

# **Initial Public Offerings: Underwriting Statistics Through 2023**

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**Table 10** (updated January 1, 2024)

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

Here are the numbers for 2001-2023 for U.S. operating company IPOs raising at least \$30 million (\$2022) 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	
\$30-130 million (inflation-adjusted in 2022 \$)		more than \$130 million (2022 \$)	
<7%	8.0% (107)	68.1%	(665)
=7%	91.0% (1,222)	31.7%	(310)
>7%	1.0% (14)	0.2%	(2)
Total	100% (1,343 IPOs)	100%	(977 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 2001-2022 48.8% 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>

**Table 11** (updated January 1, 2024)**Mean and Median Gross Spreads and Number of Managing Underwriters, 1980-2023**

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%. UW is Underwriter.

In the top panel, proceeds categories are expressed in dollars of 2022 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, 2001-2023 (\$2022)**

Proceeds	Number of IPOs	Mean Gross spread	Median Gross spread	Mean First-day Returns
Less than \$10 million	46	7.54%	7.50%	6.14%
\$10-49.99 million	277	7.17%	7.00%	28.19%
\$50-99.99 million	549	6.98%	7.00%	9.05%
\$100-199.99 million	770	6.92%	7.00%	21.34%
\$200-999.99 million	869	6.35%	6.50%	20.98%
\$1 billion or more	151	4.27%	4.50%	16.59%
<b>2001-2023</b>	<b>2,662</b>	<b>6.63%</b>	<b>7.00%</b>	<b>18.9%</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%	19.0%	4.4	4.0
2002	66	6.7%	5.2%	7.0%	71%	28.8%	4.7	4.0
2003	63	7.0%	6.7%	7.0%	78%	31.7%	3.9	4.0
2004	173	6.8%	5.7%	7.0%	78%	37.0%	4.5	4.0
2005	159	6.7%	6.1%	7.0%	65%	50.3%	4.7	4.0
2006	157	6.8%	6.1%	7.0%	69%	54.1%	4.9	4.0
2007	159	6.7%	5.7%	7.0%	73%	60.4%	5.3	5.0
2008	21	6.4%	3.4%	7.0%	62%	76.2%	7.3	5.0
2009	41	6.4%	5.6%	7.0%	49%	85.4%	6.9	6.0
2010	91	6.7%	3.5%	7.0%	69%	83.5%	6.2	5.0
2011	81	6.4%	5.1%	7.0%	54%	87.7%	7.0	6.0
2012	93	6.7%	3.6%	7.0%	72%	93.5%	6.8	6.0
2013	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	112	6.5%	4.5%	7.0%	66%	94.6%	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%	87.7%	7.5	6.0
2022	39	6.8%	5.4%	7.0%	46%	59.0%	5.6	3.0
2023	54	6.8%	5.0%	7.0%	41%	53.7%	5.3	3.0
<b>1980-2023</b>	<b>9,181</b>	<b>7.1%</b>	<b>5.4%</b>	<b>7.0%</b>	<b>51%</b>	<b>25.8%</b>	<b>3.3</b>	<b>2.0</b>

**Table 11a** (January 17, 2024)**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 2022. 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, UBS, 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. 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. 30 of 2022 for IPOs from 2020 and 2021). 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%	4.4%	-17.0%	-20.8%
JPM	224	25.7%	18.1%	-4.1%	5.1%
Morgan Stanley	218	26.9%	28.5%	7.0%	5.5%
BOA-Merrill	133	24.5%	13.6%	-11.4%	-7.8%
Jefferies	91	24.3%	0.8%	-24.2%	-32.1%
Citigroup	82	8.0%	21.7%	-8.1%	-25.0%
Credit-Suisse	74	11.8%	25.9%	-6.5%	-0.8%
Barclays	46	16.7%	28.1%	3.7%	11.7%
Cowen	29	26.1%	-39.7%	-63.8%	-94.7%
Deutsche Bank	19	11.7%	44.4%	12.7%	-1.8%
Stifel	18	12.3%	32.5%	2.6%	15.7%
Others (regionals)	133	10.6%	3.1%	-29.1%	-25.4%
Others (lower tier)	140	38.2%	-39.9%	-55.8%	-27.7%
<b>2012-2021</b>	<b>1,479</b>	<b>23.6%</b>	<b>9.1%</b>	<b>-14.8%</b>	<b>-12.6%</b>

**Table 13** (updated January 1, 2024)

## IPO Auctions in the U.S., 1999-2022

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%

**2007: (2 out of 159 IPOs)**

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

In 2007, 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 158 IPOs)**

Truett-Hurst Inc (THST)	20130619	7.00%	\$16.2 million	-5.33%
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**2014: (0 out of 206 IPOs)****2015: (0 out 118 IPOs)****2016: (0 out of 75 IPOs)****2017: (0 out of 106 IPOs)****2018: (0 out of 134 IPOs)****2019: (0 out of 112 IPOs)****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:**

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

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), and Marqeta (Goldman Sachs) used similar procedures. All raised the offer price substantially, but still left huge amounts of money on the table. These 2020-2021 IPOs used bookbuilding, but indications of interest were required to have both price and quantity information.

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., 2018-2023**  
(updated October 23, 2023)

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.

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.

Bright Green Corporation also did not have a reference price, but instead has a current reference price that is equal to the opening trade.



**Table 13a**

**Direct Listings in the U.S., 2018-2023**

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 or WSJ.com.

**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%