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Key Metrics for Technology and Life Sciences Initial Public Offerings

H1 2019

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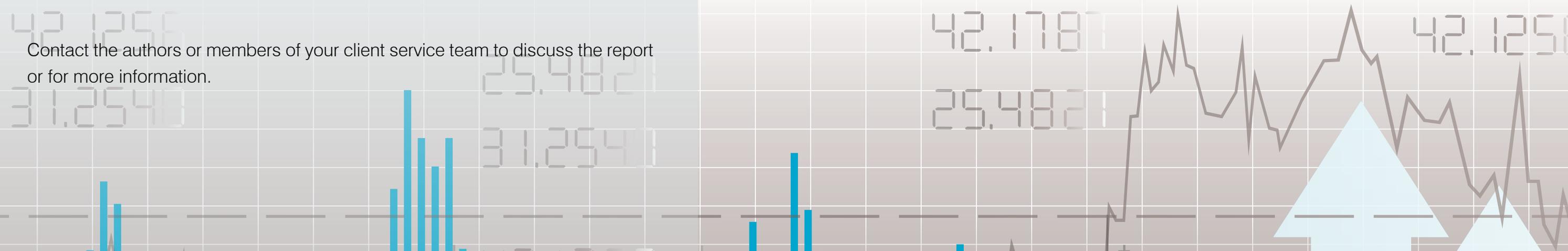
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Survey Results

Life Sciences and Tech IPOs Continue Steady Pace in First Half

As we had predicted in our prior IPO survey, 2019 has proven to be strong for initial public offerings. Following a somewhat sluggish start to the year, technology and life sciences IPOs took off in the second quarter, making for an overall strong first half that is on par with the second half of 2018.

By the Numbers

The 59 life sciences and technology offerings completed in the first half of 2019 compared with the 57 in the second half of 2018, continuing a trend of stability. Still recovering from the effects of the federal government shutdown and stock market volatility that slowed capital markets activity in the last few months of 2018, the first quarter of 2019 saw one tech offering (Lyft) and 10 life sciences offerings. The pace picked up significantly in the second quarter, when 24 tech and 24 life sciences companies debuted. In all, 25 tech companies and 34 life sciences companies went public in H1 2019, on par with the 23 tech offerings and 34 life sciences offerings in H2 2018.

The first half of 2019 included 15 offshore companies, compared with 19 in the second half of 2018. In the United States, 20 companies went public in the San Francisco Bay Area—nine of them tech and 11 life sciences—the highest number since we started tracking the numbers in 2014. Also of note, Slack Technologies went public through a direct listing in the first half of 2019, similar to that of Spotify in the first half of the previous year.

Valuations

If tech IPOs in the second half of 2018 produced offering proceeds that were marked by an unusually large spread in valuations, H1 2019 did even more so. So far this year, about 12% of tech deals priced between \$25 million and \$75 million, another 16% between \$100 million and \$150 million, and another 28% priced between \$175 million and \$225 million. Life sciences offerings again showed more of a sweet spot in amounts raised: The majority of IPOs in the first half of the year (76.5%) raised between \$50 million and \$150 million.

Only five tech and life sciences offerings in the first half of 2019 had proceeds of more than \$1 billion. The largest was a technology offering for Uber that raised \$8.1 billion. The largest life sciences offering, Avantor, raised \$2.9 billion.

Insider Participation

Tech IPOs reported a more typical percentage of insider participation in the first half of 2019—down to 24% from a one-time peak of 65.2% in the second half of 2018. Approximately 65% of life sciences deals saw insiders purchasing IPO shares and/or purchasing shares in a simultaneous private placement—on par with the first half of 2018.

Dual-Class Share Structure

The dual-class capital structure continued to be widely utilized by technology companies, as 13 technology IPOs featured this structure, the same as in the second half of 2018. Only two life sciences companies had a dual-class structure, compared to one in the prior period.

Pricing

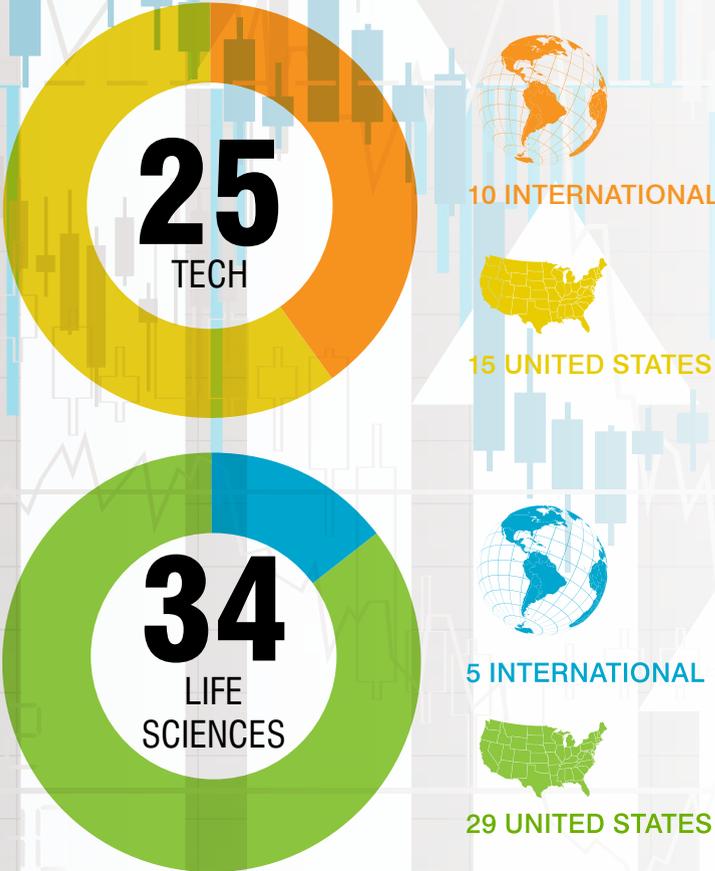
The clear majority of offerings in the first half of 2019 priced within or above-range—88% of tech offerings and 82.3% of life sciences offerings—underscoring a relatively strong and stable market environment. Just three technology offerings and six life sciences offerings priced below the red herring range.

The results indicate that IPOs so far this year were well priced with healthy but modest first-day gains. Consistent with prior half-year periods, technology offerings enjoyed stronger first-day trading as 72% traded up at first day close compared to 64.7% of life sciences offerings.

Outlook

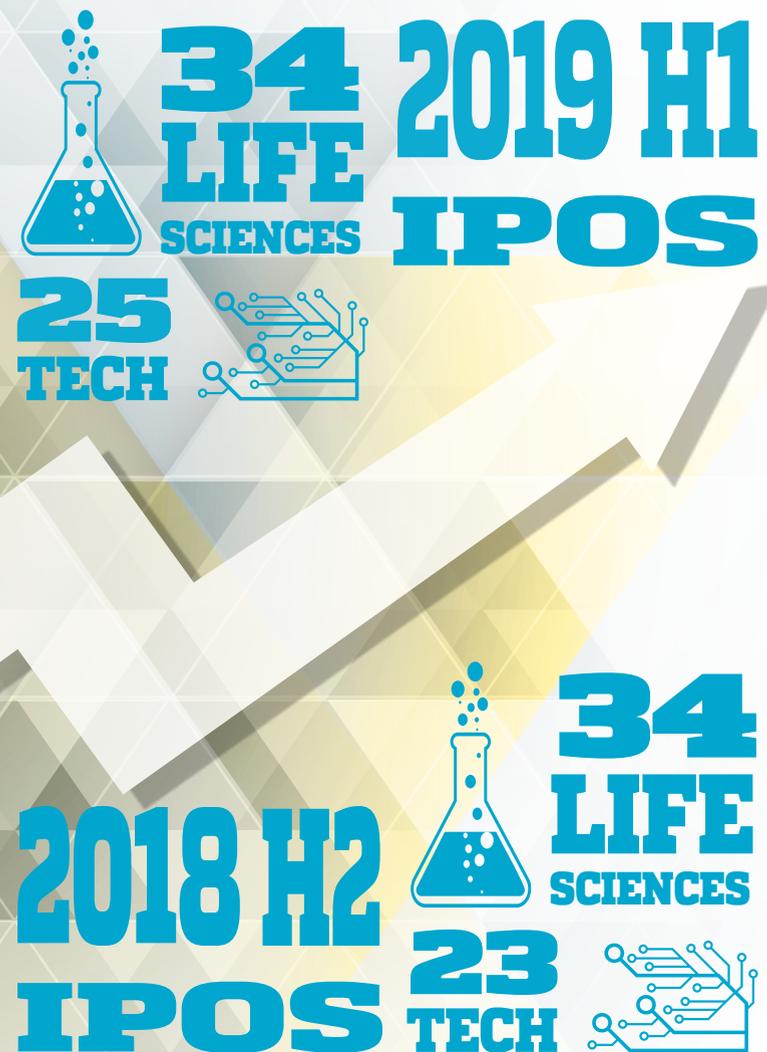
Our H1 2019 data suggests a healthy and stable market continuing, with deals well priced, trending up on average 72% on first-day close for tech and 65% for life sciences. While to date only two companies have done direct listings, more companies are considering this route to becoming public. We anticipate continued strength going into the second half of 2019, notwithstanding the potential for uncertainty surrounding the upcoming U.S. presidential elections and rhetoric around healthcare programs and policies, which may very well affect IPOs planned later this year. It is also unclear how long the bull market for tech and life sciences company IPOs will continue.

NUMBER OF IPO DEALS IN H1 2019

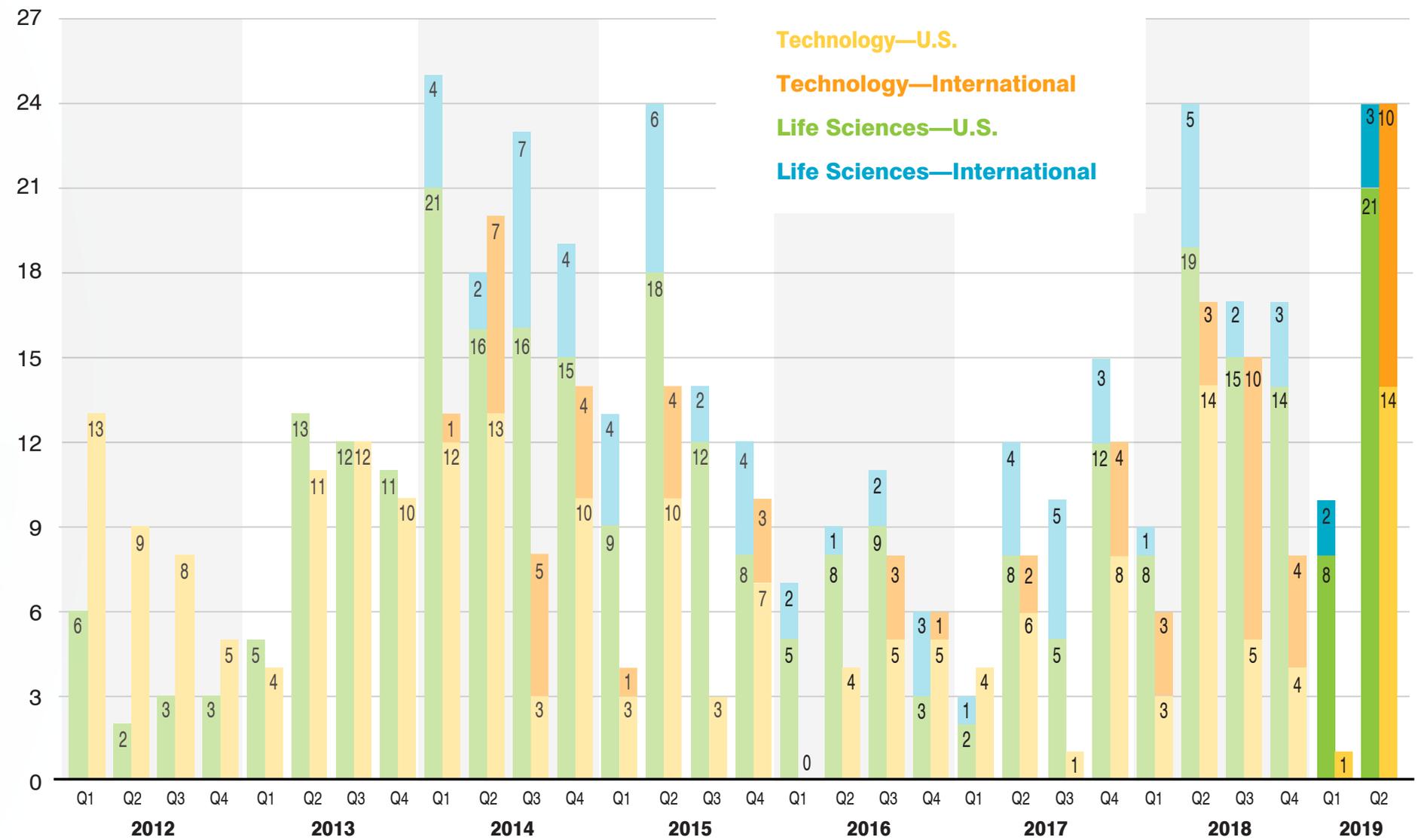


Offerings Completed

This graph shows the number of technology and life sciences IPOs completed during each quarter of 2012 through the first half of 2019.



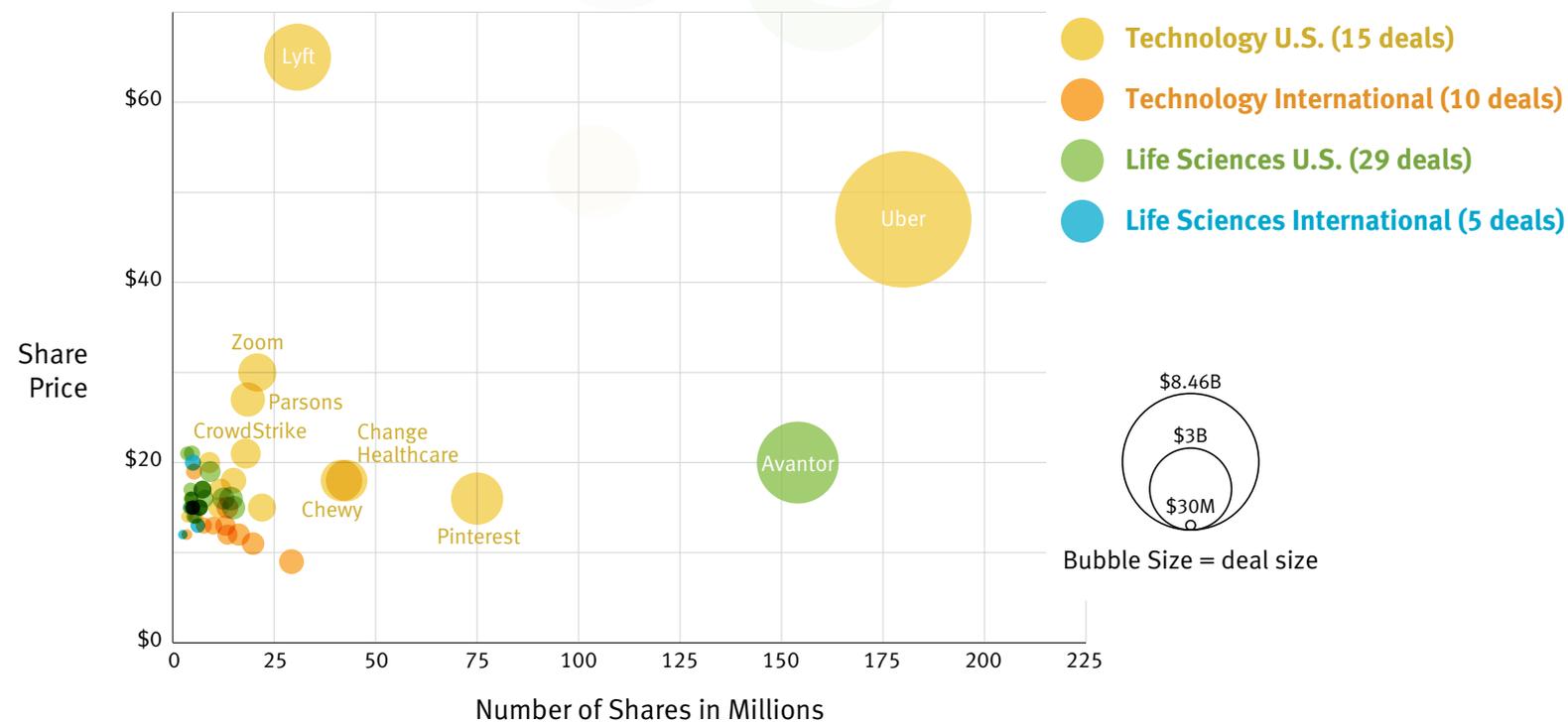
IPOS PER QUARTER 2012–H1 2019



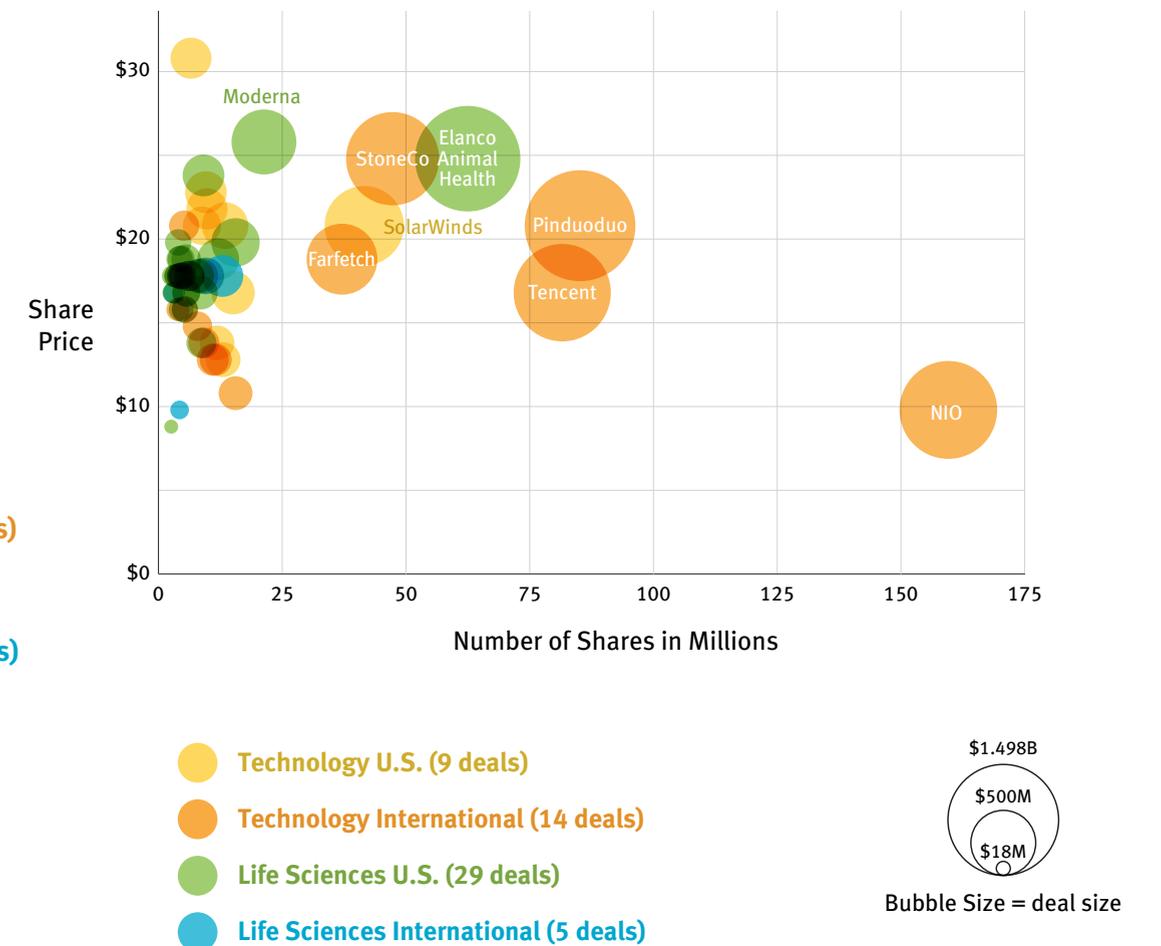
Size of Offerings, Red Herring Midpoint

The following scatter graphs plot technology and life sciences IPOs completed during the first half of 2019 and second half of 2018 in terms of the initial offering price per share and number of shares offered based on the red herring prospectus.

RED HERRING DEAL COMPARISON (MIDPOINT PRICE): 2019, FIRST HALF



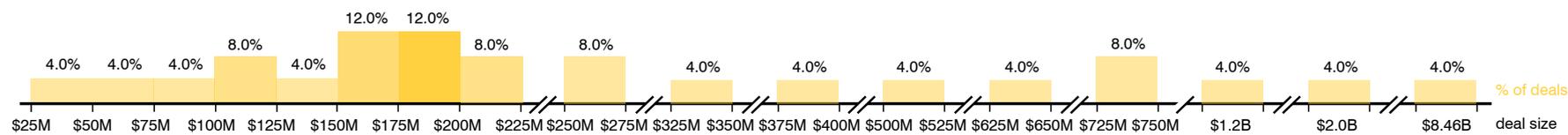
RED HERRING DEAL COMPARISON (MIDPOINT PRICE): 2018, SECOND HALF



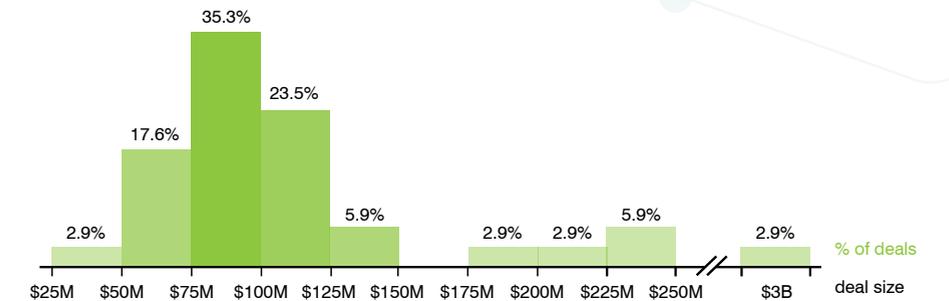
Aggregate Amount Raised, Red Herring Midpoint

The following graphs provide information about aggregate deal size at the red herring stage in the first half of 2019 and second half of 2018.

DISTRIBUTION OF DEAL SIZE (RED HERRING MIDPOINT): 2019, FIRST HALF

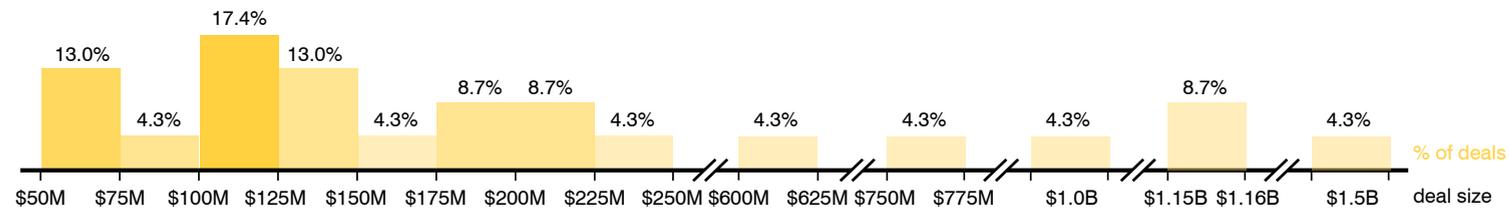


Technology Deal Size Distribution

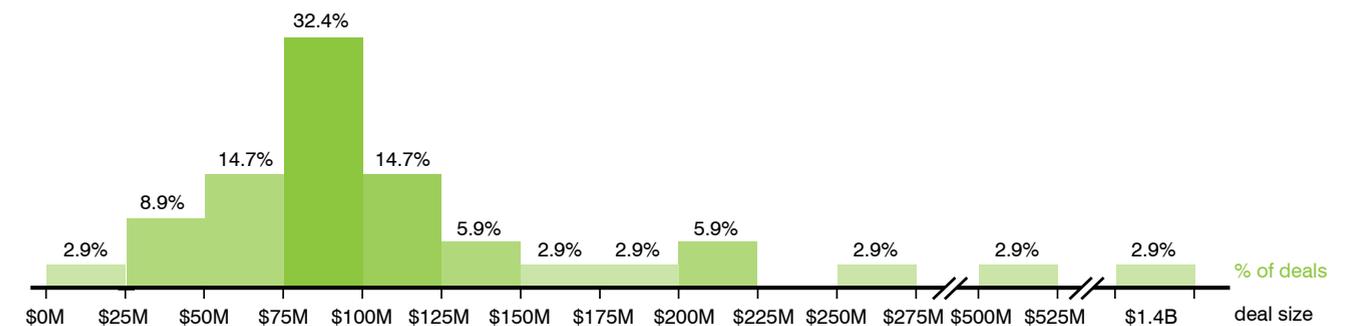


Life Sciences Deal Size Distribution

DISTRIBUTION OF DEAL SIZE (RED HERRING MIDPOINT): 2018, SECOND HALF



Technology Deal Size Distribution



Life Sciences Deal Size Distribution

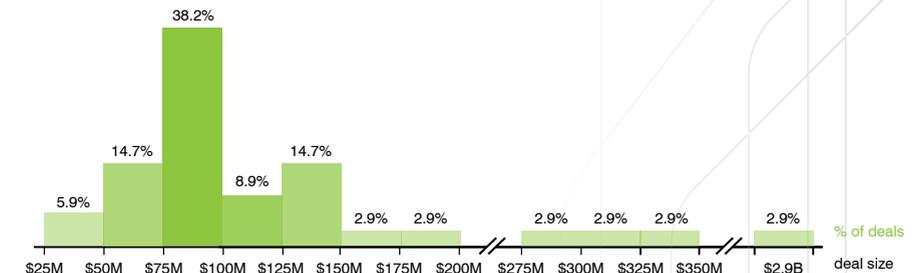
Aggregate Amount Raised, Final IPO Price

The following graphs provide information about aggregate deal size based on the actual pricing of the offering in the first half of 2019 and second half of 2018.

DISTRIBUTION OF DEAL SIZE (FINAL IPO PRICE): 2019, FIRST HALF

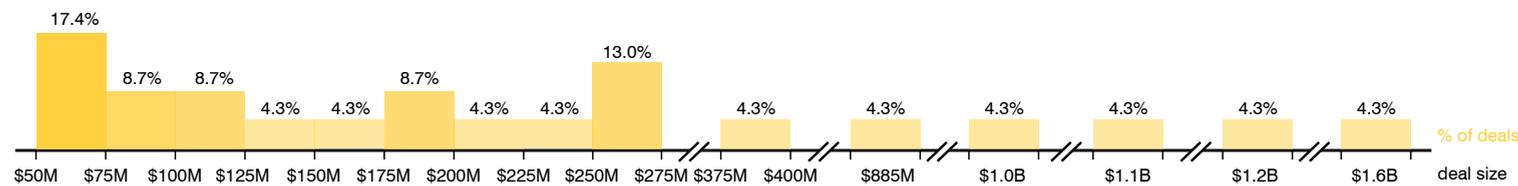


Technology Deal Size Distribution



Life Sciences Deal Size Distribution

DISTRIBUTION OF DEAL SIZE (FINAL IPO PRICE): 2018, SECOND HALF



Technology Deal Size Distribution

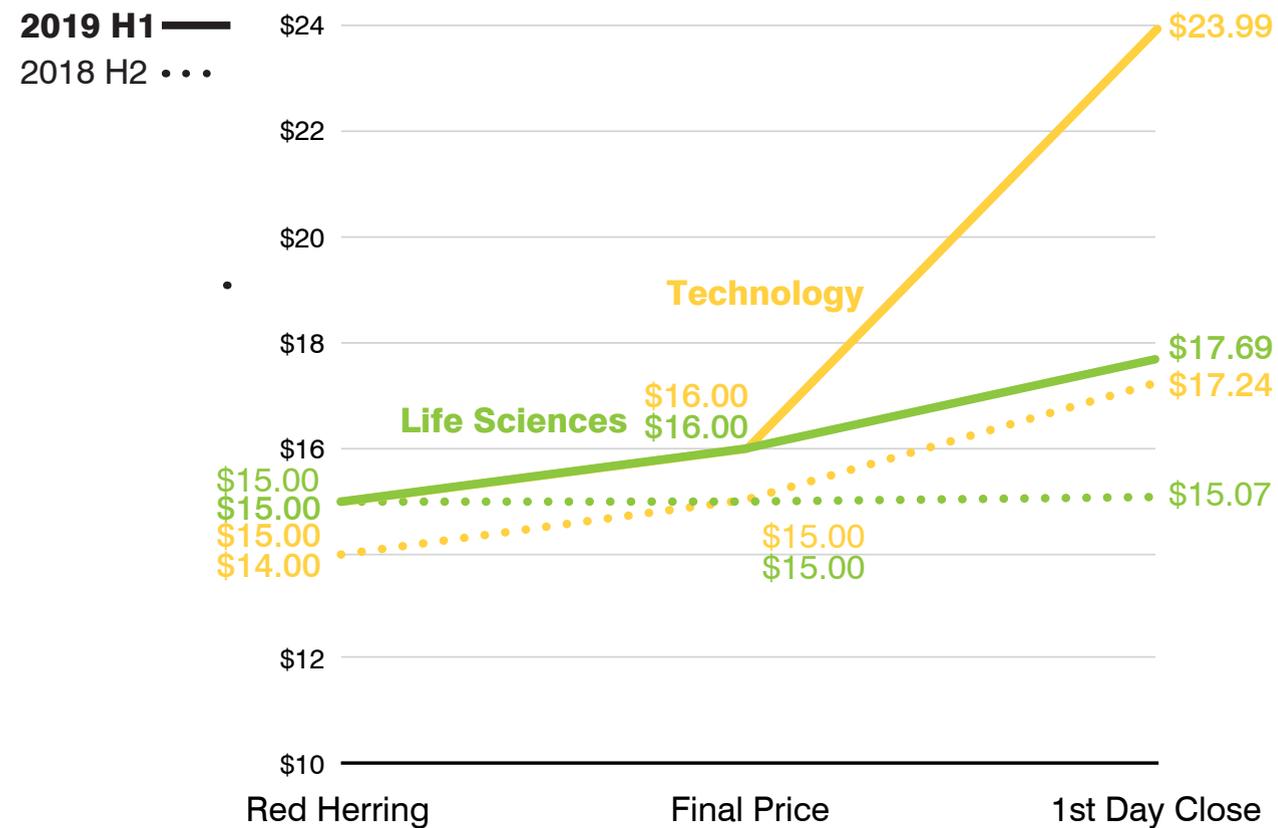


Life Sciences Deal Size Distribution

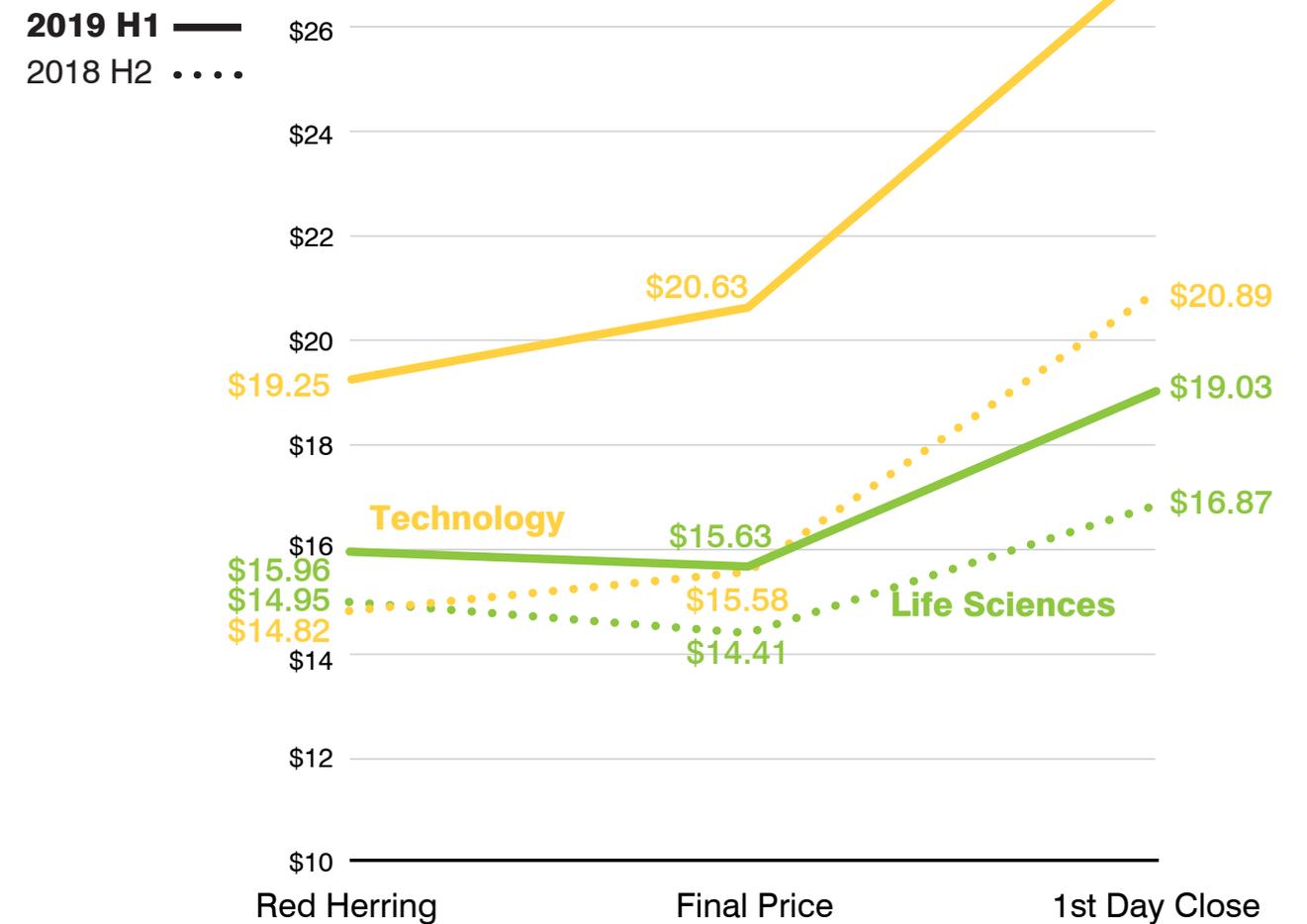
Price Changes Between the Red Herring and Initial Offering Price

Estimating the offering price for the IPO in the red herring prospectus and pricing the IPO upon completion of marketing efforts are processes that are equal parts science and art. These graphs show the median and average prices for technology and life sciences IPOs from the red herring stage to the actual public offering price to the closing price on the first day of trading, for the first half of 2019 and second half of 2018.

MEDIAN PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS



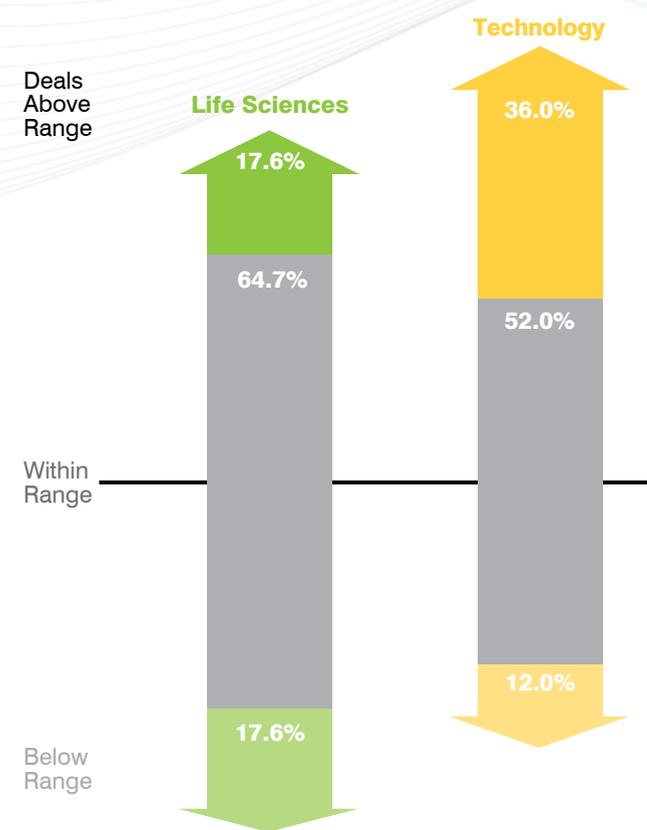
AVERAGE PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS



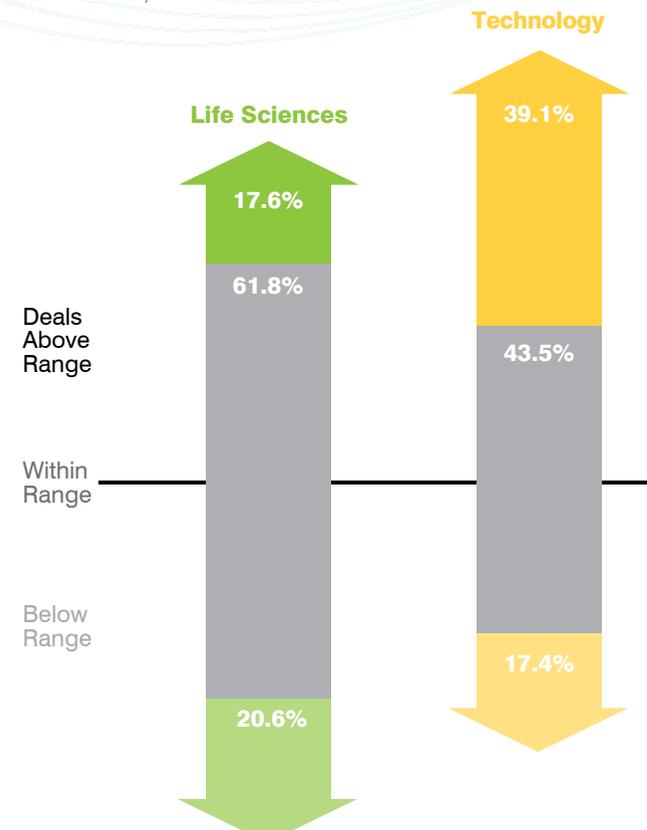
Price Changes – Red Herring Range & First Day Trading

The two graphs on the left show the percentage of technology and life sciences IPOs with a final price that falls above, within or below the red herring range in the first half of 2019 and second half of 2018. The two graphs on the right show the percentage of technology and life sciences deals that closed up, down or flat on their first day of trading in the first half of 2019 and second half of 2018.

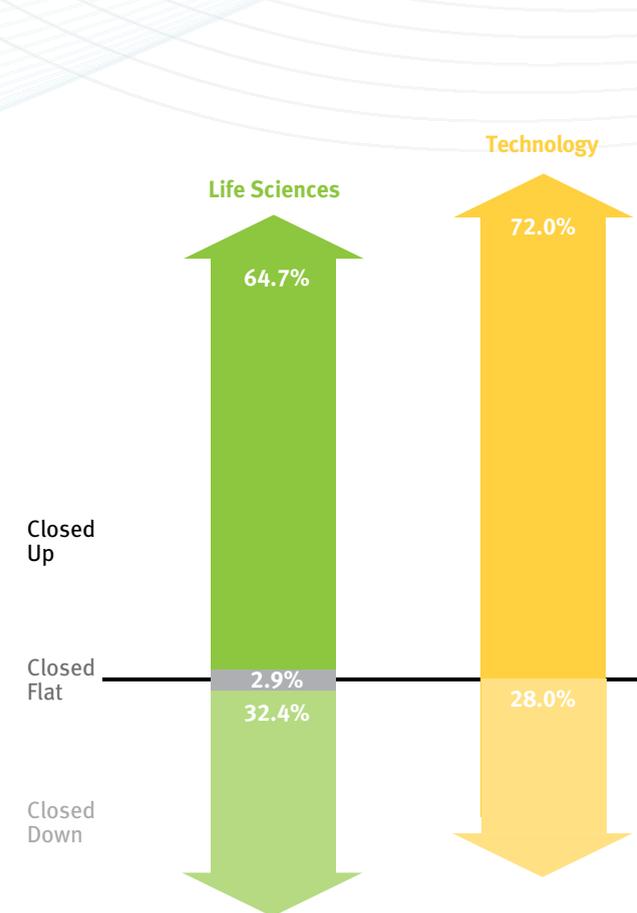
RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS) 2019, FIRST HALF



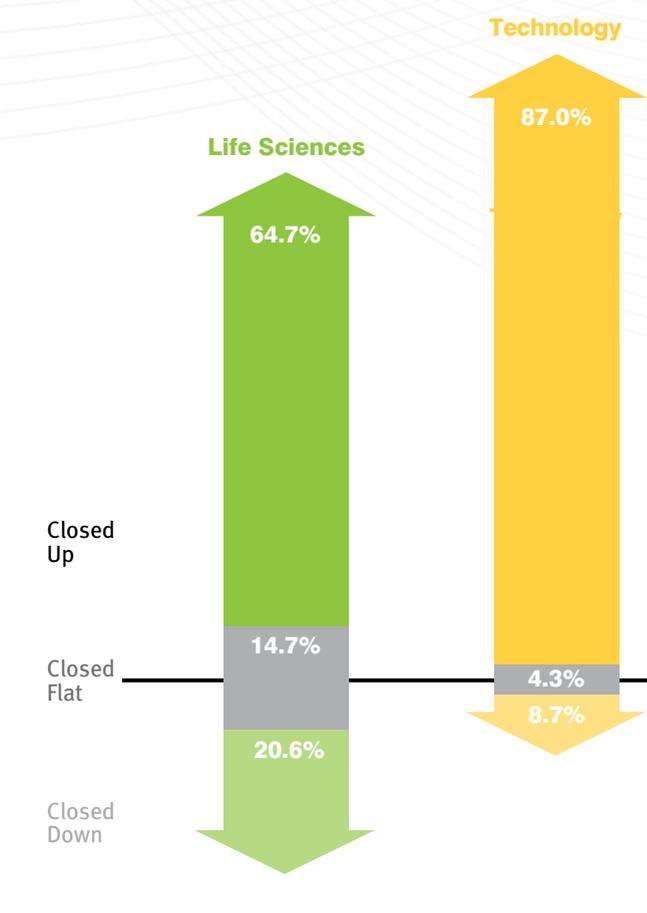
RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS) 2018, SECOND HALF



RELATION OF PRICE AT 1ST DAY CLOSE TO FINAL IPO PRICE (% OF DEALS) 2019, FIRST HALF



RELATION OF PRICE AT 1ST DAY CLOSE TO FINAL IPO PRICE (% OF DEALS) 2018, SECOND HALF



Geographical Distribution of Technology Company IPOs – H1 2019



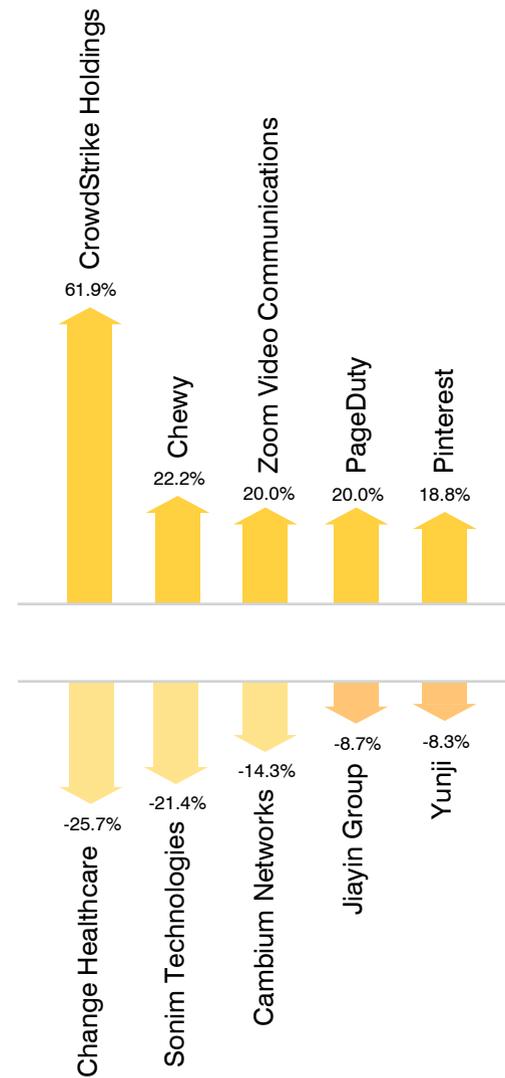
Price Changes – Biggest Tech Movers

The following graphs show the technology company IPOs with the largest percentage gain and loss from the red herring midpoint to the actual initial public offering price and from the initial public offering price to the first day of trading for IPOs completed in the first half of 2019 and second half of 2018.

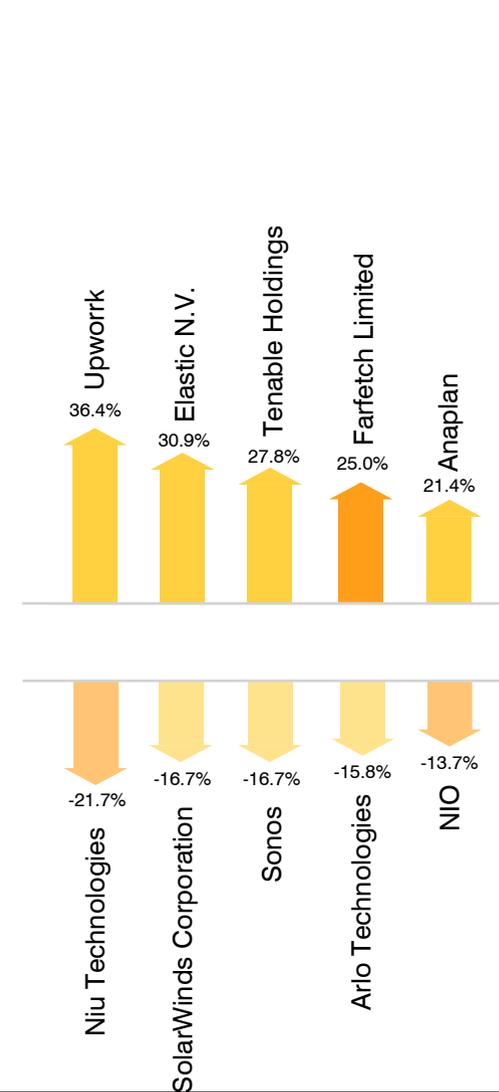
Technology—U.S.

Technology—International

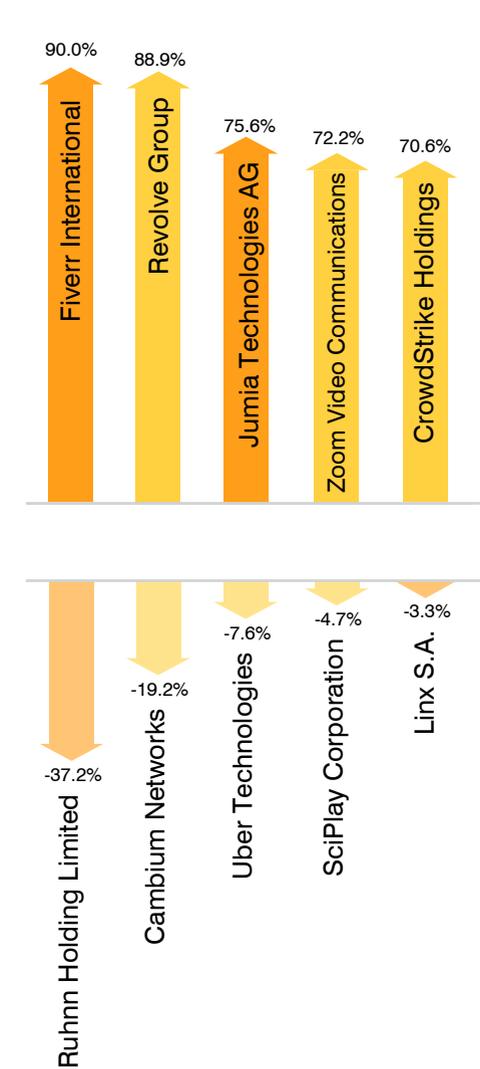
BIGGEST MOVERS—RED HERRING PRICE TO FINAL IPO PRICE 2019, FIRST HALF



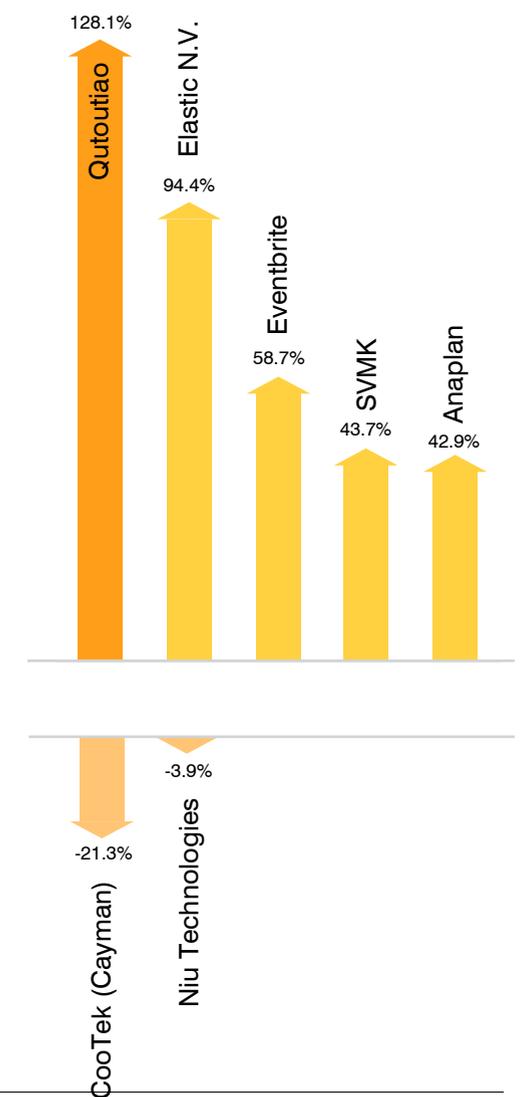
BIGGEST MOVERS—RED HERRING PRICE TO FINAL IPO PRICE 2018 SECOND HALF



BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2019, FIRST HALF



BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2018, SECOND HALF



Geographical Distribution of Life Sciences IPOs – H1 2019



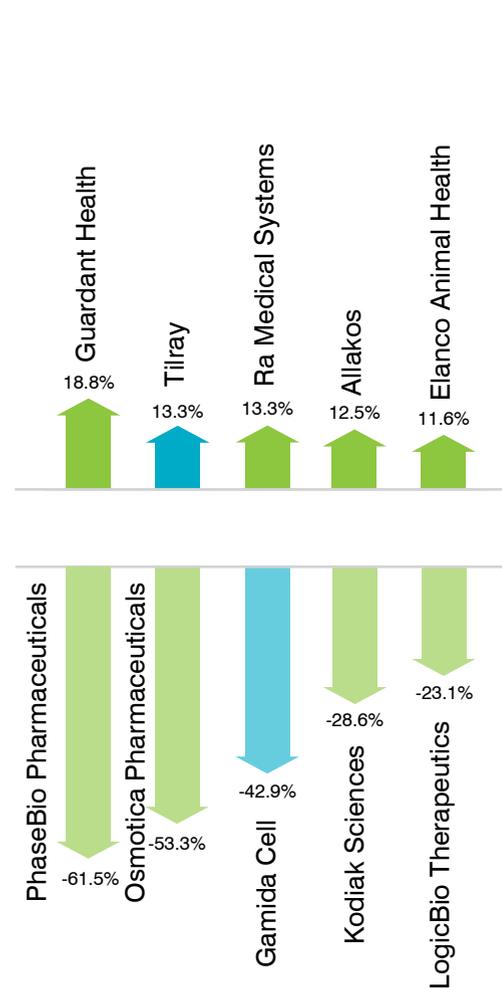
Price Changes – Biggest Life Sciences Movers

The following graphs show the life sciences company IPOs with the largest percentage gain and loss from the red herring midpoint to the actual initial public offering price and from the initial public offering price to the first day of trading for IPOs completed in the first half of 2019 and second half of 2018.

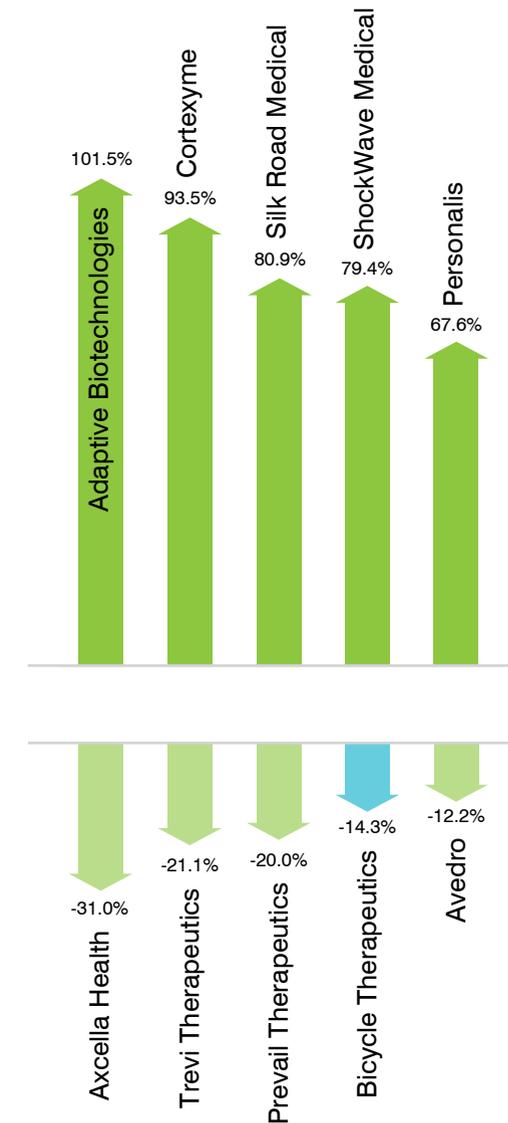
BIGGEST MOVERS – RED HERRING PRICE TO FINAL IPO PRICE 2019, FIRST HALF



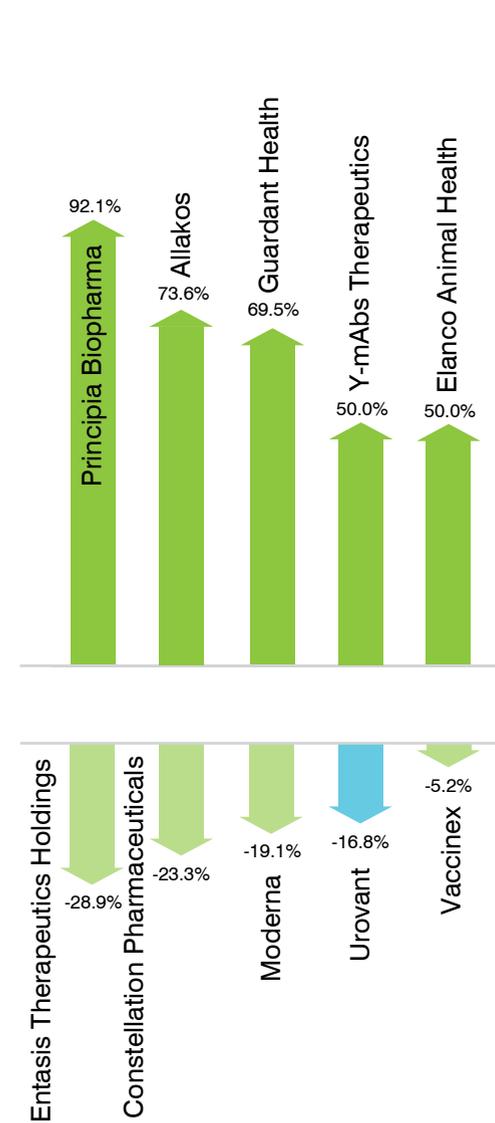
BIGGEST MOVERS – RED HERRING PRICE TO FINAL IPO PRICE 2018, SECOND HALF



BIGGEST MOVERS – IPO PRICE TO PRICE AT 1ST DAY CLOSE 2019, FIRST HALF



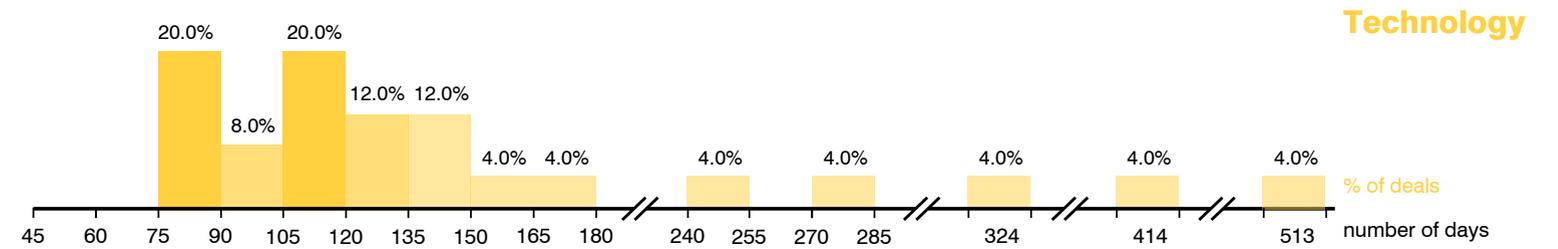
BIGGEST MOVERS – IPO PRICE TO PRICE AT 1ST DAY CLOSE 2018, SECOND HALF



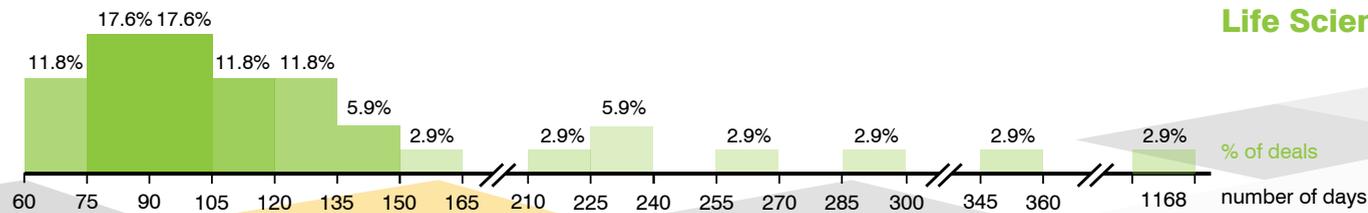
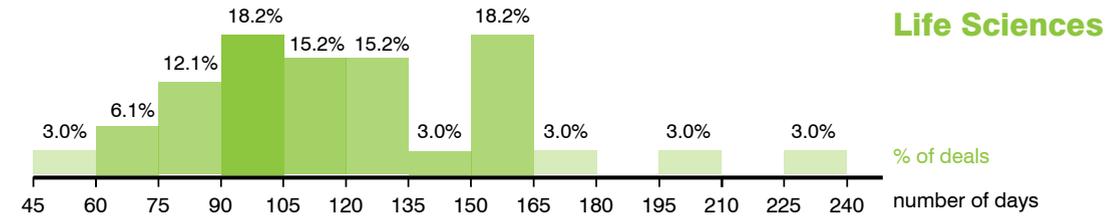
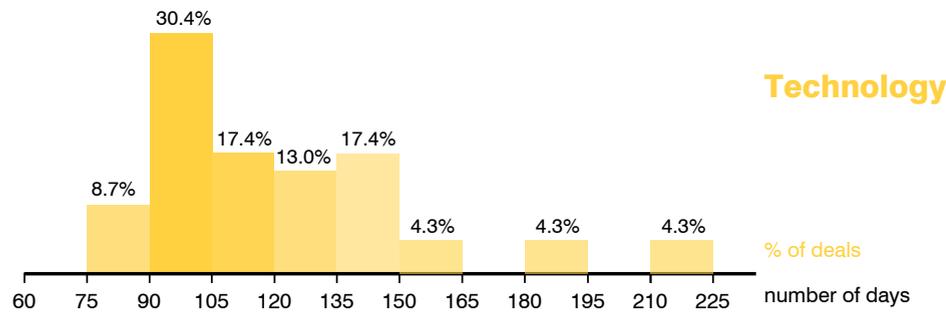
Days on File

These graphs display the percentage of deals that priced within each 15-day period from the initial confidential submission date or, rarely, initial public submission.

DISTRIBUTION OF DAYS BETWEEN INITIAL SUBMISSION AND FINAL PRICING
2019, FIRST HALF



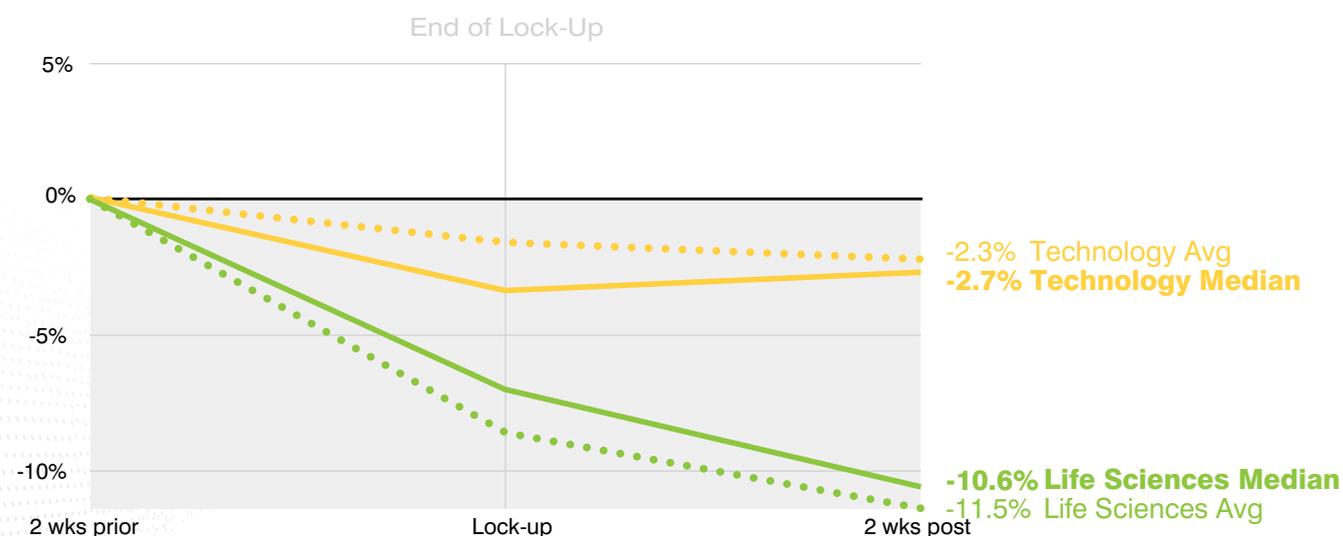
DISTRIBUTION OF DAYS BETWEEN INITIAL SUBMISSION AND FINAL PRICING
2018, SECOND HALF



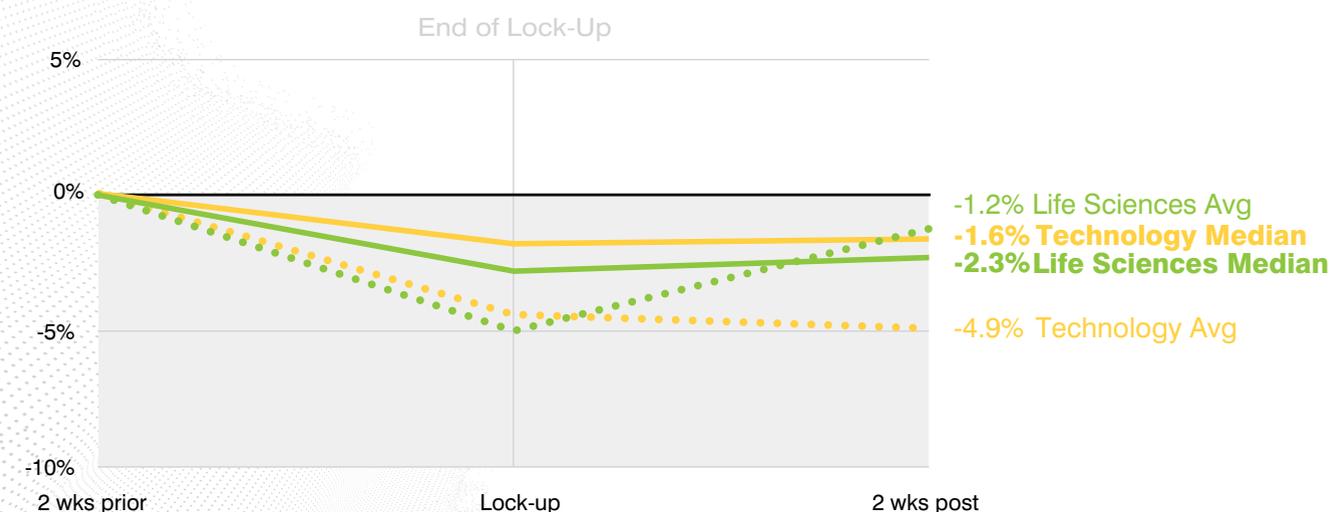
Price Changes Around the Expiration of the Lock-Up

In order to assist the development of an orderly market for the shares being offered, IPO underwriters require the stockholders of the offering company to agree not to sell shares of the company's common stock for a specified period without the underwriters' consent. Customarily, this period is 180 days and applies equally to all holders delivering the "lock-up" agreement, although in a few instances the lock-up may roll off in stages, and different holders may be subject to different restrictive periods. Upon expiration of the lock-up period, there generally is an influx of "supply," as pre-IPO stockholders have their first ability to sell shares into the public market. The graphs on this page show the average and median changes in the closing trading price of the subject company shares for the period beginning two weeks prior, and ending two weeks following, the scheduled expiration of the lock-up period for lock-ups expiring in the second half of 2018 and first half of 2019. Those companies completing IPOs in the first half of 2018 and a follow-on offering within 180 days are excluded from the top graph. Those companies completing IPOs in the second half of 2018 and a follow-on offering within 180 days are excluded from the bottom graph.

PERCENT CHANGE OF SHARE PRICES SURROUNDING END OF LOCK-UP PERIOD 2018, SECOND HALF



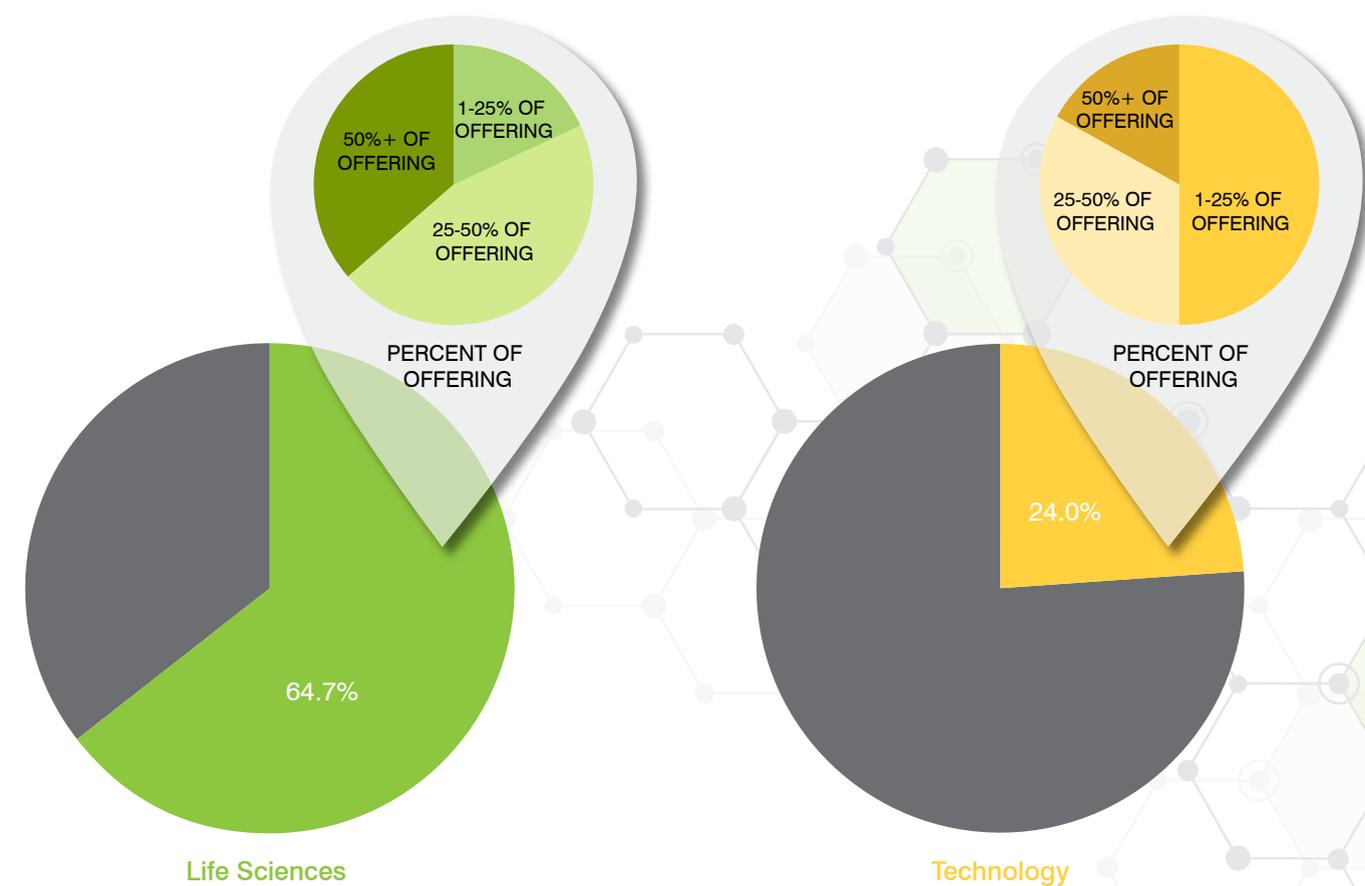
PERCENT CHANGE OF SHARE PRICES SURROUNDING END OF LOCK-UP PERIOD 2019, FIRST HALF



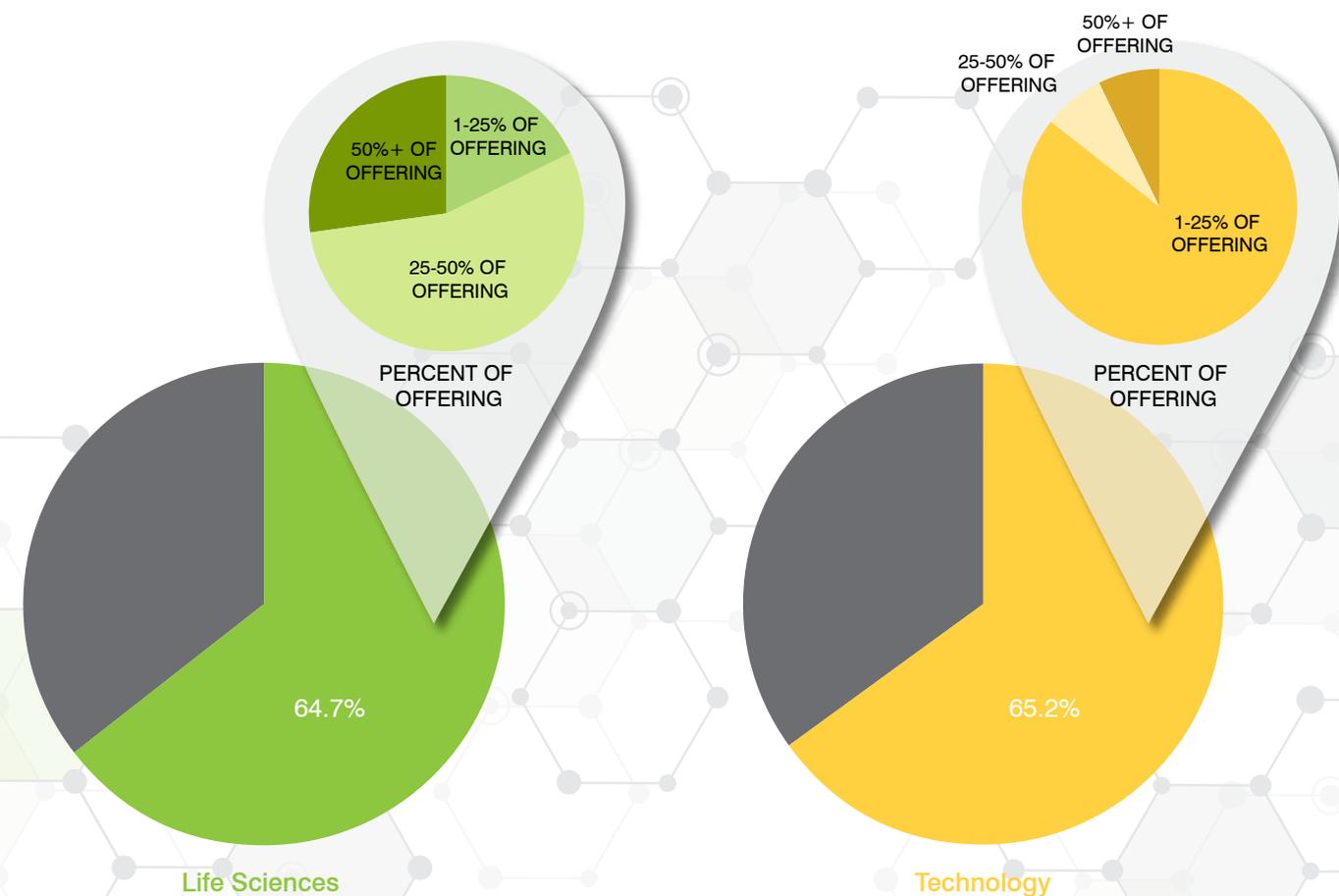
Insider Participation

These charts show the percentage of life sciences and technology IPOs in which the final prospectus indicated that specified “insiders” had expressed an interest in purchasing shares in the offering or in a concurrent private placement. Insiders are directors and officers of a company as well as existing stockholders. In this case, insiders are typically existing investors who buy additional shares in the IPO or in a concurrent private placement. Among life sciences IPOs with insider interest, the inset shows the breakdown of shares set aside for insiders.

PERCENTAGE OF DEALS WITH INSIDER PARTICIPATION AND PERCENTAGE OF OFFERING MADE AVAILABLE TO INSIDERS 2019, FIRST HALF



PERCENTAGE OF DEALS WITH INSIDER PARTICIPATION AND PERCENTAGE OF OFFERING MADE AVAILABLE TO INSIDERS 2018, SECOND HALF



Technology Offerings

H1 2019^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Lyft, Inc. NasdaqGS:LYFT	\$65.00	3/29/19	32,500,000	\$72.00	\$2,340,000,000
Ruhnn Holding Limited NasdaqGS:RUHN	\$12.50	4/3/19	10,000,000	\$12.50	\$125,000,000
PagerDuty, Inc. NYSE:PD	\$20.00	4/11/19	9,070,000	\$24.00	\$217,680,000
Tufin Software Technologies Ltd. NYSE:TUFN	\$13.00	4/11/19	7,700,000	\$14.00	\$107,800,000
Jumia Technologies AG NYSE:JMIA	\$14.50	4/12/19	13,500,000	\$14.50	\$195,750,000
Pinterest, Inc. NYSE:PINS	\$16.00	4/18/19	75,000,000	\$19.00	\$1,425,000,000
Zoom Video Communications, Inc. NasdaqGS:ZM	\$30.00	4/18/19	20,869,565	\$36.00	\$751,304,340
So-Young International Inc. NasdaqGM:SY	\$12.80	5/2/19	13,000,000	\$13.80	\$179,400,000
SciPlay Corporation NasdaqGS:SCPL	\$15.00	5/3/19	22,000,000	\$16.00	\$352,000,000
Yunji Inc. NasdaqGM:YJ	\$12.00	5/3/19	11,000,000	\$11.00	\$121,000,000
Parsons Corporation NYSE:PSN	\$27.00	5/8/19	18,518,500	\$27.00	\$499,999,500
HeadHunter Group PLC NasdaqGS:HHR	\$12.25	5/9/19	16,304,348	\$13.50	\$220,108,698
Jiayin Group Inc. NasdaqGM:JFIN	\$11.50	5/10/19	3,500,000	\$10.50	\$36,750,000
Sonim Technologies, Inc. NasdaqGM:SONM	\$14.00	5/10/19	3,571,429	\$11.00	\$39,285,719
Uber Technologies, Inc. NYSE:UBER	\$47.00	5/10/19	180,000,000	\$45.00	\$8,100,000,000

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Fastly, Inc. NYSE:FSLY	\$15.00	5/17/19	11,250,000	\$16.00	\$180,000,000
GSX Techedu Inc. NYSE:GSX	\$10.50	6/6/19	19,800,000	\$10.50	\$207,900,000
Revolve Group, Inc. NYSE:RVLV	\$17.00	6/7/19	11,764,706	\$18.00	\$211,764,708
CrowdStrike Holdings, Inc. NasdaqGS:CRWD	\$21.00	6/12/19	18,000,000	\$34.00	\$612,000,000
Fiverr International Ltd. NYSE:FVRR	\$19.00	6/13/19	5,263,158	\$21.00	\$110,526,318
Chewy, Inc. NYSE:CHWY	\$18.00	6/14/19	46,500,000	\$22.00	\$1,023,000,000
Cambium Networks Corporation NasdaqGM:CMBM	\$14.00	6/26/19	5,800,000	\$12.00	\$69,600,000
Linx S.A. NYSE:LINX	\$8.69	6/26/19	32,774,601	\$9.40	\$308,081,249
Change Healthcare Inc. NasdaqGS:CHNG	\$17.50	6/27/19	42,857,142	\$13.00	\$557,142,846
The RealReal, Inc. NasdaqGS:REAL	\$18.00	6/28/19	15,000,000	\$20.00	\$300,000,000

¹ The survey does not include offerings on the OTC Bulletin Board, Nasdaq Capital Market or those with proceeds of less than \$10 million.

² Yellow rows represent U.S. and orange rows represent International IPOs.

³ Final share numbers do not reflect any exercise of the over-allotment option.

Technology Offerings

H2 2018^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Aurora Mobile Limited NasdaqGM:JG	\$9.50	7/26/18	9,060,000	\$8.50	\$77,010,000
Pinduoduo Inc. NasdaqGS:PDD	\$17.50	7/26/18	85,600,000	\$19.00	\$1,626,400,000
Tenable Holdings, Inc. NasdaqGS:TENB	\$18.00	7/26/18	10,900,000	\$23.00	\$250,700,000
Endava plc NYSE:DAVA	\$18.00	7/27/18	6,340,000	\$20.00	\$126,800,000
Opera Limited NasdaqGS:OPRA	\$11.00	7/27/18	9,600,000	\$12.00	\$115,200,000
Sonos, Inc. NasdaqGS:SONO	\$18.00	8/2/18	13,888,888	\$15.00	\$208,333,320
Arlo Technologies, Inc. NYSE:ARLO	\$19.00	8/3/18	10,215,000	\$16.00	\$163,440,000
NIO Inc. NYSE:NIO	\$7.25	9/12/18	160,000,000	\$6.26	\$1,001,600,000
Qutoutiao Inc. NasdaqGS:QTT	\$8.00	9/14/18	12,000,000	\$7.00	\$84,000,000
Eventbrite, Inc. NYSE:EB	\$20.00	9/20/18	10,000,000	\$23.00	\$230,000,000
Farfetch Limited NYSE:FTCH	\$16.00	9/21/18	44,243,749	\$20.00	\$884,874,980
Viomi Technology Co., Ltd NasdaqGS:VIOT	\$10.00	9/25/18	11,400,000	\$9.00	\$102,600,000
SVMK Inc. NasdaqGS:SVMK	\$10.00	9/26/18	15,000,000	\$12.00	\$180,000,000
LAIX Inc. NYSE:LAIX	\$12.50	9/27/18	5,750,000	\$12.50	\$71,875,000
CooTek (Cayman) Inc. NYSE:CTK	\$13.00	9/28/18	4,350,000	\$12.00	\$52,200,000

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Upwork Inc. NasdaqGS:UPWK	\$11.00	10/3/18	12,476,693	\$15.00	\$187,150,395
Elastic N.V. NYSE:ESTC	\$27.50	10/5/18	7,000,000	\$36.00	\$252,000,000
Anaplan, Inc. NYSE:PLAN	\$14.00	10/12/18	15,500,000	\$17.00	\$263,500,000
Niu Technologies NasdaqGM:NIU	\$11.50	10/19/18	7,000,000	\$9.00	\$63,000,000
SolarWinds Corporation NYSE:SWI	\$18.00	10/19/18	25,000,000	\$15.00	\$375,000,000
StoneCo Ltd. NasdaqGS:STNE	\$22.00	10/25/18	50,724,638	\$24.00	\$1,217,391,312
MOGU Inc. NYSE:MOGU	\$15.00	12/6/18	4,750,000	\$14.00	\$66,500,000
Tencent Music Entertainment Group NYSE:TME	\$14.00	12/12/18	82,000,000	\$13.00	\$1,066,000,000

¹ The survey does not include offerings on the OTC Bulletin Board, Nasdaq Capital Market or those with proceeds of less than \$10 million.

² Yellow rows represent U.S. and orange rows represent International IPOs.

³ Final share numbers do not reflect any exercise of the over-allotment option.

Life Sciences Offerings

H1 2019^{1, 2}

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Alector, Inc. NasdaqGS:ALEC	\$19.00	2/7/19	9,250,000	\$19.00	\$175,750,000
Gossamer Bio, Inc. NasdaqGS:GOSS	\$16.00	2/8/19	17,250,000	\$16.00	\$276,000,000
Harpoon Therapeutics, Inc. NasdaqGS:HARP	\$14.00	2/8/19	5,400,000	\$14.00	\$75,600,000
Avedro, Inc. NasdaqGM:AVDR	\$15.00	2/14/19	5,000,000	\$14.00	\$70,000,000
TCR2 Therapeutics Inc. NasdaqGS:TCRR	\$15.00	2/14/19	5,000,000	\$15.00	\$75,000,000
Stealth BioTherapeutics Corp. NasdaqGM:MITO	\$13.00	2/15/19	6,500,000	\$12.00	\$78,000,000
Kaleido Biosciences, Inc. NasdaqGS:KLDO	\$21.00	2/28/19	5,000,000	\$15.00	\$75,000,000
ShockWave Medical, Inc. NasdaqGS:SWAV	\$15.00	3/7/19	5,700,000	\$17.00	\$96,900,000
GENFIT S.A. NasdaqGS:GNFT	\$20.32	3/27/19	6,650,000	\$20.32	\$135,128,000
Precision BioSciences, Inc. NasdaqGS:DTIL	\$16.00	3/28/19	7,900,000	\$16.00	\$126,400,000
NGM Biopharmaceuticals, Inc. NasdaqGS:NGM	\$15.00	4/4/19	6,666,667	\$16.00	\$106,666,672
Silk Road Medical, Inc. NasdaqGM:SILK	\$16.00	4/4/19	6,000,000	\$20.00	\$120,000,000
Brainsway Ltd. NasdaqGM:BWAY	\$11.94	4/17/19	2,500,000	\$11.00	\$27,500,000
Turning Point Therapeutics, Inc. NasdaqGS:TPTX	\$17.00	4/17/19	9,250,000	\$18.00	\$166,500,000
HOOKIPA Pharma Inc. NasdaqGS:HOOK	\$15.00	4/18/19	6,000,000	\$14.00	\$84,000,000
TransMedics Group, Inc. NasdaqGM:TMDX	\$16.00	5/2/19	5,690,000	\$16.00	\$91,040,000

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Trevi Therapeutics, Inc. NasdaqGM:TRVI	\$15.00	5/7/19	5,500,000	\$10.00	\$55,000,000
Axcella Health Inc. NasdaqGM:AXLA	\$21.00	5/9/19	3,571,428	\$20.00	\$71,428,560
Cortexyme, Inc. NasdaqGS:CRTX	\$17.00	5/9/19	4,412,000	\$17.00	\$75,004,000
Milestone Pharmaceuticals Inc. NasdaqGS:MIST	\$15.00	5/9/19	5,500,000	\$15.00	\$82,500,000
NextCure, Inc. NasdaqGS:NXTC	\$15.00	5/9/19	5,000,000	\$15.00	\$75,000,000
Applied Therapeutics, Inc. NasdaqGM:APLT	\$15.00	5/14/19	4,000,000	\$10.00	\$40,000,000
Avantor, Inc. NYSE:AVTR	\$19.50	5/17/19	207,000,000	\$14.00	\$2,898,000,000
Bicycle Therapeutics plc NasdaqGS:BCYC	\$15.00	5/23/19	4,333,333	\$14.00	\$60,666,662
IDEAYA Biosciences, Inc. NasdaqGS:IDYA	\$14.00	5/23/19	5,000,000	\$10.00	\$50,000,000
Stoke Therapeutics, Inc. NasdaqGS:STOK	\$15.00	6/19/19	7,891,110	\$18.00	\$142,039,980
Akero Therapeutics, Inc. NasdaqGS:AKRO	\$15.00	6/20/19	5,750,000	\$16.00	\$92,000,000
Atreca, Inc. NasdaqGS:BCEL	\$17.00	6/20/19	7,350,000	\$17.00	\$124,950,000
Personalis, Inc. NasdaqGM:PSNL	\$15.00	6/20/19	7,921,500	\$17.00	\$134,665,500
Prevail Therapeutics Inc. NasdaqGM:PRVL	\$17.00	6/20/19	7,353,000	\$17.00	\$125,001,000
Adaptive Biotechnologies Corporation NasdaqGS:ADPT	\$16.00	6/27/19	15,000,000	\$20.00	\$300,000,000
BridgeBio Pharma, Inc. NasdaqGS:BBIO	\$15.00	6/27/19	20,500,000	\$17.00	\$348,500,000
Morphic Holding, Inc. NasdaqGM:MORF	\$15.00	6/27/19	6,000,000	\$15.00	\$90,000,000
Karuna Therapeutics, Inc. NasdaqGM:KRTX	\$16.00	6/28/19	5,578,124	\$16.00	\$89,249,984

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Life Sciences Offerings (continued)

H2 2018^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Crinetics Pharmaceuticals, Inc. NasdaqGS:CRNX	\$16.00	7/18/18	6,000,000	\$17.00	\$102,000,000
Rubius Therapeutics, Inc. NasdaqGS:RUBY	\$21.00	7/18/18	10,483,000	\$23.00	\$241,109,000
Allakos Inc. NasdaqGS:ALLK	\$16.00	7/19/18	7,133,333	\$18.00	\$128,399,994
Constellation Pharmaceuticals, Inc. NasdaqGS:CNST	\$15.00	7/19/18	4,000,000	\$15.00	\$60,000,000
Tilray, Inc. NasdaqGS:TLRY	\$15.00	7/19/18	9,000,000	\$17.00	\$153,000,000
Replimune Group, Inc. NasdaqGS:REPL	\$15.00	7/20/18	6,700,000	\$15.00	\$100,500,000
Aquestive Therapeutics, Inc. NasdaqGM:AQST	\$15.00	7/25/18	4,500,000	\$15.00	\$67,500,000
Vaccinex, Inc. NasdaqGM:VCNX	\$13.50	8/9/18	3,333,334	\$12.00	\$40,000,008
Principia Biopharma Inc. NasdaqGS:PRNB	\$16.00	9/14/18	6,250,000	\$17.00	\$106,250,000
Elanco Animal Health Incorporated NYSE:ELAN	\$21.50	9/20/18	62,900,000	\$24.00	\$1,509,600,000
Y-mAbs Therapeutics, Inc. NasdaqGS:YMAB	\$15.00	9/21/18	6,000,000	\$16.00	\$96,000,000
Entasis Therapeutics Holdings Inc. NasdaqGM:ETTX	\$17.00	9/26/18	5,000,000	\$15.00	\$75,000,000
Arvinas Holding Company, LLC NasdaqGS:ARVN	\$15.00	9/27/18	7,500,000	\$16.00	\$120,000,000
Ra Medical Systems, Inc. NYSE:RMED	\$15.00	9/27/18	3,900,000	\$17.00	\$66,300,000
Sutro Biopharma, Inc. NasdaqGM:STRO	\$15.00	9/27/18	5,667,000	\$15.00	\$85,005,000
Urovant Sciences Ltd. NasdaqGS:UROV	\$15.00	9/27/18	10,000,000	\$14.00	\$140,000,000

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Gritstone Oncology, Inc. NasdaqGS:GRTS	\$14.00	9/28/18	6,666,667	\$15.00	\$100,000,005
Guardant Health, Inc. NasdaqGS:GH	\$16.00	10/4/18	12,500,000	\$19.00	\$237,500,000
Kodiak Sciences Inc. NasdaqGM:KOD	\$14.00	10/4/18	9,000,000	\$10.00	\$90,000,000
Allogene Therapeutics, Inc. NasdaqGS:ALLO	\$17.00	10/11/18	18,000,000	\$18.00	\$324,000,000
Equillium, Inc. NasdaqGM:EQ	\$15.00	10/12/18	4,670,000	\$14.00	\$65,380,000
SI-BONE, Inc. NasdaqGM:SIBN	\$14.00	10/17/18	7,200,000	\$15.00	\$108,000,000
Osmotica Pharmaceuticals plc NasdaqGS:OSMT	\$15.00	10/18/18	6,650,000	\$7.00	\$46,550,000
PhaseBio Pharmaceuticals, Inc. NasdaqGM:PHAS	\$13.00	10/18/18	9,200,000	\$5.00	\$46,000,000
LogicBio Therapeutics, Inc. NasdaqGM:LOGC	\$13.00	10/19/18	7,000,000	\$10.00	\$70,000,000
Gamida Cell Ltd. NasdaqGM:GMDA	\$14.00	10/26/18	6,250,000	\$8.00	\$50,000,000
Axonics Modulation Technologies, Inc. NasdaqGS:AXNX	\$15.00	10/31/18	8,000,000	\$15.00	\$120,000,000
Orchard Therapeutics plc NasdaqGS:ORTX	\$15.00	10/31/18	14,285,715	\$14.00	\$200,000,010
Twist Bioscience Corporation NasdaqGS:TWST	\$15.00	10/31/18	5,000,000	\$14.00	\$70,000,000
Eton Pharmaceuticals, Inc. NasdaqGM:ETON	\$6.00	11/13/18	3,600,000	\$6.00	\$21,600,000
Vapotherm, Inc. NYSE:VAPO	\$15.00	11/14/18	4,000,000	\$14.00	\$56,000,000
Taiwan Liposome Company, Ltd. NasdaqGM:TLC	\$7.46	11/21/18	3,750,000	\$5.80	\$21,750,000
Moderna, Inc. NasdaqGS:MRNA	\$23.00	12/7/18	26,275,993	\$23.00	\$604,347,839
Synthorx, Inc. NasdaqGS:THOR	\$11.00	12/7/18	11,912,727	\$11.00	\$131,039,997

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Methodology

Data points used in the compilation and analysis of this information were gathered using a variety of resources, including, but not limited to, filings made with the U.S. Securities and Exchange Commission, lock-up expiration dates from EDGAR Online IPO Deal Data and daily stock-trading price data. The exact dates upon which lock-ups expired were estimated based on disclosure in the prospectuses and may further be approximate in the case of dates falling on holidays or weekends. Companies were assigned to the Technology and Life Sciences sectors based on SIC codes and other company descriptors.

The information in the graphs and tables regarding offering size does not reflect any exercise of the underwriters' over-allotment, or green shoe, option. Information at the red herring stage is based on the midpoint of the range and on the number of shares offered, as reflected on the cover page of the first preliminary, or red herring, prospectus. The information regarding the actual offering size is based on the price to the public and the aggregate number of shares offered, as reflected on the cover page of the final prospectus. The closing price on the first day of trading is the closing price on the company's primary exchange on the first day of public trading of the shares following the pricing of the offering.

Disclaimer

The preparation of the information contained herein involves assumptions, compilations and analysis, and there can be no assurance that the information provided herein is error-free. Neither Fenwick & West LLP nor any of its partners, associates, staff or agents shall have any liability for any information contained herein, including any errors or incompleteness. The contents of this report are not intended, and should not be considered, as legal advice or opinion.

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