

# Initial Public Offerings: Updated Statistics

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72 operating companies went public in the U.S. in 2024, 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). Of these 72 operating companies, 56 were from the U.S. A higher IPO volume figure has been reported in many sources (at least 221 counting all offerings), but the higher numbers typically include not only operating companies (mostly domestic), but also ADRs (10 offerings), some companies that were already traded in other countries and are thus actually follow-on offerings, unit offerings (3 offerings), IPOs that do not trade on the NYSE (including NYSE American) or Nasdaq (0 offerings), IPOs with an offer price below \$5.00 (74 offerings, not including one that was also a unit offer), and small best efforts deals (1 offering, which was a bank), banks and S&Ls (1 offering, most of which are typically mutual conversions with depositors buying the stock), oil & gas partnerships or unit trusts (0 offering), REITs (3 offerings), 57 special purpose acquisition companies (SPACs), and 0 closed-end funds (not including interval funds listed at cefa.com). There was also 1 direct listing. There are also several bulletin board-traded issues or foreign stocks that I (and Dealogic) classify as follow-ons, and thus don't count, but which LSEG classifies as IPOs. Of the 10 ADRs, 2 were penny stocks.

**Note:** Many of these tables have been updated to include 2024 numbers with the assistance of Guilherme Junqueira and Rui Guo. 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 the LSEG SDC new issues database (previously known as Refinitiv and Thomson Reuters) and Dealogic, but also use information from IPOscoop.com, Nasdaq, Renaissance Capital, 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 almost all of my tables, I use a more conservative definition of what is an IPO than most other data providers, but am consistent over time. 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. 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. For 2016, I have included BATS Global Markets, which went public in April, but was listed on BATS before being acquired by CBOE Holdings in 2017.

**Table 1: Mean First-day Returns and Money Left on the Table, 1980-2024** (updated December 20, 2024)  
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. 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.

| Year             | Number of IPOs | Mean First-day Return |                   | Median First-day Return | Aggregate Amount Left on the Table | Aggregate Proceeds     |
|------------------|----------------|-----------------------|-------------------|-------------------------|------------------------------------|------------------------|
|                  |                | Equal-weighted        | Proceeds-weighted |                         |                                    |                        |
| 1980             | 71             | 14.3%                 | 20.0%             | 6.9%                    | \$0.18 billion                     | \$0.91 billion         |
| 1981             | 192            | 5.9%                  | 5.7%              | 0.3%                    | \$0.13 billion                     | \$2.31 billion         |
| 1982             | 77             | 11.0%                 | 13.3%             | 3.7%                    | \$0.13 billion                     | \$1.00 billion         |
| 1983             | 451            | 9.9%                  | 9.4%              | 2.5%                    | \$0.84 billion                     | \$8.89 billion         |
| 1984             | 171            | 3.7%                  | 2.5%              | 0.0%                    | \$0.05 billion                     | \$2.02 billion         |
| 1985             | 186            | 6.4%                  | 5.6%              | 2.8%                    | \$0.23 billion                     | \$4.09 billion         |
| 1986             | 393            | 6.1%                  | 5.1%              | 1.1%                    | \$0.68 billion                     | \$13.40 billion        |
| 1987             | 285            | 5.6%                  | 5.7%              | 1.3%                    | \$0.66 billion                     | \$11.68 billion        |
| 1988             | 105            | 5.5%                  | 3.4%              | 2.3%                    | \$0.13 billion                     | \$3.88 billion         |
| 1989             | 116            | 8.0%                  | 4.7%              | 4.0%                    | \$0.27 billion                     | \$5.81 billion         |
| 1990             | 110            | 10.8%                 | 8.1%              | 5.6%                    | \$0.34 billion                     | \$4.24 billion         |
| 1991             | 286            | 11.9%                 | 9.7%              | 7.5%                    | \$1.50 billion                     | \$15.39 billion        |
| 1992             | 412            | 10.3%                 | 8.0%              | 4.4%                    | \$1.82 billion                     | \$22.69 billion        |
| 1993             | 510            | 12.7%                 | 11.2%             | 6.3%                    | \$3.52 billion                     | \$31.44 billion        |
| 1994             | 402            | 9.6%                  | 8.3%              | 4.2%                    | \$1.43 billion                     | \$17.18 billion        |
| 1995             | 462            | 21.4%                 | 17.5%             | 13.2%                   | \$4.90 billion                     | \$27.93 billion        |
| 1996             | 677            | 17.2%                 | 16.1%             | 10.0%                   | \$6.76 billion                     | \$42.05 billion        |
| 1997             | 474            | 14.0%                 | 14.4%             | 9.4%                    | \$4.56 billion                     | \$31.76 billion        |
| 1998             | 283            | 21.9%                 | 15.6%             | 8.9%                    | \$5.25 billion                     | \$33.66 billion        |
| 1999             | 476            | 71.2%                 | 57.4%             | 37.5%                   | \$37.11 billion                    | \$64.67 billion        |
| 2000             | 380            | 56.3%                 | 45.8%             | 27.9%                   | \$29.68 billion                    | \$64.80 billion        |
| 2001             | 80             | 14.0%                 | 8.4%              | 10.2%                   | \$2.97 billion                     | \$35.29 billion        |
| 2002             | 66             | 9.1%                  | 5.1%              | 8.2%                    | \$1.13 billion                     | \$22.03 billion        |
| 2003             | 63             | 11.7%                 | 10.4%             | 8.7%                    | \$1.00 billion                     | \$9.54 billion         |
| 2004             | 173            | 12.3%                 | 12.4%             | 7.1%                    | \$3.86 billion                     | \$31.19 billion        |
| 2005             | 159            | 10.3%                 | 9.3%              | 5.8%                    | \$2.64 billion                     | \$28.23 billion        |
| 2006             | 157            | 12.1%                 | 13.0%             | 5.6%                    | \$3.95 billion                     | \$30.48 billion        |
| 2007             | 159            | 14.0%                 | 13.9%             | 6.8%                    | \$4.95 billion                     | \$35.66 billion        |
| 2008             | 21             | 5.7%                  | 24.7%             | -1.7%                   | \$5.63 billion                     | \$22.76 billion        |
| 2009             | 41             | 9.8%                  | 11.1%             | 5.7%                    | \$1.46 billion                     | \$13.17 billion        |
| 2010             | 91             | 9.4%                  | 6.2%              | 3.1%                    | \$1.84 billion                     | \$29.82 billion        |
| 2011             | 81             | 13.9%                 | 13.0%             | 8.5%                    | \$3.51 billion                     | \$26.97 billion        |
| 2012             | 93             | 17.7%                 | 8.9%              | 11.1%                   | \$2.75 billion                     | \$31.11 billion        |
| 2013             | 158            | 20.9%                 | 19.0%             | 13.0%                   | \$7.89 billion                     | \$41.56 billion        |
| 2014             | 206            | 15.5%                 | 12.8%             | 5.8%                    | \$5.40 billion                     | \$42.20 billion        |
| 2015             | 118            | 19.2%                 | 18.9%             | 10.3%                   | \$4.16 billion                     | \$22.00 billion        |
| 2016             | 75             | 14.5%                 | 14.2%             | 5.0%                    | \$1.77 billion                     | \$12.52 billion        |
| 2017             | 106            | 12.9%                 | 16.0%             | 9.0%                    | \$3.68 billion                     | \$22.98 billion        |
| 2018             | 134            | 18.6%                 | 19.1%             | 11.6%                   | \$6.39 billion                     | \$33.47 billion        |
| 2019             | 113            | 23.5%                 | 17.6%             | 17.9%                   | \$6.95 billion                     | \$39.28 billion        |
| 2020             | 165            | 41.6%                 | 47.9%             | 26.2%                   | \$29.66 billion                    | \$61.86 billion        |
| 2021             | 311            | 32.1%                 | 24.0%             | 17.0%                   | \$28.65 billion                    | \$119.36 billion       |
| 2022             | 38             | 48.9%                 | 14.2%             | 9.3%                    | \$0.99 billion                     | \$6.99 billion         |
| 2023             | 54             | 11.9%                 | 16.1%             | -0.5%                   | \$1.92 billion                     | \$11.92 billion        |
| 2024             | 72             | 15.3%                 | 18.1%             | 7.2%                    | \$3.72 billion                     | \$20.49 billion        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>18.9%</b>          | <b>20.4%</b>      | <b>7.0%</b>             | <b>\$237.03 billion</b>            | <b>\$1,161 billion</b> |

**Table 1a** (updated February 20, 2025)

**Mean First-day Returns and Money Left on the Table, 1980-2024**

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 | Percentage with 1 <sup>st</sup> -day return of |              | Aggregate Proceeds     | Market value at 1 <sup>st</sup> closing market price |
|------------------|----------------|-----------------------|------------------------------------------------|--------------|------------------------|------------------------------------------------------|
|                  |                |                       | <0%                                            | =0%          |                        |                                                      |
| 1980             | 71             | 14.3%                 | 31.0%                                          | 9.9%         | \$0.91 billion         | \$5.88 billion                                       |
| 1981             | 192            | 5.9%                  | 20.8%                                          | 29.2%        | \$2.31 billion         | \$10.71 billion                                      |
| 1982             | 77             | 11.0%                 | 16.9%                                          | 20.8%        | \$1.00 billion         | \$5.11 billion                                       |
| 1983             | 451            | 9.9%                  | 18.2%                                          | 23.1%        | \$8.89 billion         | \$41.35 billion                                      |
| 1984             | 171            | 3.7%                  | 25.7%                                          | 32.7%        | \$2.02 billion         | \$8.76 billion                                       |
| 1985             | 186            | 6.4%                  | 18.3%                                          | 14.5%        | \$4.09 billion         | \$15.18 billion                                      |
| 1986             | 393            | 6.1%                  | 28.2%                                          | 19.6%        | \$13.40 billion        | \$46.77 billion                                      |
| 1987             | 285            | 5.6%                  | 19.3%                                          | 26.0%        | \$11.68 billion        | \$45.59 billion                                      |
| 1988             | 105            | 5.5%                  | 18.1%                                          | 20.0%        | \$3.88 billion         | \$21.65 billion                                      |
| 1989             | 116            | 8.0%                  | 12.1%                                          | 16.4%        | \$5.81 billion         | \$22.37 billion                                      |
| 1990             | 110            | 10.8%                 | 13.6%                                          | 19.1%        | \$4.24 billion         | \$17.79 billion                                      |
| 1991             | 286            | 11.9%                 | 9.4%                                           | 17.1%        | \$15.35 billion        | \$54.06 billion                                      |
| 1992             | 412            | 10.3%                 | 13.8%                                          | 19.7%        | \$22.69 billion        | \$74.35 billion                                      |
| 1993             | 510            | 12.7%                 | 9.4%                                           | 15.5%        | \$31.44 billion        | \$126 billion                                        |
| 1994             | 402            | 9.6%                  | 7.5%                                           | 21.1%        | \$17.18 billion        | \$64 billion                                         |
| 1995             | 462            | 21.4%                 | 6.9%                                           | 10.0%        | \$27.93 billion        | \$127 billion                                        |
| 1996             | 677            | 17.2%                 | 8.7%                                           | 12.7%        | \$42.05 billion        | \$215 billion                                        |
| 1997             | 474            | 14.0%                 | 7.2%                                           | 12.4%        | \$31.76 billion        | \$141 billion                                        |
| 1998             | 283            | 21.9%                 | 12.0%                                          | 14.8%        | \$33.66 billion        | \$164 billion                                        |
| 1999             | 476            | 71.2%                 | 11.8%                                          | 5.9%         | \$64.67 billion        | \$652 billion                                        |
| 2000             | 380            | 56.3%                 | 11.8%                                          | 6.1%         | \$64.80 billion        | \$642 billion                                        |
| 2001             | 80             | 14.2%                 | 12.5%                                          | 5.0%         | \$35.29 billion        | \$177 billion                                        |
| 2002             | 66             | 9.1%                  | 15.2%                                          | 6.1%         | \$22.03 billion        | \$84 billion                                         |
| 2003             | 63             | 11.7%                 | 17.5%                                          | 7.9%         | \$9.54 billion         | \$40 billion                                         |
| 2004             | 173            | 12.3%                 | 19.1%                                          | 7.5%         | \$31.19 billion        | \$148 billion                                        |
| 2005             | 159            | 10.3%                 | 22.6%                                          | 10.1%        | \$28.23 billion        | \$105 billion                                        |
| 2006             | 157            | 12.1%                 | 17.8%                                          | 7.0%         | \$30.48 billion        | \$135 billion                                        |
| 2007             | 159            | 14.0%                 | 25.2%                                          | 4.4%         | \$35.66 billion        | \$212 billion                                        |
| 2008             | 21             | 5.7%                  | 61.9%                                          | 4.8%         | \$22.76 billion        | \$63 billion                                         |
| 2009             | 41             | 9.8%                  | 19.5%                                          | 9.8%         | \$13.17 billion        | \$59 billion                                         |
| 2010             | 91             | 9.4%                  | 23.1%                                          | 13.2%        | \$29.82 billion        | \$116 billion                                        |
| 2011             | 81             | 13.3%                 | 22.2%                                          | 4.9%         | \$26.97 billion        | \$178 billion                                        |
| 2012             | 93             | 17.7%                 | 18.3%                                          | 2.2%         | \$31.11 billion        | \$181 billion                                        |
| 2013             | 158            | 20.9%                 | 22.8%                                          | 3.8%         | \$41.56 billion        | \$270 billion                                        |
| 2014             | 206            | 15.5%                 | 27.7%                                          | 5.8%         | \$42.20 billion        | \$238 billion                                        |
| 2015             | 118            | 19.2%                 | 24.6%                                          | 5.9%         | \$22.00 billion        | \$150 billion                                        |
| 2016             | 75             | 14.5%                 | 22.7%                                          | 12.0%        | \$12.52 billion        | \$79 billion                                         |
| 2017             | 106            | 12.9%                 | 25.5%                                          | 3.8%         | \$22.98 billion        | \$162 billion                                        |
| 2018             | 134            | 18.6%                 | 26.1%                                          | 4.5%         | \$33.47 billion        | \$225 billion                                        |
| 2019             | 113            | 23.5%                 | 27.4%                                          | 2.7%         | \$39.28 billion        | \$333 billion                                        |
| 2020             | 165            | 41.6%                 | 19.4%                                          | 2.4%         | \$61.86 billion        | \$687 billion                                        |
| 2021             | 311            | 32.1%                 | 24.4%                                          | 4.2%         | \$119.36 billion       | \$1,205 billion                                      |
| 2022             | 38             | 48.9%                 | 39.5%                                          | 2.6%         | \$6.99 billion         | \$73 billion                                         |
| 2023             | 54             | 11.9%                 | 53.7%                                          | 3.7%         | \$11.92 billion        | \$115 billion                                        |
| 2024             | 72             | 15.3%                 | 34.7%                                          | 4.2%         | \$20.49 billion        | \$148 billion                                        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>18.9%</b>          | <b>16.5%</b>                                   | <b>13.1%</b> | <b>\$1,161 billion</b> | <b>\$7,684 billion</b>                               |

|                  |              |              |              |              |                        |                        |
|------------------|--------------|--------------|--------------|--------------|------------------------|------------------------|
| 1980-1989        | 2,047        | 7.2%         | 21.2%        | 22.3%        | \$53.98 billion        | \$223 billion          |
| 1990-1998        | 3,616        | 14.8%        | 9.3%         | 15.2%        | \$226.40 billion       | \$985 billion          |
| 1999-2000        | 856          | 64.6%        | 11.8%        | 6.0%         | \$129.47 billion       | \$1,294 billion        |
| 2001-2024        | 2,734        | 18.8%        | 23.9%        | 5.6%         | \$750.87 billion       | \$5,182 billion        |
| <b>1980-2024</b> | <b>9,253</b> | <b>18.9%</b> | <b>16.5%</b> | <b>13.1%</b> | <b>\$1,161 billion</b> | <b>\$7,684 billion</b> |

**Table 2** (updated February 20, 2025)**Mean First-day Returns, Categorized by Sales, for IPOs from 1980-2024**

Sales, measured in millions, are for the last twelve months prior to going public. All sales have been converted into dollars of **January 2024 purchasing power**, using the Consumers Price Index. There are 9,253 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 the LSEG's new issues database and its predecessors, EDGAR, and the Graeme Howard-Todd Huxster collection of pre-EDGAR prospectuses. The average first-day return is 18.8%.

|                     | 1980-1989 |       | 1990-1998 |       | 1999-2000 |     | 2001-2024 |       |
|---------------------|-----------|-------|-----------|-------|-----------|-----|-----------|-------|
|                     | Return    | N     | Return    | N     | Return    | N   | Return    | N     |
| 0≤sales<\$10m       | 10.7%     | 309   | 16.8%     | 559   | 65.7%     | 233 | 20.6%     | 663   |
| \$10m≤sales<\$50m   | 9.0%      | 570   | 20.3%     | 886   | 75.4%     | 312 | 22.5%     | 281   |
| \$50m≤sales<\$100m  | 6.8%      | 381   | 15.0%     | 624   | 81.9%     | 109 | 19.6%     | 282   |
| \$100m≤sales<\$500m | 5.3%      | 587   | 11.9%     | 1,059 | 46.7%     | 138 | 21.1%     | 788   |
| \$500m≤sales        | 3.1%      | 200   | 8.8%      | 488   | 17.2%     | 64  | 12.9%     | 720   |
| All                 | 7.2%      | 2,047 | 14.8%     | 3,616 | 64.6%     | 856 | 18.8%     | 2,734 |

**Table 3** (updated April 14, 2025)**IPO Turnover Categorized by Decade and First-Day Return, 1983-2024**

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, small best efforts offers, 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 January 1983-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 36 IPOs in the 1980s and 1990s, 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; for Nucrust Pharmaceuticals (20051222), the CRSP volume of 49,056 is replaced with Bigcharts volume of 714,500; for Stevanto Group (20210716) the CRSP volume of 49 is replaced with e BigCharts volume of 12,538,610. 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. For Grove (20210623) and Hempacco (20220830), both Nasdaq Capital Markets issues, the first-day volume has been used instead of the 2<sup>nd</sup> or 3<sup>rd</sup> day volume, for which turnover exceeded 1,000%.

**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   | 1,654          | 0.0%                            | 87.2%                        |
| 1990-1998   | 3,409          | 1.1%                            | 83.5%                        |
| 1999-2000   | 786            | 21.4%                           | 91.5%                        |
| 2001-2023   | 2,396          | 15.1%                           | 67.3%                        |
| Total       | 8,245          | 6.9%                            | 80.3%                        |

**Panel B: Average Adjusted Turnover Categorized by First-Day Returns**

| Return Categories                | Number of IPOs | Average First-Day Returns | Average Turnover |
|----------------------------------|----------------|---------------------------|------------------|
| Return $\leq 0\%$                | 2,326          | -3.6%                     | 33.4%            |
| $0\% < \text{Return} \leq 10\%$  | 2,264          | 4.5%                      | 32.7%            |
| $10\% < \text{Return} \leq 60\%$ | 3,032          | 26.1%                     | 53.0%            |
| Return $> 60\%$                  | 623            | 125.8%                    | 97.0%            |

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

| Return Categories                | 1983-1989 | 1990-1998 | 1999-2000 | 2001-2024 |
|----------------------------------|-----------|-----------|-----------|-----------|
| Return $\leq 0\%$                | 14.8%     | 24.5%     | 51.9%     | 60.3%     |
| $0\% < \text{Return} \leq 10\%$  | 18.1%     | 27.5%     | 52.5%     | 54.6%     |
| $10\% < \text{Return} \leq 60\%$ | 21.6%     | 43.9%     | 69.9%     | 72.6%     |
| Return $> 60\%$                  | 26.2%     | 77.2%     | 101.0%    | 112.7%    |
| Total                            | 17.6%     | 35.3%     | 75.5%     | 68.4%     |

**Table 3b** (updated April 21, 2025)

**Mean First-day Turnover for NYSE and Nasdaq IPOs, 1983-2024**

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 (excluding NYSE American and NYSE MKT issues after the merger in 2008) or Nasdaq (excluding Nasdaq small cap issues before October 2005 and, after Sept. 2005, Nasdaq capital market issues), excluding ADRs, unit offers, SPACs, 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). 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. 36 IPOs from the 1980s and 1990s 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         | 429            | 11           | 418          | 24.1%        | 17.6%        | 24.5%        | 12.2%                  | 12.4%        |
| 1984         | 156            | 8            | 148          | 21.9%        | 10.9%        | 23.1%        | 11.5%                  | 11.5%        |
| 1985         | 166            | 8            | 158          | 32.0%        | 18.7%        | 32.7%        | 16.4%                  | 16.5%        |
| 1986         | 355            | 28           | 327          | 37.4%        | 24.9%        | 38.6%        | 19.3%                  | 19.7%        |
| 1987         | 243            | 26           | 217          | 40.7%        | 23.1%        | 43.0%        | 21.5%                  | 21.7%        |
| 1988         | 75             | 14           | 61           | 43.2%        | 22.3%        | 48.0%        | 24.0%                  | 23.7%        |
| 1989         | 96             | 18           | 78           | 51.8%        | 24.2%        | 58.1%        | 29.1%                  | 28.1%        |
| 1990         | 90             | 15           | 75           | 61.8%        | 22.0%        | 69.7%        | 34.9%                  | 32.7%        |
| 1991         | 257            | 43           | 214          | 64.9%        | 36.3%        | 70.7%        | 35.3%                  | 35.5%        |
| 1992         | 352            | 67           | 285          | 58.5%        | 32.3%        | 64.6%        | 32.3%                  | 32.3%        |
| 1993         | 439            | 65           | 374          | 65.8%        | 42.7%        | 69.9%        | 34.9%                  | 36.1%        |
| 1994         | 334            | 47           | 287          | 53.6%        | 28.5%        | 57.9%        | 28.9%                  | 28.9%        |
| 1995         | 382            | 47           | 335          | 75.7%        | 43.9%        | 80.1%        | 40.1%                  | 40.5%        |
| 1996         | 575            | 76           | 499          | 72.6%        | 52.0%        | 75.7%        | 37.9%                  | 39.7%        |
| 1997         | 374            | 69           | 305          | 62.8%        | 45.7%        | 66.8%        | 33.4%                  | 35.7%        |
| 1998         | 223            | 50           | 173          | 91.2%        | 50.8%        | 102.8%       | 51.4%                  | 51.3%        |
| 1999         | 435            | 39           | 396          | 159.8%       | 65.5%        | 169.1%       | 84.5%                  | 82.8%        |
| 2000         | 323            | 22           | 301          | 135.7%       | 56.4%        | 141.5%       | 70.8%                  | 69.8%        |
| 2001         | 72             | 25           | 47           | 84.8%        | 50.6%        | 102.9%       | 56.8%                  | 54.6%        |
| 2002         | 60             | 25           | 35           | 72.5%        | 61.0%        | 80.6%        | 50.4%                  | 54.8%        |
| 2003         | 57             | 15           | 42           | 77.0%        | 59.1%        | 83.3%        | 52.1%                  | 53.9%        |
| 2004         | 157            | 40           | 117          | 65.9%        | 57.1%        | 68.9%        | 68.9%                  | 65.9%        |
| 2005         | 131            | 44           | 87           | 63.7%        | 62.4%        | 64.4%        | 64.4%                  | 63.7%        |
| 2006         | 133            | 37           | 96           | 65.5%        | 77.6%        | 60.9%        | 60.9%                  | 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           | 56.4%        | 59.2%        | 53.6%        | 53.6%                  | 56.4%        |
| 2011         | 69             | 31           | 38           | 76.0%        | 85.5%        | 68.2%        | 68.2%                  | 76.0%        |
| 2012         | 83             | 42           | 41           | 81.3%        | 90.4%        | 72.1%        | 72.1%                  | 81.3%        |
| 2013         | 133            | 60           | 73           | 77.6%        | 90.8%        | 66.7%        | 66.7%                  | 77.6%        |
| 2014         | 163            | 67           | 96           | 75.9%        | 79.1%        | 73.6%        | 73.6%                  | 75.9%        |
| 2015         | 98             | 33           | 65           | 79.9%        | 101.2%       | 69.0%        | 69.0%                  | 79.9%        |
| 2016         | 62             | 19           | 43           | 70.5%        | 81.9%        | 65.5%        | 65.5%                  | 70.5%        |
| 2017         | 86             | 34           | 52           | 64.1%        | 68.9%        | 61.0%        | 61.0%                  | 64.1%        |
| 2018         | 111            | 32           | 79           | 55.6%        | 64.4%        | 52.0%        | 52.0%                  | 55.6%        |
| 2019         | 97             | 23           | 74           | 61.0%        | 83.5%        | 54.0%        | 54.0%                  | 61.0%        |
| 2020         | 134            | 22           | 112          | 75.6%        | 77.5%        | 75.3%        | 75.3%                  | 75.6%        |
| 2021         | 235            | 63           | 172          | 53.6%        | 58.4%        | 51.8%        | 51.8%                  | 53.6%        |
| 2022         | 14             | 2            | 12           | 28.1%        | 50.4%        | 24.4%        | 24.4%                  | 28.1%        |
| 2023         | 23             | 8            | 15           | 56.2%        | 55.6%        | 56.6%        | 56.6%                  | 56.2%        |
| 2024         | 46             | 19           | 27           | 42.0%        | 49.3%        | 36.9%        | 36.9%                  | 42.0%        |
| 1983-2000    | 5,304          | 653          | 4,651        | 69.2%        | 40.1%        | 73.3%        | 36.8%                  | 37.2%        |
| 2001-2003    | 189            | 65           | 124          | 78.5%        | 56.6%        | 90.0%        | 53.4%                  | 54.5%        |
| 2004-2023    | 2,044          | 680          | 1,364        | 66.0%        | 73.2%        | 62.5%        | 62.5%                  | 66.0%        |
| <b>Total</b> | <b>7,537</b>   | <b>1,398</b> | <b>6,139</b> | <b>68.6%</b> | <b>56.9%</b> | <b>71.3%</b> | <b>42.8%</b>           | <b>45.4%</b> |

**Table 4** (updated April 7, 2025)

**Median Age and Fraction of IPOs with VC and Buyout Backing, 1980-2024**

There are 9,253 IPOs after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, oil & gas limited partnerships, special purpose acquisition companies (SPACs), REITs, bank and S&L IPOs, small best efforts offers, and firms not listed on CRSP within 6 months of the IPO. Missing numbers are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006, and the Stanford GSB microfiche collection of registration statements from the 1980s. Tech stocks are defined as internet-related stocks plus other technology stocks, not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. Age is defined as the year of the IPO minus the year of founding. For buyout-backed IPOs, the founding date of the predecessor company is used. For rollups, the founding date of the oldest acquired company is used in most cases. Private equity (PE) or buyout-backed IPOs were restricted to "reverse LBOs" in the 1980s and 1990s. Jerry Cao has assisted with providing information on which IPOs are buyout-backed. Will Gornall and Ilya Strebulaev, among others, have assisted with providing information on venture capital-backed IPOs. Laura Field, Martin Kenney, Alexander Ljungqvist, Don Patton, and Bill Wilhelm, among others, have assisted with providing information on the year of founding.

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. 472 growth capital-backed IPOs are classified as VC-backed.

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

The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions.

(table on the next page)

| Year             | Number of IPOs | Median Age | VC-backed    |            | Buyout-backed |            | Technology IPOs |             |
|------------------|----------------|------------|--------------|------------|---------------|------------|-----------------|-------------|
|                  |                |            | No.          | %          | No.           | %          | No.             | % VC-backed |
| 1980             | 71             | 6          | 23           | 32%        | 1             | 1%         | 22              | 64%         |
| 1981             | 192            | 8          | 53           | 28%        | 1             | 1%         | 72              | 40%         |
| 1982             | 77             | 5          | 21           | 27%        | 2             | 3%         | 42              | 36%         |
| 1983             | 451            | 7          | 116          | 26%        | 17            | 4%         | 173             | 39%         |
| 1984             | 171            | 8          | 44           | 26%        | 5             | 3%         | 50              | 52%         |
| 1985             | 186            | 9          | 39           | 21%        | 18            | 10%        | 37              | 43%         |
| 1986             | 393            | 8          | 79           | 20%        | 42            | 11%        | 77              | 40%         |
| 1987             | 285            | 8          | 66           | 23%        | 41            | 14%        | 59              | 66%         |
| 1988             | 105            | 8          | 32           | 30%        | 9             | 9%         | 28              | 61%         |
| 1989             | 116            | 8          | 40           | 34%        | 10            | 9%         | 35              | 66%         |
| 1990             | 110            | 9          | 42           | 38%        | 13            | 12%        | 32              | 75%         |
| 1991             | 286            | 10         | 115          | 40%        | 73            | 26%        | 71              | 63%         |
| 1992             | 412            | 10         | 138          | 33%        | 98            | 24%        | 115             | 58%         |
| 1993             | 510            | 9          | 172          | 34%        | 79            | 15%        | 127             | 69%         |
| 1994             | 402            | 9          | 129          | 32%        | 22            | 5%         | 115             | 56%         |
| 1995             | 462            | 8          | 190          | 41%        | 30            | 6%         | 205             | 56%         |
| 1996             | 677            | 8          | 266          | 39%        | 34            | 5%         | 276             | 56%         |
| 1997             | 474            | 10         | 134          | 28%        | 38            | 8%         | 174             | 42%         |
| 1998             | 283            | 9          | 80           | 28%        | 30            | 11%        | 113             | 49%         |
| 1999             | 476            | 5          | 280          | 59%        | 30            | 6%         | 370             | 68%         |
| 2000             | 380            | 6          | 245          | 64%        | 32            | 8%         | 261             | 70%         |
| 2001             | 80             | 12         | 32           | 40%        | 21            | 26%        | 24              | 70%         |
| 2002             | 66             | 15         | 23           | 35%        | 20            | 30%        | 20              | 65%         |
| 2003             | 63             | 11         | 25           | 40%        | 21            | 33%        | 18              | 67%         |
| 2004             | 173            | 8          | 79           | 46%        | 43            | 25%        | 61              | 66%         |
| 2005             | 159            | 13         | 45           | 28%        | 68            | 43%        | 45              | 49%         |
| 2006             | 157            | 13         | 56           | 36%        | 66            | 42%        | 48              | 56%         |
| 2007             | 159            | 9          | 79           | 50%        | 30            | 19%        | 76              | 76%         |
| 2008             | 21             | 14         | 9            | 43%        | 3             | 14%        | 6               | 67%         |
| 2009             | 41             | 15         | 12           | 29%        | 19            | 46%        | 14              | 43%         |
| 2010             | 91             | 11         | 40           | 44%        | 28            | 31%        | 33              | 73%         |
| 2011             | 81             | 11         | 46           | 57%        | 18            | 22%        | 36              | 83%         |
| 2012             | 93             | 12         | 49           | 53%        | 28            | 30%        | 40              | 87%         |
| 2013             | 158            | 12         | 81           | 52%        | 37            | 23%        | 45              | 78%         |
| 2014             | 206            | 11         | 132          | 64%        | 38            | 18%        | 53              | 75%         |
| 2015             | 118            | 10         | 78           | 65%        | 20            | 17%        | 38              | 76%         |
| 2016             | 75             | 10         | 49           | 65%        | 13            | 17%        | 21              | 71%         |
| 2017             | 106            | 12         | 64           | 60%        | 19            | 18%        | 30              | 80%         |
| 2018             | 134            | 10         | 91           | 68%        | 15            | 11%        | 39              | 77%         |
| 2019             | 113            | 10         | 77           | 69%        | 11            | 10%        | 37              | 70%         |
| 2020             | 165            | 9          | 113          | 68%        | 22            | 13%        | 46              | 73%         |
| 2021             | 311            | 11         | 175          | 56%        | 67            | 22%        | 121             | 64%         |
| 2022             | 38             | 8          | 14           | 37%        | 0             | 0%         | 6               | 17%         |
| 2023             | 54             | 10         | 23           | 43%        | 5             | 9%         | 9               | 44%         |
| 2024             | 72             | 14         | 37           | 51%        | 13            | 18%        | 14              | 57%         |
| <b>1980-2024</b> | <b>9,253</b>   | <b>9</b>   | <b>3,733</b> | <b>40%</b> | <b>1,250</b>  | <b>14%</b> | <b>3,334</b>    | <b>60%</b>  |

|                  |              |          |              |            |              |            |              |            |
|------------------|--------------|----------|--------------|------------|--------------|------------|--------------|------------|
| 1980-1989        | 2,047        | 8        | 513          | 25%        | 146          | 7%         | 595          | 47%        |
| 1990-1998        | 3,616        | 9        | 1,266        | 35%        | 417          | 12%        | 1,228        | 56%        |
| 1999-2000        | 856          | 5        | 525          | 61%        | 62           | 7%         | 631          | 68%        |
| 2001-2024        | 2,734        | 11       | 1,429        | 52%        | 625          | 23%        | 880          | 69%        |
| <b>1980-2024</b> | <b>9,253</b> | <b>9</b> | <b>3,733</b> | <b>40%</b> | <b>1,250</b> | <b>14%</b> | <b>3,334</b> | <b>60%</b> |

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**Table 4a** (updated February 20, 2025)

**Technology Company IPOs, 1980-2024 including Direct Listings**

There are 3,334 IPOs and 9 direct listings that are tech stocks, for a total of 3,342 listings, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, natural resource limited partnerships (and most other LPs, but not buyout firms such as Carlyle Group), acquisition companies, REITs, bank and S&L IPOs, and firms not listed on CRSP. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006. Tech stocks are defined as internet-related stocks plus other technology stocks including telecom, but not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, 3844, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes that I have made up: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions. I have also added the S.E.C.'s computer communications equipment code of 3576 for 21 companies, including Cisco Systems.

For the column with VC-backed IPOs, there are 3,741 IPOs including both technology and non-technology companies.

Total proceeds are nominal and do not include overallotment shares, and are zero for direct listings. Price-to-sales ratios are computed using both the offer price (OP) and the first closing market price (MP) for computing the market capitalization of equity. Market cap is calculated using the post-issue shares outstanding, with all share classes included in the case of dual-class companies. The undiluted number of shares is used, which in some cases (e.g., Facebook, Twitter, and Castlight Health) understates the market cap due to the existence of substantial amounts of in-the-money employee stock options that are highly likely to be exercised. Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, is expressed in both nominal dollars and in dollars of 2024 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<br>of Tech<br>IPOs | Proceeds in \$millions |                | Median<br>Price-to-sales |            | Median sales, \$mm |             | Median<br>age | %<br>profitable |
|------------------|---------------------------|------------------------|----------------|--------------------------|------------|--------------------|-------------|---------------|-----------------|
|                  |                           | VC-backed              | Technology     | OP                       | MP         | Nominal            | \$2024      |               |                 |
| 1980             | 22                        | 388                    | 378            | 3.4                      | 3.8        | 16.2               | 64.3        | 6.5           | 91%             |
| 1981             | 72                        | 648                    | 838            | 3.5                      | 3.6        | 12.9               | 45.8        | 9             | 88%             |
| 1982             | 42                        | 490                    | 648            | 4.2                      | 4.5        | 10.5               | 34.5        | 5             | 83%             |
| 1983             | 173                       | 2,798                  | 3,271          | 5.9                      | 6.6        | 8.6                | 27.2        | 6             | 71%             |
| 1984             | 50                        | 614                    | 551            | 2.4                      | 2.5        | 9.8                | 29.6        | 6.5           | 80%             |
| 1985             | 37                        | 667                    | 375            | 2.3                      | 2.4        | 13.4               | 39.2        | 7             | 84%             |
| 1986             | 77                        | 1,558                  | 1,217          | 3.4                      | 3.6        | 13.0               | 36.6        | 6             | 74%             |
| 1987             | 59                        | 1,315                  | 1,330          | 3.2                      | 3.2        | 17.8               | 49.4        | 5             | 86%             |
| 1988             | 28                        | 674                    | 888            | 3.0                      | 3.4        | 24.0               | 64.0        | 5.5           | 79%             |
| 1989             | 35                        | 869                    | 748            | 3.4                      | 4.0        | 31.5               | 80.3        | 6             | 77%             |
| 1990             | 32                        | 1,085                  | 764            | 3.6                      | 4.0        | 28.6               | 69.1        | 8.5           | 94%             |
| 1991             | 71                        | 3,887                  | 2,760          | 3.2                      | 3.6        | 34.6               | 79.3        | 9             | 75%             |
| 1992             | 115                       | 4,970                  | 5,875          | 3.5                      | 3.7        | 22.4               | 50.0        | 8             | 65%             |
| 1993             | 127                       | 5,929                  | 5,715          | 3.0                      | 3.6        | 27.0               | 58.4        | 8             | 74%             |
| 1994             | 115                       | 3,691                  | 3,583          | 3.7                      | 4.2        | 21.0               | 44.3        | 9             | 70%             |
| 1995             | 205                       | 7,165                  | 9,786          | 4.6                      | 5.8        | 21.4               | 43.9        | 8             | 71%             |
| 1996             | 276                       | 11,681                 | 16,256         | 6.8                      | 8.2        | 16.7               | 33.3        | 7             | 47%             |
| 1997             | 174                       | 5,016                  | 7,479          | 5.2                      | 5.7        | 21.2               | 41.0        | 8             | 50%             |
| 1998             | 113                       | 4,037                  | 8,118          | 8.8                      | 11.9       | 22.1               | 42.2        | 7             | 36%             |
| 1999             | 370                       | 22,298                 | 33,512         | 26.5                     | 43.0       | 12.1               | 22.7        | 4             | 14%             |
| 2000             | 261                       | 23,598                 | 42,537         | 31.7                     | 49.5       | 12.0               | 22.1        | 5             | 14%             |
| 2001             | 24                        | 2,658                  | 5,833          | 8.1                      | 13.4       | 24.6               | 41.8        | 9             | 30%             |
| 2002             | 20                        | 1,956                  | 2,587          | 2.9                      | 3.1        | 95.2               | 165.8       | 9             | 40%             |
| 2003             | 18                        | 1,824                  | 2,242          | 3.5                      | 4.0        | 86.2               | 175.9       | 8.5           | 39%             |
| 2004             | 61                        | 7,183                  | 9,064          | 6.4                      | 7.1        | 55.5               | 92.4        | 8             | 44%             |
| 2005             | 45                        | 3,458                  | 6,993          | 4.5                      | 4.5        | 68.0               | 110.0       | 9             | 36%             |
| 2006             | 48                        | 4,860                  | 4,873          | 5.5                      | 6.3        | 57.6               | 89.5        | 9             | 50%             |
| 2007             | 76                        | 10,566                 | 12,572         | 6.5                      | 7.8        | 71.2               | 105.2       | 8             | 30%             |
| 2008             | 6                         | 863                    | 1,194          | 4.9                      | 5.7        | 156.7              | 228.8       | 14            | 67%             |
| 2009             | 14                        | 1,697                  | 4,126          | 3.0                      | 3.6        | 174.3              | 254.5       | 11            | 71%             |
| 2010             | 33                        | 4,038                  | 4,347          | 3.4                      | 3.9        | 119.5              | 170.0       | 11            | 64%             |
| 2011             | 36                        | 8,764                  | 9,412          | 6.1                      | 6.6        | 141.3              | 197.9       | 10            | 36%             |
| 2012             | 40                        | 21,096                 | 20,887         | 4.5                      | 5.0        | 113.4              | 154.3       | 9.5           | 43%             |
| 2013             | 45                        | 11,935                 | 8,662          | 5.3                      | 6.1        | 105.8              | 141.7       | 9             | 27%             |
| 2014             | 53                        | 18,542                 | 9,965          | 6.1                      | 6.8        | 90.5               | 119.3       | 11            | 17%             |
| 2015             | 38                        | 9,890                  | 10,087         | 5.3                      | 6.2        | 130.8              | 172.6       | 11            | 26%             |
| 2016             | 21                        | 6,181                  | 2,510          | 4.2                      | 4.3        | 109.5              | 142.6       | 10            | 29%             |
| 2017             | 30                        | 11,269                 | 7,844          | 5.0                      | 6.3        | 188.4              | 239.3       | 13            | 17%             |
| 2018             | 40                        | 16,706                 | 12,246         | 7.6                      | 11.3       | 182.1              | 226.5       | 12            | 15%             |
| 2019             | 38                        | 27,534                 | 22,881         | 8.1                      | 10.6       | 205.8              | 252.2       | 11            | 29%             |
| 2020             | 48                        | 41,423                 | 29,557         | 13.6                     | 21.8       | 211.2              | 241.2       | 12            | 20%             |
| 2021             | 126                       | 72,300                 | 59,375         | 15.2                     | 17.8       | 207.7              | 234.3       | 12            | 22%             |
| 2022             | 6                         | 1,681                  | 1,163          | 5.6                      | 6.0        | 92.7               | 101.7       | 15            | 33%             |
| 2023             | 9                         | 4,256                  | 1,925          | 13.6                     | 13.6       | 6.5                | 6.8         | 6             | 33%             |
| 2024             | 14                        | 9,015                  | 5,620          | 9.2                      | 11.2       | 217.9              | 217.9       | 13.5          | 21%             |
| <b>1980-2024</b> | <b>3,343</b>              | <b>403,074</b>         | <b>402,594</b> | <b>6.2</b>               | <b>7.4</b> | <b>24.4</b>        | <b>51.8</b> | <b>8</b>      | <b>47%</b>      |

**Table 4b** (updated February 20, 2025)

**Technology and Life Science Company IPOs, 1980-2024**

There are 3,334 tech and 1,020 life science IPOs from 1980-2024, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, partnerships, acquisition companies, REITs, bank and S&L IPOs, and firms not listed on CRSP. Life science includes biotech and pharmaceutical firms. Life science is defined as SIC=2830, 2834, 2835, 2836, and 8731. In prior years, I had included 2833 (medical chemicals and botanical products) as well, but I am not including this industry in life science since in recent years it has been mainly cannabis-related companies.

Tech stocks are defined as internet-related stocks plus other technology stocks including telecom, but not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes that I created: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions. I have also added the S.E.C.'s computer communications equipment code of 3576 for 21 companies, including Cisco Systems.

Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006.

Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, are expressed in dollars of 2022 purchasing power using the CPI. Pro forma numbers are usually used if there have been recent mergers or mergers that coincide with the IPO. The percentage of IPOs that are profitable measures profitability using trailing LTM earnings (usually using after extraordinary items earnings, and usually using pro forma numbers that are computed assuming that any recent or concurrent mergers have already occurred, and the conversion of convertible preferred stock into common stock). In some cases, last fiscal year earnings are used when LTM earnings are unavailable.

(table on the next page)

| Year           | Number of IPOs |              |              | % Profitable |            |            | Median sales (\$2022, mm) |            |              |
|----------------|----------------|--------------|--------------|--------------|------------|------------|---------------------------|------------|--------------|
|                | Tech           | Life Sci     | Other        | Tech         | Life Sci   | Other      | Tech                      | Life Sci   | Other        |
| 1980           | 22             | 3            | 46           | 91%          | 67%        | 70%        | 58.6                      | 20.5       | 77.3         |
| 1981           | 72             | 10           | 110          | 88%          | 30%        | 85%        | 41.8                      | 4.9        | 43.3         |
| 1982           | 42             | 2            | 33           | 83%          | 50%        | 79%        | 31.4                      | 4.0        | 29.9         |
| 1983           | 173            | 21           | 257          | 71%          | 42%        | 86%        | 24.8                      | 7.4        | 88.8         |
| 1984           | 50             | 2            | 119          | 80%          | 100%       | 85%        | 27.0                      | 136.3      | 69.5         |
| 1985           | 37             | 5            | 144          | 84%          | 40%        | 87%        | 35.7                      | 12.5       | 106.3        |
| 1986           | 77             | 23           | 293          | 74%          | 35%        | 84%        | 33.4                      | 10.8       | 95.2         |
| 1987           | 59             | 10           | 216          | 86%          | 20%        | 85%        | 45.0                      | 7.8        | 110.9        |
| 1988           | 28             | 2            | 75           | 79%          | 0%         | 85%        | 58.3                      | 9.9        | 229.7        |
| 1989           | 35             | 4            | 77           | 77%          | 0%         | 82%        | 73.2                      | 2.7        | 122.2        |
| 1990           | 32             | 4            | 74           | 94%          | 0%         | 87%        | 63.0                      | 4.5        | 129.0        |
| 1991           | 71             | 32           | 183          | 75%          | 16%        | 88%        | 72.3                      | 7.0        | 154.8        |
| 1992           | 115            | 33           | 264          | 65%          | 18%        | 80%        | 45.6                      | 2.6        | 142.0        |
| 1993           | 127            | 27           | 356          | 74%          | 22%        | 75%        | 53.2                      | 3.0        | 120.2        |
| 1994           | 115            | 20           | 267          | 70%          | 20%        | 80%        | 40.4                      | 3.2        | 107.1        |
| 1995           | 205            | 21           | 236          | 71%          | 14%        | 75%        | 40.0                      | 5.8        | 118.8        |
| 1996           | 276            | 44           | 357          | 47%          | 14%        | 73%        | 30.3                      | 4.1        | 99.4         |
| 1997           | 174            | 22           | 278          | 50%          | 14%        | 77%        | 37.4                      | 9.9        | 111.7        |
| 1998           | 113            | 10           | 160          | 36%          | 30%        | 69%        | 38.5                      | 13.4       | 123.8        |
| 1999           | 370            | 10           | 96           | 14%          | 20%        | 63%        | 20.7                      | 10.1       | 194.1        |
| 2000           | 261            | 50           | 69           | 14%          | 12%        | 50%        | 20.2                      | 6.6        | 153.2        |
| 2001           | 24             | 5            | 51           | 29%          | 0%         | 67%        | 38.1                      | 0.3        | 571.2        |
| 2002           | 20             | 5            | 41           | 40%          | 40%        | 63%        | 151.2                     | 228.0      | 684.8        |
| 2003           | 18             | 8            | 37           | 44%          | 0%         | 76%        | 160.4                     | 0.1        | 623.8        |
| 2004           | 61             | 30           | 82           | 44%          | 7%         | 70%        | 84.3                      | 5.3        | 300.6        |
| 2005           | 45             | 16           | 98           | 36%          | 13%        | 70%        | 100.3                     | 18.2       | 320.0        |
| 2006           | 48             | 24           | 85           | 50%          | 8%         | 80%        | 81.7                      | 4.8        | 472.6        |
| 2007           | 76             | 19           | 64           | 30%          | 5%         | 73%        | 95.9                      | 1.9        | 323.0        |
| 2008           | 6              | 1            | 14           | 67%          | 0%         | 57%        | 208.7                     | 0.4        | 268.7        |
| 2009           | 14             | 3            | 24           | 71%          | 67%        | 71%        | 232.1                     | 50.1       | 598.8        |
| 2010           | 33             | 11           | 47           | 64%          | 0%         | 70%        | 155.1                     | 0.0        | 419.0        |
| 2011           | 36             | 8            | 37           | 36%          | 0%         | 59%        | 180.4                     | 4.0        | 412.6        |
| 2012           | 40             | 10           | 43           | 43%          | 0%         | 77%        | 140.7                     | 0.5        | 424.6        |
| 2013           | 45             | 40           | 73           | 27%          | 7%         | 59%        | 129.2                     | 11.9       | 507.1        |
| 2014           | 53             | 71           | 82           | 17%          | 7%         | 55%        | 108.8                     | 0.0        | 286.2        |
| 2015           | 38             | 42           | 38           | 26%          | 0%         | 66%        | 157.4                     | 0.0        | 205.8        |
| 2016           | 21             | 25           | 29           | 29%          | 8%         | 59%        | 130.1                     | 1.1        | 775.6        |
| 2017           | 30             | 32           | 44           | 17%          | 0%         | 43%        | 218.2                     | 0.0        | 516.2        |
| 2018           | 39             | 59           | 36           | 15%          | 0%         | 53%        | 203.3                     | 0.0        | 536.2        |
| 2019           | 37             | 43           | 33           | 30%          | 0%         | 45%        | 219.7                     | 0.0        | 124.4        |
| 2020           | 46             | 76           | 43           | 22%          | 5%         | 44%        | 220.0                     | 0.0        | 311.5        |
| 2021           | 121            | 89           | 101          | 21%          | 2%         | 49%        | 202.4                     | 0.0        | 325.4        |
| 2022           | 6              | 16           | 16           | 50%          | 0%         | 38%        | 92.7                      | 0.0        | 7.2          |
| 2023           | 9              | 13           | 32           | 33%          | 0%         | 50%        | 6.2                       | 0.0        | 20.4         |
| 2024           | 14             | 19           | 39           | 21%          | 11%        | 54%        | 198.7                     | 0.0        | 225.2        |
| 2001-24        | 880            | 665          | 1,189        | 32%          | 4%         | 62%        | 134.6                     | 0.0        | 368.3        |
| <b>1980-24</b> | <b>3,334</b>   | <b>1,020</b> | <b>4,899</b> | <b>47%</b>   | <b>10%</b> | <b>75%</b> | <b>47.0</b>               | <b>1.4</b> | <b>135.4</b> |



**Table 4c** (updated February 26, 2025)

**VC-backed, Growth Capital-backed, and Buyout-backed IPOs, 1980-2024**

There are 9,253 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 LSEG's new issues database and its predecessors 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. **472 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<br>IPOs | Financial sponsor-<br>backed |            | VC-backed    |            | Growth capital-<br>backed |           | Buyout-backed |            |
|------------------|-------------------|------------------------------|------------|--------------|------------|---------------------------|-----------|---------------|------------|
|                  |                   | No.                          | %          | No.          | %          | No.                       | %         | No.           | %          |
| 1980             | 71                | 24                           | 34%        | 20           | 28%        | 3                         | 4%        | 1             | 1%         |
| 1981             | 192               | 54                           | 28%        | 44           | 23%        | 9                         | 5%        | 1             | 1%         |
| 1982             | 77                | 23                           | 30%        | 19           | 25%        | 2                         | 3%        | 2             | 3%         |
| 1983             | 451               | 133                          | 29%        | 104          | 23%        | 12                        | 3%        | 17            | 4%         |
| 1984             | 171               | 49                           | 29%        | 37           | 22%        | 7                         | 4%        | 5             | 3%         |
| 1985             | 186               | 57                           | 31%        | 28           | 15%        | 11                        | 6%        | 18            | 10%        |
| 1986             | 393               | 121                          | 31%        | 72           | 18%        | 7                         | 2%        | 42            | 11%        |
| 1987             | 285               | 107                          | 38%        | 61           | 21%        | 5                         | 2%        | 41            | 14%        |
| 1988             | 105               | 41                           | 39%        | 25           | 24%        | 7                         | 7%        | 9             | 9%         |
| 1989             | 116               | 50                           | 43%        | 30           | 26%        | 10                        | 9%        | 10            | 9%         |
| 1990             | 110               | 55                           | 50%        | 37           | 34%        | 5                         | 5%        | 13            | 12%        |
| 1991             | 286               | 188                          | 66%        | 97           | 34%        | 18                        | 6%        | 73            | 26%        |
| 1992             | 412               | 236                          | 57%        | 118          | 29%        | 20                        | 5%        | 98            | 24%        |
| 1993             | 510               | 251                          | 49%        | 159          | 31%        | 13                        | 3%        | 79            | 15%        |
| 1994             | 402               | 151                          | 38%        | 111          | 28%        | 18                        | 4%        | 22            | 5%         |
| 1995             | 462               | 220                          | 48%        | 157          | 34%        | 33                        | 7%        | 30            | 6%         |
| 1996             | 677               | 300                          | 44%        | 218          | 32%        | 48                        | 7%        | 34            | 5%         |
| 1997             | 474               | 172                          | 36%        | 100          | 21%        | 34                        | 7%        | 38            | 8%         |
| 1998             | 283               | 110                          | 39%        | 61           | 22%        | 19                        | 7%        | 30            | 11%        |
| 1999             | 476               | 310                          | 65%        | 264          | 55%        | 16                        | 3%        | 30            | 6%         |
| 2000             | 380               | 277                          | 73%        | 242          | 64%        | 3                         | 1%        | 32            | 8%         |
| 2001             | 80                | 53                           | 66%        | 22           | 28%        | 10                        | 13%       | 21            | 26%        |
| 2002             | 66                | 43                           | 65%        | 11           | 17%        | 12                        | 18%       | 20            | 30%        |
| 2003             | 63                | 46                           | 73%        | 21           | 33%        | 4                         | 6%        | 21            | 33%        |
| 2004             | 173               | 122                          | 71%        | 73           | 42%        | 6                         | 3%        | 43            | 25%        |
| 2005             | 159               | 113                          | 71%        | 40           | 25%        | 5                         | 3%        | 68            | 43%        |
| 2006             | 157               | 122                          | 78%        | 53           | 34%        | 3                         | 2%        | 66            | 42%        |
| 2007             | 159               | 109                          | 69%        | 71           | 45%        | 8                         | 5%        | 30            | 19%        |
| 2008             | 21                | 12                           | 57%        | 7            | 33%        | 2                         | 10%       | 3             | 14%        |
| 2009             | 41                | 31                           | 76%        | 12           | 29%        | 0                         | 0%        | 19            | 46%        |
| 2010             | 91                | 68                           | 75%        | 37           | 42%        | 3                         | 3%        | 28            | 29%        |
| 2011             | 81                | 64                           | 79%        | 41           | 51%        | 5                         | 6%        | 18            | 22%        |
| 2012             | 93                | 77                           | 83%        | 46           | 49%        | 3                         | 3%        | 28            | 30%        |
| 2013             | 158               | 118                          | 75%        | 70           | 44%        | 11                        | 7%        | 37            | 23%        |
| 2014             | 206               | 170                          | 83%        | 115          | 56%        | 17                        | 8%        | 38            | 18%        |
| 2015             | 118               | 98                           | 83%        | 70           | 59%        | 8                         | 7%        | 20            | 17%        |
| 2016             | 75                | 62                           | 83%        | 38           | 51%        | 11                        | 15%       | 13            | 17%        |
| 2017             | 106               | 83                           | 78%        | 55           | 52%        | 9                         | 8%        | 19            | 18%        |
| 2018             | 134               | 106                          | 79%        | 80           | 60%        | 11                        | 8%        | 15            | 11%        |
| 2019             | 113               | 88                           | 78%        | 74           | 66%        | 3                         | 3%        | 11            | 10%        |
| 2020             | 165               | 135                          | 82%        | 99           | 60%        | 14                        | 8%        | 22            | 13%        |
| 2021             | 311               | 242                          | 78%        | 156          | 50%        | 19                        | 6%        | 67            | 22%        |
| 2022             | 38                | 14                           | 37%        | 14           | 37%        | 0                         | 0%        | 0             | 0%         |
| 2023             | 54                | 28                           | 52%        | 20           | 37%        | 3                         | 6%        | 5             | 9%         |
| 2024             | 72                | 50                           | 69%        | 32           | 44%        | 5                         | 7%        | 13            | 18%        |
| 1980-1989        | 2,047             | 659                          | 32%        | 440          | 22%        | 73                        | 4%        | 146           | 7%         |
| 1990-1998        | 3,616             | 1,683                        | 47%        | 1,058        | 29%        | 208                       | 6%        | 417           | 12%        |
| 1999-2000        | 856               | 587                          | 69%        | 506          | 59%        | 19                        | 2%        | 62            | 7%         |
| 2001-2024        | 2,734             | 2,054                        | 75%        | 1,257        | 46%        | 172                       | 6%        | 625           | 23%        |
| <b>1980-2024</b> | <b>9,253</b>      | <b>4,983</b>                 | <b>53%</b> | <b>3,261</b> | <b>35%</b> | <b>472</b>                | <b>5%</b> | <b>1,250</b>  | <b>13%</b> |

**Table 4d** (updated February 26, 2025)

**VC-backed IPOs, U.S.-headquartered Companies Only, 1980-2024**

There are 3,567 venture capital-backed IPOs of U.S. headquartered companies, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, natural resource limited partnerships (and most other LPs, but not buyout firms such as Carlyle Group), acquisition companies, REITs, bank and S&L IPOs, and firms not listed on CRSP. VC-backed includes growth capital-backed IPOs. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-1996.

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

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

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

(table on the next page)

| Year             | U.S.-headquartered VC-backed IPOs |              |                | At first market price, \$millions |                  |
|------------------|-----------------------------------|--------------|----------------|-----------------------------------|------------------|
|                  | Number                            | % Profitable | Proceeds, \$m  | Public float                      | Market cap       |
| 1980             | 23                                | 78%          | 388            | 500                               | 3,374            |
| 1981             | 53                                | 79%          | 648            | 718                               | 3,535            |
| 1982             | 21                                | 57%          | 490            | 575                               | 2,640            |
| 1983             | 115                               | 65%          | 2,740          | 3,088                             | 14,200           |
| 1984             | 43                                | 77%          | 563            | 606                               | 2,840            |
| 1985             | 38                                | 63%          | 660            | 682                               | 2,751            |
| 1986             | 79                                | 59%          | 1,559          | 1,671                             | 7,081            |
| 1987             | 66                                | 68%          | 1,315          | 1,446                             | 5,921            |
| 1988             | 31                                | 81%          | 658            | 709                               | 3,039            |
| 1989             | 39                                | 69%          | 843            | 941                               | 3,611            |
| 1990             | 41                                | 83%          | 1,057          | 1,177                             | 4,926            |
| 1991             | 113                               | 62%          | 3,724          | 4,290                             | 15,872           |
| 1992             | 137                               | 55%          | 4,934          | 5,561                             | 18,537           |
| 1993             | 169                               | 63%          | 5,827          | 6,866                             | 24,931           |
| 1994             | 126                               | 62%          | 3,528          | 4,011                             | 14,023           |
| 1995             | 188                               | 65%          | 7,114          | 9,298                             | 35,726           |
| 1996             | 259                               | 39%          | 11,137         | 13,465                            | 57,203           |
| 1997             | 132                               | 45%          | 4,900          | 5,937                             | 26,917           |
| 1998             | 79                                | 24%          | 4,005          | 5,050                             | 23,725           |
| 1999             | 278                               | 12%          | 22,187         | 46,532                            | 318,588          |
| 2000             | 227                               | 6%           | 21,855         | 40,648                            | 289,861          |
| 2001             | 30                                | 27%          | 2,406          | 2,895                             | 15,825           |
| 2002             | 23                                | 35%          | 1,956          | 2,216                             | 10,563           |
| 2003             | 25                                | 48%          | 1,824          | 2,150                             | 8,556            |
| 2004             | 76                                | 28%          | 7,042          | 8,306                             | 54,443           |
| 2005             | 41                                | 34%          | 3,110          | 3,759                             | 14,986           |
| 2006             | 54                                | 35%          | 4,436          | 5,214                             | 22,609           |
| 2007             | 76                                | 22%          | 10,386         | 13,238                            | 74,343           |
| 2008             | 9                                 | 44%          | 863            | 936                               | 4,428            |
| 2009             | 12                                | 58%          | 1,697          | 2,057                             | 8,302            |
| 2010             | 37                                | 38%          | 4,104          | 4,271                             | 20,184           |
| 2011             | 43                                | 28%          | 6,601          | 7,941                             | 62,870           |
| 2012             | 49                                | 33%          | 21,096         | 22,959                            | 125,886          |
| 2013             | 75                                | 15%          | 10,946         | 14,888                            | 92,898           |
| 2014             | 116                               | 16%          | 16,107         | 19,831                            | 98,782           |
| 2015             | 68                                | 13%          | 8,552          | 11,147                            | 58,497           |
| 2016             | 45                                | 20%          | 4,929          | 6,135                             | 32,605           |
| 2017             | 55                                | 13%          | 10,017         | 12,585                            | 76,298           |
| 2018             | 83                                | 10%          | 13,492         | 16,856                            | 105,811          |
| 2019             | 71                                | 3%           | 25,149         | 28,913                            | 227,544          |
| 2020             | 106                               | 10%          | 38,773         | 63,652                            | 483,158          |
| 2021             | 155                               | 10%          | 60,419         | 75,744                            | 614,787          |
| 2022             | 13                                | 0%           | 1,481          | 1,718                             | 7,223            |
| 2023             | 18                                | 11%          | 3,558          | 4,316                             | 32,981           |
| 2024             | 30                                | 17%          | 8,218          | 10,408                            | 52,688           |
| <b>1980-2024</b> | <b>3,567</b>                      | <b>37%</b>   | <b>367,294</b> | <b>495,906</b>                    | <b>3,184,673</b> |

**Table 4e (MV not adjusted for inflation) Tech IPOs, 1980-2024**

| Year             | No. of Tech<br>IPOs | Proceeds,<br>\$millions | Number<br>doubling | Market value, at first market price, \$millions |                |              |
|------------------|---------------------|-------------------------|--------------------|-------------------------------------------------|----------------|--------------|
|                  |                     |                         |                    | Total                                           | Mean           | Median       |
| 1980             | 22                  | 378                     | 0                  | \$3,054                                         | \$139          | \$64         |
| 1981             | 72                  | 838                     | 0                  | \$4,509                                         | \$63           | \$42         |
| 1982             | 42                  | 648                     | 0                  | \$3,360                                         | \$80           | \$30         |
| 1983             | 173                 | 3,271                   | 2                  | \$17,290                                        | \$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             | 59                  | 1,330                   | 0                  | \$7,632                                         | \$129          | \$58         |
| 1988             | 28                  | 888                     | 0                  | \$5,554                                         | \$198          | \$102        |
| 1989             | 35                  | 748                     | 0                  | \$3,660                                         | \$105          | \$65         |
| 1990             | 32                  | 764                     | 0                  | \$3,660                                         | \$114          | \$83         |
| 1991             | 71                  | 2,760                   | 0                  | \$11,912                                        | \$168          | \$123        |
| 1992             | 115                 | 5,875                   | 1                  | \$21,936                                        | \$191          | \$102        |
| 1993             | 127                 | 5,715                   | 1                  | \$30,331                                        | \$239          | \$86         |
| 1994             | 115                 | 3,583                   | 1                  | \$16,653                                        | \$145          | \$80         |
| 1995             | 205                 | 9,786                   | 11                 | \$50,090                                        | \$244          | \$139        |
| 1996             | 276                 | 16,256                  | 5                  | \$98,775                                        | \$358          | \$138        |
| 1997             | 174                 | 7,479                   | 2                  | \$45,962                                        | \$264          | \$113        |
| 1998             | 113                 | 8,118                   | 12                 | \$64,218                                        | \$570          | \$234        |
| 1999             | 370                 | 33,512                  | 114                | \$448,514                                       | \$1,212        | \$493        |
| 2000             | 261                 | 42,538                  | 69                 | \$518,607                                       | \$1,987        | \$702        |
| 2001             | 24                  | 5,833                   | 0                  | \$27,678                                        | \$1,153        | \$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             | 76                  | 12,572                  | 0                  | \$89,729                                        | \$1,181        | \$560        |
| 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                  | \$83,415                                        | \$2,317        | \$824        |
| 2012             | 40                  | 20,887                  | 1                  | \$125,817                                       | \$3,145        | \$686        |
| 2013             | 45                  | 8,662                   | 1                  | \$76,923                                        | \$1,709        | \$812        |
| 2014             | 53                  | 9,965                   | 2                  | \$84,160                                        | \$1,588        | \$780        |
| 2015             | 38                  | 10,087                  | 0                  | \$74,811                                        | \$1,969        | \$815        |
| 2016             | 21                  | 2,510                   | 1                  | \$23,056                                        | \$1,098        | \$841        |
| 2017             | 30                  | 7,844                   | 0                  | \$64,715                                        | \$2,157        | \$1,129      |
| 2018             | 39                  | 12,246                  | 1                  | \$103,988                                       | \$2,666        | \$1,959      |
| 2019             | 37                  | 22,881                  | 0                  | \$223,971                                       | \$6,053        | \$2,176      |
| 2020             | 46                  | 29,557                  | 12                 | \$457,789                                       | \$9,952        | \$4,319      |
| 2021             | 121                 | 59,375                  | 6                  | \$745,560                                       | \$6,162        | \$3,045      |
| 2022             | 6                   | 1,163                   | 0                  | \$25,857                                        | \$4,310        | \$468        |
| 2023             | 9                   | 1,926                   | 0                  | \$22,689                                        | \$2,521        | \$138        |
| 2024             | 14                  | 5,620                   | 1                  | \$44,388                                        | \$3,171        | \$2,383      |
| <b>1980-2024</b> | <b>3,334</b>        | <b>\$402,594</b>        | <b>245</b>         | <b>\$3,818,844</b>                              | <b>\$1,145</b> | <b>\$215</b> |

**Table 4f (adjusted for inflation, 2025 \$) IPOs, 1980-2025 (tr is trillions) through May 2025**

| Year         | No. of<br>IPOs | Proceeds, \$millions |              |             | Market value, at first close, \$millions |                |              |
|--------------|----------------|----------------------|--------------|-------------|------------------------------------------|----------------|--------------|
|              |                | Total                | Mean         | Median      | Total                                    | Mean           | Median       |
| 1980         | 71             | 3,699                | 52           | 37          | 24,004                                   | 338            | 138          |
| 1981         | 192            | 8,422                | 44           | 30          | 39,104                                   | 204            | 132          |
| 1982         | 77             | 3,365                | 44           | 23          | 17,204                                   | 223            | 113          |
| 1983         | 451            | 28,889               | 64           | 38          | 133,285                                  | 296            | 156          |
| 1984         | 171            | 6,302                | 37           | 26          | 27,221                                   | 159            | 91           |
| 1985         | 186            | 12,323               | 66           | 33          | 45,639                                   | 245            | 115          |
| 1986         | 393            | 38,855               | 99           | 35          | 132,241                                  | 336            | 130          |
| 1987         | 285            | 33,389               | 117          | 43          | 121,634                                  | 427            | 165          |
| 1988         | 105            | 10,662               | 102          | 45          | 59,600                                   | 568            | 210          |
| 1989         | 116            | 15,244               | 131          | 56          | 57,658                                   | 497            | 204          |
| 1990         | 110            | 10,661               | 97           | 61          | 42,847                                   | 390            | 218          |
| 1991         | 286            | 36,333               | 127          | 68          | 128,174                                  | 448            | 240          |
| 1992         | 412            | 52,223               | 127          | 63          | 171,263                                  | 416            | 221          |
| 1993         | 510            | 70,066               | 137          | 62          | 280,461                                  | 550            | 207          |
| 1994         | 402            | 37,336               | 93           | 52          | 137,774                                  | 343            | 163          |
| 1995         | 462            | 59,043               | 128          | 69          | 265,658                                  | 575            | 267          |
| 1996         | 677            | 86,546               | 128          | 69          | 431,496                                  | 637            | 263          |
| 1997         | 474            | 63,434               | 134          | 67          | 274,755                                  | 580            | 248          |
| 1998         | 283            | 66,223               | 234          | 83          | 297,895                                  | 1,053          | 372          |
| 1999         | 476            | 125,072              | 263          | 119         | 1,242,429                                | 2,610          | 919          |
| 2000         | 380            | 122,044              | 321          | 147         | 1,199,563                                | 3,157          | 1,069        |
| 2001         | 80             | 64,069               | 801          | 212         | 321,443                                  | 4,018          | 857          |
| 2002         | 66             | 39,517               | 599          | 213         | 149,351                                  | 2,263          | 934          |
| 2003         | 63             | 16,683               | 265          | 202         | 69,247                                   | 1,099          | 654          |
| 2004         | 173            | 53,518               | 309          | 144         | 253,978                                  | 1,468          | 586          |
| 2005         | 159            | 47,057               | 296          | 192         | 171,804                                  | 1,081          | 578          |
| 2006         | 157            | 48,865               | 311          | 167         | 216,200                                  | 1,377          | 589          |
| 2007         | 159            | 54,247               | 341          | 164         | 321,080                                  | 2,019          | 761          |
| 2008         | 21             | 34,263               | 1,632        | 217         | 95,153                                   | 4,531          | 709          |
| 2009         | 41             | 19,831               | 484          | 233         | 89,171                                   | 2,175          | 1,037        |
| 2010         | 91             | 43,728               | 481          | 158         | 169,843                                  | 1,866          | 631          |
| 2011         | 81             | 38,919               | 480          | 218         | 257,047                                  | 3,173          | 1,245        |
| 2012         | 93             | 43,643               | 469          | 133         | 253,688                                  | 2,728          | 839          |
| 2013         | 158            | 57,348               | 363          | 160         | 372,654                                  | 2,359          | 951          |
| 2014         | 206            | 57,310               | 278          | 127         | 322,992                                  | 1,568          | 583          |
| 2015         | 118            | 29,910               | 253          | 138         | 203,531                                  | 1,725          | 728          |
| 2016         | 75             | 16,801               | 224          | 127         | 104,504                                  | 1,393          | 682          |
| 2017         | 106            | 30,079               | 284          | 157         | 211,604                                  | 1,996          | 848          |
| 2018         | 134            | 42,890               | 320          | 153         | 288,708                                  | 2,155          | 802          |
| 2019         | 113            | 49,609               | 439          | 158         | 421,053                                  | 3,726          | 999          |
| 2020         | 165            | 76,243               | 462          | 246         | 845,944                                  | 5,127          | 1,358        |
| 2021         | 311            | 145,050              | 466          | 243         | 1,464,107                                | 4,708          | 1,734        |
| 2022         | 38             | 7,896                | 208          | 41          | 82,745                                   | 2,177          | 520          |
| 2023         | 54             | 12,778               | 237          | 21          | 122,158                                  | 2,262          | 267          |
| 2024         | 72             | 21,111               | 293          | 183         | 134,536                                  | 1,869          | 751          |
| 2025         | 25             | 9,112                | 364          | 202         | 135,547                                  | 5,422          | 1,241        |
| <b>80-25</b> | <b>9,278</b>   | <b>\$1.951 tr</b>    | <b>\$210</b> | <b>\$83</b> | <b>\$12.290tr</b>                        | <b>\$1,325</b> | <b>\$336</b> |

**Table 4g** (updated February 24, 2025)

**Life Science Company IPOs, 1980-2024**

IR is the initial return (underpricing), measured as the equally weighted average of the first-day return from the offer price to close. There are 1,020 biotech IPOs from 1980-2024, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, partnerships, special purpose acquisition companies (SPACs), REITs, bank and S&L IPOs, and firms not listed on CRSP. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006.

Life science includes biotech and pharmaceutical firms, defined as SIC=2830, 2834, 2835, 2836, and 8731.

Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, are expressed in dollars of 2022 purchasing power using the CPI. Pro forma numbers are usually used if there have been recent mergers or mergers that coincide with the IPO. The percentage of IPOs that are profitable measures profitability using trailing LTM earnings (usually using after extraordinary items earnings, and usually using pro forma numbers that are computed assuming that any recent or concurrent mergers have already occurred, and the conversion of convertible preferred stock into common stock). In some cases, last fiscal year earnings are used when LTM earnings are unavailable. EPS is earnings per share. Age is the median age in years, defined as the calendar year of the IPO minus the calendar year of founding.

Many of the biotech companies with positive sales have research contracts producing revenue, rather than product sales.

(table on the next page)

| Year             | Number of IPOs |              | Life Sci<br>IR,% | Life Science IPOs |          | Life Sci sales (\$2022, millions) |              |            |
|------------------|----------------|--------------|------------------|-------------------|----------|-----------------------------------|--------------|------------|
|                  | Total          | Life Sci     |                  | EPS>0             | Age      | # zero                            | % zero       | Median     |
| 1980             | 71             | 3            | 44.3%            | 67%               | 4        | 0                                 | 0.0%         | 20.5       |
| 1981             | 192            | 10           | 14.1%            | 30%               | 4.5      | 2                                 | 20.0%        | 4.9        |
| 1982             | 77             | 2            | 16.0%            | 50%               | 2        | 0                                 | 0.0%         | 4.0        |
| 1983             | 451            | 21           | 6.2%             | 42%               | 3        | 1                                 | 4.8%         | 7.4        |
| 1984             | 171            | 2            | 0.0%             | 100%              | 16       | 0                                 | 0.0%         | 136.3      |
| 1985             | 186            | 5            | 2.4%             | 40%               | 3        | 1                                 | 20.0%        | 12.5       |
| 1986             | 393            | 23           | 7.0%             | 35%               | 5        | 0                                 | 0.0%         | 10.8       |
| 1987             | 285            | 10           | 5.1%             | 20%               | 4        | 0                                 | 0.0%         | 7.8        |
| 1988             | 105            | 2            | -1.6%            | 0%                | 9        | 1                                 | 50.0%        | 9.9        |
| 1989             | 116            | 4            | 3.8%             | 0%                | 6        | 0                                 | 0.0%         | 2.7        |
| 1990             | 110            | 4            | 0.8%             | 0%                | 4        | 2                                 | 50.0%        | 4.5        |
| 1991             | 286            | 32           | 12.8%            | 16%               | 4        | 3                                 | 9.4%         | 7.0        |
| 1992             | 412            | 33           | 9.9%             | 18%               | 5        | 6                                 | 18.2%        | 2.6        |
| 1993             | 510            | 27           | 7.7%             | 22%               | 5        | 3                                 | 11.1%        | 3.0        |
| 1994             | 402            | 20           | 3.4%             | 20%               | 7.5      | 3                                 | 15.0%        | 3.2        |
| 1995             | 462            | 21           | 6.6%             | 14%               | 5        | 5                                 | 23.8%        | 5.8        |
| 1996             | 677            | 44           | 12.2%            | 14%               | 4        | 7                                 | 15.9%        | 4.1        |
| 1997             | 474            | 22           | 8.3%             | 14%               | 6        | 3                                 | 13.6%        | 9.9        |
| 1998             | 283            | 10           | 6.2%             | 30%               | 7        | 0                                 | 0.0%         | 13.4       |
| 1999             | 476            | 10           | 31.8%            | 20%               | 5.5      | 1                                 | 10.0%        | 10.1       |
| 2000             | 380            | 50           | 31.9%            | 12%               | 6        | 10                                | 20.0%        | 6.6        |
| 2001             | 80             | 5            | 10.7%            | 0%                | 5        | 2                                 | 40.0%        | 0.3        |
| 2002             | 66             | 5            | -4.9%            | 40%               | 9        | 0                                 | 0.0%         | 228.0      |
| 2003             | 63             | 8            | 2.6%             | 0%                | 6        | 4                                 | 50.0%        | 0.1        |
| 2004             | 173            | 30           | 7.8%             | 7%                | 7        | 6                                 | 20.0%        | 5.3        |
| 2005             | 159            | 16           | 8.0%             | 13%               | 6        | 1                                 | 6.3%         | 18.2       |
| 2006             | 157            | 24           | 4.2%             | 8%                | 8        | 4                                 | 16.7%        | 4.8        |
| 2007             | 159            | 19           | 2.2%             | 5%                | 8        | 8                                 | 42.1%        | 2.0        |
| 2008             | 21             | 1            | -5.7%            | 0%                | 9        | 0                                 | 0.0%         | 0.4        |
| 2009             | 41             | 3            | 1.3%             | 67%               | 14       | 0                                 | 0.0%         | 50.0       |
| 2010             | 91             | 11           | 0.9%             | 0%                | 6        | 6                                 | 54.5%        | 0.0        |
| 2011             | 81             | 8            | 6.4%             | 0%                | 5.5      | 3                                 | 37.5%        | 4.0        |
| 2012             | 93             | 10           | 7.8%             | 0%                | 7        | 5                                 | 50.0%        | 0.5        |
| 2013             | 158            | 40           | 19.3%            | 7%                | 10       | 12                                | 30.0%        | 11.9       |
| 2014             | 206            | 71           | 13.8%            | 7%                | 10       | 38                                | 53.5%        | 0.0        |
| 2015             | 118            | 42           | 22.9%            | 0%                | 7        | 26                                | 61.9%        | 0.0        |
| 2016             | 75             | 25           | 7.0%             | 8%                | 8        | 8                                 | 32.0%        | 1.1        |
| 2017             | 106            | 32           | 7.0%             | 0%                | 6.5      | 23                                | 71.9%        | 0.0        |
| 2018             | 134            | 59           | 13.8%            | 0%                | 5        | 39                                | 66.1%        | 0.0        |
| 2019             | 113            | 43           | 21.7%            | 0%                | 4        | 33                                | 76.7%        | 0.0        |
| 2020             | 165            | 76           | 37.6%            | 5%                | 6        | 49                                | 64.5%        | 0.0        |
| 2021             | 311            | 89           | 24.4%            | 2%                | 5        | 55                                | 61.8%        | 0.0        |
| 2022             | 38             | 16           | 49.4%            | 0%                | 4        | 13                                | 81.3%        | 0.0        |
| 2023             | 54             | 13           | 5.4%             | 0%                | 4        | 10                                | 76.9%        | 0.0        |
| 2024             | 72             | 19           | 12.1%            | 5%                | 5        | 11                                | 57.9%        | 0.0        |
| 2001-24          | 2,734          | 665          | 17.5%            | 4%                | 6        | 356                               | 53.5%        | 0.0        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>1,020</b> | <b>15.9%</b>     | <b>10%</b>        | <b>6</b> | <b>404</b>                        | <b>39.6%</b> | <b>1.4</b> |



**Table 4h** (February 24, 2025)**Technology Company IPO Underpricing, 1980-2024**

Underpricing is measured as the equally weighted average of the first-day return from the offer price to close. The screens described in Table 1 apply, including the exclusion of ADRs.

| Year             | Number of IPOs |              |              | EW mean 1 <sup>st</sup> -day Return,% |              |              |
|------------------|----------------|--------------|--------------|---------------------------------------|--------------|--------------|
|                  | Total          | Tech         | NonTech      | Total                                 | Tech         | NonTech      |
| 1980             | 71             | 22           | 49           | 14.3%                                 | 21.7%        | 10.9%        |
| 1981             | 192            | 72           | 120          | 5.9%                                  | 7.0%         | 5.2%         |
| 1982             | 77             | 42           | 35           | 11.0%                                 | 13.6%        | 7.9%         |
| 1983             | 451            | 173          | 278          | 9.9%                                  | 13.9%        | 7.5%         |
| 1984             | 171            | 50           | 121          | 3.7%                                  | 5.5%         | 2.9%         |
| 1985             | 186            | 37           | 149          | 6.4%                                  | 6.1%         | 6.5%         |
| 1986             | 393            | 77           | 316          | 6.1%                                  | 7.2%         | 5.9%         |
| 1987             | 285            | 59           | 226          | 5.6%                                  | 7.3%         | 5.2%         |
| 1988             | 105            | 28           | 77           | 5.5%                                  | 5.5%         | 5.5%         |
| 1989             | 116            | 35           | 81           | 8.0%                                  | 11.9%        | 6.3%         |
| 1990             | 110            | 32           | 78           | 10.8%                                 | 14.9%        | 9.1%         |
| 1991             | 286            | 71           | 215          | 11.9%                                 | 17.3%        | 10.1%        |
| 1992             | 412            | 115          | 297          | 10.3%                                 | 14.4%        | 8.7%         |
| 1993             | 510            | 127          | 383          | 12.7%                                 | 17.8%        | 11.1%        |
| 1994             | 402            | 115          | 287          | 9.6%                                  | 14.1%        | 7.8%         |
| 1995             | 462            | 205          | 257          | 21.4%                                 | 30.8%        | 14.0%        |
| 1996             | 677            | 276          | 401          | 17.2%                                 | 20.2%        | 15.2%        |
| 1997             | 474            | 174          | 300          | 14.0%                                 | 16.9%        | 12.4%        |
| 1998             | 283            | 113          | 170          | 21.9%                                 | 39.1%        | 10.3%        |
| 1999             | 476            | 370          | 106          | 71.2%                                 | 86.7%        | 17.2%        |
| 2000             | 380            | 261          | 119          | 56.3%                                 | 69.2%        | 28.1%        |
| 2001             | 80             | 24           | 56           | 14.0%                                 | 22.7%        | 10.3%        |
| 2002             | 66             | 20           | 46           | 9.1%                                  | 8.6%         | 9.3%         |
| 2003             | 63             | 18           | 45           | 11.7%                                 | 17.4%        | 9.5%         |
| 2004             | 173            | 61           | 112          | 12.3%                                 | 16.6%        | 10.0%        |
| 2005             | 159            | 45           | 114          | 10.3%                                 | 10.8%        | 10.1%        |
| 2006             | 157            | 48           | 109          | 12.1%                                 | 15.3%        | 10.8%        |
| 2007             | 159            | 76           | 83           | 14.0%                                 | 18.8%        | 9.6%         |
| 2008             | 21             | 6            | 15           | 5.7%                                  | 2.6%         | 7.0%         |
| 2009             | 41             | 14           | 27           | 9.8%                                  | 16.9%        | 6.2%         |
| 2010             | 91             | 33           | 58           | 9.4%                                  | 15.5%        | 5.9%         |
| 2011             | 81             | 36           | 45           | 13.9%                                 | 20.2%        | 9.0%         |
| 2012             | 93             | 40           | 53           | 17.7%                                 | 23.4%        | 13.3%        |
| 2013             | 158            | 45           | 113          | 20.9%                                 | 26.7%        | 18.5%        |
| 2014             | 206            | 53           | 153          | 15.5%                                 | 25.0%        | 12.2%        |
| 2015             | 118            | 38           | 80           | 19.2%                                 | 18.8%        | 19.4%        |
| 2016             | 75             | 21           | 54           | 14.5%                                 | 32.4%        | 7.5%         |
| 2017             | 106            | 30           | 76           | 12.9%                                 | 21.1%        | 9.6%         |
| 2018             | 134            | 39           | 95           | 18.6%                                 | 32.3%        | 13.0%        |
| 2019             | 113            | 37           | 76           | 23.5%                                 | 28.6%        | 21.1%        |
| 2020             | 165            | 46           | 119          | 41.6%                                 | 62.6%        | 33.5%        |
| 2021             | 311            | 121          | 190          | 32.1%                                 | 33.0%        | 31.6%        |
| 2022             | 38             | 6            | 32           | 49.9%                                 | 9.3%         | 56.4%        |
| 2023             | 54             | 9            | 45           | 11.9%                                 | -5.6%        | 15.4%        |
| 2024             | 72             | 14           | 58           | 15.3%                                 | 41.1%        | 9.1%         |
| <b>1980-2024</b> | <b>9,253</b>   | <b>3,334</b> | <b>5,919</b> | <b>18.9%</b>                          | <b>31.2%</b> | <b>12.0%</b> |

**Table 4i** (updated February 26, 2025)

**VC-backed Tech IPOs, 1980-2024**

There are 2,004 Venture Capital-backed tech IPOs, after excluding those with an offer price below \$5.00 per share, unit offers, ADRs, closed-end funds, best effort offers, natural resource limited partnerships (and most other LPs, but not buyout firms such as Carlyle Group), special purpose acquisition companies (SPACs), direct listings, REITs, bank and S&L IPOs, and firms not listed on CRSP. Missing and questionable numbers from the SDC new issues database are supplemented by direct inspection of prospectuses on EDGAR, information from Dealogic for IPOs after 1991, Howard and Co.'s *Going Public: The IPO Reporter* from 1980-1985, and the Graeme Howard-Todd Huxster collection of IPO prospectuses for 1975-2006. Tech stocks are defined as internet-related stocks plus other technology stocks including telecom, but not including biotech. Loughran and Ritter (2004) list the SIC codes in their appendix 3 and sources of founding dates in appendix 1. The definition of technology stocks has been changed from that in Loughran and Ritter (2004 *Financial Management*), with SIC=3559, 3576, 3844, and 7389 added to tech. Some 7389 (business services) companies have had their SIC codes changed into non-tech categories, such as consulting and two new SIC codes that I have made up: 5614 for telemarketing firms and 7388 for non-tech business services such as Sotheby's Auctions. I have also added the S.E.C.'s computer communications equipment code of 3576 for 21 companies, including Cisco Systems.

Price-to-sales ratios are computed using both the offer price (OP) and the first closing market price (MP) for computing the market capitalization of equity. Market cap is calculated using the post-issue shares outstanding, with all share classes included in the case of dual-class companies. The undiluted number of shares is used, which in some cases (e.g., Facebook, Twitter, and Castlight Health) understates the market cap due to the existence of substantial amounts of in-the-money employee stock options that are highly likely to be exercised. Sales are the last twelve months (LTM) revenues as reported in the prospectus. The median sales, in millions, is expressed in both nominal dollars and in dollars of 2024 purchasing power using the CPI. The median age, in years, is the number of years since the calendar year of the founding date and the calendar year of the IPO. The percentage of IPOs that are profitable measures profitability using trailing LTM earnings (usually using after extraordinary items earnings, and usually using pro forma numbers that are computed assuming that any recent or concurrent mergers have already occurred, and the conversion of convertible preferred stock into common stock). In some cases, last fiscal year earnings are used when LTM earnings are unavailable.

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

(table on the next page)

| Year             | Number of VC-backed tech IPOs | Median Price-to-sales |            | Median sales, \$mm |             | Median age | % profitable |
|------------------|-------------------------------|-----------------------|------------|--------------------|-------------|------------|--------------|
|                  |                               | OP                    | MP         | Nominal            | \$2024      |            |              |
| 1980             | 14                            | 3.0                   | 3.4        | 16.9               | 67.1        | 6.5        | 93%          |
| 1981             | 29                            | 3.8                   | 4.3        | 11.9               | 42.2        | 9          | 90%          |
| 1982             | 15                            | 6.1                   | 7.6        | 18.9               | 62.0        | 3          | 67%          |
| 1983             | 67                            | 7.2                   | 8.1        | 11.7               | 36.8        | 5          | 66%          |
| 1984             | 26                            | 2.3                   | 2.3        | 21.9               | 66.2        | 5          | 81%          |
| 1985             | 16                            | 3.0                   | 3.3        | 17.1               | 50.1        | 5          | 81%          |
| 1986             | 31                            | 4.3                   | 4.7        | 17.0               | 47.8        | 5          | 71%          |
| 1987             | 39                            | 3.2                   | 3.2        | 22.0               | 61.0        | 5          | 87%          |
| 1988             | 17                            | 2.6                   | 2.7        | 28.2               | 75.2        | 6          | 94%          |
| 1989             | 23                            | 3.4                   | 3.7        | 35.5               | 90.4        | 7          | 83%          |
| 1990             | 24                            | 3.9                   | 4.5        | 28.6               | 69.1        | 7.5        | 100%         |
| 1991             | 45                            | 3.2                   | 3.5        | 35.9               | 82.3        | 9          | 71%          |
| 1992             | 67                            | 3.9                   | 4.4        | 22.0               | 49.1        | 7          | 61%          |
| 1993             | 88                            | 3.1                   | 3.6        | 24.3               | 52.5        | 8          | 72%          |
| 1994             | 64                            | 4.3                   | 5.2        | 18.9               | 39.9        | 8          | 66%          |
| 1995             | 115                           | 5.5                   | 6.9        | 19.7               | 40.4        | 8          | 70%          |
| 1996             | 154                           | 9.8                   | 11.3       | 14.3               | 28.6        | 7          | 35%          |
| 1997             | 73                            | 6.9                   | 8.3        | 19.3               | 37.4        | 6          | 38%          |
| 1998             | 55                            | 11.6                  | 14.8       | 18.8               | 35.9        | 6          | 22%          |
| 1999             | 250                           | 30.9                  | 56.6       | 11.0               | 20.7        | 4          | 9%           |
| 2000             | 183                           | 41.4                  | 65.7       | 9.3                | 17.0        | 5          | 6%           |
| 2001             | 17                            | 14.9                  | 17.4       | 22.8               | 40.2        | 6          | 12%          |
| 2002             | 13                            | 3.5                   | 3.9        | 87.3               | 152.0       | 6          | 31%          |
| 2003             | 12                            | 5.2                   | 6.1        | 65.0               | 110.3       | 7          | 50%          |
| 2004             | 40                            | 6.9                   | 7.9        | 41.0               | 68.3        | 7          | 30%          |
| 2005             | 22                            | 6.4                   | 7.2        | 46.5               | 75.2        | 7.5        | 23%          |
| 2006             | 27                            | 6.2                   | 8.1        | 51.2               | 79.7        | 8          | 52%          |
| 2007             | 58                            | 7.3                   | 8.3        | 66.5               | 98.2        | 8          | 26%          |
| 2008             | 4                             | 4.1                   | 4.7        | 156.7              | 228.8       | 12         | 50%          |
| 2009             | 6                             | 4.6                   | 5.8        | 105.7              | 154.3       | 9.5        | 50%          |
| 2010             | 23                            | 3.2                   | 3.9        | 112.9              | 160.7       | 10         | 61%          |
| 2011             | 30                            | 6.8                   | 7.2        | 117.2              | 164.2       | 9.5        | 37%          |
| 2012             | 35                            | 4.6                   | 5.0        | 103.7              | 141.2       | 9          | 37%          |
| 2013             | 35                            | 5.8                   | 7.1        | 104.2              | 139.5       | 9          | 17%          |
| 2014             | 40                            | 6.5                   | 8.2        | 86.8               | 114.5       | 10         | 18%          |
| 2015             | 29                            | 6.0                   | 7.5        | 76.6               | 101.1       | 10         | 21%          |
| 2016             | 15                            | 4.5                   | 5.9        | 101.7              | 132.5       | 9          | 27%          |
| 2017             | 24                            | 5.0                   | 6.9        | 158.4              | 201.2       | 13         | 13%          |
| 2018             | 30                            | 8.6                   | 12.4       | 173.6              | 215.9       | 12         | 13%          |
| 2019             | 26                            | 9.8                   | 13.7       | 146.6              | 179.7       | 10.5       | 15%          |
| 2020             | 33                            | 15.7                  | 27.2       | 201.3              | 240.7       | 11         | 18%          |
| 2021             | 77                            | 20.3                  | 26.6       | 136.4              | 160.8       | 11         | 16%          |
| 2022             | 1                             | 20.6                  | 24.0       | 70.4               | 77.2        | 14         | 0%           |
| 2023             | 4                             | 12.7                  | 13.5       | 243.8              | 253.6       | 8.5        | 25%          |
| 2024             | 8                             | 9.2                   | 12.6       | 217.9              | 217.9       | 13.5       | 13%          |
| <b>1980-2024</b> | <b>2,004</b>                  | <b>7.6</b>            | <b>9.7</b> | <b>24.0</b>        | <b>50.5</b> | <b>7</b>   | <b>39%</b>   |

**Table 5 (updated May 16, 2025)**  
**Number of U. S. IPOs (excluding ADRs) with an offer price of \$5.00 or greater**  
**that doubled (offer to close) in price on the first day of trading, 1997-2025**

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

| <b>Quarter</b> | <b>Number</b>        | <b>Quarter</b> | <b>Number</b>                         |
|----------------|----------------------|----------------|---------------------------------------|
| 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 Therapeutics) 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)**

**Number of U. S. IPOs (excluding ADRs) with an offer price of \$5.00 or greater that doubled (offer to close) in price on the first day of trading, 1997-2025**

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

|              |                          |              |             |
|--------------|--------------------------|--------------|-------------|
| 2017, first  | 0                        | 2025, first  | (NewsMax) 1 |
| 2017, second | 0                        | 2025, second | (FatPipe) 1 |
| 2017, third  | 0                        |              |             |
| 2017, fourth | (Reto Eco-Solutions) 1   |              |             |
| 2018, first  | (Zscalar) 1              |              |             |
| 2018, second | 0                        |              |             |
| 2018, third  | 0                        |              |             |
| 2018, fourth | 0                        |              |             |
| 2019, first  | 0                        |              |             |
| 2019, second | (Beyond Meat, ADPT) 2    |              |             |
| 2019, third  | 0                        |              |             |
| 2019, fourth | (Monopar Therapeutics) 1 |              |             |
| 2020, first  | 1                        |              |             |
| 2020, second | 2                        |              |             |
| 2020, third  | 10                       |              |             |
| 2020, fourth | 9                        |              |             |
| 2021, first  | 5                        |              |             |
| 2021, second | 5                        |              |             |
| 2021, third  | 4                        |              |             |
| 2021, fourth | 4                        |              |             |
| 2022, first  | (Blue Water Vaccines) 1  |              |             |
| 2022, second | (Genius Group, ZYFG) 2   |              |             |
| 2022, third  | (Virax Biolabs Group) 1  |              |             |
| 2022, fourth | 0                        |              |             |
| 2023, first  | 0                        |              |             |
| 2023, second | (U Power Ltd) 1          |              |             |
| 2023, third  | 0                        |              |             |
| 2023, fourth | 0                        |              |             |
| 2024, first  | 0                        |              |             |
| 2024, second | 0                        |              |             |
| 2024, third  | (JBDI Holdings Ltd) 1    |              |             |
| 2024, fourth | (zSpace) 1               |              |             |

**Table 6** (updated December 27, 2024)  
**Number of Initial Public Offerings, First-Day Return, and  
Revisions from the File Price Range by Cohort Year, 1990-2024**

| <b>Cohort<br/>Year</b> | <b>Number<br/>of IPOs</b> | <b>Percentage<br/>First-day<br/>Return</b> | <b>Percentage<br/>of IPOs with<br/>OP &lt; Lo</b> | <b>Percentage<br/>of IPOs in the<br/>Middle</b> | <b>Percentage<br/>of IPOs with<br/>OP &gt; Hi</b> |
|------------------------|---------------------------|--------------------------------------------|---------------------------------------------------|-------------------------------------------------|---------------------------------------------------|
| 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                   | 284                       | 21.4                                       | 27.5                                              | 50.0                                            | 22.5                                              |
| 1999                   | 465                       | 70.5                                       | 14.8                                              | 37.2                                            | 48.0                                              |
| 2000                   | 371                       | 57.1                                       | 22.1                                              | 39.4                                            | 38.5                                              |
| 2001                   | 78                        | 14.2                                       | 25.6                                              | 56.4                                            | 18.0                                              |
| 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                   | 42                        | 10.8                                       | 33.3                                              | 40.5                                            | 26.2                                              |
| 2010                   | 97                        | 9.4                                        | 48.5                                              | 39.2                                            | 12.4                                              |
| 2011                   | 81                        | 14.1                                       | 37.0                                              | 30.9                                            | 32.1                                              |
| 2012                   | 100                       | 17.6                                       | 42.0                                              | 33.0                                            | 25.0                                              |
| 2013                   | 161                       | 20.5                                       | 29.8                                              | 42.2                                            | 28.0                                              |
| 2014                   | 218                       | 14.3                                       | 44.0                                              | 39.0                                            | 17.0                                              |
| 2015                   | 123                       | 18.9                                       | 35.8                                              | 38.2                                            | 26.0                                              |
| 2016                   | 75                        | 14.4                                       | 33.3                                              | 57.3                                            | 9.3                                               |
| 2017                   | 111                       | 11.8                                       | 23.4                                              | 60.4                                            | 16.2                                              |
| 2018                   | 136                       | 18.4                                       | 16.9                                              | 61.8                                            | 21.3                                              |
| 2019                   | 113                       | 23.3                                       | 15.9                                              | 57.5                                            | 26.5                                              |
| 2020                   | 153                       | 42.4                                       | 7.2                                               | 50.3                                            | 42.5                                              |
| 2021                   | 293                       | 24.6                                       | 18.1                                              | 56.3                                            | 25.6                                              |
| 2022                   | 27                        | 33.8                                       | 25.9                                              | 66.7                                            | 7.4                                               |
| 2023                   | 31                        | 6.9                                        | 32.2                                              | 48.4                                            | 19.4                                              |
| 2024                   | 59                        | 12.3                                       | 17.0                                              | 61.0                                            | 22.0                                              |
| <b>1990-2024</b>       | <b>6,742</b>              | <b>21.5</b>                                | <b>26.9</b>                                       | <b>47.0</b>                                     | <b>26.1</b>                                       |

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, SPACs, 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 23 in 2023. Lo and Hi are the minimum and maximum of the original file price range. Because the average first-day return is different on the firms that are retained or added than on those that are deleted, the 6.9% average first-day return in 2023 is less than the 11.9% reported in other tables, such as Table 1.

**Table 7 (updated December 27, 2024)**

**Percentage of IPOs relative to file price range:**

|                  | <b>Below</b> | <b>Within</b> | <b>Above</b> |
|------------------|--------------|---------------|--------------|
| <b>1980-1989</b> | <b>30 %</b>  | <b>57 %</b>   | <b>13 %</b>  |
| <b>1990-1998</b> | <b>27 %</b>  | <b>49 %</b>   | <b>24 %</b>  |
| <b>1999-2000</b> | <b>18 %</b>  | <b>38 %</b>   | <b>44 %</b>  |
| <b>2001-2019</b> | <b>33 %</b>  | <b>45 %</b>   | <b>22 %</b>  |
| <b>2020-2024</b> | <b>16 %</b>  | <b>55 %</b>   | <b>29 %</b>  |
| <b>1980-2024</b> | <b>28 %</b>  | <b>49 %</b>   | <b>23 %</b>  |

**Average first-day returns relative to offer price categorized by file price range:**

|                  | <b>Below</b> | <b>Within</b> | <b>Above</b> |
|------------------|--------------|---------------|--------------|
| <b>1980-1989</b> | <b>0 %</b>   | <b>6 %</b>    | <b>20 %</b>  |
| <b>1990-1998</b> | <b>4 %</b>   | <b>11 %</b>   | <b>31 %</b>  |
| <b>1999-2000</b> | <b>8 %</b>   | <b>26 %</b>   | <b>122 %</b> |
| <b>2001-2019</b> | <b>3 %</b>   | <b>12 %</b>   | <b>38 %</b>  |
| <b>2020-2024</b> | <b>5 %</b>   | <b>22 %</b>   | <b>51 %</b>  |
| <b>1980-2024</b> | <b>4 %</b>   | <b>12 %</b>   | <b>51 %</b>  |

The sample used in this table is described in Table 6. A file price range midpoint of \$8 rather than an offer price of \$5 is used as a screen, and banks and S&Ls are included.

**Table 8** (updated January 30, 2025)

**Number of Offerings, Average First-day Returns, and  
Gross Proceeds of Initial Public Offerings in 1960-2024**

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 1975-2021 are compiled by Jay R. Ritter using the LSEG's new issues database and its predecessors, Dealogic, IPOscoop.com, 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.**

| <b>Year</b> | <b>Number of Offerings<sup>1</sup></b> | <b>Average First-day Return<sup>2</sup></b> | <b>Gross Proceeds, \$ Millions<sup>3</sup></b> |
|-------------|----------------------------------------|---------------------------------------------|------------------------------------------------|
| 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        | 192                                    | 5.9%                                        | 2,306                                          |
| 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             | 465           | 21.3%        | 27,993           |
| 1996             | 689           | 17.1%        | 42,428           |
| 1997             | 485           | 14.0%        | 32,547           |
| 1998             | 310           | 20.6%        | 34,416           |
| 1999             | 484           | 70.0%        | 64,809           |
| 2000             | 382           | 56.1%        | 64,931           |
| 2001             | 80            | 14.0%        | 35,288           |
| 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            | 10.8%        | 13,296           |
| 2010             | 98            | 9.3%         | 30,624           |
| 2011             | 82            | 13.8%        | 27,750           |
| 2012             | 101           | 17.3%        | 31,973           |
| 2013             | 163           | 20.6%        | 41,909           |
| 2014             | 222           | 14.9%        | 46,852           |
| 2015             | 125           | 18.7%        | 22,296           |
| 2016             | 79            | 14.0%        | 13,234           |
| 2017             | 117           | 12.3%        | 24,032           |
| 2018             | 143           | 17.8%        | 34,043           |
| 2019             | 120           | 22.4%        | 39,725           |
| 2020             | 165           | 41.6%        | 61,860           |
| 2021             | 315           | 31.9%        | 119,631          |
| 2022             | 39            | 47.7%        | 7,014            |
| 2023             | 54            | 11.9%        | 11,916           |
| 2024             | 73            | 15.1%        | 20,527           |
| 1960-69          | 2,661         | 21.2%        | 7,988            |
| 1970-79          | 1,536         | 7.1%         | 6,663            |
| 1980-89          | 2,364         | 6.9%         | 60,874           |
| 1990-99          | 4,195         | 21.1%        | 294,814          |
| 2000-24          | 3,229         | 22.8%        | 828,469          |
| <b>1960-2024</b> | <b>13,985</b> | <b>17.6%</b> | <b>1,198,831</b> |

<sup>1</sup> 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), SPACs, 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.

<sup>2</sup> First-day returns are computed as the percentage return from the offering price to the first closing market price.

<sup>3</sup> Gross proceeds exclude overallotment options but include the international tranche, if any. No adjustments for inflation have been made.

**Table 9** (updated February 20, 2025)

**Fraction of IPOs with Negative Earnings, 1980-2024**

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. There is one IPO from 1986 with missing earnings. I assume that the earnings were positive for this firm.

| 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        | 2,047          | 1                    | 29%                    | 19%                           | 9.2%                   | 6.8%         |
| 1990-1998        | 3,616          | 0                    | 34%                    | 32%                           | 16.0%                  | 14.3%        |
| 1999-2000        | 856            | 0                    | 74%                    | 78%                           | 71.1%                  | 41.6%        |
| 2001-2024        | 2,734          | 0                    | 32%                    | 62%                           | 20.1%                  | 16.6%        |
| 2001-2010        | 1,010          | 0                    | 34%                    | 46%                           | 10.1%                  | 12.9%        |
| 2011-2024        | 1,724          | 0                    | 31%                    | 71%                           | 24.2%                  | 20.0%        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>1</b>             | <b>36%</b>             | <b>42%</b>                    | <b>26.5%</b>           | <b>13.3%</b> |

(year-by-year on the next page)

| Year             | Number of IPOs | Percentage Tech Stocks | Percentage of IPOs with EPS<0 | Mean First-day Returns |              |
|------------------|----------------|------------------------|-------------------------------|------------------------|--------------|
|                  |                |                        |                               | EPS<0                  | EPS≥0        |
| 1980             | 71             | 31%                    | 24%                           | 7.1%                   | 16.5%        |
| 1981             | 192            | 38%                    | 17%                           | 8.0%                   | 5.4%         |
| 1982             | 77             | 55%                    | 19%                           | 6.4%                   | 12.1%        |
| 1983             | 451            | 38%                    | 22%                           | 14.0%                  | 8.8%         |
| 1984             | 171            | 29%                    | 16%                           | 11.1%                  | 2.2%         |
| 1985             | 186            | 20%                    | 15%                           | 5.2%                   | 6.6%         |
| 1986             | 393            | 20%                    | 21%                           | 8.8%                   | 5.4%         |
| 1987             | 285            | 20%                    | 17%                           | 5.1%                   | 5.8%         |
| 1988             | 105            | 27%                    | 18%                           | 6.0%                   | 5.3%         |
| 1989             | 116            | 30%                    | 22%                           | 8.3%                   | 7.9%         |
| 1990             | 110            | 28%                    | 15%                           | 9.5%                   | 11.0%        |
| 1991             | 286            | 24%                    | 24%                           | 9.4%                   | 12.7%        |
| 1992             | 412            | 28%                    | 29%                           | 10.2%                  | 10.3%        |
| 1993             | 510            | 25%                    | 28%                           | 12.6%                  | 12.8%        |
| 1994             | 402            | 29%                    | 26%                           | 8.0%                   | 10.2%        |
| 1995             | 462            | 44%                    | 30%                           | 22.5%                  | 21.0%        |
| 1996             | 677            | 40%                    | 41%                           | 16.7%                  | 17.6%        |
| 1997             | 474            | 36%                    | 36%                           | 12.6%                  | 14.9%        |
| 1998             | 283            | 40%                    | 46%                           | 32.1%                  | 13.1%        |
| 1999             | 476            | 78%                    | 76%                           | 81.0%                  | 40.2%        |
| 2000             | 380            | 68%                    | 81%                           | 59.4%                  | 43.8%        |
| 2001             | 80             | 29%                    | 49%                           | 15.3%                  | 12.8%        |
| 2002             | 66             | 30%                    | 45%                           | 5.6%                   | 12.0%        |
| 2003             | 63             | 29%                    | 44%                           | 10.0%                  | 13.2%        |
| 2004             | 173            | 35%                    | 50%                           | 11.9%                  | 12.7%        |
| 2005             | 159            | 28%                    | 45%                           | 7.3%                   | 12.8%        |
| 2006             | 157            | 31%                    | 40%                           | 7.3%                   | 15.4%        |
| 2007             | 159            | 48%                    | 55%                           | 13.8%                  | 14.3%        |
| 2008             | 21             | 29%                    | 43%                           | 1.8%                   | 8.7%         |
| 2009             | 41             | 34%                    | 29%                           | 12.8%                  | 8.6%         |
| 2010             | 91             | 36%                    | 41%                           | 6.9%                   | 11.1%        |
| 2011             | 81             | 44%                    | 57%                           | 11.0%                  | 17.7%        |
| 2012             | 93             | 43%                    | 46%                           | 22.4%                  | 13.7%        |
| 2013             | 158            | 29%                    | 63%                           | 20.2%                  | 21.9%        |
| 2014             | 206            | 25%                    | 71%                           | 17.1%                  | 11.4%        |
| 2015             | 118            | 32%                    | 70%                           | 19.1%                  | 19.6%        |
| 2016             | 75             | 28%                    | 67%                           | 13.2%                  | 17.0%        |
| 2017             | 106            | 28%                    | 77%                           | 12.4%                  | 14.8%        |
| 2018             | 134            | 29%                    | 81%                           | 20.4%                  | 10.5%        |
| 2019             | 113            | 32%                    | 77%                           | 25.2%                  | 17.9%        |
| 2020             | 165            | 25%                    | 80%                           | 45.3%                  | 26.9%        |
| 2021             | 311            | 38%                    | 75%                           | 30.0%                  | 38.6%        |
| 2022             | 38             | 16%                    | 76%                           | 54.1%                  | 32.4%        |
| 2023             | 54             | 17%                    | 65%                           | 13.9%                  | 8.1%         |
| 2024             | 72             | 19%                    | 64%                           | 17.5%                  | 11.5%        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>36%</b>             | <b>42%</b>                    | <b>26.5%</b>           | <b>13.3%</b> |

**Table 10** (updated January 27, 2025)

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

There were 2,522 operating company IPOs during 2001-2024 raising at least \$30 million (\$2024) using bookbuilding, using the screens in Table 1. The 16 true auctions in 2001-2013 listed in Table 13 are not included. Proceeds numbers do not include overallotment shares.

| Proceeds Category                                |                                   |
|--------------------------------------------------|-----------------------------------|
| \$30-150 million (inflation-adjusted in 2024 \$) | more than \$150 million (2024 \$) |
| <7%    3.8%    (41)                              | 52.8% (764)                       |
| =7%    94.0% (1,011)                             | 46.8% (677)                       |
| >7%    2.1%    (23)                              | 0.4%    (6)                       |
| Total   100% (1,075 IPOs)                        | 100% (1,447 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 2001-2024 46.8% 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%. See Hsuan-Chi Chen and Jay R. Ritter’s “The Seven Percent Solution” in the June 2000 issue of the *Journal of Finance* for evidence from earlier years, available at

<https://site.warrington.ufl.edu/ritter/files/2016/01/The-Seven-Percent-Solution-2000-06.pdf>

and the updated graph at

<https://site.warrington.ufl.edu/ritter/files/IPOs-gross-spreads.pdf>

The proceeds level at which 7% is standard has also crept up: in 2001-2024, of the 308 IPOs with proceeds of \$150-\$200 million (in \$2024, without including overallotment option shares), 86.7% had gross spreads of exactly 7.0%.

**Table 11** (updated January 27, 2025)**Mean and Median Gross Spreads and Number of Managing Underwriters, 1980-2024**

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), 2012 (Facebook with a 1.1% spread on a \$16 billion IPO), and 2019 (Uber Technologies with a spread of 1.3% on an \$8.1 billion IPO), a higher fraction of IPOs were mega-deals with a gross spread far below 7%. The above proceeds numbers have not been adjusted for inflation. UW is Underwriter.

In the top panel, proceeds categories are expressed in dollars of 2024 purchasing power, and overallotment shares are not included. The bottom panel (on the next page) reports year-by-year numbers.

**Mean and Median Gross Spreads by Proceeds Categories, 2001-2024 (\$2024)**

| Proceeds               | Number of IPOs | Mean Gross spread | Median Gross spread | Mean First-day Returns |
|------------------------|----------------|-------------------|---------------------|------------------------|
| Less than \$20 million | 131            | 7.54%             | 7.50%               | 23.8%                  |
| \$20-49.99 million     | 183            | 7.06%             | 7.00%               | 27.6%                  |
| \$50-99.99 million     | 487            | 6.98%             | 7.00%               | 7.6%                   |
| \$100-199.99 million   | 789            | 6.94%             | 7.00%               | 20.0%                  |
| \$200-999.99 million   | 970            | 6.41%             | 6.50%               | 21.5%                  |
| \$1 billion or more    | 174            | 4.40%             | 4.70%               | 15.9%                  |
| <b>2001-2024</b>       | <b>2,734</b>   | <b>6.63%</b>      | <b>7.00%</b>        | <b>18.8%</b>           |

Note: For the smallest deals, it is not uncommon to have a “nonaccountable expense allowance” equal to up to 3% of the proceeds in addition to the gross spread. As a result, the underwriter compensation for these small deals is higher than the numbers reported here.

| Year             | Number of IPOs | Gross Spreads |             |             |            | Fraction with Multiple Bookrunners | Number of Managing UWs |            |
|------------------|----------------|---------------|-------------|-------------|------------|------------------------------------|------------------------|------------|
|                  |                | Mean EW       | Mean PW     | Median      | =7%        |                                    | 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             | 186            | 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             | 462            | 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             | 283            | 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             | 80             | 6.6%          | 4.6%        | 7.0%        | 61%        | 18.8%                              | 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             | 158            | 6.6%          | 5.4%        | 7.0%        | 64%        | 91.8%                              | 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             | 106            | 6.6%          | 5.5%        | 7.0%        | 64%        | 90.6%                              | 6.3                    | 5.0        |
| 2018             | 134            | 6.5%          | 5.4%        | 7.0%        | 68%        | 95.5%                              | 6.3                    | 4.0        |
| 2019             | 113            | 6.5%          | 4.5%        | 7.0%        | 66%        | 94.7%                              | 6.8                    | 5.0        |
| 2020             | 165            | 6.6%          | 5.2%        | 7.0%        | 67%        | 89.1%                              | 6.7                    | 4.0        |
| 2021             | 311            | 6.4%          | 5.0%        | 7.0%        | 50%        | 87.8%                              | 7.5                    | 6.0        |
| 2022             | 38             | 6.8%          | 5.4%        | 7.0%        | 46%        | 63.2%                              | 5.6                    | 3.0        |
| 2023             | 54             | 6.8%          | 5.0%        | 7.0%        | 41%        | 53.7%                              | 5.3                    | 3.0        |
| 2024             | 72             | 6.6%          | 5.7%        | 7.0%        | 51%        | 79.2%                              | 6.3                    | 4.0        |
| <b>1980-2024</b> | <b>9,253</b>   | <b>7.1%</b>   | <b>5.5%</b> | <b>7.0%</b> | <b>51%</b> | <b>22.6%</b>                       | <b>3.3</b>             | <b>2.0</b> |

**Table 11a** (May 22, 2025)**First-day and Long-run Returns on IPOs by Lead-left Underwriter, 2012-2021**

1,479 operating company IPOs from 2012-2021 are used, with returns calculated through the end of December 2024. IPOs are categorized by the underwriter listed in the top left of the managing underwriters on the first page of the IPO prospectus (S.E.C. Form 424). The 11 underwriters with the highest number of operating company IPOs are listed, with other underwriters grouped into two other categories. Others (regionals) include Wm. Blair, Piper-Jaffray, Raymond James, RBC Capital Markets, Wells Fargo and other underwriters not otherwise named below with an underwriter rank of 6.0 or higher on a 1-to-9 scale. Others (lower tier) include Aegis, Boustead, EF Hutton, Maxim Group and others with an underwriter rank of below 6.0. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price (not from the offer price) until the earlier of the three-year anniversary or the delisting date. Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Specifically, the firm with the closest book-to-market ratio within the size decile of the IPO is used for the matching firm. For companies with dual-class shares, the post-issue book-to-market ratio is calculated using the post-issue total shares outstanding for all share classes. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue basic number of shares outstanding, a procedure that assumes that nontraded share classes would have the same price as traded shares, and that outstanding stock options have zero value. If a matching firm is delisted before the IPO, it is assumed that the proceeds of the delisted firm are then invested in the next-best matching firm at the time of the IPO. All returns include dividends and capital gains, including the index returns.

| Underwriter         | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|---------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                     |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Goldman Sachs       | 272            | 27.6%                    | 6.7%                               | -25.6%          | -22.8%         |
| JP Morgan           | 224            | 25.7%                    | 20.7%                              | -10.5%          | 0.5%           |
| Morgan Stanley      | 218            | 26.9%                    | 31.0%                              | -0.4%           | 6.5%           |
| BOA-Merrill         | 133            | 24.5%                    | 16.3%                              | -17.0%          | -2.3%          |
| Jefferies           | 91             | 24.3%                    | 1.0%                               | -31.3%          | -21.5%         |
| UBS/Credit-Suisse   | 89             | 10.9%                    | 16.9%                              | -17.5%          | -16.3%         |
| Citigroup           | 82             | 8.0%                     | -24.0%                             | -9.1%           | -29.9%         |
| Barclays            | 46             | 16.7%                    | 28.6%                              | -0.5%           | 9.7%           |
| Cowen               | 29             | 26.1%                    | -42.3%                             | -74.6%          | -54.3%         |
| Deutsche Bank       | 19             | 11.7%                    | 44.4%                              | 12.7%           | -1.8%          |
| Stifel              | 18             | 12.3%                    | 46.6%                              | 12.1%           | 34.2%          |
| Others (regionals)  | 118            | 11.1%                    | 10.0%                              | -25.0%          | -13.3%         |
| Others (lower tier) | 140            | 38.2%                    | -44.7%                             | -74.2%          | -37.0%         |
| <b>2012-2021</b>    | 1,479          | 23.6%                    | 10.6%                              | -21.6%          | -12.3%         |

**Table 11b** (May 22, 2025)**First-day and Long-run Returns on VC-backed IPOs by Lead-left Underwriter, 2012-2021**

909 venture capital-backed operating company IPOs from 2012-2021 are used, with returns calculated through the end of December 2024. IPOs are categorized by the underwriter listed in the top left of the managing underwriters on the first page of the IPO prospectus (S.E.C. Form 424). The 11 underwriters with the highest number of operating company IPOs (both VC-backed and other IPOs) are listed, with other underwriters grouped into two other categories. Others (regionals) include Wm. Blair, Piper-Jaffray, Raymond James, RBC Capital Markets, Wells Fargo and other underwriters not otherwise named below with an underwriter rank of 6.0 or higher on a 1-to-9 scale. Others (lower tier) include Aegis, Boustead, EF Hutton, Maxim Group and others with an underwriter rank of below 6.0. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price (not from the offer price) until the earlier of the three-year anniversary or the delisting date. Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Specifically, the firm with the closest book-to-market ratio within the size decile of the IPO is used for the matching firm. For companies with dual-class shares, the post-issue book-to-market ratio is calculated using the post-issue total shares outstanding for all share classes. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue basic number of shares outstanding, a procedure that assumes that nontraded share classes would have the same price as traded shares, and that outstanding stock options have zero value. If a matching firm is delisted before the IPO, it is assumed that the proceeds of the delisted firm are then invested in the next-best matching firm at the time of the IPO. All returns include dividends and capital gains, including the index returns.

| Underwriter              | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|--------------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                          |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Goldman Sachs            | 179            | 33.3%                    | 10.9%                              | -21.7%          | -14.0%         |
| JP Morgan                | 156            | 29.5%                    | 12.7%                              | -18.9%          | -7.1%          |
| Morgan Stanley           | 162            | 31.5%                    | 36.5%                              | 4.9%            | 7.0%           |
| BOA-Merrill              | 78             | 30.1%                    | 16.5%                              | -16.9%          | -12.7%         |
| Jefferies                | 71             | 26.4%                    | 1.7%                               | -29.0%          | -11.3%         |
| UBS/Credit-Suisse        | 41             | 10.6%                    | 32.1%                              | -2.4%           | 12.7%          |
| Citigroup                | 47             | 9.0%                     | 28.9%                              | -6.6%           | -24.9%         |
| Barclays                 | 23             | 16.0%                    | 9.6%                               | -20.7%          | -25.5%         |
| Cowen                    | 23             | 30.4%                    | -33.5%                             | -66.2%          | -47.4%         |
| Deutsche Bank            | 8              | 16.0%                    | 52.4%                              | 20.1%           | 20.4%          |
| Stifel                   | 13             | 12.7%                    | 54.6%                              | 19.2%           | 46.5%          |
| Others (regionals)       | 72             | 10.2%                    | 9.5%                               | -25.7%          | -23.5%         |
| Others (lower tier)      | 36             | 7.1%                     | -19.1%                             | -47.2%          | -31.5%         |
| Top 5 above              | 646            | 30.8%                    | 17.4%                              | -14.6%          | -6.6%          |
| Others except lower tier | 227            | 13.0%                    | 17.3%                              | -16.9%          | -14.3%         |
| Lower tier               | 36             | 7.1%                     | -19.1%                             | -47.2%          | -31.5%         |
| <b>2012-2021</b>         | <b>909</b>     | <b>25.4%</b>             | <b>15.9%</b>                       | <b>-16.5%</b>   | <b>-9.5%</b>   |



**Table 12 (updated January 3, 2025)**  
**Number of IPOs Categorized by the LTM Sales (in millions of 2024 \$), 1980-2024**

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

| Year             | Number of IPOs |              | Percentage of IPOs |            | Medians, \$2024 |            |            |
|------------------|----------------|--------------|--------------------|------------|-----------------|------------|------------|
|                  | <\$100 m       | >\$100 m     | <\$100 m           | >\$100m    | Sales           | MV         | PSR        |
| 1980             | 47             | 24           | 66%                | 34%        | 71              | 120        | 2.2        |
| 1981             | 148            | 44           | 77%                | 23%        | 45              | 117        | 2.9        |
| 1982             | 62             | 15           | 81%                | 19%        | 34              | 105        | 3.0        |
| 1983             | 298            | 153          | 66%                | 34%        | 46              | 142        | 2.8        |
| 1984             | 117            | 54           | 68%                | 32%        | 62              | 53         | 1.6        |
| 1985             | 102            | 84           | 55%                | 45%        | 74              | 68         | 1.3        |
| 1986             | 226            | 167          | 58%                | 42%        | 79              | 77         | 1.5        |
| 1987             | 152            | 133          | 53%                | 47%        | 86              | 96         | 1.5        |
| 1988             | 48             | 57           | 46%                | 54%        | 135             | 116        | 1.5        |
| 1989             | 60             | 56           | 52%                | 48%        | 97              | 111        | 2.0        |
| 1990             | 58             | 52           | 53%                | 47%        | 90              | 124        | 2.0        |
| 1991             | 138            | 148          | 48%                | 52%        | 112             | 127        | 1.6        |
| 1992             | 211            | 201          | 51%                | 49%        | 94              | 119        | 1.8        |
| 1993             | 260            | 250          | 51%                | 49%        | 98              | 115        | 1.9        |
| 1994             | 239            | 163          | 59%                | 41%        | 75              | 92         | 1.8        |
| 1995             | 277            | 185          | 60%                | 40%        | 63              | 134        | 3.0        |
| 1996             | 433            | 244          | 64%                | 36%        | 51              | 137        | 3.9        |
| 1997             | 289            | 185          | 61%                | 39%        | 66              | 133        | 3.0        |
| 1998             | 164            | 119          | 58%                | 42%        | 75              | 187        | 3.4        |
| 1999             | 365            | 111          | 77%                | 23%        | 30              | 361        | 18.4       |
| 2000             | 289            | 91           | 76%                | 24%        | 23              | 460        | 30.1       |
| 2001             | 26             | 54           | 32%                | 68%        | 238             | 479        | 2.3        |
| 2002             | 16             | 50           | 24%                | 76%        | 425             | 517        | 2.1        |
| 2003             | 20             | 43           | 32%                | 68%        | 282             | 370        | 2.7        |
| 2004             | 79             | 94           | 46%                | 54%        | 141             | 298        | 3.8        |
| 2005             | 56             | 103          | 35%                | 65%        | 216             | 360        | 2.6        |
| 2006             | 61             | 96           | 39%                | 61%        | 169             | 325        | 3.8        |
| 2007             | 68             | 91           | 43%                | 57%        | 130             | 373        | 6.1        |
| 2008             | 4              | 17           | 19%                | 81%        | 278             | 375        | 4.0        |
| 2009             | 6              | 35           | 15%                | 85%        | 387             | 517        | 1.8        |
| 2010             | 26             | 65           | 29%                | 71%        | 213             | 355        | 2.7        |
| 2011             | 27             | 54           | 33%                | 67%        | 212             | 614        | 4.9        |
| 2012             | 26             | 67           | 28%                | 72%        | 203             | 377        | 3.4        |
| 2013             | 64             | 94           | 41%                | 59%        | 151             | 441        | 5.0        |
| 2014             | 107            | 99           | 52%                | 48%        | 97              | 286        | 7.2        |
| 2015             | 67             | 51           | 57%                | 43%        | 74              | 403        | 9.8        |
| 2016             | 37             | 38           | 49%                | 51%        | 105             | 422        | 5.0        |
| 2017             | 48             | 58           | 45%                | 55%        | 145             | 470        | 6.2        |
| 2018             | 75             | 59           | 56%                | 44%        | 53              | 644        | 12.8       |
| 2019             | 62             | 51           | 55%                | 45%        | 74              | 693        | 14.4       |
| 2020             | 100            | 65           | 61%                | 39%        | 34              | 926        | 23.5       |
| 2021             | 144            | 167          | 46%                | 54%        | 128             | 1378       | 18.4       |
| 2022             | 29             | 9            | 76%                | 24%        | 1               | 290        | 234        |
| 2023             | 37             | 17           | 69%                | 31%        | 7               | 283        | 12.4       |
| 2024             | 41             | 31           | 57%                | 43%        | 55              | 619        | 7.5        |
| <b>1980-2024</b> | <b>5,209</b>   | <b>4,044</b> | <b>56%</b>         | <b>44%</b> | <b>76</b>       | <b>293</b> | <b>3.4</b> |

**Table 12a** (updated January 3, 2025)  
**Number of IPOs Categorized by the LTM Sales (in 2024 \$), 1980-2024**

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, calculated using the first closing market price and using the post-issue number of shares in all share classes.

| Year             | Number of IPOs |              | Percentage of IPOs |            | Medians, \$2024 |            |            |
|------------------|----------------|--------------|--------------------|------------|-----------------|------------|------------|
|                  | <\$100 m       | >\$100 m     | <\$100 m           | >\$100 m   | Sales           | MV         | PSR        |
| 1980             | 47             | 24           | 66%                | 34%        | 71              | 134        | 2.5        |
| 1981             | 148            | 44           | 77%                | 23%        | 45              | 128        | 2.9        |
| 1982             | 62             | 15           | 81%                | 19%        | 34              | 110        | 3.1        |
| 1983             | 298            | 153          | 66%                | 34%        | 46              | 152        | 3.2        |
| 1984             | 117            | 54           | 68%                | 32%        | 62              | 88         | 1.6        |
| 1985             | 102            | 84           | 55%                | 45%        | 74              | 111        | 1.5        |
| 1986             | 226            | 167          | 58%                | 42%        | 79              | 126        | 1.6        |
| 1987             | 152            | 133          | 53%                | 47%        | 86              | 160        | 1.6        |
| 1988             | 48             | 57           | 46%                | 54%        | 135             | 204        | 1.6        |
| 1989             | 60             | 56           | 52%                | 48%        | 97              | 198        | 2.4        |
| 1990             | 58             | 52           | 53%                | 47%        | 90              | 211        | 2.2        |
| 1991             | 138            | 148          | 48%                | 52%        | 112             | 233        | 1.8        |
| 1992             | 211            | 201          | 51%                | 49%        | 94              | 214        | 2.0        |
| 1993             | 260            | 250          | 51%                | 49%        | 98              | 201        | 2.1        |
| 1994             | 239            | 163          | 59%                | 41%        | 75              | 159        | 2.1        |
| 1995             | 277            | 185          | 60%                | 40%        | 63              | 259        | 3.5        |
| 1996             | 433            | 244          | 64%                | 36%        | 51              | 255        | 4.5        |
| 1997             | 289            | 185          | 61%                | 39%        | 66              | 240        | 3.4        |
| 1998             | 164            | 119          | 58%                | 42%        | 75              | 361        | 3.6        |
| 1999             | 365            | 111          | 77%                | 23%        | 30              | 892        | 30.3       |
| 2000             | 289            | 91           | 76%                | 24%        | 23              | 1037       | 40.9       |
| 2001             | 26             | 54           | 32%                | 68%        | 238             | 832        | 2.8        |
| 2002             | 16             | 50           | 24%                | 76%        | 425             | 907        | 2.3        |
| 2003             | 20             | 43           | 32%                | 68%        | 282             | 634        | 2.7        |
| 2004             | 79             | 94           | 46%                | 54%        | 141             | 569        | 4.2        |
| 2005             | 56             | 103          | 35%                | 65%        | 216             | 561        | 2.7        |
| 2006             | 61             | 96           | 39%                | 61%        | 169             | 571        | 3.9        |
| 2007             | 68             | 91           | 43%                | 57%        | 130             | 738        | 6.7        |
| 2008             | 4              | 17           | 19%                | 81%        | 278             | 688        | 3.9        |
| 2009             | 6              | 35           | 15%                | 85%        | 387             | 1006       | 2.0        |
| 2010             | 26             | 65           | 29%                | 71%        | 213             | 613        | 2.8        |
| 2011             | 27             | 54           | 33%                | 67%        | 212             | 1208       | 5.6        |
| 2012             | 26             | 67           | 28%                | 72%        | 203             | 814        | 4.4        |
| 2013             | 64             | 94           | 41%                | 59%        | 151             | 923        | 5.4        |
| 2014             | 107            | 99           | 52%                | 48%        | 97              | 566        | 8.9        |
| 2015             | 67             | 51           | 57%                | 43%        | 74              | 706        | 12.2       |
| 2016             | 37             | 38           | 49%                | 51%        | 105             | 662        | 6.5        |
| 2017             | 48             | 58           | 45%                | 55%        | 145             | 823        | 7.5        |
| 2018             | 75             | 59           | 56%                | 44%        | 53              | 778        | 17.5       |
| 2019             | 62             | 51           | 55%                | 45%        | 74              | 970        | 18.3       |
| 2020             | 100            | 65           | 61%                | 39%        | 34              | 1318       | 38.2       |
| 2021             | 144            | 167          | 46%                | 54%        | 128             | 1683       | 23.1       |
| 2022             | 29             | 9            | 76%                | 24%        | 1               | 505        | 526        |
| 2023             | 37             | 17           | 69%                | 31%        | 7               | 259        | 11.1       |
| 2024             | 41             | 31           | 57%                | 43%        | 55              | 724        | 8.3        |
| <b>1980-2024</b> | <b>5,209</b>   | <b>4,044</b> | <b>56%</b>         | <b>44%</b> | <b>76</b>       | <b>330</b> | <b>3.8</b> |

**Table 12b** (updated January 28, 2025)  
**Number of IPOs Categorized by the LTM Sales (in 2011 \$), 1980-2024**

| Year             | Number of IPOs | Number of IPOs |              | Percentage of IPOs |              |
|------------------|----------------|----------------|--------------|--------------------|--------------|
|                  |                | <\$1 billion   | >\$1 billion | <\$1 billion       | >\$1 billion |
| 1980             | 71             | 71             | 0            | 100%               | 0%           |
| 1981             | 192            | 190            | 2            | 99%                | 1%           |
| 1982             | 77             | 77             | 0            | 100%               | 0%           |
| 1983             | 451            | 440            | 11           | 98%                | 2%           |
| 1984             | 171            | 169            | 2            | 99%                | 1%           |
| 1985             | 186            | 182            | 4            | 98%                | 2%           |
| 1986             | 393            | 375            | 18           | 95%                | 5%           |
| 1987             | 285            | 267            | 18           | 94%                | 6%           |
| 1988             | 105            | 94             | 11           | 90%                | 10%          |
| 1989             | 116            | 108            | 8            | 93%                | 7%           |
| 1990             | 110            | 103            | 7            | 94%                | 6%           |
| 1991             | 286            | 270            | 16           | 94%                | 6%           |
| 1992             | 412            | 385            | 27           | 93%                | 7%           |
| 1993             | 510            | 481            | 29           | 94%                | 6%           |
| 1994             | 402            | 384            | 18           | 96%                | 4%           |
| 1995             | 462            | 437            | 25           | 95%                | 5%           |
| 1996             | 677            | 658            | 19           | 97%                | 3%           |
| 1997             | 474            | 450            | 24           | 95%                | 5%           |
| 1998             | 283            | 264            | 19           | 93%                | 7%           |
| 1999             | 476            | 455            | 21           | 96%                | 4%           |
| 2000             | 380            | 366            | 14           | 96%                | 4%           |
| 2001             | 80             | 60             | 20           | 75%                | 25%          |
| 2002             | 66             | 50             | 16           | 76%                | 24%          |
| 2003             | 63             | 58             | 5            | 92%                | 8%           |
| 2004             | 173            | 151            | 22           | 87%                | 13%          |
| 2005             | 159            | 139            | 20           | 87%                | 13%          |
| 2006             | 157            | 138            | 19           | 88%                | 12%          |
| 2007             | 159            | 142            | 17           | 89%                | 11%          |
| 2008             | 21             | 18             | 3            | 86%                | 14%          |
| 2009             | 41             | 28             | 13           | 68%                | 32%          |
| 2010             | 91             | 78             | 13           | 86%                | 14%          |
| 2011             | 81             | 67             | 14           | 83%                | 17%          |
| 2012             | 93             | 77             | 16           | 83%                | 17%          |
| 2013             | 158            | 128            | 30           | 81%                | 19%          |
| 2014             | 206            | 175            | 31           | 85%                | 15%          |
| 2015             | 118            | 107            | 11           | 91%                | 9%           |
| 2016             | 75             | 61             | 14           | 81%                | 19%          |
| 2017             | 106            | 90             | 16           | 85%                | 15%          |
| 2018             | 134            | 122            | 12           | 91%                | 9%           |
| 2019             | 113            | 104            | 9            | 92%                | 8%           |
| 2020             | 165            | 148            | 17           | 90%                | 10%          |
| 2021             | 311            | 286            | 25           | 92%                | 8%           |
| 2022             | 38             | 34             | 4            | 89%                | 11%          |
| 2023             | 54             | 47             | 7            | 87%                | 13%          |
| 2024             | 72             | 60             | 12           | 86%                | 14%          |
| <b>1980-2024</b> | <b>9,253</b>   | <b>8,594</b>   | <b>659</b>   | <b>93%</b>         | <b>7%</b>    |

**Table 13** (updated August 1, 2025)**IPOs Using Auctions and Limit Order Bookbuilding in the U.S., 1999-2025**

The average first-day return on WRHambrecht's 19 IPO auctions has been 12.6%. For the 22 auction IPOs, including those by other underwriters, the average first-day return has been 12.5%. In 2020-2021, the five IPOs listed used bookbuilding although the issuer insisted that all indications of interest include both price and quantity indications. For IPO auctions for which WRHambrecht was the bookrunner, the numbers are as follows:

| <b>Name of IPO (ticker)</b>                                                                                                                                                 | <b>Date of IPO</b> | <b>Gross Spread</b> | <b>Gross Proceeds</b> | <b>First-day Return</b> |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|---------------------|-----------------------|-------------------------|
| <b>1999: (3 out of 476 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| 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%                 |
| <b>2000: (1 out of 380 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| Nogatech (NGTC)                                                                                                                                                             | 20000518           | 6.50%               | \$42.0 million        | -21.58%                 |
| <b>2001: (2 out of 79 IPOs)</b>                                                                                                                                             |                    |                     |                       |                         |
| Peet's Coffee (PEET)                                                                                                                                                        | 20010125           | 6.50%               | \$26.4 million        | 17.25%                  |
| Briazz (BRZZ)                                                                                                                                                               | 20010502           | 6.00%               | \$16.0 million        | 0.38%                   |
| <b>2002: (1 out of 66 IPOs)</b>                                                                                                                                             |                    |                     |                       |                         |
| Overstock.com (OSTK)                                                                                                                                                        | 20020529           | 4.00%               | \$39.0 million        | 0.23%                   |
| <b>2003: (2 out of 63 IPOs)</b>                                                                                                                                             |                    |                     |                       |                         |
| 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.                                        |                    |                     |                       |                         |
| <b>2004: (1 out of 173 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| 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. |                    |                     |                       |                         |
| <b>2005: (5 out of 159 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| 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%                   |
| <b>2006: (2 out of 157 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| Traffic.com (TRFC)                                                                                                                                                          | 20060125           | 6.00%               | \$78.6 million        | 1.25%                   |
| FortuNet (FNET)                                                                                                                                                             | 20060131           | 4.50%               | \$22.5 million        | 0.56%                   |
| <b>2007: (2 out of 159 IPOs)</b>                                                                                                                                            |                    |                     |                       |                         |
| 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, WR Hambrecht 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, WR Hambrecht 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 91 IPOs)**

**2011: (0 out of 81 IPOs)**

**2012: (0 out of 93 IPOs)**

**2013: (1 out of 158 IPOs)**

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

**2014: (0 out of 206 IPOs)**

**2015: (0 out of 118 IPOs)**

**2016: (0 out of 75 IPOs)**

**2017: (0 out of 106 IPOs)**

**2018: (0 out of 134 IPOs)**

**2019: (0 out of 113 IPOs)**

**The following 6 IPOs were not WR Hambrecht auction IPOs, but used a process known as limit order bookbuilding, requiring that indications of interest include a reservation price:**

**2020: (3 out of 165 IPOs)**

|                    |          |       |                   |        |
|--------------------|----------|-------|-------------------|--------|
| Unity Software (U) | 20200918 | 4.75% | \$1,300.0 million | 31.4%  |
| DoorDash (DASH)    | 20201209 | 2.40% | \$3,366.0 million | 85.8%  |
| Airbnb (ABNB)      | 20201210 | 2.12% | \$3,490.0 million | 112.8% |

**2021: (2 out of 311 IPOs)**

|                     |          |       |                   |       |
|---------------------|----------|-------|-------------------|-------|
| ACV Auctions (ACVA) | 20210324 | 6.00% | \$413.8 million   | 25.0% |
| Marqeta (MQ)        | 20210609 | 6.50% | \$1,227.3 million | 13.0% |

**2022: (0 out of 38 IPOs)**

**2023: (0 out of 54 IPOs)**

**2024: (0 out of 72 IPOs)**

**2025:**

|             |          |      |                   |        |
|-------------|----------|------|-------------------|--------|
| Figma (FIG) | 20250731 | 4.5% | \$1,218.9 million | 250.0% |
|-------------|----------|------|-------------------|--------|

Financial press articles stated that Unity required that all indications of interest submitted to the lead-left underwriter (Goldman Sachs) had to include a price as well as quantity of shares requested. Bids at multiple prices were permitted. All bids at or above the offer price received shares, but Unity reserved the right to make non-pro rata allocations among the winning bidders. DoorDash (Goldman Sachs), Airbnb (Morgan Stanley), ACV Auctions (Goldman Sachs), Marqeta (Goldman Sachs), and Figma (Morgan Stanley) used similar procedures. All raised the offer price substantially, but still left huge amounts of money on the table. These IPOs used bookbuilding, but indications of interest were required to have both price and quantity information. There may have been other IPOs that also used limit order bookbuilding.

WR Hambrecht has also been a bookrunner on several other IPOs that did not use an auction. For example, on 20150415, they did a \$76 million best efforts IPO of Xbiotech (XBIT), which increased 22.37% on the first day of trading, on 20170630 they did a \$12.0 million IPO for ShiftPixy, and on 20170921 they did a \$19.1 million IPO for Arcimoto.

**Table 13a: Direct Listings in the U.S., 2018-2025**  
(updated November 3, 2025)

With direct listings, no shares trade hands at the reference price. Instead, there is typically a large block trade at the open. The first-day return is thus calculated from the open to the closing price. With traditional IPOs, including auctions, the first-day return would be computed from the offer price to the close. The returns calculated in these two manners reflect the returns earned by buyers who bought from the issuer and selling shareholders. The July 2019 Nasdaq listing of iHeartMedia (IHRT) is not included because the stock was traded OTC beforehand. For Watford Holdings, the “Current Reference Price” is used instead of a “Reference Price” based on the front page of the SEC Form 424B3 prospectus. For this company, there had been no private market transactions on which to base a reference price. The current reference price was defined to be the market-clearing opening price. For Bright Green Corporation in May 2022, ZenaTech in October 2024, Damon in November 2024, Cloudastructure in January 2025, Turn Therapeutics and Nomadar in October 2025, the current reference price is also used.

Thryv Holdings has unusually low volume on the first day of trading, only 9,569 shares (this number has been confirmed with the company as correct). It had much higher volume on the second day, 208,916 shares, with a price jump to a close of \$14.39. The prospectus for Thryv Holdings reports 30,829,145 shares outstanding, giving it a market cap at the opening price of \$430 million, considerably less than the unicorns doing direct listings.

In 2022-2025, the companies doing direct listings have been microcap stocks.

Table 13a

## Direct Listings in the U.S., 2018-2025

In the bottom panel, the last column is a measure of intraday volatility on the first day of trading. The average volatility for these five direct listings is about the same as that on the IPOs of similar companies. High, low, and closing prices, as well as trading volume, come from BigCharts.Marketwatch.com, Yahoo Finance, Seeking Alpha, or WSJ.com. Direct listings with first-day trading volume of below 5 million shares, are listed in italics.

## Panel A: First day return from the open to close

| Name of IPO (ticker)            | Date of Listing | Prices    |          |          | First-day Return |
|---------------------------------|-----------------|-----------|----------|----------|------------------|
|                                 |                 | Reference | Open     | Close    |                  |
| Spotify Technology (SPOT)       | 20180403        | \$132.00  | \$165.90 | \$149.01 | -10.2%           |
| Watford Holdings (WTRE)         | 20190328        | \$25.26   | \$25.26  | \$27.00  | 6.9%             |
| Slack (WORK)                    | 20190620        | \$26.00   | \$38.50  | \$38.62  | 0.3%             |
| Asana (ASAN)                    | 20200930        | \$21.00   | \$27.00  | \$28.80  | 6.7%             |
| Palantir Technologies (PLTR)    | 20200930        | \$7.25    | \$10.00  | \$9.50   | -5.0%            |
| Thryv Holdings (THRY)           | 20201001        | \$12.40   | \$14.00  | \$11.075 | -20.9%           |
| Roblox (RBLX)                   | 20210310        | \$45.00   | \$64.50  | \$69.50  | 7.8%             |
| Coinbase Global (COIN)          | 20210414        | \$250.00  | \$381.00 | \$328.28 | -13.8%           |
| SquareSpace (SQSP)              | 20210519        | \$50.00   | \$48.00  | \$43.65  | -9.1%            |
| ZipRecruiter (ZIP)              | 20210526        | \$18.00   | \$20.00  | \$21.10  | 5.5%             |
| Amplitude (AMPL)                | 20210928        | \$35.00   | \$50.00  | \$54.80  | 9.6%             |
| Warby Parker (WRBY)             | 20210929        | \$40.00   | \$54.11  | \$54.49  | 0.7%             |
| Bright Green (BGXX)             | 20220517        | \$15.99   | \$15.99  | \$25.245 | 57.9%            |
| Surf Air Mobility (SRFM)        | 20230727        | \$20.00   | \$5.00   | \$3.15   | -37.0%           |
| Courtside Group (PODC)          | 20230908        | \$8.00    | \$4.30   | \$4.39   | 2.1%             |
| reAlpha Tech (AIRE)             | 20231023        | \$8.00    | \$23.01  | \$406.67 | 1,667.4%         |
| FibroBiologics (FBLG)           | 20240131        | \$8.00    | \$30.00  | \$29.10  | -3.0%            |
| ZenaTech (ZENA)                 | 20241001        | \$10.00   | \$10.00  | \$8.80   | -12.0%           |
| Damon (DMNID)                   | 20241118        | \$4.00    | \$4.00   | \$2.41   | -39.7%           |
| Cloudastructure (CSAI)          | 20250130        | \$50.00   | \$50.00  | \$33.75  | -32.5%           |
| NeOnc Technologies Hldgs (NTHI) | 20250326        | none      | \$25.00  | \$12.11  | -51.6%           |
| Arrive AI (ARAI)                | 20250515        | \$13.00   | \$40.00  | \$13.25  | -66.9%           |
| Turn Therapeutics (TTRX)        | 20251008        | \$10.00   | \$10.00  | \$7.00   | -30.0%           |
| Aptera Motors (SEV)             | 20251016        | \$40.85   | \$19.99  | \$8.00   | -60.0%           |
| OBOOK Holdings (OWLS)           | 20251016        | \$10.00   | \$68.00  | \$55.55  | -18.3%           |
| Nomadax (NOMA)                  | 20251031        | \$30.00   | \$30.00  | \$21.00  | -30.0%           |

**Table 13a** (continued)

Direct listings with first-day trading volume of below 5 million shares are listed in italics.

**Panel B: Intraday Volatility**

| Name of IPO (ticker)                      | Trading Volume   | Prices         |                 |                 | (High-Low)<br>÷Close, % |
|-------------------------------------------|------------------|----------------|-----------------|-----------------|-------------------------|
|                                           |                  | Low            | High            | Close           |                         |
| Spotify Technology (SPOT)                 | 30,526,500       | \$148.26       | \$165.90        | \$149.01        | 11.8%                   |
| <i>Watford Holdings Ltd (WTRE)</i>        | <i>129,131</i>   | <i>\$25.26</i> | <i>\$27.40</i>  | <i>\$27.00</i>  | <i>7.9%</i>             |
| Slack (WORK)                              | 137,364,188      | \$38.25        | \$42.00         | \$38.62         | 9.7%                    |
| Asana (ASAN)                              | 40,825,910       | \$26.75        | \$29.96         | \$28.80         | 11.1%                   |
| Palantir Technologies (PLTR)              | 338,584,375      | \$9.11         | \$11.42         | \$9.50          | 24.3%                   |
| <i>Thryv Holdings (THRY)</i>              | <i>9,569</i>     | <i>\$10.60</i> | <i>\$14.00</i>  | <i>\$11.075</i> | <i>30.7%</i>            |
| Roblox (RBLX)                             | 97,069,344       | \$60.50        | \$74.83         | \$69.50         | 20.6%                   |
| Coinbase Global (COIN)                    | 81,065,750       | \$310.00       | \$429.54        | \$328.28        | 36.4%                   |
| SquareSpace (SQSP)                        | 5,471,014        | \$42.82        | \$50.02         | \$43.65         | 16.5%                   |
| ZipRecruiter (ZIP)                        | 16,606,301       | \$19.32        | \$21.69         | \$21.10         | 11.2%                   |
| Amplitude (AMPL)                          | 11,529,531       | \$50.00        | \$54.90         | \$54.80         | 8.9%                    |
| Warby Parker (WRBY)                       | 13,805,076       | \$52.96        | \$54.74         | \$54.49         | 3.3%                    |
| <i>Bright Green (BGXX)</i>                | <i>315,750</i>   | <i>\$15.99</i> | <i>\$36.44</i>  | <i>\$26.245</i> | <i>77.9%</i>            |
| <i>Surf Air Mobility (SFRM)</i>           | <i>3,237,295</i> | <i>\$2.75</i>  | <i>\$5.00</i>   | <i>\$3.15</i>   | <i>71.4%</i>            |
| <i>Courtside Group (PODC)</i>             | <i>1,054,440</i> | <i>\$3.89</i>  | <i>\$5.80</i>   | <i>\$4.39</i>   | <i>43.5%</i>            |
| <i>reAlpha Tech (AIRE)</i>                | <i>32,239</i>    | <i>\$23.01</i> | <i>\$575.41</i> | <i>\$406.67</i> | <i>135.8%</i>           |
| <i>FibroBiologics (FBLG)</i>              | <i>68,731</i>    | <i>\$22.00</i> | <i>\$55.00</i>  | <i>\$29.10</i>  | <i>113.4%</i>           |
| <i>ZenaTech (ZENA)</i>                    | <i>324,600</i>   | <i>\$6.08</i>  | <i>\$11.00</i>  | <i>\$8.80</i>   | <i>55.9%</i>            |
| <i>Damon (DMNID)</i>                      | <i>1,040,250</i> | <i>\$2.15</i>  | <i>\$4.95</i>   | <i>\$2.41</i>   | <i>116.2%</i>           |
| <i>Cloudastructure (CSAI)</i>             | <i>19,136</i>    | <i>\$33.75</i> | <i>\$50.00</i>  | <i>\$33.75</i>  | <i>48.1%</i>            |
| <i>NeOnc Technologies Holdings (NTHI)</i> | <i>84,856</i>    | <i>\$12.11</i> | <i>\$25.00</i>  | <i>\$12.11</i>  | <i>51.6%</i>            |
| <i>Arrive AI (ARAI)</i>                   | <i>204,062</i>   | <i>\$11.10</i> | <i>\$40.00</i>  | <i>\$13.25</i>  | <i>218.1%</i>           |
| <i>Turn Therapeutics (TTRX)</i>           | <i>402,400</i>   | <i>\$6.23</i>  | <i>\$10.00</i>  | <i>\$7.00</i>   | <i>53.9%</i>            |
| <i>Aptera Motors (SEV)</i>                | <i>3,478,100</i> | <i>\$3.55</i>  | <i>\$22.43</i>  | <i>\$8.00</i>   | <i>236.0%</i>           |
| <i>OBOOK Holdings (OWLS)</i>              | <i>222,300</i>   | <i>\$18.40</i> | <i>\$90.00</i>  | <i>\$55.55</i>  | <i>128.9%</i>           |
| <i>Nomadar (NOMA)</i>                     | <i>105,555</i>   | <i>\$15.92</i> | <i>\$57.70</i>  | <i>\$21.00</i>  | <i>198.9%</i>           |



**Table 13b** (updated April 28, 2025)**Long-run Returns on Auction IPOs and Direct Listings**

23 IPOs using auctions from 1999-2008, including one bank offering (B of I Holdings), are used, along with 12 direct listings from 2018-2021, with returns calculated through December 31, 2024. The companies are listed in Tables 13 (auctions) and 13a (direct listings). The five IPOs during 2020-2022 that used bookbuilding with limit orders, listed in Table 13 as auctions, are not included. There have also been seven direct listings of small companies during 2022-2025, all of which displayed high first-day volatility. For the direct listings, the first-day return is computed from the opening price to the closing price, whereas for the auction IPOs, the offer price is used to calculate the first-day return. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year or five-year anniversary or the delisting date, or December 31, 2024. Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. The market-adjusted and style-adjusted returns are the average buy-and-hold return on the IPOs minus the average compounded return on the benchmark. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding.

**Panel A: 3-year Returns on Auction IPOs and Direct Listings from 1999-2021**

| Sector               | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                      |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Auction IPOs         | 23             | 12.7%                    | 87.5%                              | 79.2%           | 10.2%          |
| Direct Listings      | 12             | 2.1%                     | -3.6%                              | -36.4%          | -40.7%         |
| Other IPOs 1999-2021 | 3,404          | 30.2%                    | -3.4%                              | -17.5%          | -23.0%         |

6 of the 23 auction IPOs had 3-year buy-and-hold returns of at least 150%. The style-adjusted return for the auction IPOs is much lower than the market-adjusted return because two of the matching firms had 3-year buy-and-hold returns of over 700%.

**Panel B: 5-year Returns on Auction IPOs and Direct Listings from 1999-2021**

| Sector               | Number of IPOs | Average First-day Return | Average 5-year Buy-and-hold Return |                 |                |
|----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                      |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Auction IPOs         | 23             | 12.7%                    | 89.2%                              | 71.5%           | 3.5%           |
| Direct Listings      | 12             | 2.1%                     | 41.8%                              | -8.0%           | -5.0%          |
| Other IPOs 1999-2021 | 3,404          | 30.2%                    | 9.4%                               | -20.5%          | -30.7%         |

**Table 14** (updated January 7, 2025)

**The Market Share of Foreign Companies among U.S. IPOs, 1980-2024**

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 other databases frequently classify 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 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.

There are 9 unit ADRs (2 in 1993, and 1 each in 1994, 1995, 1996, 1997, 2009, 2010, and 2023) that are included.

For the column “Mean IR%” (Mean percentage initial return, measured from the offer price to the first-day close), market prices are missing for 11 of the 583 ADRs.

In addition to the IPOs listed in this table, there have been more than fifty Chinese IPOs with an offer price of below \$5.00 per share, plus some unit offers. Some of these deals were best efforts offerings. Those with an offer price below \$5 per share include the following (these deals raised a median of less than \$10 million):

|      |                                          |
|------|------------------------------------------|
| 2007 | 2                                        |
| 2008 | 1                                        |
| 2009 | 2                                        |
| 2010 | 4                                        |
| 2015 | 1                                        |
| 2016 | 1                                        |
| 2017 | 2 + 2 best efforts offers                |
| 2018 | 3                                        |
| 2019 | 4                                        |
| 2020 | 3                                        |
| 2021 | 6                                        |
| 2022 | 3                                        |
| 2023 | 9                                        |
| 2024 | 21 (including 1 ADR) + 22 from Hong Kong |

| Year             | IPOs including ADRs |              | Domestic     | Foreign      |            | %            | Chinese    |            | %           |
|------------------|---------------------|--------------|--------------|--------------|------------|--------------|------------|------------|-------------|
|                  | Number              | Mean IR %    |              | Total        | ADRs       | Foreign      | Total      | ADRs       | Chinese     |
| 1980             | 71                  | 14.3%        | 70           | 1            | 0          | 1.4%         | 0          | 0          | 0%          |
| 1981             | 193                 | 5.9%         | 192          | 1            | 0          | 0.5%         | 0          | 0          | 0%          |
| 1982             | 78                  | 10.9%        | 76           | 2            | 1          | 2.6%         | 0          | 0          | 0%          |
| 1983             | 453                 | 9.9%         | 446          | 7            | 2          | 1.5%         | 0          | 0          | 0%          |
| 1984             | 175                 | 3.8%         | 168          | 7            | 5          | 4.0%         | 0          | 0          | 0%          |
| 1985             | 186                 | 6.4%         | 183          | 3            | 0          | 1.6%         | 0          | 0          | 0%          |
| 1986             | 394                 | 6.1%         | 392          | 2            | 1          | 0.5%         | 0          | 0          | 0%          |
| 1987             | 285                 | 5.6%         | 281          | 4            | 0          | 1.4%         | 0          | 0          | 0%          |
| 1988             | 109                 | 5.4%         | 100          | 9            | 5          | 8.3%         | 0          | 0          | 0%          |
| 1989             | 119                 | 8.0%         | 110          | 9            | 3          | 7.6%         | 0          | 0          | 0%          |
| 1990             | 111                 | 10.7%        | 107          | 4            | 1          | 3.6%         | 0          | 0          | 0%          |
| 1991             | 288                 | 11.9%        | 278          | 10           | 2          | 3.5%         | 0          | 0          | 0%          |
| 1992             | 416                 | 10.2%        | 393          | 23           | 4          | 5.5%         | 0          | 0          | 0%          |
| 1993             | 527                 | 12.5%        | 487          | 39           | 19         | 7.6%         | 1          | 1          | 0.2%        |
| 1994             | 420                 | 9.5%         | 385          | 33           | 22         | 8.3%         | 3          | 2          | 0.7%        |
| 1995             | 477                 | 20.9%        | 436          | 41           | 16         | 8.6%         | 1          | 1          | 0.2%        |
| 1996             | 710                 | 16.9%        | 646          | 64           | 33         | 9.0%         | 1          | 1          | 0.1%        |
| 1997             | 504                 | 13.7%        | 430          | 74           | 34         | 14.7%        | 4          | 3          | 0.8%        |
| 1998             | 294                 | 21.7%        | 256          | 38           | 13         | 12.9%        | 2          | 1          | 0.7%        |
| 1999             | 501                 | 69.7%        | 450          | 51           | 26         | 10.2%        | 1          | 0          | 0.2%        |
| 2000             | 418                 | 55.4%        | 336          | 82           | 40         | 19.6%        | 7          | 4          | 1.7%        |
| 2001             | 83                  | 13.8%        | 74           | 9            | 4          | 10.8%        | 2          | 2          | 2.4%        |
| 2002             | 68                  | 9.0%         | 63           | 5            | 2          | 7.4%         | 1          | 1          | 1.5%        |
| 2003             | 66                  | 13.0%        | 60           | 6            | 3          | 9.1%         | 2          | 2          | 3.0%        |
| 2004             | 189                 | 11.9%        | 160          | 28           | 16         | 15.3%        | 9          | 9          | 4.8%        |
| 2005             | 172                 | 11.7%        | 142          | 30           | 13         | 17.4%        | 8          | 8          | 4.7%        |
| 2006             | 172                 | 12.5%        | 138          | 34           | 15         | 19.8%        | 9          | 7          | 5.2%        |
| 2007             | 190                 | 14.4%        | 138          | 52           | 31         | 27.4%        | 29         | 27         | 15.3%       |
| 2008             | 24                  | 4.3%         | 18           | 6            | 3          | 25.0%        | 3          | 3          | 16.7%       |
| 2009             | 49                  | 8.8%         | 38           | 11           | 8          | 22.4%        | 10         | 7          | 20.4%       |
| 2010             | 125                 | 12.2%        | 80           | 45           | 34         | 36.0%        | 33         | 32         | 26.4%       |
| 2011             | 93                  | 13.3%        | 70           | 23           | 12         | 24.7%        | 13         | 11         | 14.0%       |
| 2012             | 97                  | 17.2%        | 85           | 12           | 4          | 12.4%        | 2          | 2          | 2.1%        |
| 2013             | 168                 | 22.3%        | 140          | 28           | 10         | 16.8%        | 8          | 6          | 4.8%        |
| 2014             | 225                 | 14.8%        | 176          | 49           | 19         | 21.8%        | 14         | 14         | 6.2%        |
| 2015             | 126                 | 18.7%        | 104          | 22           | 8          | 17.5%        | 5          | 4          | 4.0%        |
| 2016             | 83                  | 14.1%        | 68           | 15           | 9          | 18.1%        | 6          | 6          | 7.2%        |
| 2017             | 125                 | 13.6%        | 94           | 31           | 20         | 24.8%        | 16         | 15         | 12.8%       |
| 2018             | 166                 | 17.1%        | 119          | 47           | 32         | 28.3%        | 28         | 27         | 16.9%       |
| 2019             | 138                 | 19.8%        | 100          | 38           | 27         | 27.5%        | 23         | 20         | 16.7%       |
| 2020             | 198                 | 38.3%        | 147          | 50           | 32         | 25.8%        | 29         | 25         | 15.2%       |
| 2021             | 347                 | 31.0%        | 263          | 84           | 36         | 24.2%        | 30         | 21         | 8.6%        |
| 2022             | 43                  | 54.5%        | 27           | 16           | 5          | 37.2%        | 5          | 4          | 11.6%       |
| 2023             | 67                  | 9.8%         | 39           | 28           | 13         | 41.8%        | 13         | 8          | 19.4%       |
| 2024             | 80                  | 14.2%        | 56           | 24           | 8          | 30.0%        | 9          | 6          | 11.3%       |
| <b>1980-2024</b> | <b>9,823</b>        | <b>18.8%</b> | <b>8,621</b> | <b>1,197</b> | <b>591</b> | <b>12.2%</b> | <b>327</b> | <b>280</b> | <b>3.3%</b> |

**Table 15** (updated February 28, 2025)

**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 S&Ls), companies not promptly listed on the Amex, NYSE, or Nasdaq, master limited partnerships (partnerships of natural resource companies, but not private equity firms such as Carlyle), small best efforts offers (included in the other exclusions column), and foreign companies issuing American Depositary Receipts (6 of which are banks). 11 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).

Some IPOs are excluded for multiple reasons. For example, some bank and S&L IPOs are also excluded due to not being listed on CRSP. The bank and S&L count includes all of them (other than ADRs).

In 2024, there are 2 out of 10 ADRs that are also penny stocks (IPOs with an offer price of below \$5).

Table 15

| Year         | Number of IPOs |              | CEFs, SPACs, and REITs | Units and penny stocks | LPs        | Banks and S&Ls | No CRSP listing or others | ADRs       |
|--------------|----------------|--------------|------------------------|------------------------|------------|----------------|---------------------------|------------|
|              | Gross          | Net          |                        |                        |            |                |                           |            |
| 1980         | 234            | 71           | 1                      | 56                     | 0          | 0              | 106                       | 0          |
| 1981         | 439            | 192          | 0                      | 103                    | 0          | 0              | 144                       | 0          |
| 1982         | 198            | 77           | 1                      | 14                     | 0          | 3              | 102                       | 1          |
| 1983         | 850            | 451          | 1                      | 168                    | 0          | 75             | 152                       | 3          |
| 1984         | 518            | 171          | 4                      | 139                    | 1          | 47             | 150                       | 6          |
| 1985         | 326            | 186          | 16                     | 102                    | 6          | 43             | 0                         | 0          |
| 1986         | 710            | 393          | 28                     | 183                    | 20         | 100            | 0                         | 1          |
| 1987         | 531            | 285          | 36                     | 131                    | 15         | 57             | 7                         | 0          |
| 1988         | 293            | 105          | 74                     | 88                     | 3          | 30             | 0                         | 5          |
| 1989         | 254            | 116          | 46                     | 83                     | 2          | 11             | 0                         | 3          |
| 1990         | 213            | 110          | 43                     | 55                     | 1          | 7              | 0                         | 1          |
| 1991         | 408            | 286          | 45                     | 65                     | 2          | 7              | 2                         | 2          |
| 1992         | 602            | 412          | 105                    | 80                     | 1          | 4              | 0                         | 5          |
| 1993         | 772            | 510          | 175                    | 93                     | 3          | 17             | 0                         | 17         |
| 1994         | 594            | 402          | 85                     | 106                    | 3          | 10             | 0                         | 19         |
| 1995         | 574            | 462          | 11                     | 77                     | 2          | 3              | 4                         | 16         |
| 1996         | 845            | 677          | 15                     | 104                    | 5          | 15             | 0                         | 34         |
| 1997         | 601            | 474          | 30                     | 63                     | 1          | 15             | 0                         | 34         |
| 1998         | 379            | 283          | 39                     | 20                     | 2          | 33             | 0                         | 13         |
| 1999         | 565            | 476          | 37                     | 18                     | 3          | 12             | 0                         | 26         |
| 2000         | 431            | 380          | 2                      | 8                      | 0          | 4              | 0                         | 40         |
| 2001         | 130            | 80           | 38                     | 5                      | 4          | 0              | 0                         | 4          |
| 2002         | 157            | 66           | 81                     | 2                      | 6          | 4              | 0                         | 2          |
| 2003         | 131            | 63           | 57                     | 5                      | 0          | 5              | 0                         | 3          |
| 2004         | 304            | 173          | 95                     | 5                      | 5          | 8              | 2                         | 16         |
| 2005         | 283            | 159          | 88                     | 4                      | 9          | 8              | 2                         | 13         |
| 2006         | 261            | 157          | 62                     | 5                      | 18         | 5              | 0                         | 15         |
| 2007         | 326            | 159          | 116                    | 4                      | 14         | 1              | 1                         | 31         |
| 2008         | 53             | 21           | 22                     | 3                      | 4          | 0              | 0                         | 3          |
| 2009         | 80             | 41           | 22                     | 3                      | 0          | 2              | 2                         | 10         |
| 2010         | 198            | 91           | 37                     | 9                      | 7          | 11             | 7                         | 36         |
| 2011         | 178            | 81           | 50                     | 5                      | 18         | 12             | 0                         | 12         |
| 2012         | 175            | 93           | 46                     | 4                      | 16         | 11             | 0                         | 5          |
| 2013         | 255            | 158          | 58                     | 3                      | 19         | 5              | 2                         | 10         |
| 2014         | 305            | 206          | 30                     | 10                     | 20         | 19             | 1                         | 19         |
| 2015         | 183            | 118          | 35                     | 4                      | 9          | 7              | 2                         | 8          |
| 2016         | 113            | 75           | 18                     | 4                      | 1          | 4              | 2                         | 9          |
| 2017         | 202            | 106          | 52                     | 3                      | 5          | 11             | 5                         | 20         |
| 2018         | 243            | 134          | 52                     | 9                      | 1          | 9              | 6                         | 32         |
| 2019         | 228            | 112          | 67                     | 6                      | 1          | 7              | 8                         | 27         |
| 2020         | 465            | 165          | 257                    | 7                      | 0          | 0              | 4                         | 32         |
| 2021         | 1,033          | 311          | 633                    | 34                     | 0          | 11             | 13                        | 36         |
| 2022         | 182            | 38           | 91                     | 39                     | 0          | 3              | 6                         | 5          |
| 2023         | 153            | 54           | 31                     | 47                     | 1          | 3              | 2                         | 13         |
| 2024         | 221            | 72           | 59                     | 77                     | 1          | 2              | 1                         | 10         |
| <b>Total</b> | <b>16,189</b>  | <b>9,253</b> | <b>2,892</b>           | <b>2,053</b>           | <b>228</b> | <b>641</b>     | <b>723</b>                | <b>597</b> |

**Table 15a** (updated February 28, 2025)  
**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 16,179 IPOs from 1980-2024 includes the 9,253 operating company IPOs from 1980-2024 used in most tables, plus many penny stock IPOs and unit offers, 576 ADRs with a first-day return, 229 natural resource industry limited partnerships, and 580 bank and S&L IPOs (6 of which are ADRs). There are also 14 ADRs with a missing first-day close (1 in 1986, 2 in 1988, 2 in 1989, 2 in 1992, 2 in 1993, 3 in 1994, 1 in 1995, 1 in 1997). For 2024, the sum of ADRs, Banks, LPs, and the other 72 operating companies is reduced because of a bank best efforts offer and 2 penny stock ADRs.

As with Table 15, the net number of IPOs in the first column excludes Special Purpose Acquisition Companies (SPACs), closed-end funds (not including interval 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 were previously not included as SPACs, but I have recently added those from 1988-1997. 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 580 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. **Many bank demutualizations use best efforts offerings, and in most years I exclude these 200+ IPOs.** The same can be said of some insurance IPOs, which I include.

The average first-day return on 570 ADR IPOs with a closing market price, including banks but excluding 6 penny stocks, is 17.0%, with a range of -37.2% 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 228 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 is 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<br>IPOs |              | CEFs,<br>SPACs, and<br>REITs | Closed<br>-end<br>funds | REITs      | SPACs        |              | LPs        | Banks<br>and<br>S&Ls | Including LPs,<br>Banks, & ADRs |              |
|--------------|-------------------|--------------|------------------------------|-------------------------|------------|--------------|--------------|------------|----------------------|---------------------------------|--------------|
|              | Gross             | Net          |                              |                         |            | Non-<br>unit | Unit         |            |                      | No.                             | Mean IR      |
| 1980         | 234               | 71           | 1                            | 0                       | 1          | 0            | 0            | 0          | 0                    | 71                              | 14.3%        |
| 1981         | 439               | 192          | 0                            | 0                       | 0          | 0            | 0            | 0          | 0                    | 192                             | 5.9%         |
| 1982         | 198               | 77           | 1                            | 0                       | 1          | 0            | 0            | 0          | 3                    | 80                              | 10.5%        |
| 1983         | 850               | 451          | 1                            | 0                       | 1          | 0            | 0            | 0          | 75                   | 523                             | 8.9%         |
| 1984         | 518               | 171          | 4                            | 0                       | 4          | 0            | 0            | 1          | 47                   | 220                             | 3.1%         |
| 1985         | 326               | 186          | 16                           | 1                       | 15         | 0            | 0            | 6          | 43                   | 223                             | 6.4%         |
| 1986         | 710               | 393          | 28                           | 25                      | 3          | 0            | 0            | 20         | 100                  | 497                             | 5.9%         |
| 1987         | 531               | 285          | 36                           | 32                      | 4          | 0            | 0            | 15         | 57                   | 349                             | 5.5%         |
| 1988         | 293               | 105          | 74                           | 65                      | 8          | 0            | 1            | 3          | 30                   | 136                             | 5.3%         |
| 1989         | 254               | 116          | 46                           | 46                      | 0          | 0            | 0            | 2          | 11                   | 128                             | 7.7%         |
| 1990         | 213               | 110          | 43                           | 42                      | 0          | 0            | 1            | 1          | 7                    | 118                             | 10.3%        |
| 1991         | 408               | 286          | 45                           | 42                      | 2          | 0            | 1            | 2          | 7                    | 295                             | 11.8%        |
| 1992         | 602               | 412          | 105                          | 98                      | 5          | 0            | 2            | 1          | 4                    | 420                             | 10.1%        |
| 1993         | 772               | 510          | 175                          | 121                     | 46         | 0            | 8            | 3          | 17                   | 546                             | 12.4%        |
| 1994         | 594               | 402          | 85                           | 37                      | 41         | 0            | 7            | 3          | 10                   | 432                             | 9.4%         |
| 1995         | 574               | 462          | 11                           | 2                       | 7          | 0            | 2            | 2          | 3                    | 483                             | 20.8%        |
| 1996         | 845               | 677          | 15                           | 5                       | 6          | 0            | 4            | 5          | 15                   | 727                             | 16.7%        |
| 1997         | 601               | 474          | 30                           | 7                       | 22         | 0            | 1            | 1          | 15                   | 517                             | 13.6%        |
| 1998         | 379               | 283          | 39                           | 24                      | 15         | 0            | 0            | 2          | 33                   | 323                             | 20.6%        |
| 1999         | 565               | 476          | 37                           | 35                      | 2          | 0            | 0            | 3          | 12                   | 512                             | 68.3%        |
| 2000         | 431               | 380          | 2                            | 2                       | 0          | 0            | 0            | 0          | 4                    | 420                             | 55.1%        |
| 2001         | 130               | 80           | 38                           | 38                      | 0          | 0            | 0            | 4          | 0                    | 86                              | 13.6%        |
| 2002         | 157               | 66           | 81                           | 77                      | 4          | 0            | 0            | 6          | 4                    | 77                              | 7.8%         |
| 2003         | 131               | 63           | 57                           | 49                      | 7          | 0            | 1            | 0          | 5                    | 71                              | 13.1%        |
| 2004         | 304               | 173          | 95                           | 55                      | 28         | 0            | 12           | 5          | 8                    | 201                             | 11.9%        |
| 2005         | 283               | 159          | 89                           | 50                      | 11         | 4            | 24           | 9          | 8                    | 189                             | 11.5%        |
| 2006         | 261               | 157          | 62                           | 22                      | 5          | 0            | 35           | 18         | 5                    | 195                             | 11.4%        |
| 2007         | 326               | 159          | 116                          | 47                      | 4          | 0            | 65           | 14         | 1                    | 205                             | 14.0%        |
| 2008         | 53                | 21           | 22                           | 3                       | 2          | 0            | 17           | 4          | 0                    | 28                              | 4.1%         |
| 2009         | 80                | 41           | 22                           | 13                      | 9          | 0            | 0            | 0          | 2                    | 50                              | 9.6%         |
| 2010         | 198               | 91           | 37                           | 22                      | 8          | 0            | 7            | 7          | 11                   | 139                             | 11.5%        |
| 2011         | 178               | 81           | 50                           | 25                      | 9          | 0            | 16           | 18         | 12                   | 112                             | 11.6%        |
| 2012         | 175               | 93           | 46                           | 28                      | 9          | 1            | 8            | 16         | 11                   | 122                             | 15.8%        |
| 2013         | 255               | 158          | 58                           | 28                      | 20         | 3            | 7            | 19         | 5                    | 192                             | 20.1%        |
| 2014         | 305               | 206          | 30                           | 13                      | 6          | 0            | 11           | 20         | 19                   | 261                             | 14.2%        |
| 2015         | 183               | 118          | 35                           | 8                       | 7          | 1            | 19           | 9          | 7                    | 142                             | 17.4%        |
| 2016         | 113               | 75           | 18                           | 2                       | 3          | 0            | 13           | 1          | 4                    | 89                              | 13.6%        |
| 2017         | 202               | 106          | 52                           | 9                       | 9          | 0            | 34           | 5          | 11                   | 141                             | 12.7%        |
| 2018         | 243               | 134          | 52                           | 1                       | 5          | 0            | 46           | 1          | 9                    | 176                             | 16.4%        |
| 2019         | 228               | 113          | 67                           | 6                       | 2          | 0            | 59           | 1          | 7                    | 146                             | 19.0%        |
| 2020         | 465               | 165          | 257                          | 5                       | 4          | 11           | 237          | 0          | 0                    | 197                             | 38.3%        |
| 2021         | 1,033             | 311          | 633                          | 15                      | 5          | 33           | 580          | 0          | 11                   | 349                             | 30.7%        |
| 2022         | 175               | 38           | 91                           | 4                       | 1          | 0            | 86           | 0          | 3                    | 46                              | 50.1%        |
| 2023         | 153               | 54           | 31                           | 0                       | 0          | 0            | 31           | 1          | 3                    | 71                              | 9.7%         |
| 2024         | 221               | 72           | 59                           | 0                       | 2          | 3            | 54           | 0          | 2                    | 81                              | 14.0%        |
| <b>Total</b> | <b>16,189</b>     | <b>9,253</b> | <b>2,892</b>                 | <b>1,104</b>            | <b>343</b> | <b>56</b>    | <b>1,389</b> | <b>227</b> | <b>641</b>           | <b>10,578</b>                   | <b>17.9%</b> |

**Table 15b** (updated October 21, 2025)**Special Purpose Acquisition Company (SPAC) IPOs, 1990-2025**

IR is the initial return, measured from the offer price to the first close. Proceeds are in billions and do not include overallotment shares. For 1990-1997 and 2004-2007, 50 of the initial returns are missing for SPAC OTC issues. For SPACs from before 2010, data has been provided by Tim Jenkinson, Andrew Karolyi, and Milos Vulanovic. SPAC Research, Gritstone Asset Management, and Dealogic have been used as data sources for SPACs in 2015-2025. For 1990-2022, LSEG (SDC) misclassifies over 140 SPAC IPOs, usually as closed-end funds (SIC 6726).

| Year         | Operating Company IPOs |              | SPAC IPOs |              |              | SPAC IPOs      |             |
|--------------|------------------------|--------------|-----------|--------------|--------------|----------------|-------------|
|              | Number                 | Mean IR      | Non-unit  | Unit         | Total        | Proceeds, \$b  | Mean IR     |
| 1990         | 110                    | 10.8%        | 0         | 1            | 1            | \$0.003        |             |
| 1991         | 286                    | 11.9%        | 0         | 1            | 1            | \$0.015        |             |
| 1992         | 412                    | 10.3%        | 0         | 2            | 2            | \$0.030        |             |
| 1993         | 510                    | 12.7%        | 0         | 8            | 8            | \$0.086        |             |
| 1994         | 402                    | 9.6%         | 0         | 7            | 7            | \$0.086        |             |
| 1995         | 462                    | 21.4%        | 0         | 2            | 2            | \$0.018        |             |
| 1996         | 677                    | 17.2%        | 0         | 4            | 4            | \$0.032        |             |
| 1997         | 474                    | 14.0%        | 0         | 1            | 1            | \$0.018        |             |
| 1998         | 283                    | 21.9%        | 0         | 0            | 0            |                |             |
| 1999         | 476                    | 71.2%        | 0         | 0            | 0            |                |             |
| 2000         | 380                    | 56.3%        | 0         | 0            | 0            |                |             |
| 2001         | 80                     | 14.0%        | 0         | 0            | 0            |                |             |
| 2002         | 66                     | 9.1%         | 0         | 0            | 0            |                |             |
| 2003         | 63                     | 11.7%        | 0         | 1            | 1            | \$0.024        | 0.9%        |
| 2004         | 173                    | 12.3%        | 0         | 12           | 12           | \$0.425        | 0.8%        |
| 2005         | 159                    | 10.3%        | 4         | 24           | 28           | \$1.846        | 1.9%        |
| 2006         | 157                    | 12.1%        | 0         | 35           | 35           | \$3.013        | 3.2%        |
| 2007         | 159                    | 14.0%        | 0         | 65           | 65           | \$10.985       | 0.7%        |
| 2008         | 21                     | 5.7%         | 0         | 17           | 17           | \$3.627        | 0.2%        |
| 2009         | 41                     | 9.8%         | 0         | 0            | 0            | 0              |             |
| 2010         | 91                     | 9.4%         | 0         | 7            | 7            | \$0.513        | -1.5%       |
| 2011         | 81                     | 13.9%        | 0         | 16           | 16           | \$1.049        | 0.4%        |
| 2012         | 93                     | 17.7%        | 1         | 8            | 9            | \$0.475        | 0.0%        |
| 2013         | 158                    | 20.9%        | 3         | 7            | 10           | \$1.33         | 0.2%        |
| 2014         | 206                    | 15.5%        | 0         | 11           | 11           | \$1.56         | -0.1%       |
| 2015         | 118                    | 19.2%        | 1         | 19           | 20           | \$3.62         | 0.4%        |
| 2016         | 75                     | 14.5%        | 0         | 13           | 13           | \$3.22         | 0.3%        |
| 2017         | 106                    | 12.9%        | 0         | 34           | 34           | \$9.00         | 0.7%        |
| 2018         | 134                    | 18.6%        | 0         | 46           | 46           | \$9.94         | 0.4%        |
| 2019         | 113                    | 23.5%        | 0         | 59           | 59           | \$12.12        | 0.6%        |
| 2020         | 165                    | 41.6%        | 11        | 237          | 248          | \$75.34        | 1.6%        |
| 2021         | 311                    | 32.0%        | 33        | 580          | 613          | \$144.53       | 1.9%        |
| 2022         | 38                     | 48.9%        | 0         | 86           | 86           | \$12.08        | 0.1%        |
| 2023         | 54                     | 11.9%        | 0         | 31           | 31           | \$3.19         | 1.2%        |
| 2024         | 72                     | 15.3%        | 3         | 54           | 57           | \$8.67         | 0.1%        |
| <b>Total</b> | <b>7,206</b>           | <b>22.2%</b> | <b>56</b> | <b>1,387</b> | <b>1,443</b> | <b>\$306.9</b> | <b>1.2%</b> |



**SPAC IPOs by Quarter**

|       | Number | Mean IR |       | Number | Mean IR |
|-------|--------|---------|-------|--------|---------|
| 1Q 21 | 298    | 3.7%    | 1Q24  | 6      | 1.0%    |
| 2Q 21 | 60     | 0.3%    | 2Q24  | 10     | 0.3%    |
| 3Q 21 | 89     | -0.2%   | 3Q24  | 18     | -0.1%   |
| 4Q 21 | 166    | 0.5%    | 4Q24  | 23     | -0.1%   |
| 1Q 22 | 54     | 0.0%    | 1Q 25 | 19     | 0.1%    |
| 2Q 22 | 16     | 0.2%    | 2Q 25 | 44     | 1.5%    |
| 3Q 22 | 8      | 0.0%    | 3Q 25 | 35     | 0.5%    |
| 4Q 22 | 8      | 0.5%    |       |        |         |
| 1Q 23 | 11     | 1.6%    |       |        |         |
| 2Q 23 | 6      | 1.1%    |       |        |         |
| 3Q 23 | 5      | 1.2%    |       |        |         |
| 4Q 23 | 9      | 0.9%    |       |        |         |

**Table 15c (March 18, 2025)**  
**Post-merger Returns on deSPACs, 2012-2022**

This table is an updated version of Table 4 in “SPACs” by Minmo Gahng, Jay R. Ritter, and Donghang Zhang, published in the Sept. 2023 *Review of Financial Studies*. The table reports average equally weighted deSPAC period common share percentage returns based on a buy-and-hold strategy (Equation (3)) in which an investor purchases common shares of a merged company at the close of the first day of trading as a new entity (the deSPAC) and holds them for 1 or 3 years. The year column represents the year of the merger. The sample consists of 447 business combinations consummated between January 2010 and December 2022, after excluding a few deSPACs that were listed OTC rather than on Nasdaq or the NYSE. Returns include dividend yields and capital gains. When the full 1- or 3-year data are not available, we calculate the returns based on available data. For example, if a merged company started to trade in March 2020 and delisted in August 2020, we report the buy-and-hold returns from March 2020 to August 2020 for both one-year and three-year returns (not annualized). Returns end on December 29, 2023, a Friday. The CRSP return is the total return on the CRSP value-weighted market index, matched to each investment period. The main source for deSPAC information is SPACResearch.com.

For 2021 and 2022, the 3-year returns are for less than 3 years. In 2021, GNRS is not included because this deSPAC was traded OTC. (The returns are reported for 63 of the 64 deSPACs.) It should be noted that if there is a high redemption rate, the public float after the deSPAC can be quite low until shares that were locked up become available for trading. For 2023, returns are measured from an assumed \$10 price to the Dec. 29, 2023 split-adjusted close. For two deSPACs in 2023, the market price is multiplied by 1.4 due to bonus shares given to non-redeeming shareholders. The return for a deSPAC on Dec. 29, 2023 is not included. For 2024, returns are measured through Dec. 31, 2024, from an assumed \$10 price, for 71 of 73 deSPACs, excluding one that merged on Dec. 31, 2024 and one that never listed.

The equally weighted average deSPAC return would be similar if a purchase price of \$10 was used, since the average first closing deSPAC price is close to \$10. The average deSPAC return would be higher, however, if a public cash-weighted return was reported, because it tends to be the case that deSPACs with high redemption rates (low public cash) have worse subsequent returns. Also, some deSPACs involve side payments to non-redeeming shareholders, for instance giving 0.5 sponsor shares to each non-redeeming shareholder. For these shareholders, the effective purchase price is thus approximately \$6.67 rather than \$10.00, so their returns would be higher if the deSPAC return accounted for the side payment. If these shares were sold on the first day of deSPAC trading, however, the computations would not be affected. Guilherme Junqueira assisted in the update of this table.

| Year      | Number | Average 1-year Return |        |              | Average 3-year Buy-and-hold Return |        |              |
|-----------|--------|-----------------------|--------|--------------|------------------------------------|--------|--------------|
|           |        | deSPACs               | Market | Mkt-adjusted | deSPACs                            | Market | Mkt-adjusted |
| 2012      | 1      | -53.2%                | 20.4%  | -73.6%       | -98.1%                             | 37.2%  | -135.3%      |
| 2013      | 5      | -30.1%                | 17.9%  | -48.0%       | -41.1%                             | 28.0%  | -69.1%       |
| 2014      | 4      | -51.6%                | 5.7%   | -57.3%       | -89.6%                             | 26.7%  | -116.2%      |
| 2015      | 9      | -19.5%                | 0.7%   | -20.2%       | 87.7%                              | 33.1%  | 54.6%        |
| 2016      | 9      | -5.2%                 | 19.0%  | -24.2%       | -35.1%                             | 40.3%  | -75.3%       |
| 2017      | 13     | -11.0%                | 11.7%  | -22.6%       | -44.5%                             | 30.3%  | -74.7%       |
| 2018      | 23     | -35.0%                | 8.8%   | -43.8%       | -8.1%                              | 51.7%  | -59.8%       |
| 2019      | 25     | 2.0%                  | 8.8%   | -6.8%        | -25.0%                             | 10.1%  | -35.1%       |
| 2020      | 64     | -3.0%                 | 32.6%  | -35.6%       | -56.0%                             | 28.6%  | -84.6%       |
| 2021      | 198    | -64.2%                | -10.3% | -53.9%       | -73.0%                             | 7.0%   | -80.0%       |
| 2022      | 102    | -63.8%                | 5.0%   | -68.8%       | -63.8%                             | 16.9%  | -80.7%       |
| 2023      | 98     | -59.1%                |        |              |                                    |        |              |
| 2024      | 73     | -62.0%                |        |              |                                    |        |              |
| <hr/>     |        |                       |        |              |                                    |        |              |
| 2012-2022 | 451    | -46.3%                | 3.1%   | -49.4%       | -57.7%                             | 17.0%  | -74.7%       |

**Table 16** (updated March 31, 2025)**Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2023**

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2024 purchasing power using the Consumer Price Index. 9,181 IPOs from 1980-2023 are used, with returns calculated through the end of December 2024. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. mm is millions of dollars. Buy-and-hold returns are calculated until the earlier of the three-year anniversary or the delisting date (no later than Dec. 31 of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Specifically, the firm with the closest book-to-market ratio within the size decile of the IPO is used for the matching firm. For post-issue book value of equity numbers, I use the post-issue common equity numbers from SDC with corrections by checking the prospectus, and for the remaining missing numbers I use the equity book values reported for the nearest quarter after the IPO on COMPUSTAT, and further missing numbers are calculated using the reported pre-IPO equity book values plus the amount of the proceeds (assuming that 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. If a matching firm is delisted before the IPO, it is assumed that the proceeds of the delisted firm are then invested in the next-best matching firm at the time of the IPO. All returns include dividends and capital gains, including the index returns.

| Sales (in 2024\$) | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                   |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| 0-9.999 mm        | 1,743          | 23.8%                    | -15.7%                             | -51.7%          | -34.1%         |
| 10-19.999 mm      | 645            | 28.5%                    | -1.0%                              | -36.5%          | -19.4%         |
| 20-49.999 mm      | 1,392          | 24.5%                    | 14.6%                              | -28.2%          | -10.8%         |
| 50-99.999 mm      | 1,388          | 19.1%                    | 27.1%                              | -15.4%          | -3.0%          |
| 100-499.999 mm    | 2,562          | 15.0%                    | 40.0%                              | -1.7%           | 6.4%           |
| 500 mm and up     | 1,451          | 10.4%                    | 31.3%                              | -4.7%           | -3.9%          |
| 0-99.999 mm       | 5,168          | 23.3%                    | 5.8%                               | -33.7%          | -17.6%         |
| 100 mm and up     | 4,013          | 13.4%                    | 36.9%                              | -2.8%           | 2.7%           |
| <b>1980-2023</b>  | <b>9,181</b>   | <b>18.9%</b>             | <b>19.4%</b>                       | <b>-20.2%</b>   | <b>-8.8%</b>   |

**Table 16a** (updated March 31, 2025)

**Long-run Returns on IPOs Categorized by the Pre-issue Sales of the Firm, 1980-2023**

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

| Sales (in 2024\$)     | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Less than \$1 billion | 8,346          | 19.9%                    | 18.1%                              | -22.0%          | -9.6%          |
| \$1 billion and up    | 835            | 9.6%                     | 32.2%                              | -1.8%           | 0.1%           |
| <b>1980-2023</b>      | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

Note: For example, a -20.2% 3-year market-adjusted buy-and-hold return for all IPOs corresponds to an annualized market-adjusted return of -5.4% per year, with an average holding period of 2.8 years, because  $1.194/1.396=0.855$  (which is the wealth relative, or public market equivalent), and  $0.855^{0.357}=0.946$ . The 39.6% buy-and-hold market return is 20.2% above the 19.4% average buy-and-hold return, and 0.357 is equal to  $1/2.8$ . Alternatively stated, underperformance of 5.4% per year for 2.8 years results in a wealth relative of 0.855.

**Table 16b** (updated April 4, 2025)

**Long-run Returns on IPOs Categorized by the Profitability of the Firm, 1980-2023**

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2024 purchasing power using the Consumer Price Index. 9,181 IPOs (including the 2016 IPO of BATS Global Markets, which listed on BATS) from 1980-2023 are used, with returns calculated through December 31, 2024. IPOs with an offer price below \$5.00 per share, unit offers, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. The market-adjusted and style-adjusted returns are the average buy-and-hold return on the IPOs minus the average compounded return on the benchmark. For post-issue book value of equity numbers, I use the post-issue common equity numbers from SDC with corrections by checking the prospectus, and for the remaining missing numbers I use the equity book values reported for the nearest quarter after the IPO on COMPUSTAT, and further missing numbers are calculated using the reported pre-IPO equity book values plus the amount of the proceeds (assuming that overallotment option shares and costs of issuing offset each other) times the fraction of the primary shares. For dual-class shares, the post-issue book-to-market ratio is calculated using the larger of the post-issue number of shares reported from SDC (with corrections to account for all share classes) and the total shares outstanding reported from CRSP at end of the IPO date. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding. Earnings per share (EPS) is for the pre-IPO last twelve months (LTM). All returns include dividends and capital gains, including the index returns.

| Trailing LTM EPS                       | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------------------------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                                        |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Unprofitable                           | 3,874          | 26.6%                    | -0.6%                              | -30.5%          | -23.5%         |
| Profitable                             | 5,307          | 13.3%                    | 34.0%                              | -12.7%          | 2.0%           |
| Sales less than \$100 million (\$2024) |                |                          |                                    |                 |                |
| Unprofitable                           | 2,863          | 29.5%                    | -10.2%                             | -40.5%          | -29.7%         |
| Profitable                             | 2,305          | 15.5%                    | 25.7%                              | -25.3%          | -2.6%          |
| All less than \$100m                   | 5,168          | 23.3%                    | 5.8%                               | -33.7%          | -17.6%         |
| Sales more than \$100 million (\$2024) |                |                          |                                    |                 |                |
| Unprofitable                           | 1,011          | 18.5%                    | 26.6%                              | -2.3%           | -5.8%          |
| Profitable                             | 3,002          | 11.6%                    | 40.3%                              | -3.0%           | 5.6%           |
| All more than \$100m                   | 4,013          | 13.4%                    | 36.9%                              | -2.8%           | 2.7%           |
| <b>1980-2023</b>                       | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

**Table 16c** (updated April 4, 2025)  
**Long-run Returns Measured from the Offer Price on Tech and non-Tech Stock IPOs**  
**Excluding the Internet Bubble, 1980-2023**

**Panel A: IPOs from 1980-2023, excluding 1999-2000, categorized by industry**

| Industry | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|          |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech     | 2,689          | 19.8%                    | 73.3%                              | 25.8%           | 46.0%          |
| Non-Tech | 5,636          | 11.6%                    | 30.3%                              | -14.7%          | -1.6%          |
| All      | 8,325          | 14.2%                    | 44.2%                              | -1.6%           | 13.8%          |

**Panel B: Categorized by sales and industry (sales in \$2024)**

| LTM Sales             | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Sales < \$100 million |                |                          |                                    |                 |                |
| Tech                  | 1,726          | 20.0%                    | 68.2%                              | 16.2%           | 41.7%          |
| Non-Tech              | 2,788          | 13.7%                    | 13.3%                              | -32.8%          | -13.6%         |
| Sales > \$100 million |                |                          |                                    |                 |                |
| Tech                  | 963            | 19.6%                    | 82.5%                              | 43.1%           | 53.8%          |
| Non-Tech              | 2,848          | 9.5%                     | 47.0%                              | 2.9%            | 10.1%          |

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

| LTM Sales             | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Sales < \$100 million |                |                          |                                    |                 |                |
| Tech                  | 937            | 17.6%                    | 72.1%                              | 16.4%           | 44.3%          |
| Non-Tech              | 1,289          | 12.0%                    | 27.0%                              | -24.9%          | -1.6%          |
| Sales > \$100 million |                |                          |                                    |                 |                |
| Tech                  | 546            | 16.5%                    | 90.7%                              | 44.2%           | 59.5%          |
| Non-Tech              | 2,347          | 9.4%                     | 49.0%                              | 3.6%            | 12.5%          |

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

| LTM Sales             | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Sales < \$100 million |                |                          |                                    |                 |                |
| Tech                  | 789            | 22.8%                    | 63.4%                              | 15.8%           | 38.6%          |
| Non-Tech              | 1,499          | 15.1%                    | 1.5%                               | -39.6%          | -23.8%         |
| Sales > \$100 million |                |                          |                                    |                 |                |
| Tech                  | 417            | 23.7%                    | 71.8%                              | 41.7%           | 46.3%          |
| Non-Tech              | 501            | 10.4%                    | 37.3%                              | -0.2%           | -1.4%          |

**Table 16d** (updated April 4, 2025)  
**Long-run Returns Measured from the First Closing Market Price on Tech and non-Tech  
Stock IPOs Excluding the Internet Bubble, 1980-2023**

**Panel A: IPOs from 1980-2023, excluding 1999-2000, categorized by industry**

| Industry | Number<br>of IPOs | Average<br>First-day<br>Return | Average 3-year Buy-and-hold Return |                     |                    |
|----------|-------------------|--------------------------------|------------------------------------|---------------------|--------------------|
|          |                   |                                | IPOs                               | Market-<br>adjusted | Style-<br>adjusted |
| Tech     | 2,689             | 19.8%                          | 42.3%                              | -5.1%               | 15.1%              |
| Non-Tech | 5,636             | 11.6%                          | 19.4%                              | -25.6%              | -12.5%             |
| All      | 8,325             | 14.2%                          | 26.8%                              | -19.0%              | -3.6%              |

**Panel B: Categorized by sales and industry (sales in \$2024)**

| LTM Sales             | Number<br>of IPOs | Average<br>First-day<br>Return | Average 3-year Buy-and-hold Return |                     |                    |
|-----------------------|-------------------|--------------------------------|------------------------------------|---------------------|--------------------|
|                       |                   |                                | IPOs                               | Market-<br>adjusted | Style-<br>adjusted |
| Sales < \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 1,726             | 20.0%                          | 36.4%                              | -15.6%              | 9.9%               |
| Non-Tech              | 2,788             | 13.7%                          | 3.5%                               | -42.6%              | -23.4%             |
| Sales > \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 963               | 19.6%                          | 53.1%                              | 13.7%               | 24.4%              |
| Non-Tech              | 2,848             | 9.5%                           | 35.0%                              | -9.0%               | -1.9%              |

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

| LTM Sales             | Number<br>of IPOs | Average<br>First-day<br>Return | Average 3-year Buy-and-hold Return |                     |                    |
|-----------------------|-------------------|--------------------------------|------------------------------------|---------------------|--------------------|
|                       |                   |                                | IPOs                               | Market-<br>adjusted | Style-<br>adjusted |
| Sales < \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 937               | 17.6%                          | 43.0%                              | -12.7%              | 15.3%              |
| Non-Tech              | 1,289             | 12.0%                          | 16.5%                              | -35.4%              | -12.1%             |
| Sales > \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 546               | 16.5%                          | 62.2%                              | 15.6%               | 30.9%              |
| Non-Tech              | 2,347             | 9.4%                           | 36.9%                              | -8.5%               | 0.4%               |

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

| LTM Sales             | Number<br>of IPOs | Average<br>First-day<br>Return | Average 3-year Buy-and-hold Return |                     |                    |
|-----------------------|-------------------|--------------------------------|------------------------------------|---------------------|--------------------|
|                       |                   |                                | IPOs                               | Market-<br>adjusted | Style-<br>adjusted |
| Sales < \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 789               | 22.8%                          | 28.4%                              | -19.2%              | 3.6%               |
| Non-Tech              | 1,499             | 15.1%                          | -7.7%                              | -48.8%              | -33.1%             |
| Sales > \$100 million |                   |                                |                                    |                     |                    |
| Tech                  | 417               | 23.7%                          | 41.2%                              | 11.1%               | 15.7%              |
| Non-Tech              | 501               | 10.4%                          | 26.1%                              | -11.4%              | -12.6%             |

**Table 16e** (April 26, 2024)

**Distribution of 3-year and 5-year Buy-and-Hold Returns on IPOs, 1975-2020**

8,883 IPOs from 1975-2020 are used, with buy-and-hold returns calculated until the earlier of the 3-year or 5-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, SPACs, 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 18.2%, with an average 3-year buy-and-hold return (BHR) of 23.7%, measured from the first close, and 41.3%, measured from the offer price. In Panel B, the average first-day return is 12.9%, with a subsequent average 3-year buy-and-hold return of 41.7%, measured from the first close, and 58.4%, measured from the offer price. Sales is inflation-adjusted sales for the last twelve months (LTM) prior to the IPO, in dollars of January 2024 purchasing power using the CPI.

**Panel A: All 8,883 IPOs**

| 3-year buy-and-hold<br>return | From the first close |               | From the offer price |               |
|-------------------------------|----------------------|---------------|----------------------|---------------|
|                               | Number of IPOs       | Percentage    | Number of IPOs       | Percentage    |
| BHR<-50%                      | 3,329                | 37.5%         | 3,028                | 34.1%         |
| -50%<BHR≤0%                   | 1,919                | 21.6%         | 1,866                | 21.0%         |
| 0%<BHR≤50%                    | 1,309                | 14.7%         | 1,323                | 14.9%         |
| 50%<BHR≤100%                  | 864                  | 9.7%          | 903                  | 10.2%         |
| 100%<BHR≤200%                 | 751                  | 8.5%          | 869                  | 9.8%          |
| 200%<BHR≤500%                 | 550                  | 6.2%          | 674                  | 7.6%          |
| 500%<BHR≤1,000%               | 122                  | 1.4%          | 158                  | 1.8%          |
| 1,000%<BHR≤2,000%             | 27                   | 0.3%          | 45                   | 0.5%          |
| 2,000%<BHR≤3,000%             | 6                    | 0.1%          | 10                   | 0.1%          |
| 3,000%<BHR                    | 6                    | 0.1%          | 7                    | 0.1%          |
| <b>1975-2020</b>              | <b>8,883</b>         | <b>100.0%</b> | <b>8,883</b>         | <b>100.0%</b> |

**Panel B: 3,876 IPOs with LTM Sales of \$100 million or more (\$2024)**

| 3-year buy-and-hold<br>return | From the first close |               | From the offer price |               |
|-------------------------------|----------------------|---------------|----------------------|---------------|
|                               | Number of IPOs       | Percentage    | Number of IPOs       | Percentage    |
| BHR<-50%                      | 949                  | 24.5%         | 838                  | 21.6%         |
| -50%<BHR≤0%                   | 875                  | 22.6%         | 822                  | 21.2%         |
| 0%<BHR≤50%                    | 744                  | 19.2%         | 729                  | 18.8%         |
| 50%<BHR≤100%                  | 522                  | 13.5%         | 530                  | 13.7%         |
| 100%<BHR≤200%                 | 441                  | 11.4%         | 519                  | 13.4%         |
| 200%<BHR≤500%                 | 285                  | 7.3%          | 358                  | 9.2%          |
| 500%<BHR≤1,000%               | 50                   | 1.3%          | 61                   | 1.6%          |
| 1,000%<BHR≤2,000%             | 8                    | 0.2%          | 14                   | 0.4%          |
| 2,000%<BHR≤3,000%             | 1                    | 0.0%          | 4                    | 0.1%          |
| 3,000%<BHR                    | 1                    | 0.0%          | 1                    | 0.0%          |
| <b>1975-2020</b>              | <b>3,876</b>         | <b>100.0%</b> | <b>3,876</b>         | <b>100.0%</b> |



**Table 16e** (continued)

The average first-day return in Panel C is 18.2%, with an average 5-year buy-and-hold return (BHR) of 39.6%, measured from the first close, and 59.3%, measured from the offer price. In Panel D, the average first-day return is 12.9%, with a subsequent average 5-year buy-and-hold return of 60.2%, measured from the first close, and 79.1%, measured from the offer price. Sales is inflation-adjusted sales for the last twelve months (LTM) prior to the IPO, in dollars of January 2024 purchasing power using the CPI. For the 2019 and 2020 cohorts, returns are calculated through Friday, Dec. 29, 2023 unless an IPO was delisted earlier. Columns may not add to 100% due to rounding.

Panel C: All 8,883 IPOs from 1975-2020

| 5-year buy-and-hold<br>return | From the first close |               | From the offer price |               |
|-------------------------------|----------------------|---------------|----------------------|---------------|
|                               | Number of IPOs       | Percentage    | Number of IPOs       | Percentage    |
| BHR<-50%                      | 3,710                | 41.8%         | 3,447                | 38.8%         |
| -50%<BHR≤0%                   | 1,598                | 18.0%         | 1,549                | 17.4%         |
| 0%<BHR≤50%                    | 1,103                | 12.4%         | 1,108                | 12.5%         |
| 50%<BHR≤100%                  | 740                  | 8.3%          | 783                  | 8.8%          |
| 100%<BHR≤200%                 | 809                  | 9.1%          | 870                  | 9.8%          |
| 200%<BHR≤500%                 | 642                  | 7.2%          | 776                  | 8.7%          |
| 500%<BHR≤1,000%               | 185                  | 2.1%          | 224                  | 2.5%          |
| 1,000%<BHR≤2,000%             | 73                   | 0.8%          | 88                   | 1.0%          |
| 2,000%<BHR≤3,000%             | 13                   | 0.1%          | 25                   | 0.3%          |
| 3,000%<BHR                    | 10                   | 0.1%          | 13                   | 0.1%          |
| <b>1975-2020</b>              | <b>8,883</b>         | <b>100.0%</b> | <b>8,883</b>         | <b>100.0%</b> |

Panel D: 3,876 IPOs with LTM Sales of \$100 million or more (\$2024)

| 5-year buy-and-hold<br>return | From the first close |               | From the offer price |               |
|-------------------------------|----------------------|---------------|----------------------|---------------|
|                               | Number of IPOs       | Percentage    | Number of IPOs       | Percentage    |
| BHR<-50%                      | 1,105                | 28.5%         | 1,001                | 25.8%         |
| -50%<BHR≤0%                   | 759                  | 19.6%         | 734                  | 18.9%         |
| 0%<BHR≤50%                    | 605                  | 15.6%         | 586                  | 15.1%         |
| 50%<BHR≤100%                  | 447                  | 11.5%         | 458                  | 11.8%         |
| 100%<BHR≤200%                 | 484                  | 12.5%         | 507                  | 13.1%         |
| 200%<BHR≤500%                 | 352                  | 9.1%          | 434                  | 11.2%         |
| 500%<BHR≤1,000%               | 85                   | 2.2%          | 104                  | 2.7%          |
| 1,000%<BHR≤2,000%             | 34                   | 0.9%          | 41                   | 1.1%          |
| 2,000%<BHR≤3,000%             | 4                    | 0.1%          | 9                    | 0.2%          |
| 3,000%<BHR                    | 1                    | 0.0%          | 2                    | 0.1%          |
| <b>1975-2020</b>              | <b>3,876</b>         | <b>100.0%</b> | <b>3,876</b>         | <b>100.0%</b> |

**Table 16f** (updated April 4, 2025)**Aftermarket Returns with and without Including the First-day Return**

9,181 operating company IPOs from 1980-2023 are used, with returns calculated through December 31, 2024. IPOs with an offer price below \$5.00 per share, unit offers, SPACs, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). 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. Further details are reported in the captions to Tables 16a and 16b. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding.

Tables 16c and 16d report similar numbers, but those tables exclude IPOs from the internet bubble years of 1999-2000.

**Panel A:****Long-run Returns Measured from the Offer Price on Tech and non-Tech IPOs, 1980-2023**

| Sector   | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|          |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech     | 3,320          | 31.2%                    | 50.1%                              | 15.6%           | 28.0%          |
| Non-Tech | 5,861          | 12.0%                    | 28.9%                              | -13.6%          | -2.7%          |
| All      | 9,181          | 18.9%                    | 36.5%                              | -.03%           | 8.4%           |

**Panel B:****Long-run Returns Measured from the First Close on Tech and non-Tech IPOs, 1980-2023**

| Sector   | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|          |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech     | 3,320          | 31.2%                    | 21.8%                              | -12.6%          | -0.2%          |
| Non-Tech | 5,861          | 12.0%                    | 18.0%                              | -24.5%          | -13.6%         |
| All      | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

**Table 17** (updated May 27, 2025)

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

All Last Twelve Months (LTM) sales figures for the firms going public have been converted into dollars of January 2024 purchasing power using the Consumer Price Index. IPOs from 1980-2023 are used, with returns calculated through the end of December 2024. In Panel A, the sample size is 9,181 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 \$100 million (2024 purchasing power). Buy-and-hold returns are calculated from the first close until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. All returns include dividends and capital gains, including the index returns. Jerry Cao of the Hang Seng University of Hong Kong 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 1980-2023 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           | 3,696          | 27.0%                    | 21.8%                              | -13.2%          | -2.7%          |
| NonVC-backed        | 5,485          | 13.5%                    | 17.7%                              | -24.9%          | -12.8%         |
| NonVC and nonBuyout | 4,248          | 14.7%                    | 14.3%                              | -31.8%          | -16.3%         |
| 1980-2023           | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

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

**Panel B: IPOs with at least \$100 million in LTM sales (2024 purchasing power) from 1980-2023 categorized by private equity (buyout fund) backing**

| Buyout-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                      |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Buyout-backed        | 1,100          | 9.1%                     | 30.4%                              | -0.5%           | 0.8%           |
| NonBuyout-backed     | 2,913          | 14.9%                    | 39.3%                              | -3.7%           | 3.4%           |
| All                  | 4,013          | 13.4%                    | 36.9%                              | -2.8%           | 2.7%           |

**Table 17a** (updated April 2, 2025)

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

9,181 IPOs from 1980-2023 are used, with returns calculated through the end of December 2023. Buy-and-hold returns are calculated from the first closing price until the earlier of the three-year anniversary or the delisting date (Friday, Dec. 31 of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. All returns include dividends and capital gains. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. This table is an updated version of Table 3 of my “Growth Capital-backed IPOs” published in the 2015 *Financial Review*. Growth capital-backed IPOs are defined to be IPOs with a financial sponsor that is financing investments in tangible assets and/or acquisitions are a major part of its growth strategy. Buyouts involve the financial sponsor taking control by buying out prior shareholders. Corporate venture capital and angel investors are not included as financial sponsors.

|                         | Number<br>of IPOs | Average<br>First-day<br>Return | Average 3-year Buy-and-hold Return |                     |                    |
|-------------------------|-------------------|--------------------------------|------------------------------------|---------------------|--------------------|
|                         |                   |                                | IPOs                               | Market-<br>adjusted | Style-<br>adjusted |
| VC-backed               | 3,229             | 28.8%                          | 18.8%                              | -15.1%              | -3.9%              |
| Growth capital-backed   | 467               | 14.6%                          | 43.0%                              | -0.4%               | 5.8%               |
| Buyout-backed           | 1,237             | 9.5%                           | 29.4%                              | -1.4%               | -1.0%              |
| Financial Sponsored     | 4,933             | 22.6%                          | 23.7%                              | -10.3%              | -2.3%              |
| Non-Financial Sponsored | 4,248             | 14.7%                          | 14.3%                              | -31.8%              | -16.3%             |
| All                     | 9,181             | 18.9%                          | 19.4%                              | -20.2%              | -8.8%              |

Note: The high average 3-year buy-and-hold return for growth capital-backed IPOs is partly attributable, in a mechanical sense, to the six IPOs with the highest buy-and-hold returns in this subsample: The May 10, 1984 IPO of restaurant chain This Can’t Be Yogurt (4,076.6%); the April 10, 1997 IPO of middleware software developer and distributor BEA Systems (2,562.2%); the November 15, 1989 IPO of original equipment manufacturer Solelectron (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 2, 2025)**Long-run Returns on IPOs Categorized by VC-backing, by Subperiod**

The sample is composed of 9,181 IPOs from 1980-2023, with returns calculated through the end of December 2024. Growth capital-backed IPOs are classified as venture capital (VC)-backed in all panels. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). 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 1980-2023 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        | 3,696          | 27.0%                    | 21.8%                              | -13.2%          | -2.7%          |
| NonVC-backed     | 5,485          | 13.5%                    | 17.7%                              | -24.9%          | -12.8%         |
| All              | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

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

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 513            | 8.6%                     | 31.9%                              | -14.0%          | 14.0%          |
| NonVC-backed     | 1,534          | 6.8%                     | 19.3%                              | -25.5%          | -1.8%          |
| All              | 2,047          | 7.2%                     | 22.5%                              | -22.6%          | 2.2%           |

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

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 1,266          | 17.3%                    | 60.7%                              | -1.1%           | 27.0%          |
| NonVC-backed     | 2,350          | 13.5%                    | 28.4%                              | -31.7%          | -14.8%         |
| All              | 3,616          | 14.8%                    | 39.7%                              | -21.0%          | -0.1%          |

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

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 525            | 80.9%                    | -62.3%                             | -40.5%          | -62.5%         |
| NonVC-backed     | 331            | 38.7%                    | -38.6%                             | -17.9%          | -53.3%         |
| All              | 856            | 64.6%                    | -53.1%                             | -31.8%          | -58.9%         |

**Panel E: IPOs from 2001-2023**

| 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        | 1,392          | 22.4%                    | 14.5%                              | -13.7%          | -13.3%         |
| NonVC-backed     | 1,270          | 15.0%                    | 10.6%                              | -13.4%          | -12.2%         |
| All              | 2,662          | 18.9%                    | 12.6%                              | -13.6%          | -12.7%         |

**Table 18a** (updated April 4, 2025)**Long-run Returns on IPOs Categorized by VC-backing and Real Sales**

The sample is composed of 9,181 IPOs from 1980-2023, with returns calculated through the end of December 2024. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price in Panels A and B, and from the offer price in Panels C and D, until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. Sales are the trailing twelve month revenues listed in the IPO prospectus, measured in terms of dollars of January 2024 purchasing power using the CPI. The highest 3-year buy-and-hold return from the offer price is that of Yahoo!, an April 12, 1996 VC-backed IPO with low trailing sales that jumped 153.8% on the first day and then went up another 3,589.8% during the next three years.

**Panel A: IPOs with Sales<\$100 million from 1980-2023 categorized by VC-backing**

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 2,667          | 28.7%                    | 10.7%                              | -23.1%          | -9.3%          |
| NonVC-backed     | 2,501          | 17.5%                    | 0.5%                               | -45.1%          | -26.5%         |
| All              | 5,168          | 23.3%                    | 5.8%                               | -33.7%          | -17.6%         |

**Panel B: IPOs with Sales>\$100 million from 1980-2023 categorized by VC-backing**

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 1,029          | 22.7%                    | 50.7%                              | 12.2%           | 14.5%          |
| NonVC-backed     | 2,984          | 10.1%                    | 32.1%                              | -8.0%           | -1.4%          |
| All              | 4,013          | 13.4%                    | 36.9%                              | -2.8%           | 2.7%           |

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

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 2,667          | 28.7%                    | 33.1%                              | -0.7%           | 13.1%          |
| NonVC-backed     | 2,501          | 17.5%                    | 13.3%                              | -32.3%          | -13.7%         |
| All              | 5,168          | 23.3%                    | 23.5%                              | -16.0%          | 0.1%           |

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

| VC-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| VC-backed        | 1,029          | 22.7%                    | 81.0%                              | 42.6%           | 44.9%          |
| NonVC-backed     | 2,984          | 10.1%                    | 43.8%                              | 3.7%            | 10.3%          |
| All              | 4,013          | 13.4%                    | 53.3%                              | 13.6%           | 19.1%          |

**Table 18b** (updated April 9, 2025)

**Long-run Returns on VC-backed and other IPOs Segmented by Industry, 1980-2023**

An earlier version of this table appears as Table 7 in “Going Public with IPOs and SPAC Mergers” by Rongbing Huang, Jay R. Ritter, and Donghang Zhang, forthcoming in *Research Handbook on the Structure of Private Equity and Venture Capital*. 9,181 IPOs from 1980-2023 are used, with returns calculated through December 31, 2024. IPOs with an offer price below \$5.00 per share, unit offers, SPACs, ADRs, REITs, closed end funds, natural resource partnerships, banks and S&Ls, small best efforts offers, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. of 2024 for IPOs from 2022 and 2023). The captions to Tables 2 and 6 provide industry classification details. Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. The market-adjusted and style-adjusted returns are the average buy-and-hold return on the IPOs minus the average compounded return on the benchmark. Market capitalization (size) is calculated using the first closing market price after the IPO and the post-issue number of shares outstanding.

**Panel A: Long-run Returns on VC-backed IPOs, by Industry, 1980-2023**

| Sector       | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|--------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|              |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech         | 1,996          | 37.2%                    | 26.5%                              | -4.8%           | 6.5%           |
| Life science | 800            | 15.6%                    | 9.0%                               | -24.3%          | -17.8%         |
| Other        | 900            | 14.6%                    | 22.8%                              | -22.1%          | -9.7%          |
| All          | 3,696          | 27.0%                    | 21.8%                              | -13.2%          | -2.7%          |

**Panel B: Long-run Returns on nonVC-backed IPOs, by Industry, 1980-2023**

| Sector       | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|--------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|              |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech         | 1,324          | 22.1%                    | 14.7%                              | -24.4%          | -10.4%         |
| Life science | 201            | 17.4%                    | 33.9%                              | -2.1%           | 23.8%          |
| Other        | 3,960          | 10.4%                    | 17.9%                              | -26.2%          | -15.5%         |
| All          | 5,485          | 13.5%                    | 17.7%                              | -24.9%          | -12.8%         |

Note: The high life science 3-year buy-and-hold return for the 201 nonVC-backed IPOs in Panel B is partly driven by the 2,444.8% return on the June 1980 IPO of Enzo Biochem and the 1,606.1% return on the August 2003 IPO of New River Pharmaceutical, which used a WR Hambrecht + Co auction to go public. Of the 971 life science IPOs during 1980-2021, these are two of the three top long-run performers, with the VC-backed July 1998 IPO of Abgenix being the third, with a 2,071.1% return. Moderna, a December 2018 VC-backed IPO, produced the fifth-highest return.



**Table 18c** (updated April 4, 2025)**Long-run Returns on VC-backed and other IPOs Segmented by Industry, 1999-2023**

An earlier version of this table appears as Table 8 in “Going Public with IPOs and SPAC Mergers” by Rongbing Huang, Jay R. Ritter, and Donghang Zhang, forthcoming in *Research Handbook on the Structure of Private Equity and Venture Capital*, edited by Brian Broughman and Elisabeth de Fontenay.

3,518 IPOs from 1999-2023 are used, with returns calculated through December 31, 2024. See the captions to Tables 2 and 6 in the book chapter above for a description of the sample and industry definitions.

**Panel A: Long-run Returns on VC-backed IPOs, by Industry, 1999-2023**

| Sector       | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|--------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|              |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech         | 1,034          | 54.1%                    | -13.4%                             | -19.7%          | -26.4%         |
| Life science | 591            | 18.4%                    | 2.2%                               | -23.1%          | -23.2%         |
| Other        | 292            | 23.1%                    | -0.3%                              | -21.8%          | -35.1%         |
| All          | 1,917          | 38.4%                    | -6.6%                              | -21.0%          | -26.7%         |

**Panel B: Long-run Returns on nonVC-backed IPOs, by Industry, 1999-2023**

| Sector       | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|--------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|              |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech         | 463            | 32.4%                    | -22.2%                             | -25.8%          | -38.2%         |
| Life science | 115            | 21.4%                    | 0.9%                               | -20.4%          | -13.9%         |
| Other        | 1,023          | 14.1%                    | 10.6%                              | -8.5%           | -13.5%         |
| All          | 1,601          | 19.9%                    | 0.5%                               | -14.3%          | -20.7%         |

**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 1980-2023**  
(Updated March 28, 2025)

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, 2023 (a Friday). Buy-and-hold returns for initial public offerings (IPOs) occurring after Dec. 31, 2022 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 for the early 1980s 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.

| Year      | Number of IPOs | Average First-day Return | Average One-year Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------|----------------|--------------------------|-------------------------|------------------------------------|-----------------|----------------|
|           |                |                          |                         | IPOs                               | Market-adjusted | Style-adjusted |
| 1980      | 71             | 14.3%                    | 28.7%                   | 89.8%                              | 37.0%           | 18.5%          |
| 1981      | 192            | 5.9%                     | -10.5%                  | 12.3%                              | -27.0%          | 11.0%          |
| 1982      | 77             | 11.0%                    | 101.8%                  | 37.5%                              | -31.5%          | -12.0%         |
| 1983      | 451            | 9.9%                     | -19.2%                  | 15.9%                              | -37.7%          | -4.4%          |
| 1984      | 171            | 3.7%                     | 20.0%                   | 50.2%                              | -28.5%          | 29.0%          |
| 1985      | 186            | 6.4%                     | 23.6%                   | 5.6%                               | -41.3%          | -12.3%         |
| 1986      | 393            | 6.2%                     | 9.5%                    | 16.9%                              | -22.6%          | -1.3%          |
| 1987      | 285            | 5.6%                     | -21.5%                  | -2.6%                              | -19.1%          | -11.2%         |
| 1988      | 105            | 5.5%                     | 28.7%                   | 58.0%                              | 9.7%            | 38.7%          |
| 1989      | 116            | 8.0%                     | -5.5%                   | 48.1%                              | 13.2%           | 7.2%           |
| 1990      | 110            | 10.8%                    | 4.0%                    | 9.7%                               | -35.9%          | -38.4%         |
| 1991      | 286            | 11.9%                    | 10.5%                   | 31.2%                              | -1.8%           | 5.8%           |
| 1992      | 412            | 10.3%                    | 20.5%                   | 37.4%                              | -0.2%           | 11.1%          |
| 1993      | 510            | 12.7%                    | 3.0%                    | 44.1%                              | -8.7%           | -9.5%          |
| 1994      | 402            | 9.6%                     | 27.8%                   | 78.0%                              | -5.7%           | -0.9%          |
| 1995      | 462            | 21.4%                    | 26.5%                   | 28.6%                              | -58.0%          | -24.7%         |
| 1996      | 677            | 17.2%                    | 7.1%                    | 25.2%                              | -56.8%          | 7.0%           |
| 1997      | 474            | 14.0%                    | 8.0%                    | 58.3%                              | -2.0%           | 22.0%          |
| 1998      | 283            | 21.8%                    | 18.4%                   | 22.9%                              | 5.1%            | -4.9%          |
| 1999      | 476            | 71.2%                    | 22.1%                   | -47.6%                             | -32.5%          | -60.6%         |
| 2000      | 380            | 56.4%                    | -52.9%                  | -60.1%                             | -30.9%          | -56.9%         |
| 2001      | 80             | 14.0%                    | -14.3%                  | 18.0%                              | 14.6%           | -27.8%         |
| 2002      | 66             | 9.1%                     | 3.1%                    | 68.6%                              | 39.0%           | -0.4%          |
| 2003      | 63             | 11.7%                    | 25.7%                   | 34.0%                              | -7.7%           | -11.2%         |
| 2004      | 173            | 12.3%                    | 17.8%                   | 51.4%                              | 6.9%            | -7.0%          |
| 2005      | 159            | 10.3%                    | 19.0%                   | 14.6%                              | 3.1%            | -2.5%          |
| 2006      | 157            | 12.1%                    | 21.4%                   | -28.8%                             | -11.1%          | -4.5%          |
| 2007      | 159            | 14.0%                    | -28.4%                  | -16.5%                             | -0.4%           | 0.5%           |
| 2008      | 21             | 5.7%                     | -34.4%                  | 11.4%                              | 8.1%            | 5.1%           |
| 2009      | 41             | 9.8%                     | 11.5%                   | 37.0%                              | -5.1%           | -18.3%         |
| 2010      | 91             | 9.4%                     | 15.7%                   | 36.4%                              | -9.6%           | -18.5%         |
| 2011      | 81             | 13.9%                    | -12.2%                  | 38.6%                              | -8.7%           | -11.6%         |
| 2012      | 93             | 17.7%                    | 35.7%                   | 81.9%                              | 31.8%           | 33.4%          |
| 2013      | 158            | 20.9%                    | 12.8%                   | 12.1%                              | -14.1%          | -16.1%         |
| 2014      | 206            | 15.5%                    | 20.1%                   | 17.1%                              | -9.7%           | -12.5%         |
| 2015      | 118            | 19.2%                    | -23.8%                  | 24.5%                              | -9.9%           | -27.3%         |
| 2016      | 75             | 14.5%                    | 23.3%                   | 70.5%                              | 29.5%           | 27.0%          |
| 2017      | 106            | 12.9%                    | 32.4%                   | 52.8%                              | 22.6%           | 35.6%          |
| 2018      | 134            | 18.6%                    | -6.8%                   | 79.1%                              | 23.4%           | 55.8%          |
| 2019      | 113            | 23.5%                    | 33.0%                   | 12.5%                              | -25.1%          | -8.8%          |
| 2020      | 165            | 41.6%                    | 9.9%                    | -48.1%                             | -78.6%          | -75.5%         |
| 2021      | 311            | 32.1%                    | -49.1%                  | -49.1%                             | -68.6%          | -40.9%         |
| 2022      | 38             | 48.9%                    | -27.8%                  | -23.8%                             | -61.4%          | -70.5%         |
| 2023      | 54             | 11.9%                    | -11.5%                  | -27.4%                             | -62.7%          | -84.3%         |
| 1980-1989 | 2,047          | 7.2%                     | 3.4%                    | 22.5%                              | -22.6%          | 2.2%           |
| 1990-1998 | 3,616          | 14.8%                    | 14.0%                   | 39.7%                              | -21.0%          | -0.2%          |
| 1999-2000 | 856            | 64.6%                    | -11.2%                  | -53.1%                             | -31.8%          | -58.9%         |
| 2001-2010 | 1,010          | 11.6%                    | 6.7%                    | 17.1%                              | 2.2%            | -7.6%          |
| 2011-2023 | 1,652          | 23.3%                    | -1.0%                   | 9.9%                               | -23.2%          | -15.9%         |
| 1980-2023 | 9,181          | 18.9%                    | 5.9%                    | 19.4%                              | -20.2%          | -8.8%          |

**Table 19a** (updated March 28, 2025)**Long-run Returns on IPOs Categorized by Sales, by Subperiod**

The sample is composed of 9,181 IPOs from 1980-2023, with returns calculated through the end of December 2024. Sales are the trailing twelve months reported in the IPO prospectus, converted to dollars of January \$2024 purchasing power using the CPI. IPOs with an offer price below \$5.00 per share, unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). 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. 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 1980-1995 categorized by annual sales (\$2024)**

| Small or large sales? | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| \$50 million or less  | 1,666          | 13.8%                    | 15.0%                              | -38.7%          | -10.9%         |
| Greater than \$50 mm  | 2,563          | 8.2%                     | 44.3%                              | -7.7%           | 3.2%           |
| All                   | 4,229          | 10.4%                    | 32.8%                              | -19.9%          | -2.3%          |

**Panel B: IPOs from 1996-2023 categorized by annual sales (\$2024)**

| Small or large sales? | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                       |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| \$50 million or less  | 2,114          | 33.6%                    | -15.5%                             | -41.8%          | -32.5%         |
| Greater than \$50 mm  | 2,838          | 20.8%                    | 25.4%                              | -4.5%           | -0.6%          |
| All                   | 4,952          | 26.3%                    | 7.9%                               | -20.4%          | -14.3%         |

**Table 19b** (September 25, 2025)**Long-run Returns on IPOs Categorized by Whether the Midpoint of the Original File Price Range Was Less than \$8 or Not, including Penny Stocks, IPOs from 2001-2023**

The sample is composed of 2,768 IPOs from 2001-2023, with returns calculated through the end of December 2024. IPOs with an offer price below \$5.00 per share are included. Unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). 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.

Of the 244 IPOs with a file price range of below \$8, 99 had an offer price below \$5. These 99 IPOs had average first-day returns that are even higher, and 3-year buy-and-hold returns that are even worse, than those IPOs priced at \$5 or \$6.

Penny stock IPOs were rare in 2001-2020, but there have been many in 2021-2024 (and 2025), as shown in Table 15.

**Panel A: IPOs from 2001-2023 categorized by file price range midpoint**

| File price range midpoint | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|---------------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                           |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Less than \$8.00          | 244            | 70.6%                    | -59.8%                             | -90.0%          | -84.1%         |
| \$8.00 or more            | 2,524          | 17.8%                    | 16.4%                              | -9.7%           | -9.3%          |
| All                       | 2,768          | 22.4%                    | 9.7%                               | -16.8%          | -15.9%         |

**Panel B: Low file price midpoint IPOs from 2001-2023 categorized by profitability**

| Profitable or not?   | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                      |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Last 12 months EPS<0 | 149            | 46.2%                    | -53.5%                             | -83.8%          | -74.6%         |
| Last 12 months EPS>0 | 95             | 108.8%                   | -69.6%                             | -99.9%          | -98.9%         |
| All                  | 244            | 70.6%                    | -59.8%                             | -90.0%          | -84.1%         |

**Table 19c** (October 3, 2025)**Long-run Returns on IPOs Categorized by Whether the Midpoint of the Offer Price Was Less than \$5, Exactly \$5, or Above \$5, IPOs from 2001-2023**

The sample is composed of 2,768 IPOs from 2001-2023, with returns calculated through the end of December 2024. IPOs with an offer price below \$5.00 per share are included. Unit offers, small best efforts offerings, ADRs, REITs, closed end funds, SPACs, natural resource limited partnerships, banks and S&Ls, and IPOs not listed on CRSP within six months of the offer date are excluded. Buy-and-hold returns are calculated from the first closing market price (in Panel A) and from the offer price (in Panel B) until the earlier of the three-year anniversary or the delisting date (Dec. 31 of 2024 for IPOs from 2022 and 2023). 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. There have been 106 IPOs with an offer price below \$5, and 92 with an offer price of exactly \$5. Penny stock IPOs were rare in 2001-2020, but there have been many in 2021-2024 (and 2025), as shown in Table 15.

**Panel A: IPO Returns from 2001-2023 categorized by the offer price (from 1<sup>st</sup> close)**

| Offer Price      | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                  |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Less than \$5.00 | 106            | 111.8%                   | -63.8%                             | -97.7%          | -94.8%         |
| \$5.00           | 92             | 17.7%                    | -51.0%                             | -81.0%          | -73.7%         |
| More than \$5.00 | 2,570          | 18.6%                    | 14.9%                              | -11.1%          | -10.6%         |
| All              | 2,768          | 22.4%                    | 9.7%                               | -16.8%          | -15.8%         |

**Panel B: Penny Stock IPO Average 3-year Returns from 2001-2023 from the Offer Price**

|                  |     |        |        |        |        |
|------------------|-----|--------|--------|--------|--------|
| Less than \$5.00 | 106 | 111.8% | -61.5% | -95.4% | -92.5% |
|------------------|-----|--------|--------|--------|--------|

**Panel C: IPO Median Sales, Age, and Price-to-Sales Ratio, Valued at the 1st Close**

| Offer Price      | Number of IPOs | Median Sales (\$2025) | Median Age | Median Price-to-Sales Ratio |                   |
|------------------|----------------|-----------------------|------------|-----------------------------|-------------------|
|                  |                |                       |            | Using Offer Price           | Using First Close |
| Less than \$5.00 | 106            | 13.0                  | 6          | 6.7                         | 10.1              |
| \$5.00           | 92             | 4.0                   | 7          | 17.9                        | 25.4              |
| More than \$5.00 | 2,570          | 149.2                 | 11         | 5.9                         | 6.8               |
| All              | 2,768          | 126.2                 | 10         | 6.0                         | 7.1               |

**Table 19d** (October 3, 2025)

**Characteristics of IPOs from 2024-2025 Categorized by Whether the Midpoint of the Offer Price Was Less than \$5, Exactly \$5, or Above \$5**

The sample is composed of 302 operating company IPOs from 2024-2025 (through September 30). 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. Market capitalization (size) is calculated using the first closing market price after the IPO. Trailing twelve month sales are in dollars of January 2025 purchasing power. Proceeds are in millions do not include overallotment shares. There have been 163 IPOs with an offer price below \$5, 15 with an offer price of exactly \$5, and 128 with an offer price above \$5.00.

**Panel A: Percentage of profitable companies (trailing twelve months)**

| Offer Price      | Number of IPOs | Percentage profitable | Percentage foreign | Mean proceeds and mean 1 <sup>st</sup> day percentage return |       |
|------------------|----------------|-----------------------|--------------------|--------------------------------------------------------------|-------|
|                  |                |                       |                    |                                                              |       |
| Less than \$5.00 | 164            | 66%                   | 85%                | \$8.1 m                                                      | 8.5%  |
| \$5.00           | 15             | 73%                   | 73%                | \$9.8 m                                                      | 27.8% |
| More than \$5.00 | 124            | 35%                   | 18%                | \$382.5 m                                                    | 25.2% |
| All              | 302            | 53%                   | 56%                | \$180.0m                                                     | 16.3% |

**Panel B: IPO Median Sales, Age, and Price-to-Sales Ratio, valued at the first close**

| Offer Price      | Number of IPOs | Median Sales (\$2025) | Median Age | Median Price-to-Sales Ratio |                   |
|------------------|----------------|-----------------------|------------|-----------------------------|-------------------|
|                  |                |                       |            | Using Offer Price           | Using First Close |
| Less than \$5.00 | 164            | 9.6                   | 9          | 8.5                         | 8.5               |
| \$5.00           | 15             | 9.5                   | 13         | 19.3                        | 18.0              |
| More than \$5.00 | 124            | 180.5                 | 13         | 7.2                         | 8.4               |
| All              | 302            | 17.4                  | 10         | 8.5                         | 8.9               |

**Panel C: Categorized by Listing Exchange**

| Offer Price      | Number of IPOs | Mean 1 <sup>st</sup> -day Return | Listing Exchange |           |      |
|------------------|----------------|----------------------------------|------------------|-----------|------|
|                  |                |                                  | Nasdaq           | NYSE Amer | NYSE |
| Less than \$5.00 | 164            | 8.4%                             | 147              | 17        | 0    |
| \$5.00           | 15             | 27.8%                            | 12               | 3         | 0    |
| More than \$5.00 | 124            | 25.2%                            | 70               | 7         | 47   |
| All              | 302            | 16.2%                            | 229              | 27        | 47   |

**Table 20** (updated April 25, 2025)**Returns on IPOs during the five years after issuing, for IPOs from 1980-2023**

These tables show that IPOs have underperformed other firms of the same size (market cap) by an average of 3.6% 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 on an equally weighted basis. Returns are through Dec. 31, 2024.

**Table 20-1****Percentage returns on IPOs from 1980-2023 during the first five years after issuing**

|                       | First<br>six<br>months | Second<br>six<br>months | First<br>Year | Second<br>year | Third<br>year | Fourth<br>year | Fifth<br>Year | Geometric<br>Mean<br>years 1-5 |
|-----------------------|------------------------|-------------------------|---------------|----------------|---------------|----------------|---------------|--------------------------------|
| IPO firms             | 5.1%                   | -0.1%                   | 5.8%          | 5.9%           | 12.0%         | 18.5%          | 10.2%         | 10.4%                          |
| Size-matched          | 5.4%                   | 5.5%                    | 11.4%         | 13.8%          | 15.6%         | 16.8%          | 12.6%         | 14.0%                          |
| Difference            | -0.3%                  | -5.6%                   | -5.6%         | -7.9%          | -3.4%         | 1.7%           | -2.4%         | -3.6%                          |
| IPO firms             | 5.1%                   | -0.1%                   | 5.8%          | 5.9%           | 12.0%         | 18.5%          | 10.2%         | 10.4%                          |
| Size & BM-<br>Matched | 4.2%                   | 4.0%                    | 8.3%          | 12.3%          | 12.5%         | 17.3%          | 12.5%         | 12.5%                          |
| Difference            | 1.0%                   | -4.1%                   | -2.5%         | -6.4%          | -0.5%         | 1.2%           | -2.3%         | -2.1%                          |
| No. of IPOs           | 9,181                  | 9,157                   | 9,181         | 8,976          | 8,239         | 7,089          | 6,191         |                                |

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 9,127 IPOs from 1980-2022, 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. 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 31, 2024. 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, 2023, 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<br>six<br>months | Second<br>six<br>months | First<br>year | Second<br>year | Third<br>Year | Fourth<br>year | Fifth<br>year | Geometric<br>mean<br>years 1-5 |
|-----------------------|------------------------|-------------------------|---------------|----------------|---------------|----------------|---------------|--------------------------------|
| IPO firms             | 3.6%                   | -0.8%                   | 3.4%          | 9.6%           | 12.1%         | 2.3%           | 8.1%          | 7.1%                           |
| Size-matched          | 3.7%                   | 3.4%                    | 7.0%          | 16.6%          | 16.7%         | 7.3%           | 10.1%         | 11.5%                          |
| Difference            | -0.1%                  | -4.2%                   | -3.6%         | -7.0%          | -4.6%         | -5.0%          | -2.0%         | -4.4%                          |
| IPO firms             | 3.6%                   | -0.8%                   | 3.4%          | 9.6%           | 12.1%         | 2.3%           | 8.1%          | 7.1%                           |
| Size & BM-<br>Matched | -0.1%                  | 1.5%                    | 0.9%          | 14.6%          | 9.4%          | 4.4%           | 11.1%         | 7.9%                           |
| Difference            | 3.7%                   | -2.3%                   | 2.5%          | -5.0%          | 2.7%          | -2.1%          | -3.0%         | -0.8%                          |
| No. of IPOs           | 2,047                  | 2,041                   | 2,047         | 2,013          | 1,868         | 1,706          | 1,558         |                                |

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

|                       | First<br>six<br>months | Second<br>six<br>months | First<br>year | Second<br>year | Third<br>Year | Fourth<br>year | Fifth<br>year | Geometric<br>mean<br>years 1-5 |
|-----------------------|------------------------|-------------------------|---------------|----------------|---------------|----------------|---------------|--------------------------------|
| IPO firms             | 12.9%                  | 3.6%                    | 14.9%         | 7.8%           | 9.2%          | 25.5%          | 13.0%         | 13.9%                          |
| Size-matched          | 6.6%                   | 8.6%                    | 15.8%         | 17.8%          | 16.3%         | 20.3%          | 15.8%         | 17.2%                          |
| Difference            | 6.3%                   | -5.0%                   | -0.9%         | -10.0%         | -7.1%         | 5.2%           | -2.8%         | -3.3%                          |
| IPO firms             | 12.9%                  | 3.6%                    | 14.9%         | 7.8%           | 9.1%          | 25.5%          | 13.0%         | 13.9%                          |
| Size & BM-<br>matched | 7.1%                   | 7.3%                    | 14.9%         | 15.7%          | 12.2%         | 24.3%          | 13.6%         | 16.1%                          |
| Difference            | 5.8%                   | -3.7%                   | 0.0%          | -7.9%          | -3.1%         | 1.2%           | -0.6%         | -2.2%                          |
| No. of IPOs           | 4,092                  | 4,087                   | 4,092         | 4,019          | 3,640         | 3,190          | 2,762         |                                |

**Table 20-4****Percentage returns on IPOs from 2000-2023 during the first five years after issuing**

|                       | First<br>six<br>months | Second<br>six<br>months | First<br>year | Second<br>year | Third<br>year | Fourth<br>year | Fifth<br>year | Geometric<br>mean<br>years 1-5 |
|-----------------------|------------------------|-------------------------|---------------|----------------|---------------|----------------|---------------|--------------------------------|
| IPO firms             | -4.2%                  | -4.6%                   | -4.9%         | 0.7%           | 15.5%         | 20.8%          | 7.9%          | 7.6%                           |
| Size-matched          | 5.1%                   | 2.8%                    | 8.4%          | 6.5%           | 14.0%         | 19.0%          | 9.8%          | 11.5%                          |
| Difference            | -9.3%                  | -7.4%                   | -13.3%        | -5.8%          | 1.5%          | 1.8%           | -1.9%         | -3.9%                          |
| IPO firms             | -4.2%                  | -4.6%                   | -4.9%         | 0.7%           | 15.5%         | 20.8%          | 7.9%          | 7.6%                           |
| Size & BM-<br>matched | 3.1%                   | 1.1%                    | 4.5%          | 6.2%           | 14.8%         | 17.1%          | 9.8%          | 10.4%                          |
| Difference            | -7.3%                  | -5.7%                   | -9.4%         | -5.5%          | 0.7%          | 3.7%           | -1.9%         | -2.8%                          |
| No. of IPOs           | 3,042                  | 3,029                   | 3,042         | 2,944          | 2,731         | 2,193          | 1,871         |                                |

Returns are through December 31, 2024. Thus, the fifth-year returns are only for those IPOs from 2000 to 2019, and the fourth-year returns are only for those IPOs from 2000 to 2020, etc. Note that the fifth-year returns are available only for those IPOs that survived for at least four years.

**Table 21** (updated December 30, 2024)  
**The Mean and Median Percentage Public Float, 1980-2024**

The public float is 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, multiplied by 100%.

| Year             | Number of IPOs | Public Float, % |             | Percentiles      |                  |
|------------------|----------------|-----------------|-------------|------------------|------------------|
|                  |                | Mean            | Median      | 25 <sup>th</sup> | 75 <sup>th</sup> |
| 1980             | 71             | 31.0            | 28.5        | 20.3             | 34.2             |
| 1981             | 192            | 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             | 462            | 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             | 283            | 30.7            | 27.9        | 20.7             | 37.0             |
| 1999             | 476            | 23.1            | 20.5        | 15.5             | 28.4             |
| 2000             | 380            | 21.0            | 19.4        | 14.0             | 25.2             |
| 2001             | 80             | 27.2            | 22.4        | 17.7             | 33.5             |
| 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             | 30.1            | 27.8        | 20.0             | 34.6             |
| 2011             | 81             | 23.7            | 22.2        | 15.8             | 28.2             |
| 2012             | 93             | 23.7            | 22.3        | 14.7             | 27.2             |
| 2013             | 158            | 25.0            | 23.7        | 17.6             | 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             | 106            | 21.8            | 21.5        | 15.7             | 26.1             |
| 2018             | 134            | 22.0            | 21.0        | 15.1             | 27.6             |
| 2019             | 113            | 21.0            | 19.7        | 14.1             | 25.7             |
| 2020             | 165            | 22.0            | 22.0        | 15.6             | 28.1             |
| 2021             | 311            | 18.2            | 16.7        | 11.2             | 23.8             |
| 2022             | 38             | 19.7            | 15.4        | 11.0             | 28.2             |
| 2023             | 54             | 15.4            | 12.8        | 9.1              | 20.4             |
| 2024             | 72             | 20.7            | 17.4        | 11.5             | 30.2             |
| <b>1980-2024</b> | <b>9,253</b>   | <b>29.3</b>     | <b>27.3</b> | <b>19.9</b>      | <b>35.7</b>      |

**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.

| Year      | No of<br>IPOs | No. of cohort IPOs<br>Delisted for<br>Non-distress reasons | Number of acquisitions and buyouts by |         |            |                    |         |
|-----------|---------------|------------------------------------------------------------|---------------------------------------|---------|------------|--------------------|---------|
|           |               |                                                            | Strategic Buyer                       |         |            | Financial<br>Buyer |         |
|           |               |                                                            | Public                                | Private | Percentage | Public             | Private |
| 1980      | 71            | 2                                                          | 2                                     | 0       | 2.7%       | 0                  | 0       |
| 1981      | 192           | 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      | 510           | 44                                                         | 38                                    | 4       | 8.2%       | 0                  | 2       |
| 1994      | 402           | 42                                                         | 37                                    | 4       | 10.1%      | 0                  | 1       |
| 1995      | 462           | 79                                                         | 72                                    | 6       | 16.9%      | 0                  | 1       |
| 1996      | 677           | 115                                                        | 101                                   | 11      | 16.6%      | 0                  | 3       |
| 1997      | 474           | 82                                                         | 69                                    | 6       | 15.8%      | 0                  | 7       |
| 1998      | 283           | 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      | 80            | 8                                                          | 8                                     | 0       | 10.1%      | 0                  | 0       |
| 2002      | 66            | 11                                                         | 10                                    | 1       | 16.7%      | 0                  | 0       |
| 2003      | 63            | 8                                                          | 7                                     | 0       | 11.3%      | 0                  | 1       |
| 2004      | 173           | 24                                                         | 21                                    | 0       | 12.1%      | 0                  | 1       |
| 2005      | 159           | 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      | 158           | 14                                                         | 1                                     | 0       | 8.9%       | 0                  | 0       |
| 2014      | 206           | 5                                                          | 1                                     | 0       | 2.4%       | 0                  | 1       |
| 2015      | 118           |                                                            | 0                                     | 0       |            | 0                  | 1       |
| 2016      | 75            |                                                            |                                       |         |            |                    |         |
| 2017      | 106           |                                                            |                                       |         |            |                    |         |
| 2018      | 134           |                                                            |                                       |         |            |                    |         |
| 2019      | 113           |                                                            |                                       |         |            |                    |         |
| 2020      | 165           |                                                            |                                       |         |            |                    |         |
| 2021      | 311           |                                                            |                                       |         |            |                    |         |
| 2022      | 38            |                                                            |                                       |         |            |                    |         |
| 2023      | 54            |                                                            |                                       |         |            |                    |         |
| 1980-2017 | 8,368         | 967                                                        | 794                                   | 81      | 11.4%      | 4                  | 56      |

**Table 23** (updated July 2, 2025)**Dual Class IPOs**

This table lists the number of operating company IPOs each year that have dual class shares among tech and non-tech IPOs. The sample is described in the caption to Table 4. Laura Field and Michelle Lowry supplied classifications for many of the years.

|                | Tech IPOs  |              |             | Non-tech IPOs |              |              | All IPOs   |              |              |
|----------------|------------|--------------|-------------|---------------|--------------|--------------|------------|--------------|--------------|
|                | Dual       | Total        | %           | Dual          | Total        | %            | Dual       | Total        | %            |
| 1980           | 0          | 22           | 0%          | 1             | 49           | 2.0%         | 1          | 71           | 1.4%         |
| 1981           | 2          | 72           | 2.8%        | 4             | 120          | 3.3%         | 6          | 192          | 3.1%         |
| 1982           | 0          | 42           | 0%          | 0             | 35           | 0.0%         | 0          | 77           | 0.0%         |
| 1983           | 3          | 173          | 1.7%        | 4             | 278          | 1.4%         | 7          | 451          | 1.6%         |
| 1984           | 2          | 50           | 4.0%        | 5             | 121          | 4.1%         | 7          | 171          | 4.1%         |
| 1985           | 1          | 37           | 2.7%        | 6             | 149          | 4.0%         | 7          | 186          | 3.8%         |
| 1986           | 3          | 77           | 3.9%        | 21            | 316          | 6.6%         | 24         | 393          | 6.1%         |
| 1987           | 1          | 59           | 1.7%        | 23            | 226          | 10.2%        | 24         | 285          | 8.4%         |
| 1988           | 4          | 28           | 14.3%       | 8             | 77           | 10.4%        | 12         | 105          | 11.4%        |
| 1989           | 1          | 35           | 2.9%        | 5             | 81           | 6.2%         | 6          | 116          | 5.2%         |
| 1990           | 0          | 32           | 0%          | 9             | 78           | 11.5%        | 9          | 110          | 8.2%         |
| 1991           | 6          | 71           | 8.5%        | 18            | 215          | 8.4%         | 24         | 286          | 8.4%         |
| 1992           | 4          | 115          | 3.5%        | 18            | 297          | 6.1%         | 22         | 412          | 4.9%         |
| 1993           | 3          | 127          | 2.4%        | 31            | 383          | 8.1%         | 34         | 510          | 6.7%         |
| 1994           | 7          | 115          | 6.1%        | 26            | 287          | 9.1%         | 33         | 402          | 8.2%         |
| 1995           | 8          | 205          | 3.9%        | 23            | 257          | 8.9%         | 31         | 462          | 6.7%         |
| 1996           | 14         | 276          | 5.1%        | 45            | 401          | 11.2%        | 59         | 677          | 8.7%         |
| 1997           | 10         | 174          | 5.7%        | 40            | 300          | 13.3%        | 50         | 474          | 10.5%        |
| 1998           | 8          | 113          | 7.1%        | 21            | 170          | 12.4%        | 29         | 283          | 10.2%        |
| 1999           | 22         | 370          | 5.9%        | 19            | 106          | 17.9%        | 41         | 476          | 8.6%         |
| 2000           | 18         | 261          | 6.9%        | 7             | 119          | 5.9%         | 25         | 380          | 6.6%         |
| 2001           | 2          | 24           | 8.3%        | 6             | 56           | 10.7%        | 8          | 80           | 10.0%        |
| 2002           | 1          | 20           | 5.0%        | 11            | 46           | 23.9%        | 12         | 66           | 18.2%        |
| 2003           | 1          | 18           | 5.6%        | 5             | 45           | 11.1%        | 6          | 63           | 9.5%         |
| 2004           | 3          | 61           | 4.9%        | 9             | 112          | 8.0%         | 12         | 173          | 6.9%         |
| 2005           | 9          | 45           | 20.0%       | 13            | 114          | 11.4%        | 22         | 159          | 13.8%        |
| 2006           | 1          | 48           | 2.1%        | 10            | 109          | 9.2%         | 11         | 157          | 7.0%         |
| 2007           | 5          | 76           | 6.6%        | 13            | 83           | 15.7%        | 18         | 159          | 11.3%        |
| 2008           | 0          | 6            | 0%          | 3             | 15           | 20.0%        | 3          | 21           | 14.3%        |
| 2009           | 2          | 14           | 14.3%       | 3             | 27           | 11.1%        | 5          | 41           | 12.2%        |
| 2010           | 2          | 33           | 6.1%        | 8             | 58           | 13.8%        | 10         | 91           | 11.0%        |
| 2011           | 5          | 36           | 13.9%       | 9             | 45           | 20.0%        | 14         | 81           | 17.3%        |
| 2012           | 6          | 40           | 15.0%       | 9             | 53           | 17.0%        | 15         | 93           | 16.1%        |
| 2013           | 5          | 45           | 11.1%       | 23            | 113          | 20.4%        | 28         | 158          | 17.7%        |
| 2014           | 3          | 53           | 5.7%        | 18            | 153          | 11.8%        | 21         | 206          | 10.2%        |
| 2015           | 14         | 38           | 36.8%       | 8             | 80           | 10.0%        | 22         | 118          | 18.6%        |
| 2016           | 5          | 21           | 23.8%       | 4             | 54           | 7.4%         | 9          | 75           | 12.0%        |
| 2017           | 13         | 30           | 43.3%       | 17            | 76           | 22.4%        | 30         | 106          | 28.3%        |
| 2018           | 14         | 39           | 35.9%       | 13            | 95           | 13.7%        | 27         | 134          | 20.1%        |
| 2019           | 13         | 37           | 35.1%       | 13            | 76           | 17.1%        | 26         | 113          | 23.0%        |
| 2020           | 19         | 46           | 41.3%       | 14            | 119          | 11.8%        | 33         | 165          | 20.0%        |
| 2021           | 56         | 121          | 46.3%       | 46            | 190          | 24.2%        | 102        | 311          | 32.8%        |
| 2022           | 3          | 6            | 50.0%       | 5             | 32           | 15.6%        | 8          | 38           | 21.1%        |
| 2023           | 4          | 9            | 44.4%       | 10            | 45           | 22.2%        | 14         | 54           | 25.9%        |
| 2024           | 6          | 14           | 42.9%       | 10            | 58           | 17.2%        | 16         | 72           | 22.2%        |
| <b>1980-24</b> | <b>309</b> | <b>3,334</b> | <b>9.3%</b> | <b>614</b>    | <b>5,919</b> | <b>10.3%</b> | <b>923</b> | <b>9,253</b> | <b>10.0%</b> |

**Table 24** (updated July 2, 2025)

**Long-run Returns on IPOs Categorized by Dual Class Status**

9,181 IPOs from 1980-2023 are used, with returns calculated through the end of December 2024. 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 (all of which have dual class structures), 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 close until the earlier of the three-year anniversary or the delisting date (the end December of 2024 for IPOs from 2022 and 2023). Market-adjusted returns use the CRSP value-weighted index. Style adjustments use firms matched by market cap and book-to-market ratio with at least five years of CRSP listing and no follow-on equity issues in the prior five years. All returns include dividends and capital gains, including the index returns. Firms with two or more classes of shares are classified as dual class. Firms with pre-IPO convertible preferred that converted into common at the time of the IPO are classified based on the *pro forma* (post-conversion) share structure. Laura Field and Michelle Lowry supplied classifications for many of the years.

**Panel A: IPOs from 1980-2023 categorized by dual class status**

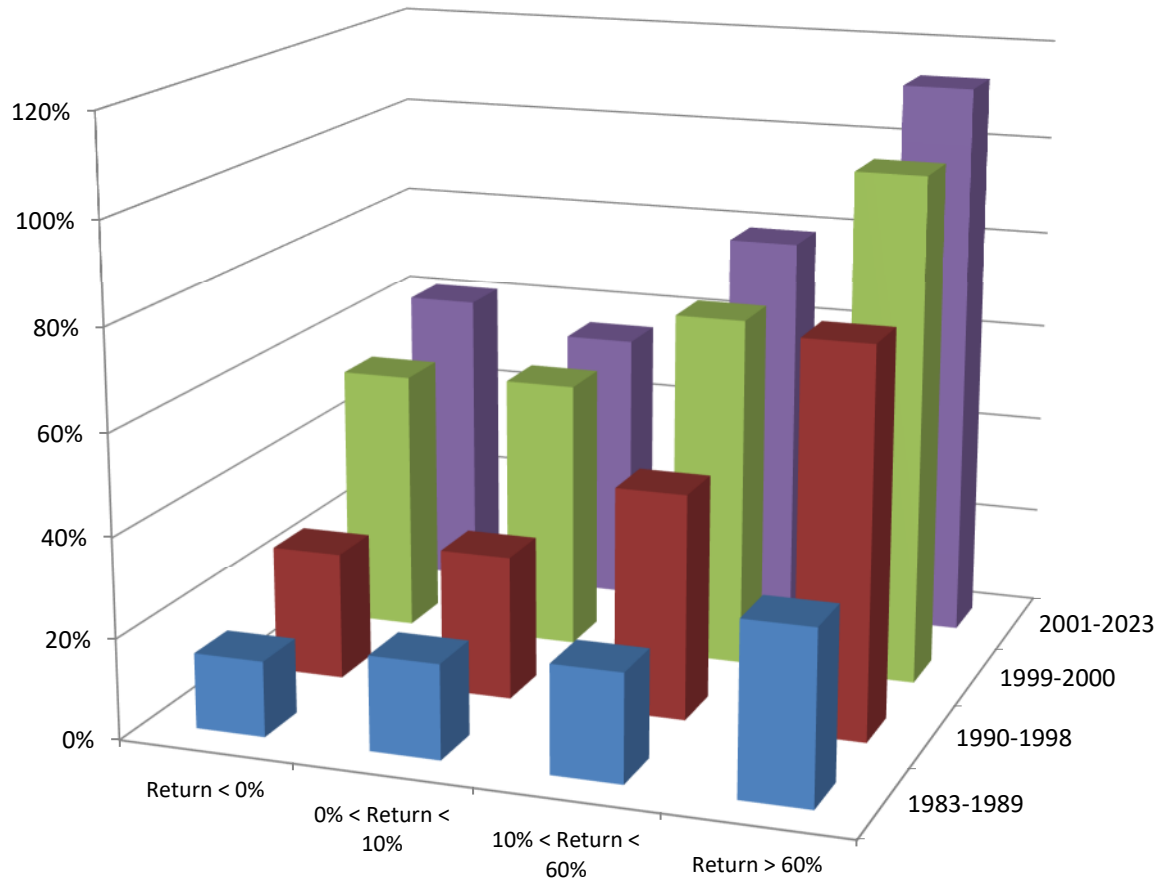
| Dual class or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|-------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                   |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Dual class        | 907            | 19.7%                    | 29.8%                              | -6.2%           | -2.3%          |
| Single class      | 8,274          | 18.9%                    | 18.2%                              | -21.7%          | -9.5%          |
| 1980-2023         | 9,181          | 18.9%                    | 19.4%                              | -20.2%          | -8.8%          |

**Panel B: IPOs from 1980-2023 categorized by dual class and tech status**

| Buyout-backed or not | Number of IPOs | Average First-day Return | Average 3-year Buy-and-hold Return |                 |                |
|----------------------|----------------|--------------------------|------------------------------------|-----------------|----------------|
|                      |                |                          | IPOs                               | Market-adjusted | Style-adjusted |
| Tech stocks          |                |                          |                                    |                 |                |
| Dual class           | 303            | 33.3%                    | 42.0%                              | 13.7%           | 18.4%          |
| Single class         | 3,017          | 31.0%                    | 19.8%                              | -15.2%          | -2.1%          |
| All tech stocks      | 3,320          | 31.2%                    | 21.8%                              | -12.6%          | -0.2%          |
| Non-tech stocks      |                |                          |                                    |                 |                |
| Dual class           | 604            | 12.8%                    | 23.6%                              | -16.1%          | -12.7%         |
| Single class         | 5,257          | 11.9%                    | 17.3%                              | -25.5%          | -13.7%         |
| All non-tech stocks  | 5,861          | 12.0%                    | 18.0%                              | -24.5%          | -13.6%         |

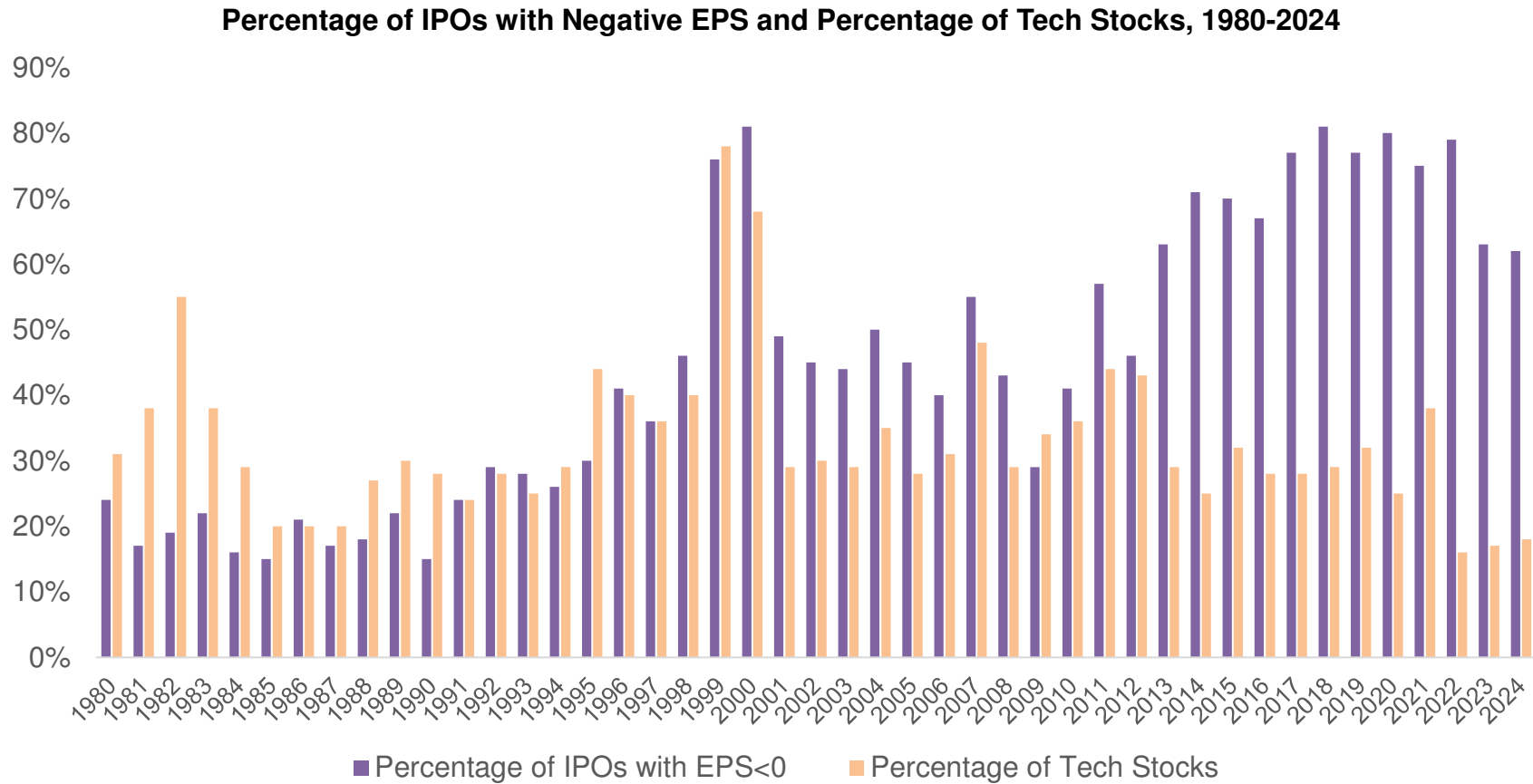
**Figure 1**

**IPO Turnover Categorized by Time Period and First-Day Return, 1983-2023**



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 2001-2023. 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. Panel C of Table 3 reports the numbers that are graphed here.

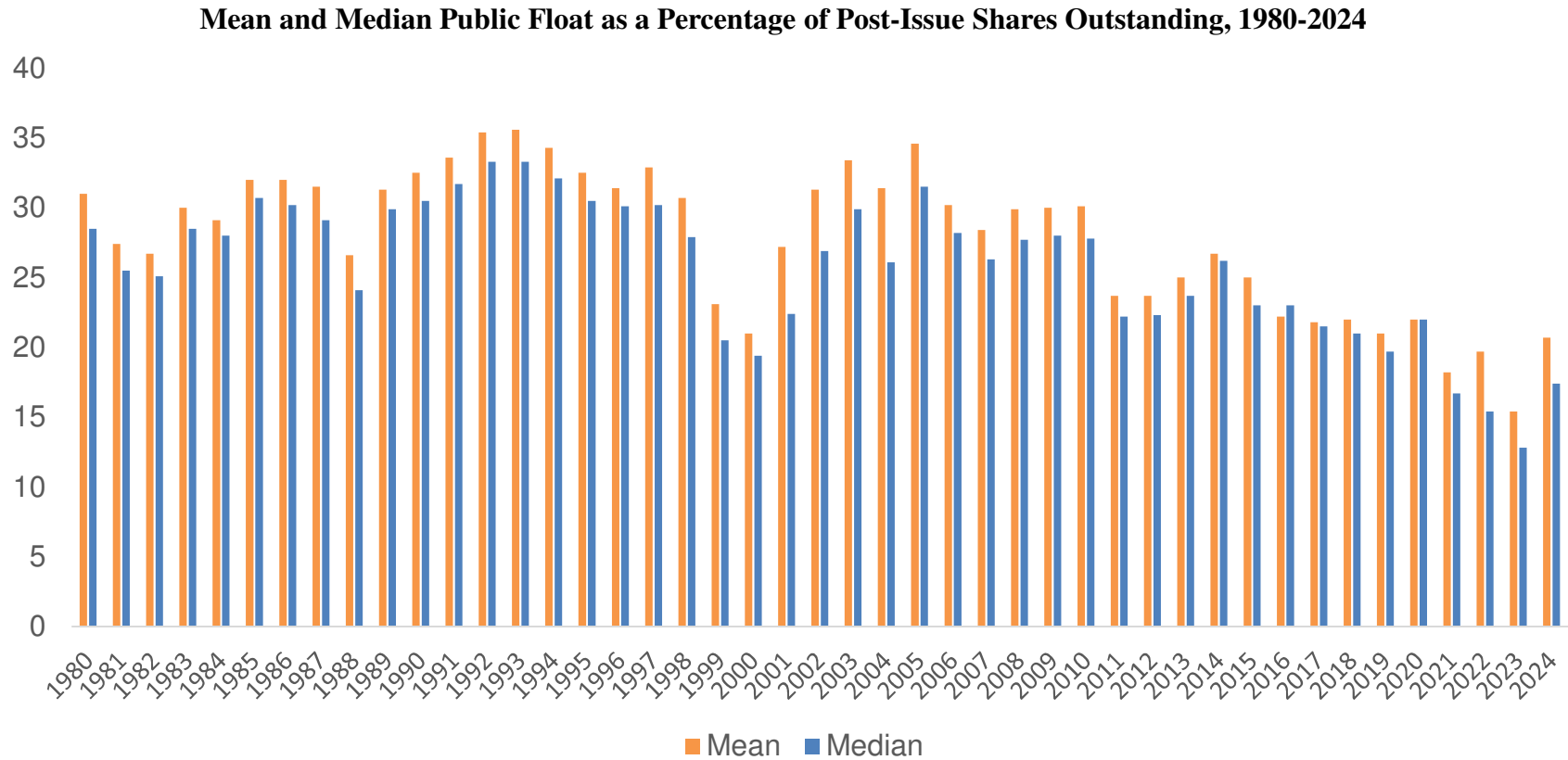
**Figure 2:** See Table 9 for details



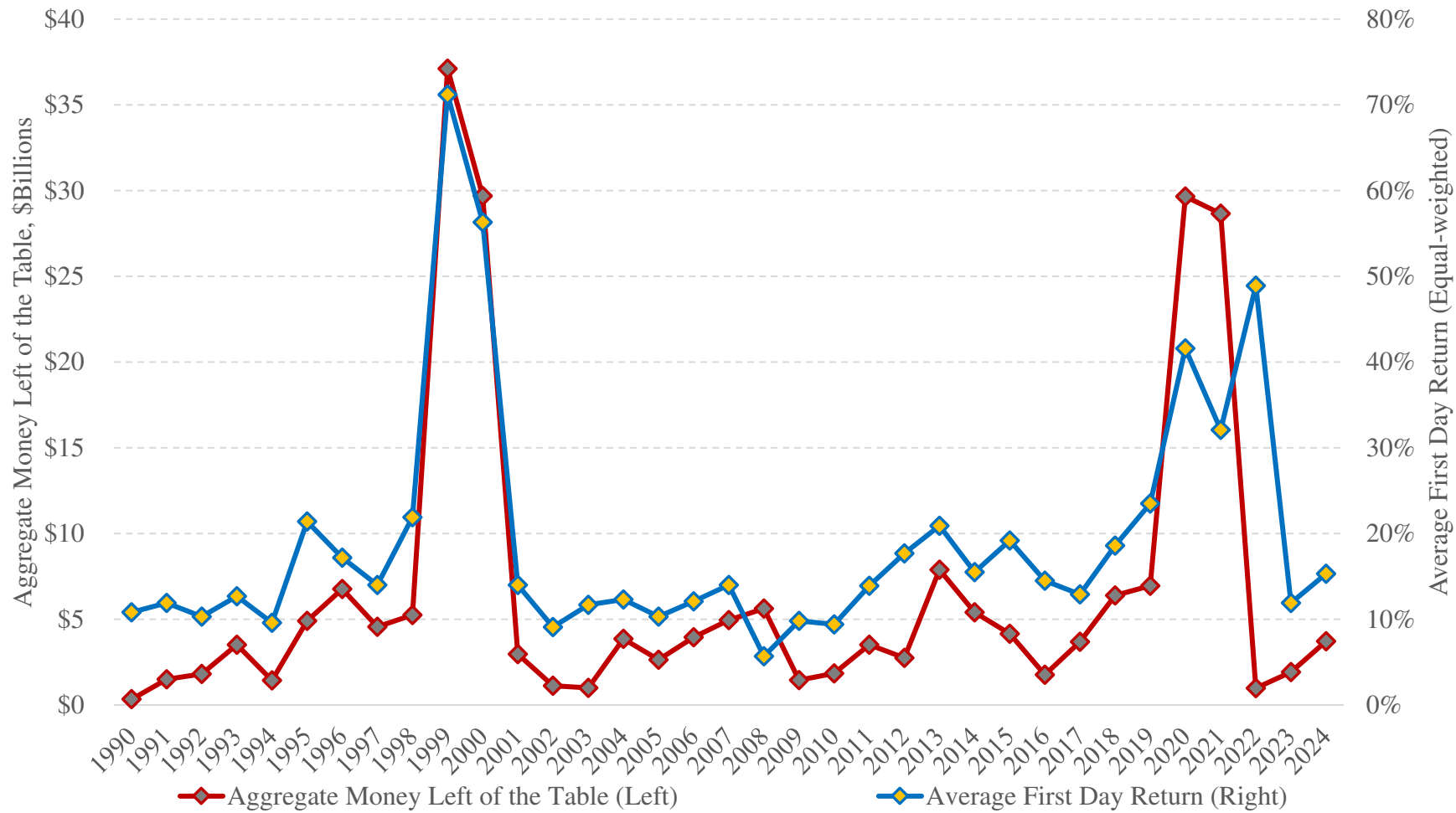


**Figure 3**

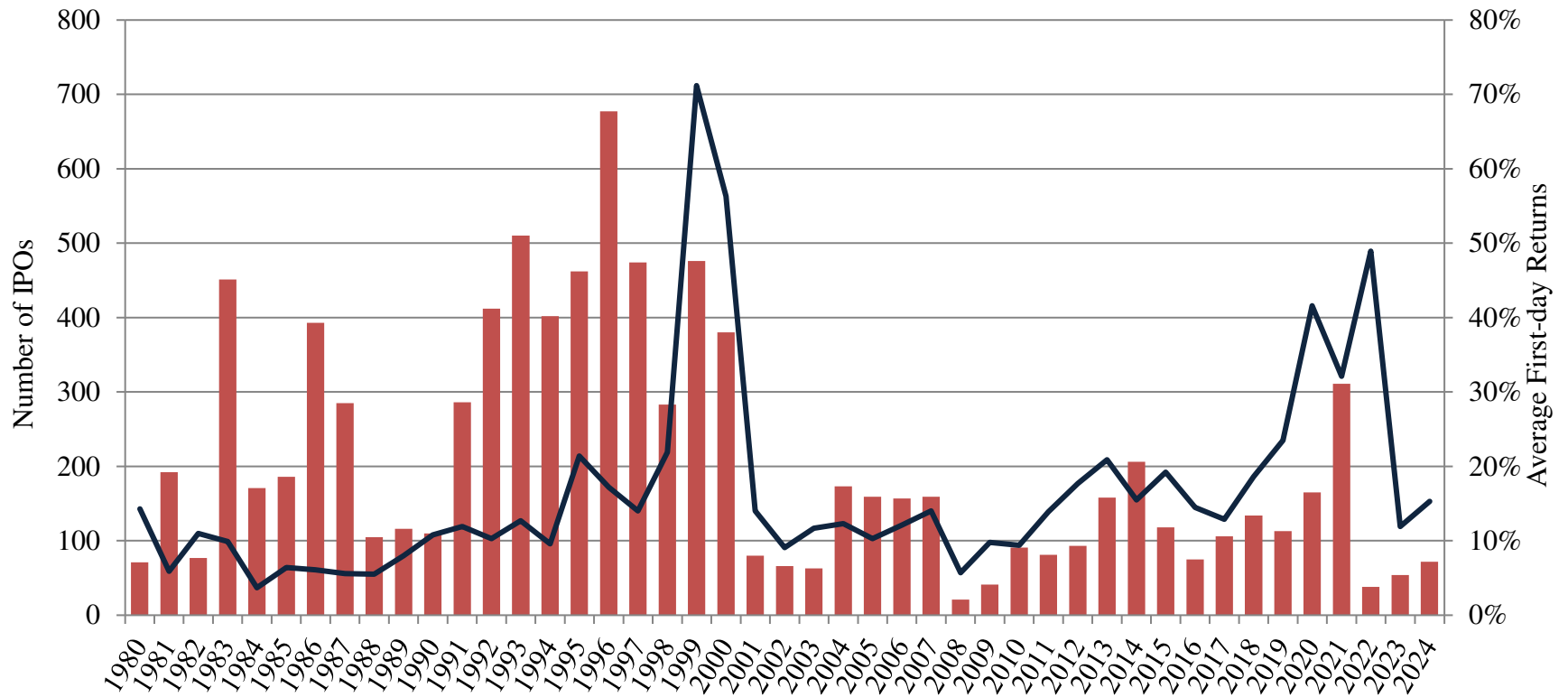
**The public float is the number of shares issued in the IPO divided by the post-issue number of shares outstanding in all share classes. See Table 21 for details.**



**Figure 4: See Table 1 for details.**



**Figure 5: The number of IPOs and average first-day returns per year, 1980-2024**



The number of IPOs (bars) and equally weighted average first-day return, by year, for 1980-2024 for operating companies going public with traditional IPOs on major U.S. exchanges (ADRs, penny stocks, etc. are excluded. See Table 1 for details.)

**Figure 6: Number and Percentage of U.S. IPOs from Chinese Companies, 1989-2024**

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.

