculated as the number of shares issued in the IPO (not including overallotment shares) divided by the post-issue number of shares outstanding in all share classes (using data from CRSP except for companies with dual-class shares), multiplied by 100%.

Year	Number of IPOs	Public Float, %		Percentiles	
		Mean	Median	25^{th}	75^{th}
1980	71	31.0	28.5	20.3	34.2
1981	193	27.4	25.5	20.0	34.4
1982	77	26.7	25.1	19.5	33.2
1983	451	30.0	28.5	21.9	35.8
1984	171	29.1	28.0	21.8	35.7
1985	186	32.0	30.7	23.7	38.3
1986	393	32.0	30.2	22.5	38.2
1987	285	31.5	29.1	22.0	39.2
1988	105	26.6	24.1	19.4	32.0
1989	116	31.3	29.9	23.0	34.8
1990	110	32.5	30.5	23.5	38.8
1991	286	33.6	31.7	25.3	38.4
1992	412	35.4	33.3	25.5	41.4
1993	510	35.6	33.3	25.9	42.4
1994	402	34.3	32.1	25.2	40.3
1995	461	32.5	30.5	23.9	38.8
1996	677	31.4	30.1	22.6	38.1
1997	474	32.9	30.2	23.7	39.5
1998	281	30.7	27.9	20.7	36.9
1999	476	23.1	20.5	15.5	28.4
2000	380	21.0	19.4	14.0	25.2
2001	79	26.2	21.9	17.7	33.4
2002	66	31.3	26.9	20.3	35.7
2003	63	33.4	29.9	21.0	38.9
2004	173	31.4	26.1	21.9	35.3
2005	159	34.6	31.5	24.9	42.4
2006	157	30.2	28.2	22.8	35.2
2007	159	28.4	26.3	19.4	33.9
2008	21	29.9	27.7	21.3	39.3
2009	41	30.0	28.0	19.4	34.2
2010	91	30.9	27.9	20.0	35.9
2011	81	24.6	22.5	15.8	29.0
2012	93	23.7	22.3	14.7	27.2
2013	157	25.5	23.9	17.7	30.0
2014	206	26.7	26.2	19.3	33.0
2015	118	25.0	23.0	17.3	31.2
2016	75	22.2	23.0	14.7	27.9
2017	107	21.7	21.4	15.4	26.1
2018	134	22.0	21.1	15.6	27.7
1980-2017	8,497	30.1	28.0	20.8	36.5

Table 22
Non-distress Delistings within Three Years of the IPO

This is an updated Table 3 of the 2013 *Journal of Financial and Quantitative Analysis* article "Where Have All the IPOs Gone?" by Xiaohui Gao, Jay R. Ritter, and Zhongyan Zhu.

			Number of acquisitions and buyouts by				
		No. of cohort IPOs				Financial	
	No of	Delisted for	Strategic Buyer			Buyer	
Year	IPOs	Non-distress reasons	Public	Private	Percentage	Public	Private
1980	71	2	2	0	2.7%	0	0
1981	193	13	11	1	6.1%	0	1
1982	77	6	4	2	7.7%	0	0
1983	451	29	27	2	6.4%	0	0
1984	171	16	14	2	9.1%	0	0
1985	186	18	14	2	8.6%	0	2
1986	393	40	31	5	9.2%	0	4
1987	285	44	26	4	10.6%	0	14
1988	105	7	7	0	6.9%	0	0
1989	116	8	8	0	7.1%	0	0
1990	110	5	4	1	4.5%	0	0
1991	286	9	6	3	3.1%	0	0
1992	412	36	34	2	8.7%	0	0
1993	509	44	38	4	8.2%	0	2
1994	403	42	37	4	10.1%	0	1
1995	461	79	72	6	16.9%	0	1
1996	676	115	101	11	16.6%	0	3
1997	474	82	69	6	15.8%	0	7
1998	282	40	33	3	12.8%	0	4
1999	477	106	96	8	21.8%	0	2
2000	381	56	51	4	14.4%	0	1
2001	79	8	8	0	10.1%	0	0
2002	66	11	10	1	16.7%	0	0
2003	62	8	7	0	11.3%	0	1
2004	174	24	21	0	12.1%	0	1
2005	160	24	19	4	14.4%	0	1
2006	157	19	16	1	10.8%	0	2
2007	159	17	14	2	10.7%	2	1
2008	21	3	3	0	14.3%	0	0
2009	41	6	4	1	14.6%	0	1
2010	91	8	3	2	8.8%	0	1
2011	81	7	0	0	8.6%	0	2
2012	93	14	0	0	15.1%	0	2
2013	157	14	1	0	8.9%	0	0
2014	207	5	1	0	2.4%	0	1
2015	115		0	0		0	1
2016	74						
2017	108						
2018							
1980-2017	8,360	967	794	81	11.4%	4	56

Table 23 (updated Dec. 19, 2018)
Dual Class IPOs

This table lists the number of IPOs each year that have dual class shares among tech IPOs and among non-tech IPOs. For example, in 1980 there were 22 tech stock IPOs, none of which were dual class, and 49 non-tech stock IPOs, 1 of which used a dual class structure. The sample is IPOs with an offer price of at least $5.00, excluding ADRs, unit offers, closed-end funds, REITs, natural resource limited partnerships, small best efforts offers, banks and S&Ls, and stocks not listed on CRSP (CRSP includes Amex, NYSE, and NASDAQ stocks).

	Tech IPOs			Non-tech IPOs		
	Dual	Total	%	Dual	Total	%
1980	0	22	0%	1	49	2.0%
1981	2	73	2.7%	4	120	3.3%
1982	0	42	0%	0	35	0.0%
1983	3	174	1.7%	4	278	1.4%
1984	2	50	4.0%	5	121	4.1%
1985	1	37	2.7%	6	149	4.0%
1986	3	77	3.9%	21	316	6.6%
1987	1	58	1.7%	23	227	10.1%
1988	3	28	10.7%	6	77	7.8%
1989	1	35	2.9%	6	81	7.4%
1990	0	31	0%	7	79	8.9%
1991	7	70	10.0%	16	216	7.4%
1992	2	113	1.8%	16	299	5.4%
1993	3	126	2.4%	30	384	7.8%
1994	8	116	6.9%	25	286	8.7%
1995	8	204	3.9%	22	257	8.6%
1996	16	274	5.8%	46	405	11.4%
1997	10	173	5.8%	41	302	13.6%
1998	8	114	7.0%	21	170	12.4%
1999	22	370	5.9%	19	107	18.7%
2000	19	260	7.3%	7	120	5.8%
2001	2	23	8.7%	5	56	8.9%
2002	2	20	10.0%	12	46	26.1%
2003	3	18	16.7%	5	45	11.1%
2004	3	61	4.9%	10	113	8.8%
2005	9	45	20.0%	13	115	11.3%
2006	1	48	2.1%	10	109	9.2%
2007	4	75	5.3%	14	84	16.7%
2008	0	6	0%	3	15	20.0%
2009	2	14	14.3%	3	27	11.1%
2010	2	33	6.1%	7	59	11.9%
2011	5	36	13.9%	9	45	20.0%
2012	5	39	12.8%	11	54	20.4%
2013	5	43	11.6%	23	114	20.2%
2014	3	53	5.7%	18	153	11.8%
2015	14	38	36.8%	8	80	10.0%
2016	5	21	23.8%	4	54	7.4%
2017	13	30	43.3%	17	77	22.1%
2018	13	38	34.2%	12	96	12.5%
1980-2018	210	3,088	6.8%	510	5,420	9.4%

Figure 2: See Table 9 for details.

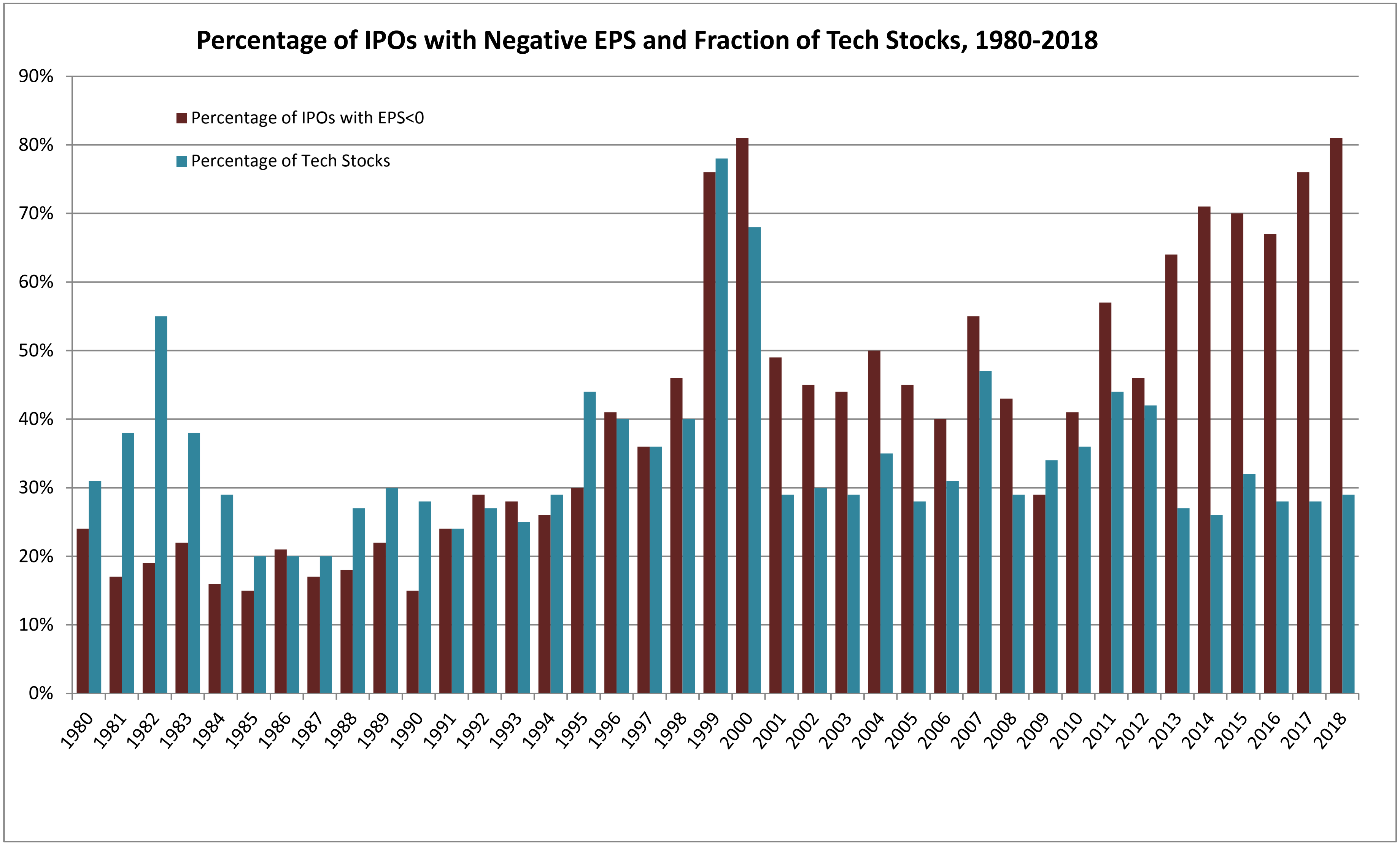


Figure 3

The public float is the number of shares issued in the IPO divided by the post-issue number of shares outstanding in all share classes. See Table 21 for details.

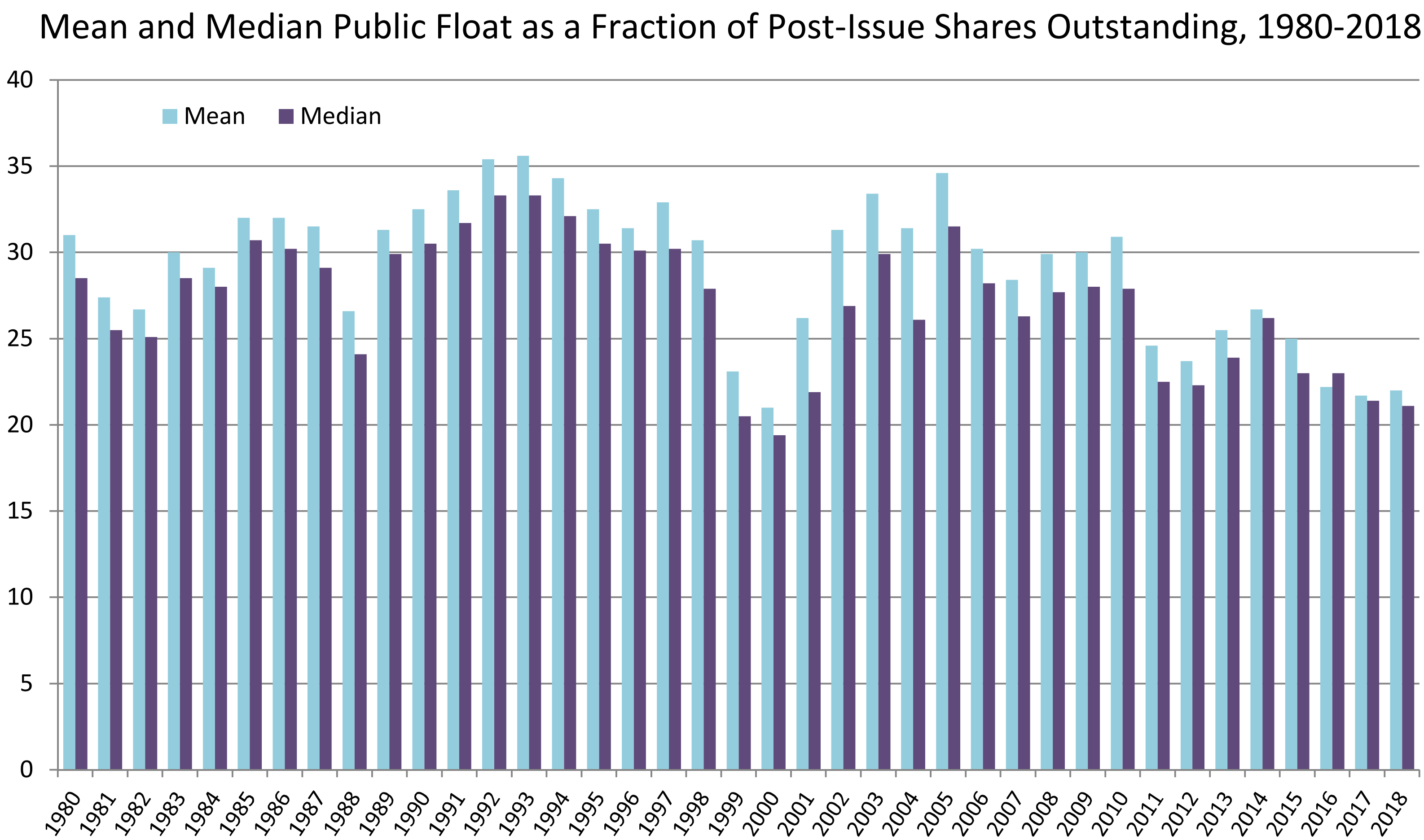


Figure 4: See Table 1 for details.

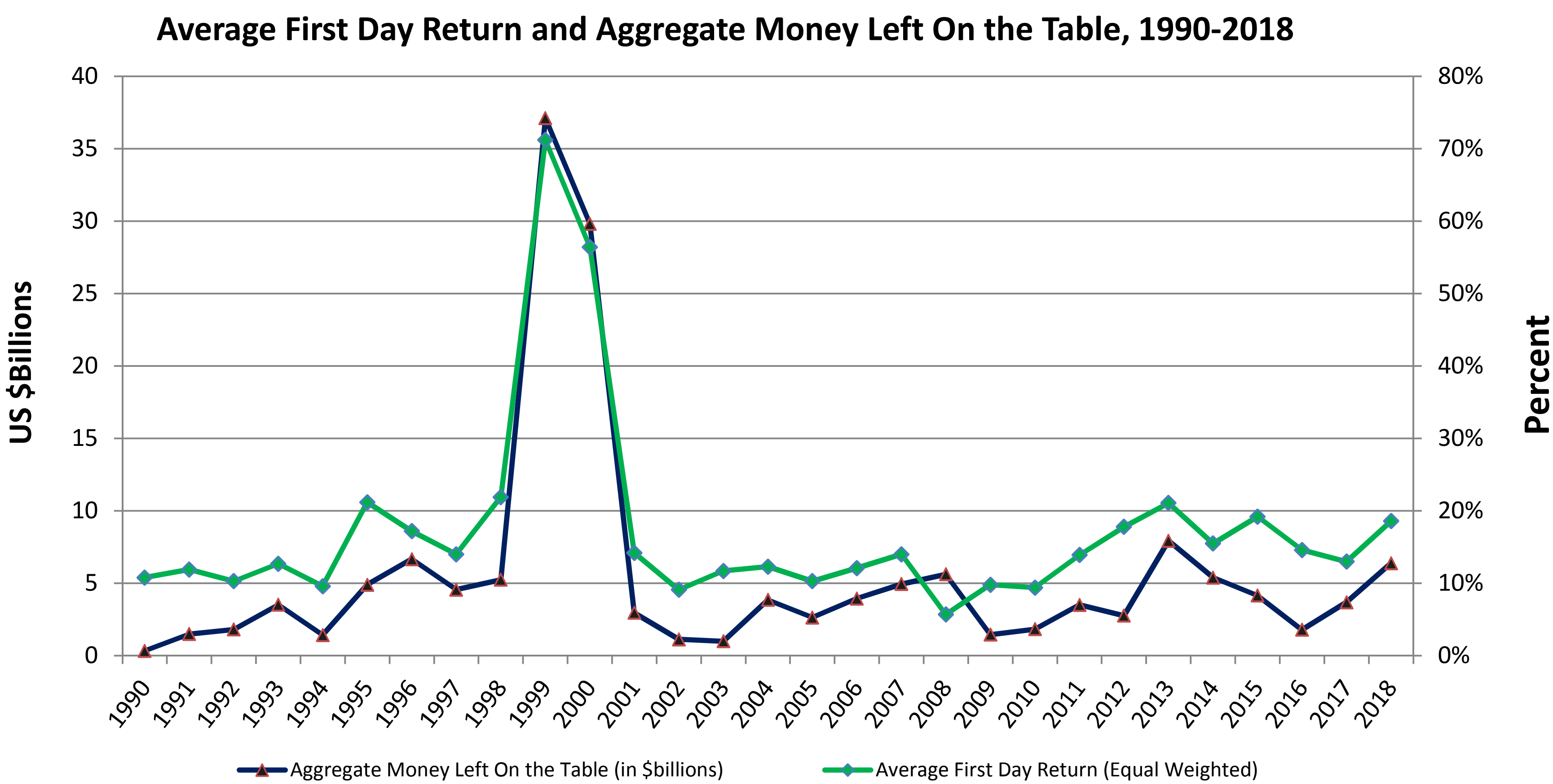
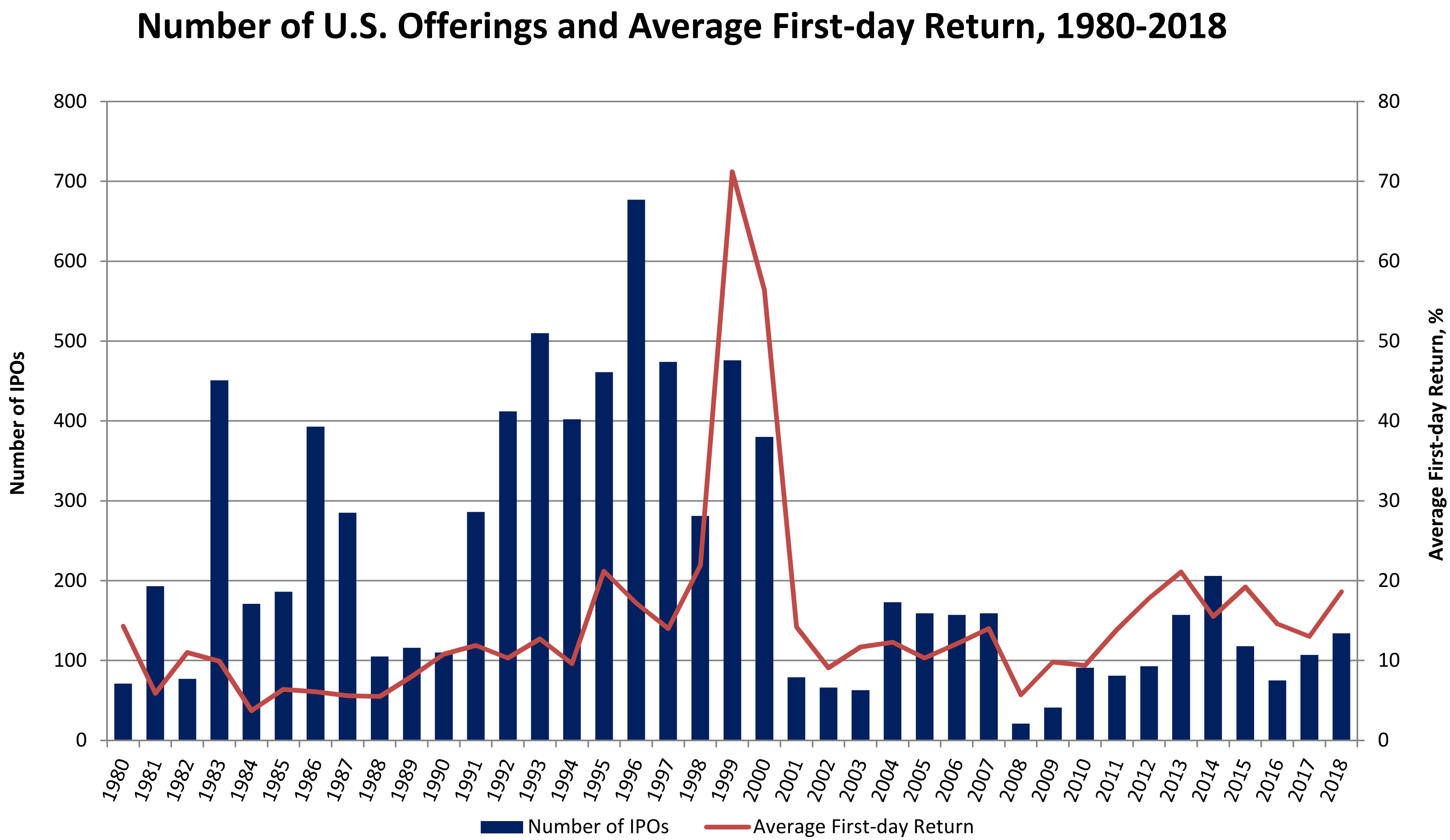


Figure 5. See Table 1 for details. A PowerPoint of this slide can be downloaded from elsewhere on Jay Ritter's IPO Data page.



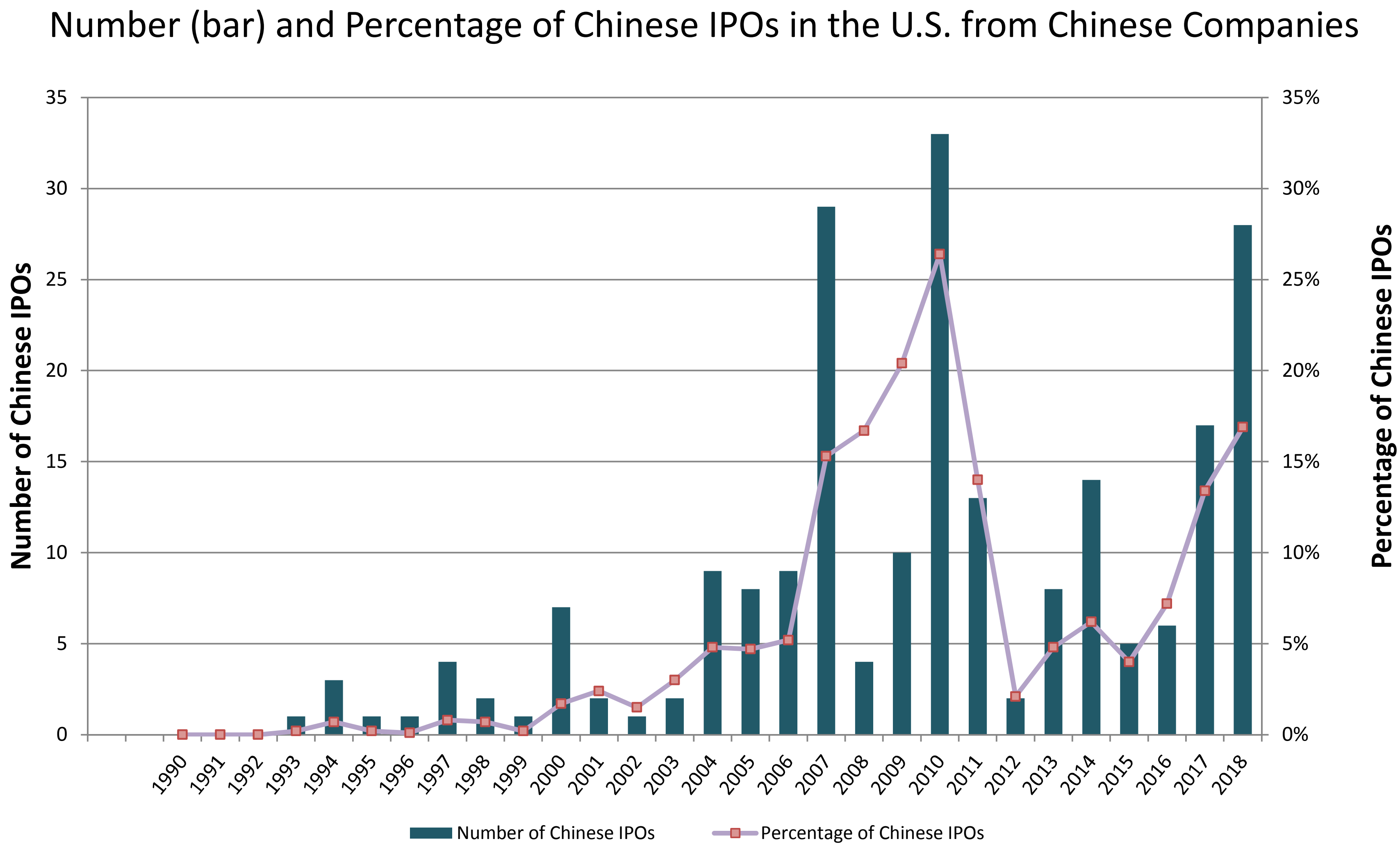


Table 14 gives the numbers plotted here. In this figure, ADRs are included for both the number of Chinese IPOs and the overall number of IPOs.