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Key Metrics for Technology and Life Sciences Initial Public Offerings

2017

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Contact the authors or members of your client service team to discuss the report or for more information.

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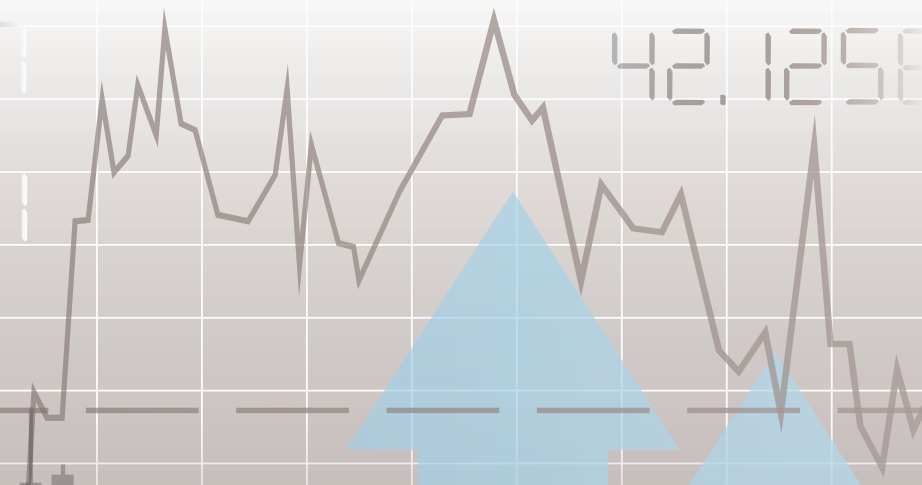
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42.1256
31.2540

25.4821
31.2540

42.1781
25.4821

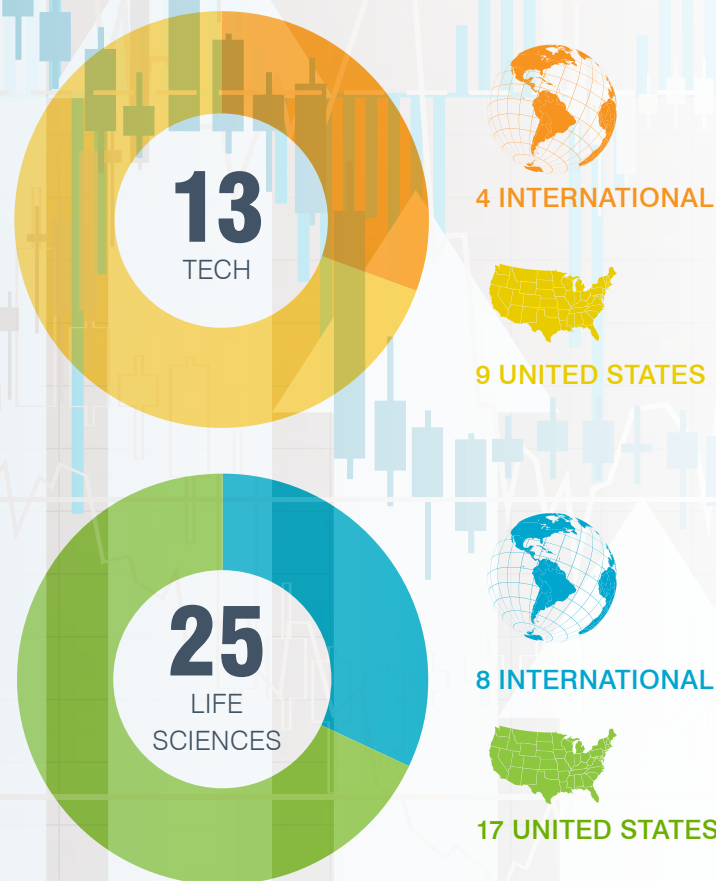
42.1256



Survey Results

Volume of IPOs Stays Lower than Average as Markets Reach New Highs

NUMBER OF IPO DEALS IN H2 2017



As major market indices ascended to new heights over the course of 2017 and market volatility held at an IPO-favorable low ebb, the number of technology IPOs completed in the second half of 2017 remained stubbornly low at only 13. This compares to 16, the average number of technology IPOs in the half-year periods beginning with 2012 and reaching a peak of 33 in the first half of 2014. The 2017 statistics are consistent with the trend of technology companies accessing private sources of capital and delaying their entry into public-company status for longer periods than in the past. The 25 life sciences IPOs completed in the second half of 2017 was more in line with recent history, as this compares to an average of 23 transactions in the half-year periods beginning with 2012.

The fact that all but one of the technology IPOs completed in the second half of 2017 took place in the fourth quarter suggests momentum in the market heading into 2018.

The second half of 2017 did not include “blockbuster” deals similar to Snap’s \$3.4 billion offering in the first half of 2017. The largest technology IPO in the second half of 2017 was Sea Ltd., which produced proceeds of about \$900 million. The largest life sciences IPO, Denali Therapeutics, raised proceeds of \$250 million. Consistent with prior periods, technology offerings were notably larger than their life sciences counterparts. The average offering proceeds in the second half of 2017 were \$223.5 million for technology companies and \$96.3 million for life sciences companies.

While dual-class high vote/low/no vote capital structures continued to generate controversy and commentary in 2017, this structure continued to be quite popular among technology companies. Of

the 13 technology companies completing IPOs in the second half, eight had adopted a dual-class structure. Interestingly, all four of the internationally based technology companies (three in China, one in Singapore) employed a dual-class structure. Life sciences companies continued to have a more traditional single-class structure.

Transactions completed in the second half of 2017 found a stable pricing environment. Of the technology deals, 46% priced above their red herring range and 39% priced within the range, and of the life sciences deals, 80% priced in or above their red herring range. Similarly, the 2017 deals saw favorable first-day trading, as all of the technology offerings and 80% of the life sciences offerings closed above their IPO prices.

Consistent with a prevailing trend over the past several years, insider participation was an important feature of the life sciences offerings. Insiders purchased shares in the IPO, or in a concurrent private placement, in 21 of the 25 life sciences transactions completed in the second half of 2017.

The second half of 2017 saw a notable proportion of deals completed that had been filed with the SEC many months earlier. Of the 38 completed offerings, 10 were for companies that made their initial confidential submission more than six months prior to the ultimate pricing. Two of these 10 companies made their initial public filing more than 100 days prior to pricing.

The domestic technology and life sciences IPOs in the second half of 2017 were for companies based in 13 different states, showing increased geographic diversity.

Offerings Completed

This graph shows the number of technology and life sciences IPOs completed during each quarter of 2012 through 2017.

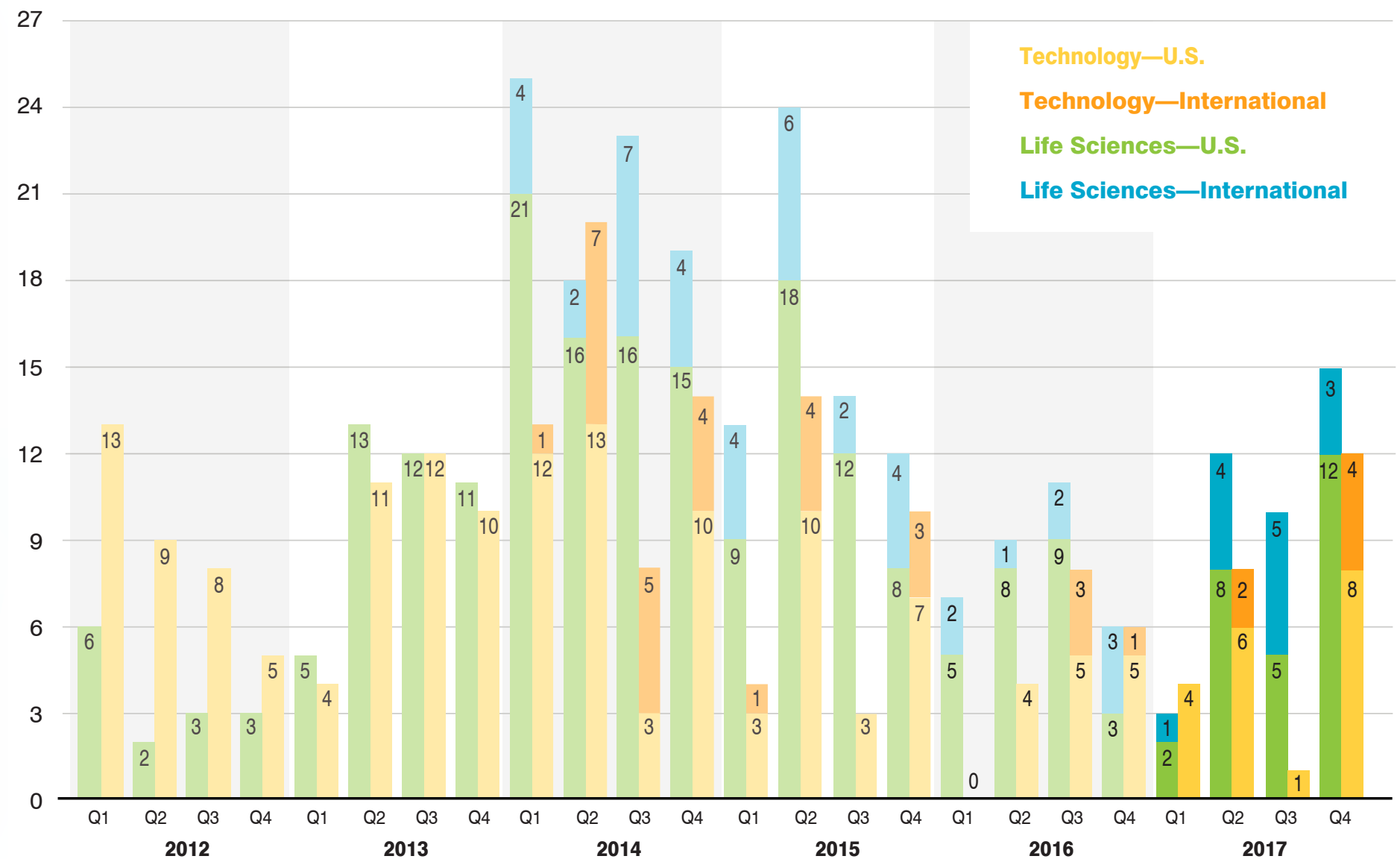
2017
IPOS

40
LIFE
SCIENCES

25
TECH



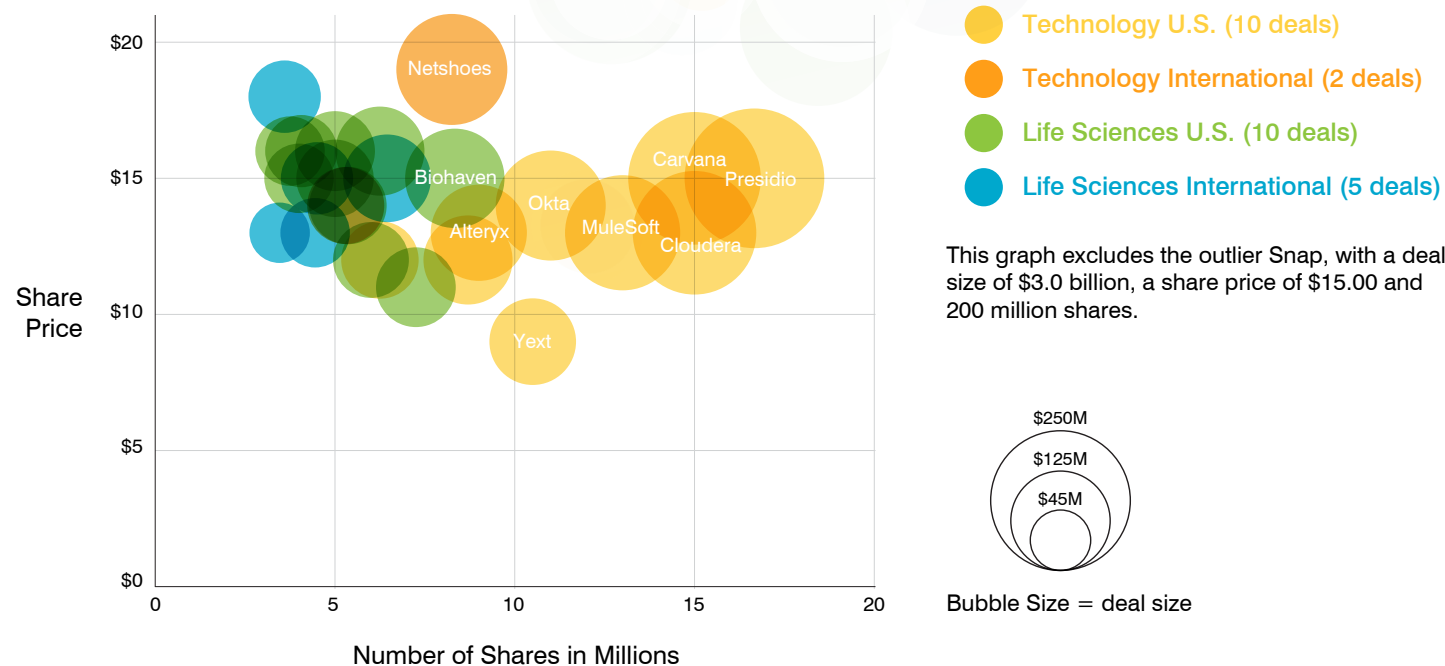
IPOS PER QUARTER 2012–2017



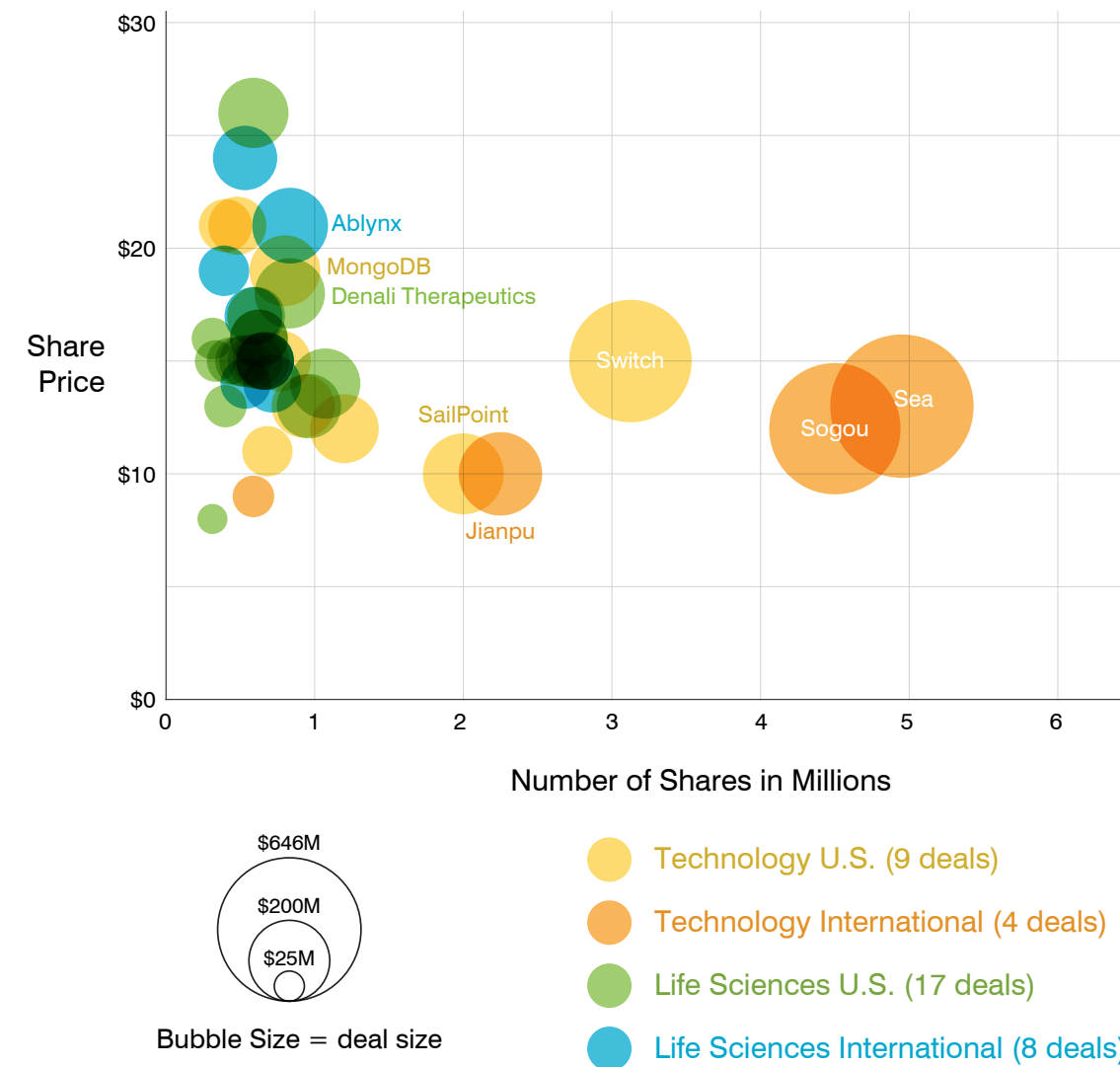
Size of Offerings, Red Herring Midpoint

The following scatter graphs plot technology and life sciences IPOs completed during the first and second half of 2017 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): 2017, FIRST HALF



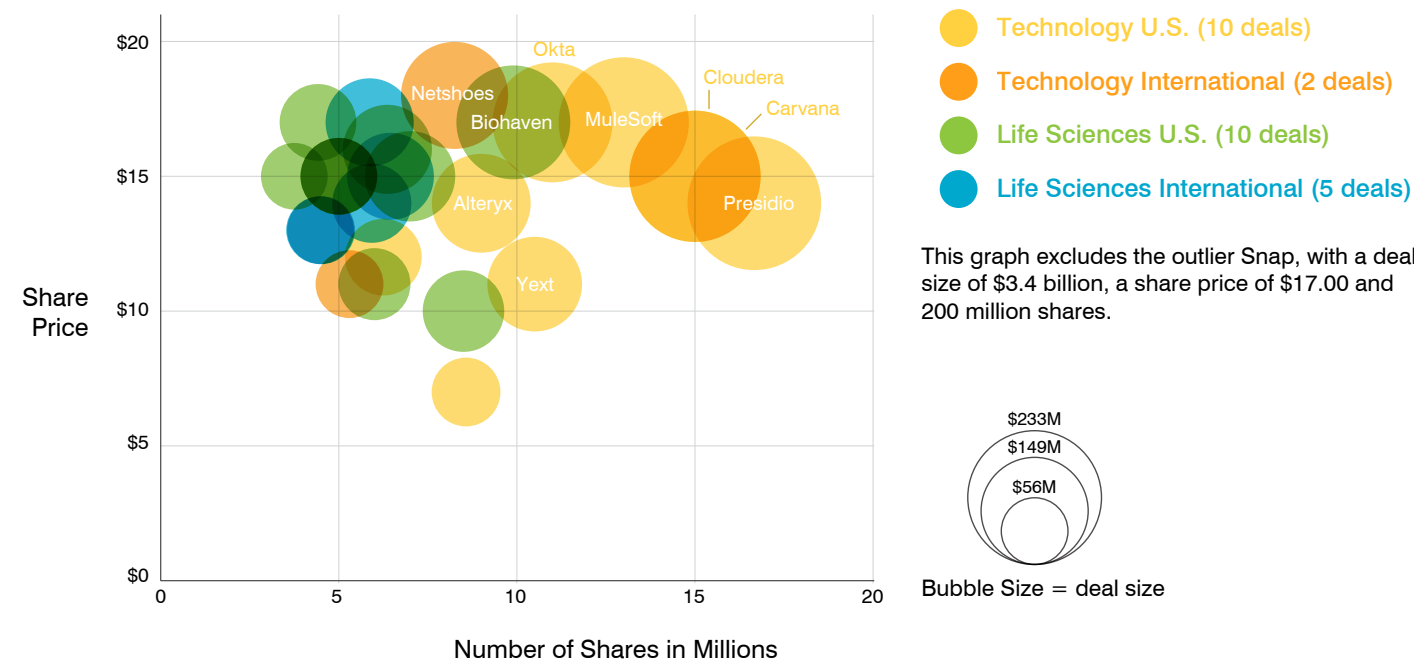
RED HERRING DEAL COMPARISON (MIDPOINT PRICE): 2017, SECOND HALF



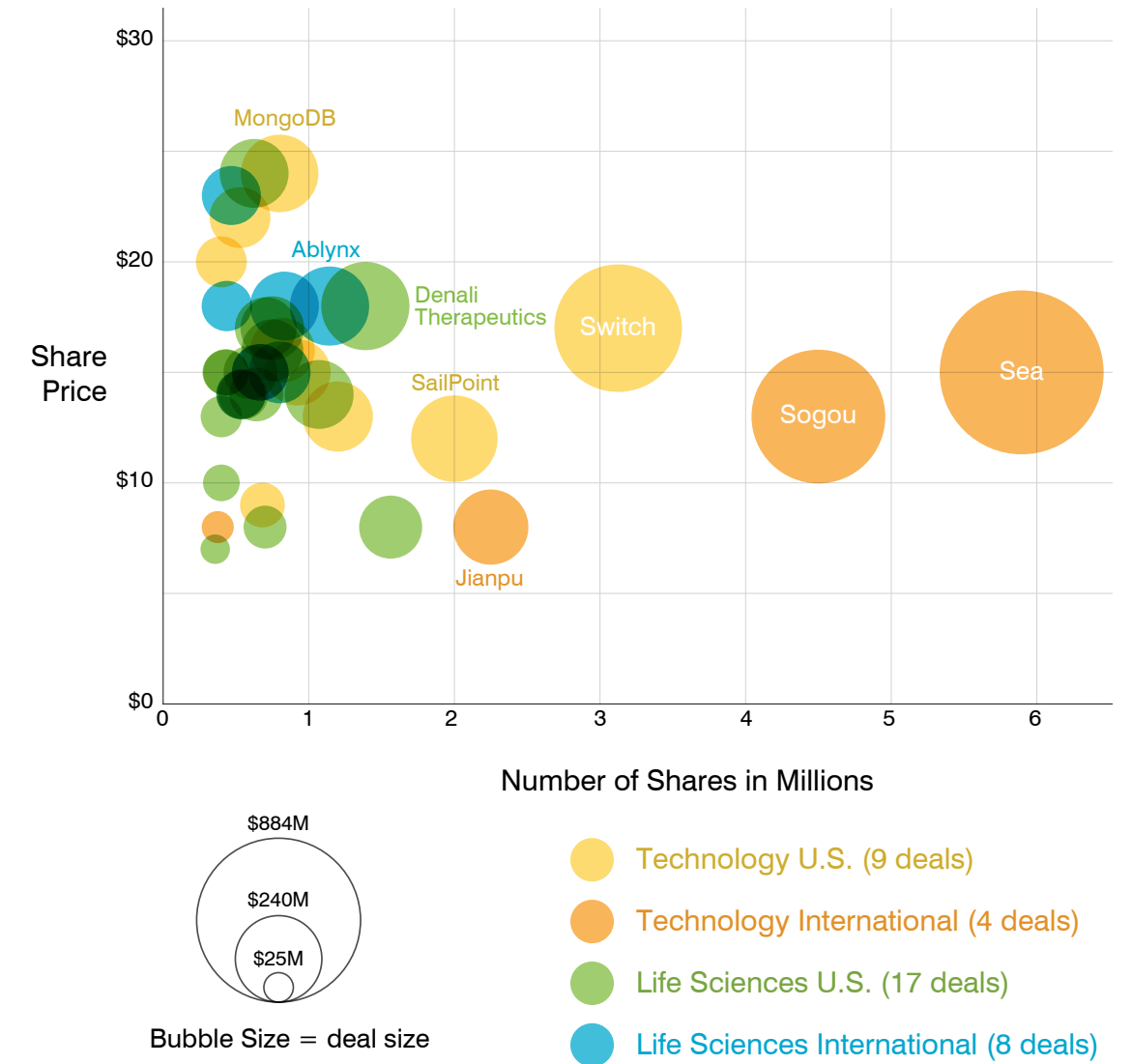
Size of Offerings, Final IPO Price

The following scatter graphs plot technology and life sciences IPOs completed during the first and second half of 2017 in terms of the initial offering price per share and number of shares offered based on actual pricing of the offering.

IPO DEAL COMPARISON 2017, FIRST HALF



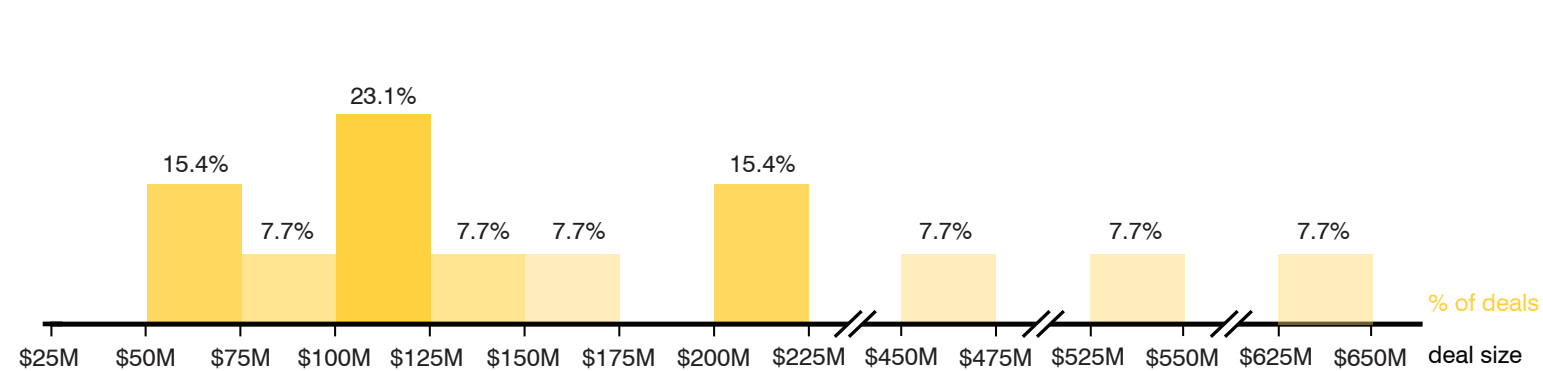
IPO DEAL COMPARISON 2017, SECOND HALF



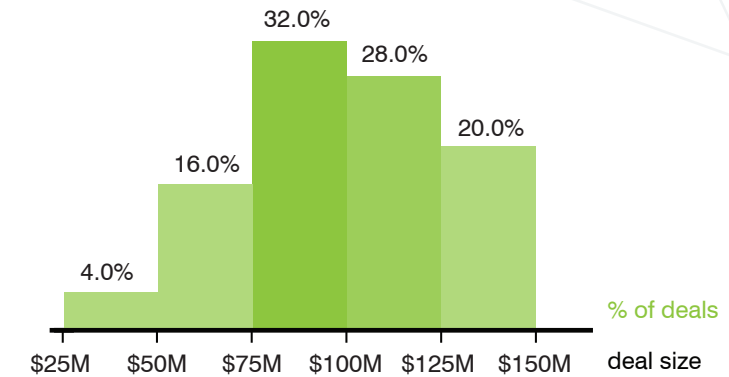
Aggregate Amount Raised, Red Herring Midpoint

The following graphs provide information about aggregate deal size at the red herring stage in the first and second half of 2017.

DISTRIBUTION OF DEAL SIZE (RED HERRING MIDPOINT): 2017, SECOND HALF

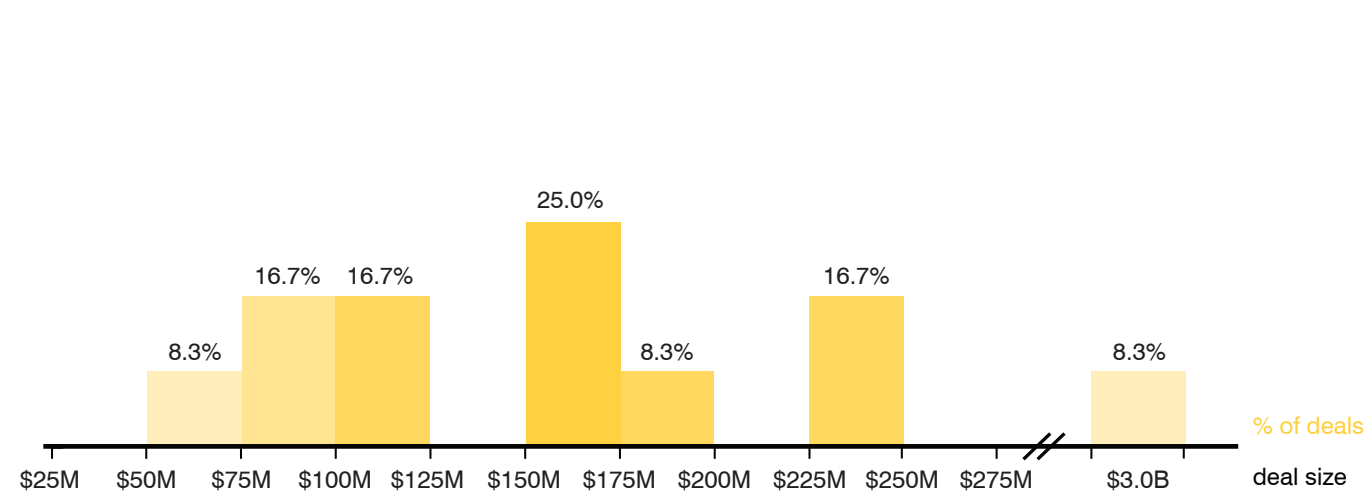


Technology Deal Size Distribution

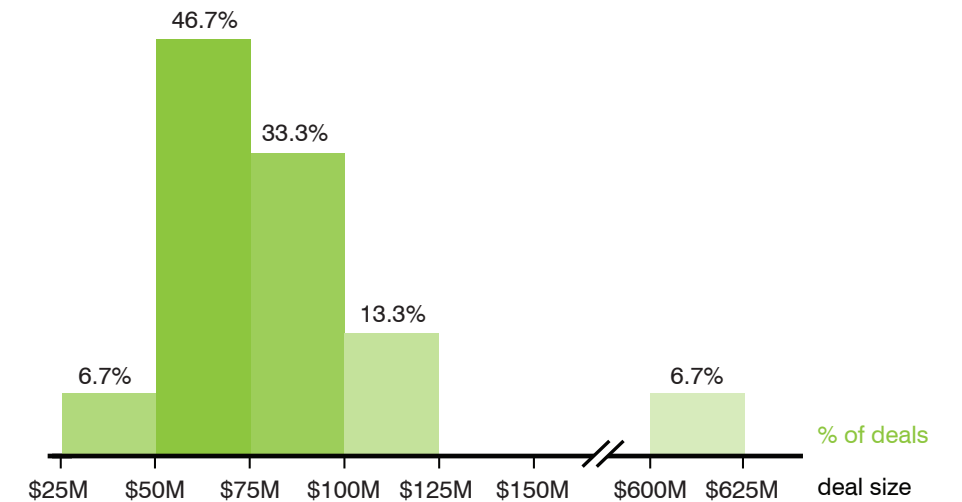


Life Sciences Deal Size Distribution

DISTRIBUTION OF DEAL SIZE (RED HERRING MIDPOINT): 2017, FIRST HALF



Technology Deal Size Distribution

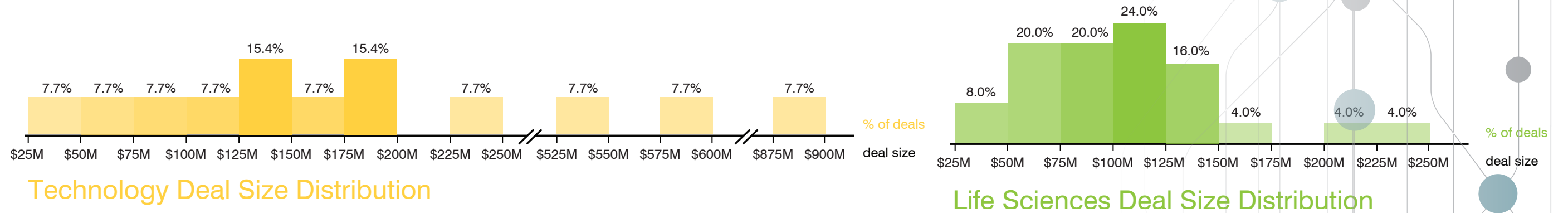


Life Sciences Deal Size Distribution

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 and second half of 2017.

DISTRIBUTION OF DEAL SIZE (FINAL IPO PRICE): 2017, SECOND HALF



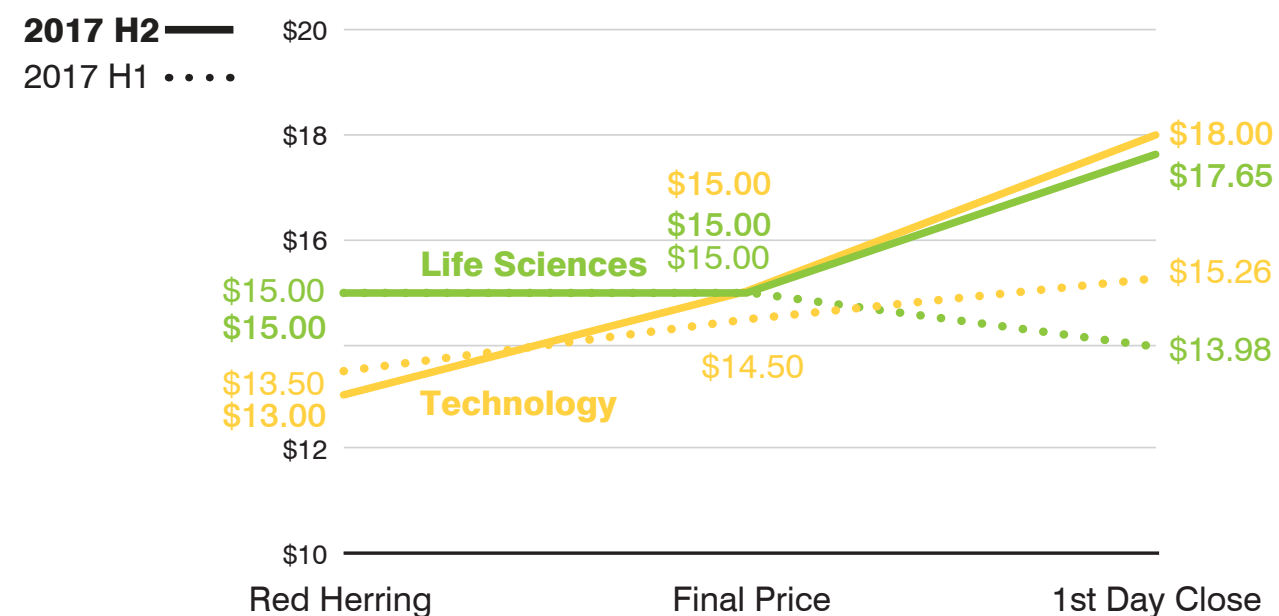
DISTRIBUTION OF DEAL SIZE (FINAL IPO PRICE): 2017, FIRST HALF



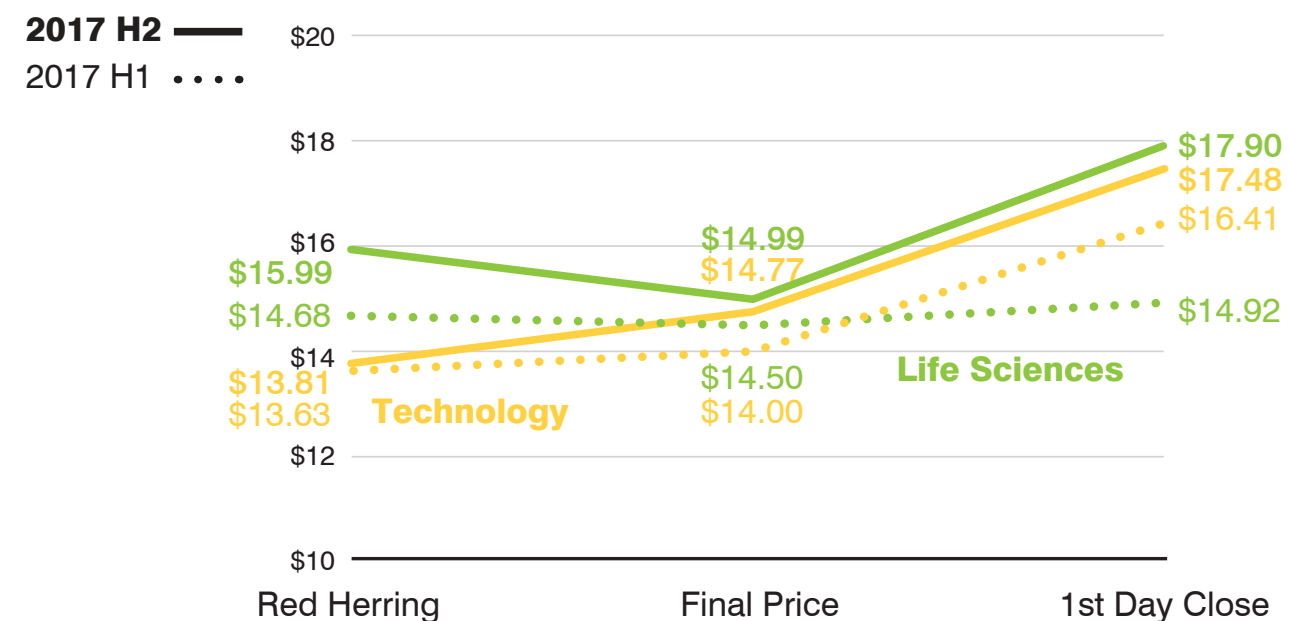
Price Changes Between the Red Herring and Initial Offering Price

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 and second half of 2017.

MEDIAN PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS



AVERAGE PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS

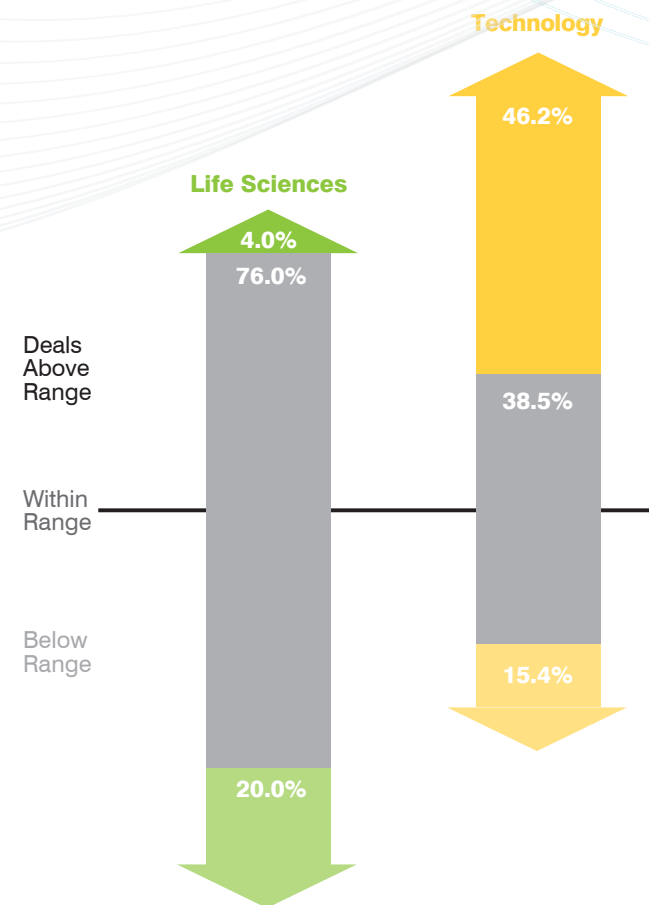


Price Changes (continued)

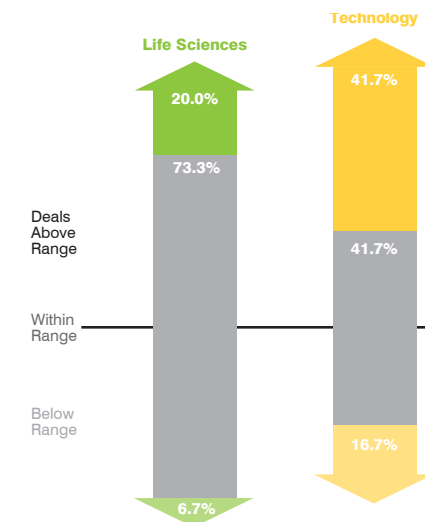
The two graphs on the left show the percentage of technology and life sciences IPOs with a final price that falls above, within or below the red herring range in the second half of 2017 and the first half of 2017. The two graphs on the right show the percentage of technology and life sciences deals that closed up, down or flat on their first day of trading in the second half of 2017 and the first half of 2017.

RELATION OF PRICE AT 1ST DAY CLOSE TO FINAL IPO PRICE (% OF DEALS) 2017, SECOND HALF

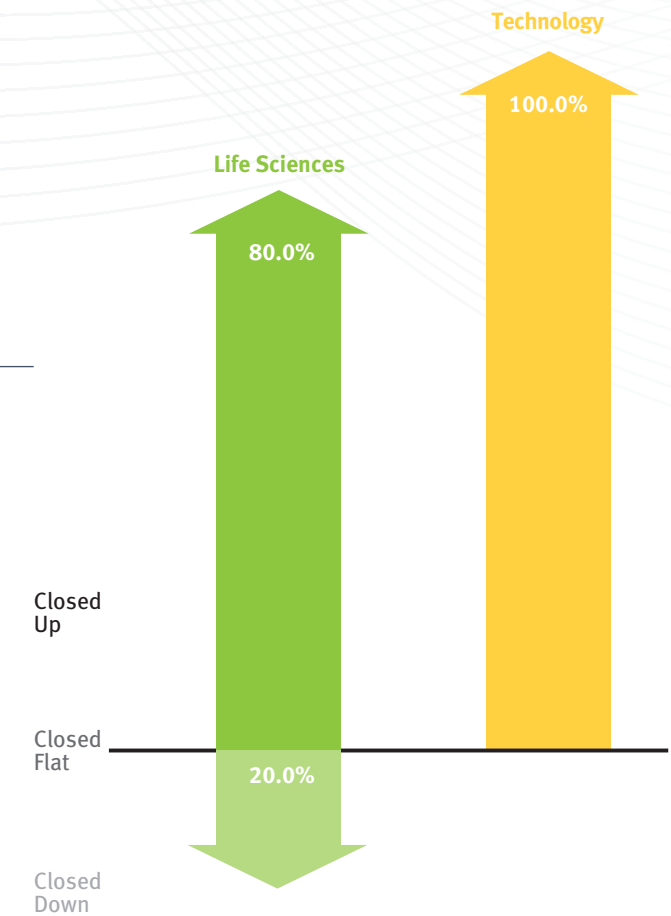
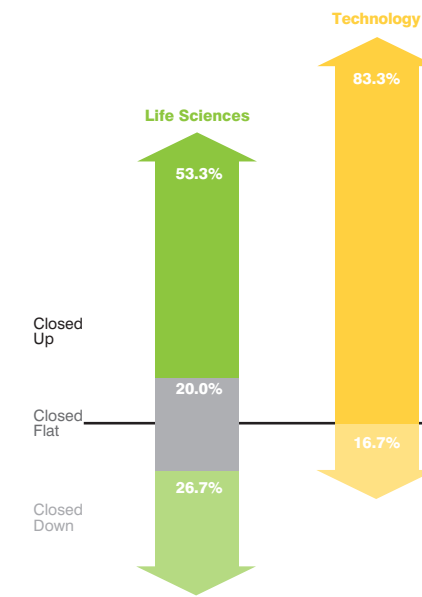
RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS) 2017, SECOND HALF



RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS) 2017, FIRST HALF



RELATION OF PRICE AT 1ST DAY CLOSE TO FINAL IPO PRICE (% OF DEALS) 2017, FIRST HALF



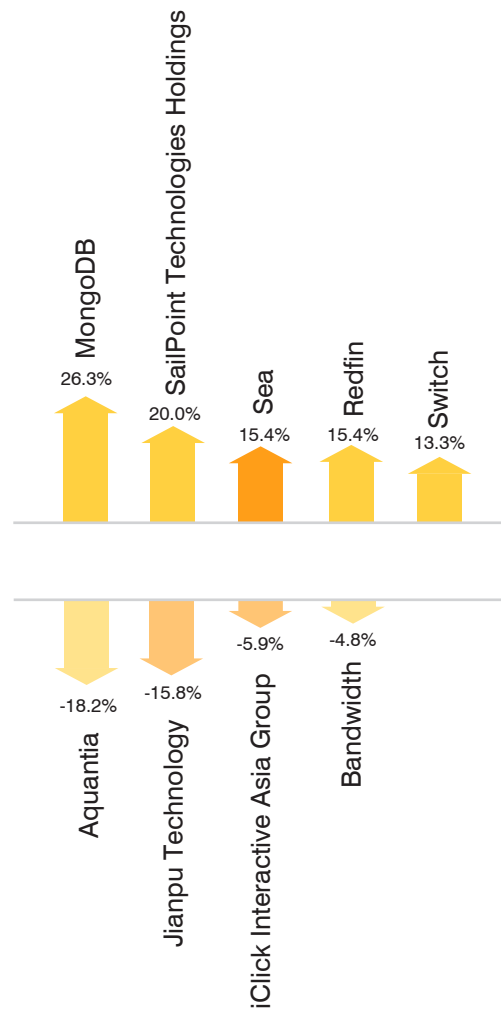
Geographical Distribution of Technology Company IPOs



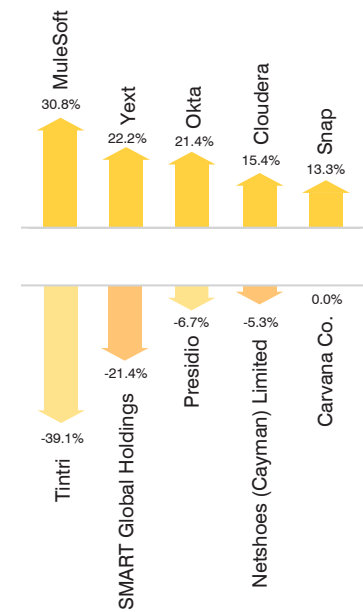
Price Changes (continued)

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 second half and first half of 2017.

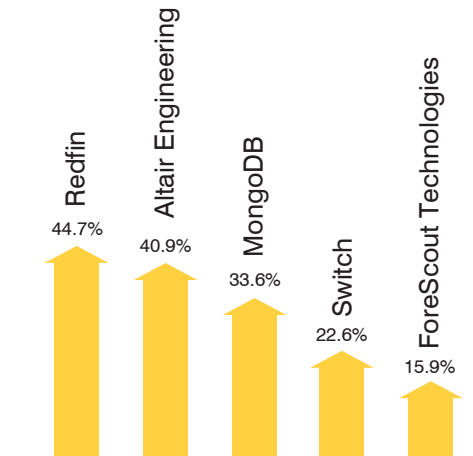
BIGGEST MOVERS—RED HERRING PRICE TO FINAL IPO PRICE 2017, SECOND HALF



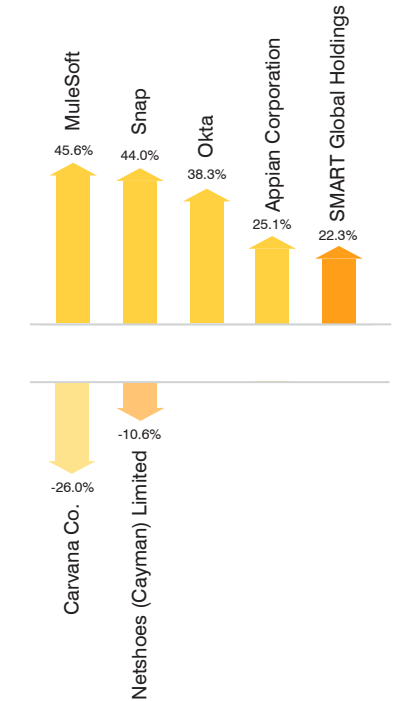
BIGGEST MOVERS—RED HERRING PRICE TO FINAL IPO PRICE 2017, FIRST HALF



BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2017, SECOND HALF

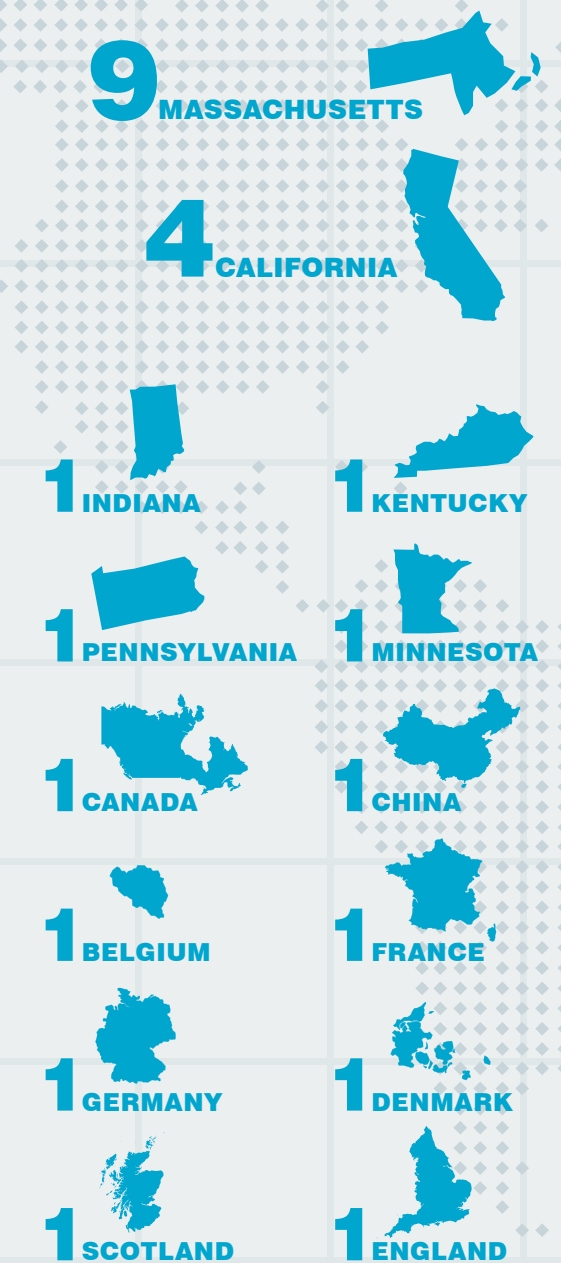


BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2017, FIRST HALF



Technology—U.S.
Technology—International

Geographical Distribution
of Life Sciences
Company IPOs



Price Changes (continued)

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 second half and first half of 2017.

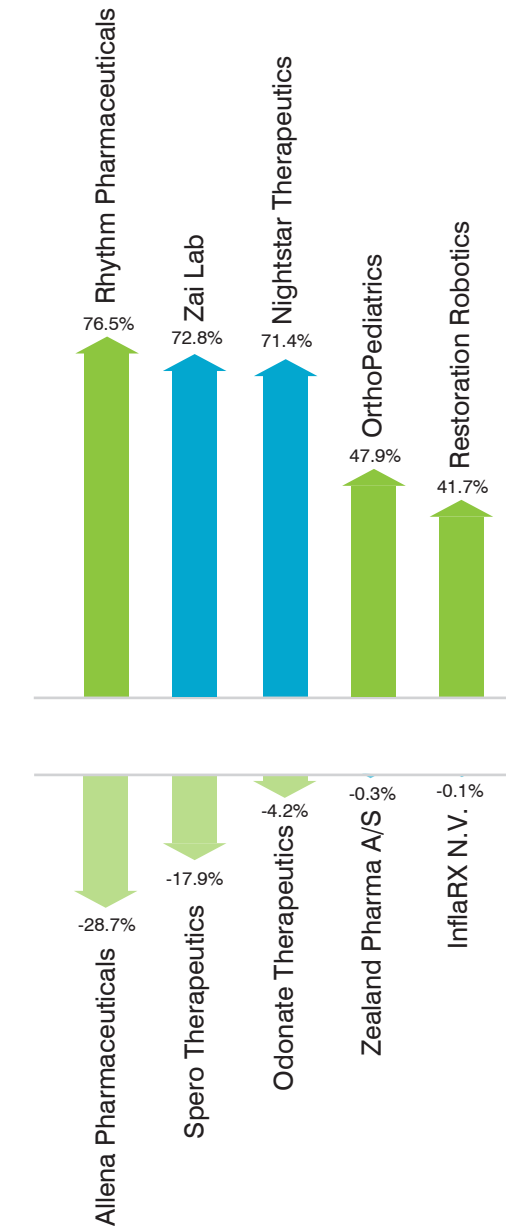
BIGGEST MOVERS – RED HERRING PRICE TO FINAL IPO PRICE 2017, SECOND HALF



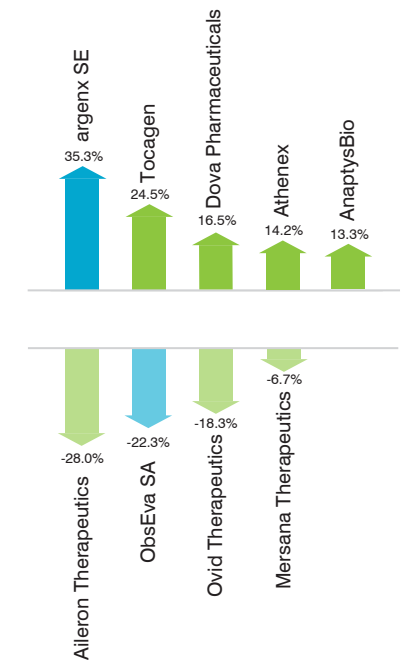
BIGGEST MOVERS – RED HERRING PRICE TO FINAL IPO PRICE 2017, FIRST HALF



BIGGEST MOVERS – IPO PRICE TO PRICE AT 1ST DAY CLOSE 2017, SECOND HALF



BIGGEST MOVERS – IPO PRICE TO PRICE AT 1ST DAY CLOSE 2017, FIRST HALF

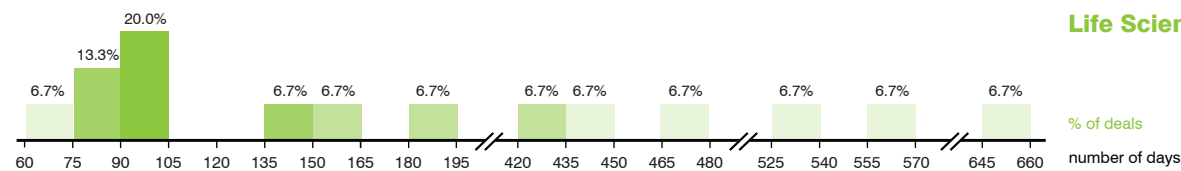
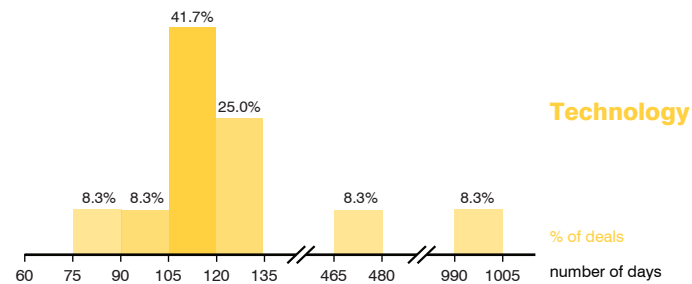


▲ Life Sciences—U.S.
▲ Life Sciences—International

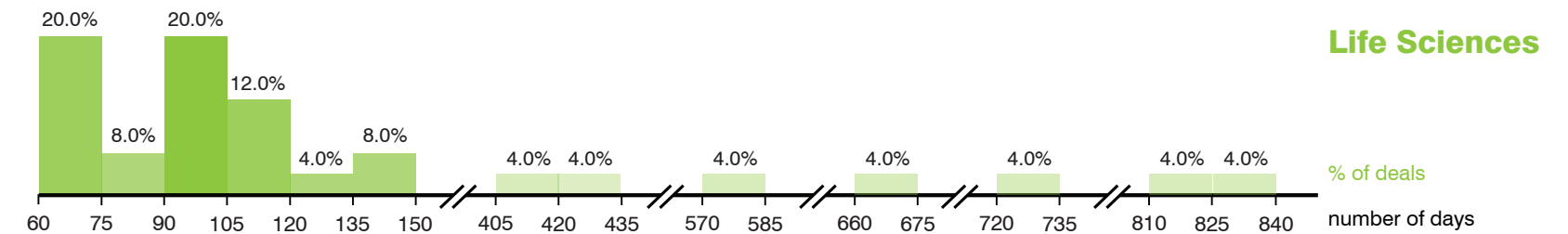
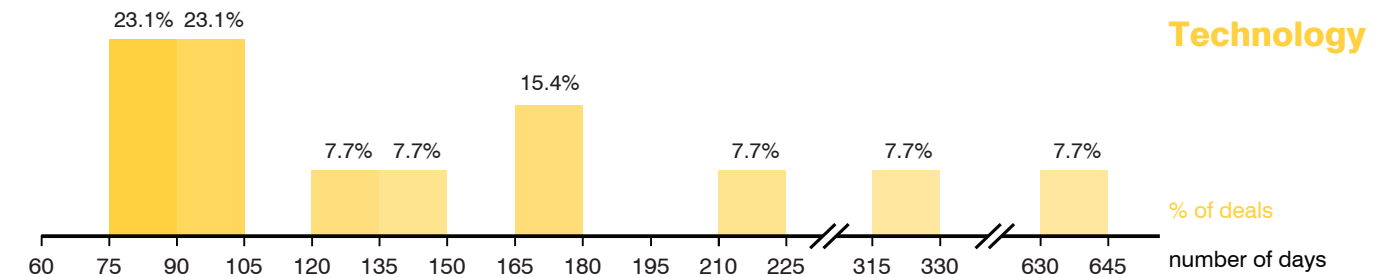
Days on File

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 2017, FIRST HALF



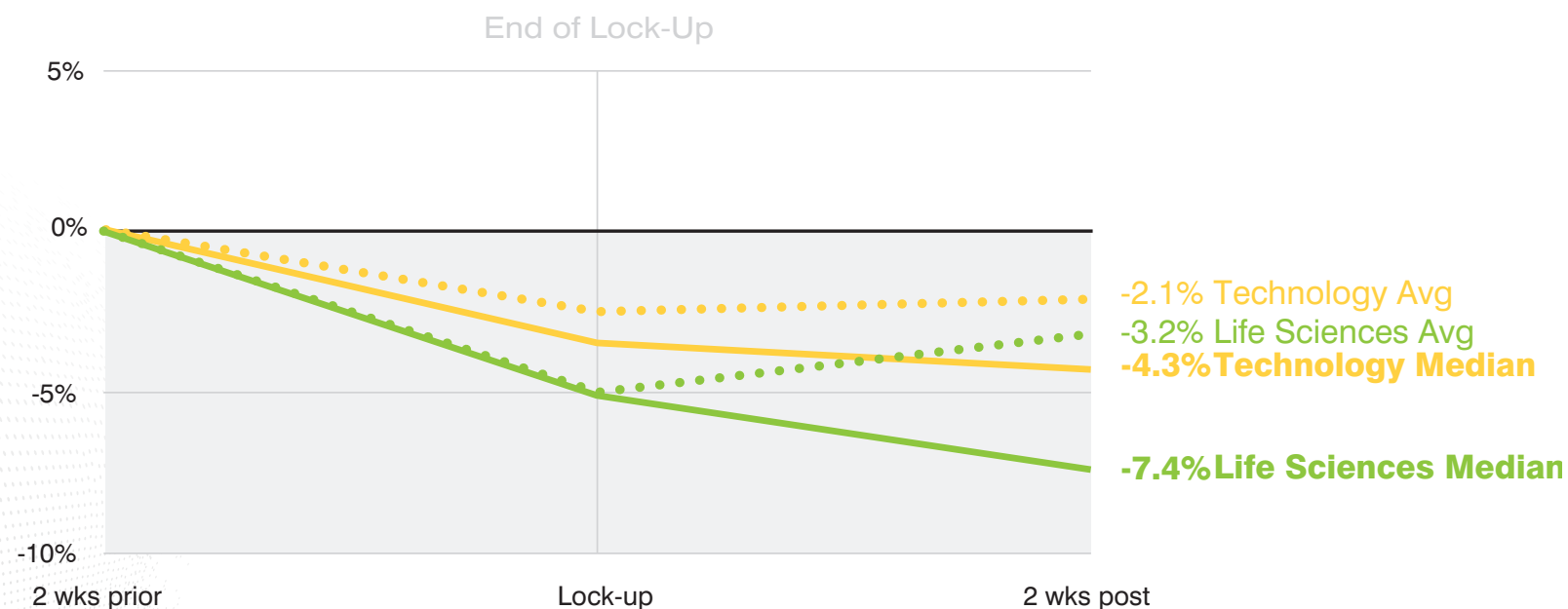
DISTRIBUTION OF DAYS BETWEEN INITIAL SUBMISSION AND FINAL PRICING 2017, SECOND HALF



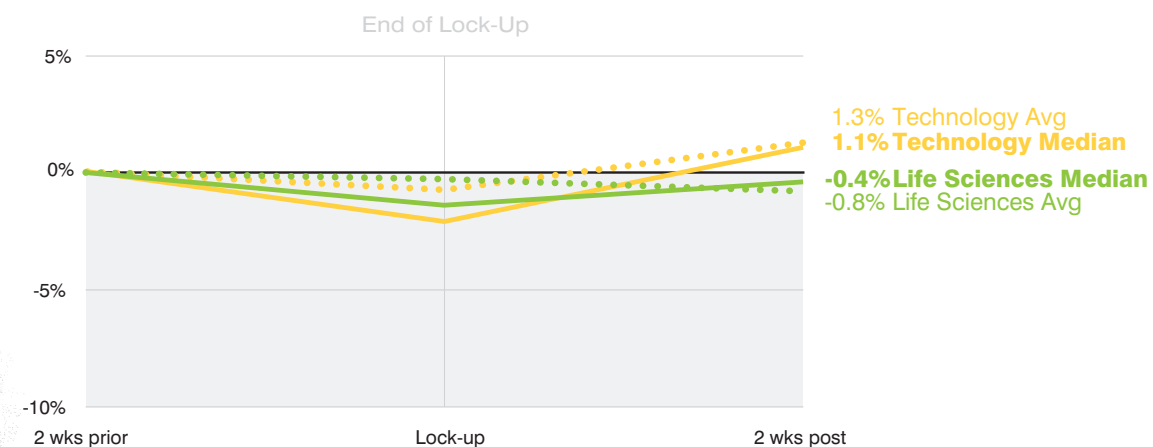
Price Changes Around the Expiration of the Lock-Up

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 below 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 first and second half of 2017. Those companies completing IPOs in the first half of 2017 and a follow-on offering within 180 days are excluded from the top graph. Those companies completing IPOs in the second half of 2016 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 2017, SECOND HALF

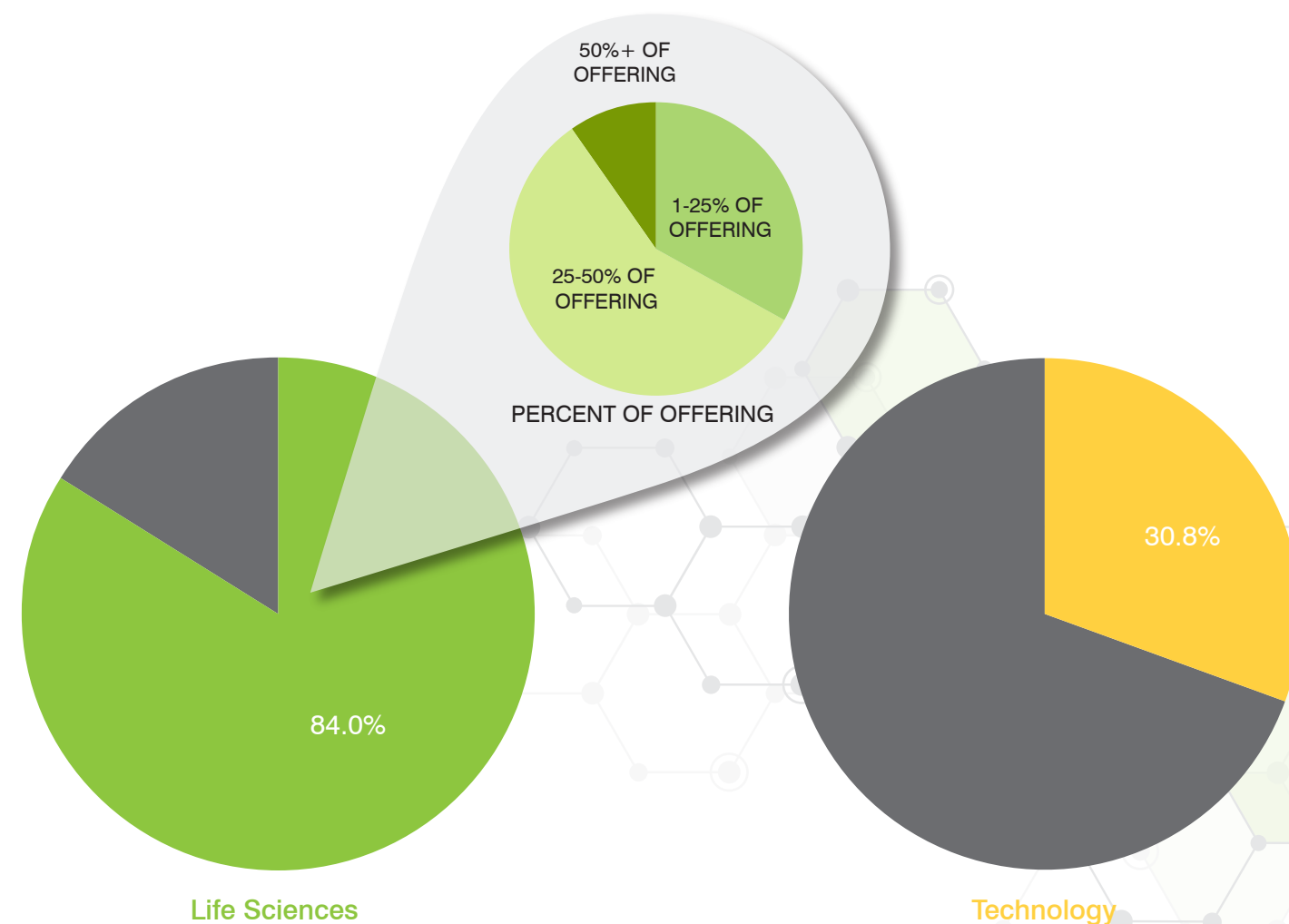


PERCENT CHANGE OF SHARE PRICES SURROUNDING END OF LOCK-UP PERIOD 2017, FIRST HALF



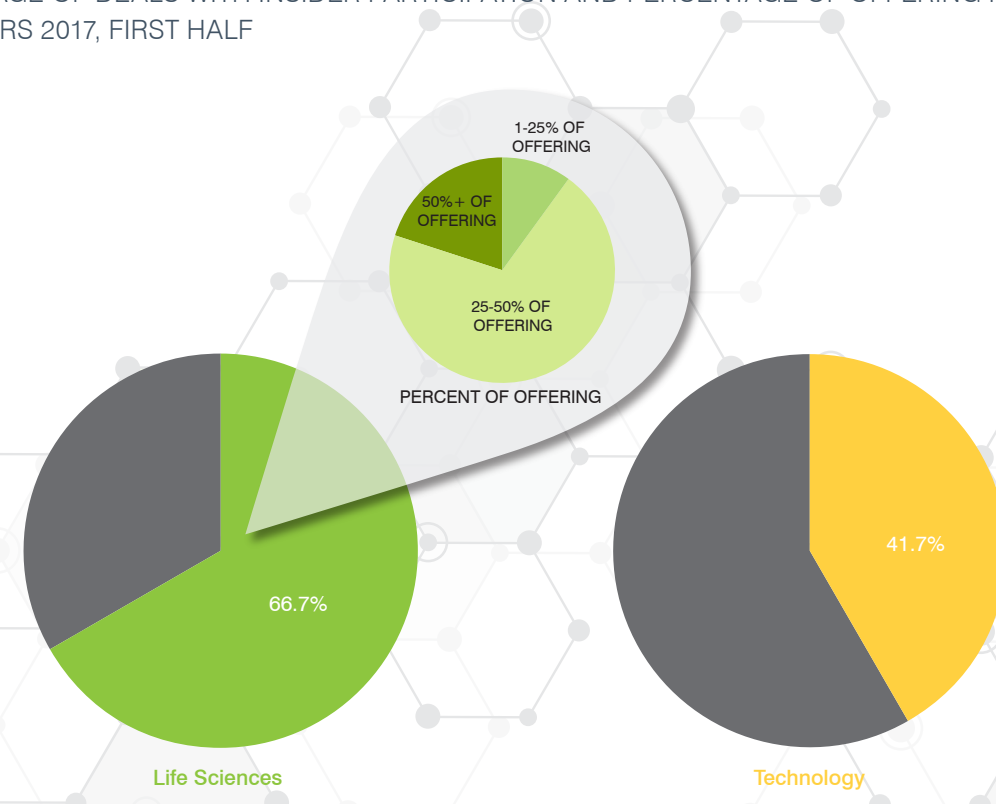
Insider Participation

PERCENTAGE OF DEALS WITH INSIDER PARTICIPATION AND PERCENTAGE OF OFFERING MADE AVAILABLE TO INSIDERS 2017, SECOND HALF



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 2017, FIRST HALF



Technology Offerings

H1 2017^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Snap Inc. NYSE:SNAP	\$15.00	3/2017	200,000,000	\$17.00	\$3,400,000,000
Presidio, Inc. NasdaqGS:PSDO	\$15.00	3/2017	16,666,666	\$14.00	\$233,333,324
MuleSoft, Inc. NYSE:MULE	\$13.00	3/2017	13,000,000	\$17.00	\$221,000,000
Alteryx, Inc. NYSE:AYX	\$13.00	3/2017	9,000,000	\$14.00	\$126,000,000
Okta, Inc. NasdaqGS:OKTA	\$14.00	4/2017	11,000,000	\$17.00	\$187,000,000
Netshoes (Cayman) Limited NYSE:NETS	\$19.00	4/2017	8,250,000	\$18.00	\$148,500,000
Yext, Inc. NYSE:YEXT	\$9.00	4/2017	10,500,000	\$11.00	\$115,500,000
Carvana Co. NYSE:CVNA	\$15.00	4/2017	15,000,000	\$15.00	\$225,000,000
Cloudera, Inc. NYSE:CLDR	\$13.00	4/2017	15,000,000	\$15.00	\$225,000,000
SMART Global Holdings, Inc. NasdaqGS:SGH	\$14.00	5/2017	5,300,000	\$11.00	\$58,300,000
Appian Corporation NasdaqGM:APPN	\$12.00	5/2017	6,250,000	\$12.00	\$75,000,000
Tintri, Inc. NasdaqGM:TNTR	\$11.50	6/2017	8,572,000	\$7.00	\$60,004,000

H2 2017^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Redfin Corporation NasdaqGS:RDFN	\$13.00	7/2017	9,231,000	\$15.00	\$138,465,000
Switch, Inc. NYSE:SWCH	\$15.00	10/2017	31,250,000	\$17.00	\$531,250,000
MongoDB, Inc. NasdaqGM:MDB	\$19.00	10/2017	8,000,000	\$24.00	\$192,000,000
Sea Ltd. NYSE:SE	\$13.00	10/2017	58,960,000	\$15.00	\$884,400,000
ForeScout Technologies, Inc. NasdaqGM:FSCT	\$21.00	10/2017	5,280,000	\$22.00	\$116,160,000
Altair Engineering Inc. NasdaqGS:ALTR	\$12.00	11/2017	12,000,000	\$13.00	\$156,000,000
Aquantia Corp. NYSE:AQ	\$11.00	11/2017	6,818,000	\$9.00	\$61,362,000
Sogou Inc. NYSE:SOGO	\$12.00	11/2017	45,000,000	\$13.00	\$585,000,000
Bandwidth Inc. NasdaqGS:BAND	\$21.00	11/2017	4,000,000	\$20.00	\$80,000,000
SendGrid, Inc. NYSE:SEND	\$14.50	11/2017	8,200,000	\$16.00	\$131,200,000
Jianpu Technology Inc. NYSE:JT	\$9.50	11/2017	22,500,000	\$8.00	\$180,000,000
SailPoint Technologies Holdings, Inc. NYSE:SAIL	\$10.00	11/2017	20,000,000	\$12.00	\$240,000,000
iClick Interactive Asia Group Limited NasdaqGM:ICLK	\$8.50	12/2017	3,750,000	\$8.00	\$30,000,000

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 Rows shaded in orange represent International Technology IPOs.

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

Life Sciences Offerings

H1 2017^{1, 2}

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
AnaptysBio, Inc. NasdaqGS:ANAB	\$15.00	1/2017	5,000,000	\$15.00	\$75,000,000
ObsEva SA NasdaqGS:OBSV	\$15.00	1/2017	6,450,000	\$15.00	\$96,750,000
Jounce Therapeutics, Inc. NasdaqGS:JNCE	\$14.00	1/2017	6,365,000	\$16.00	\$101,840,000
Tocagen Inc. NasdaqGS:TOCA	\$11.00	4/2017	8,500,000	\$10.00	\$85,000,000
Verona Pharma plc NasdaqGM:VRNA	\$13.49	4/2017	5,924,875	\$13.50	\$79,985,813
Zymeworks Inc. NYSE:ZYME	\$14.50	4/2017	4,500,000	\$13.00	\$58,500,000
Biohaven Pharmaceutical Holding Company Ltd. NYSE:BHVN	\$15.00	5/2017	9,900,000	\$17.00	\$168,300,000
UroGen Pharma Ltd. NasdaqGM:URGN	\$13.00	5/2017	4,473,373	\$13.00	\$58,153,849
Ovid Therapeutics Inc. NasdaqGS:OVID	\$16.00	5/2017	5,000,000	\$15.00	\$75,000,000
G1 Therapeutics, Inc. NasdaqGS:GTHX	\$16.00	5/2017	7,000,000	\$15.00	\$105,000,000
argenx SE NasdaqGS:ARGX	\$18.18	5/2017	5,865,000	\$17.00	\$99,705,000
Athenex, Inc. NasdaqGS:ATNX	\$12.00	6/2017	6,000,000	\$11.00	\$66,000,000

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Mersana Therapeutics, Inc. NasdaqGS:MRSN	\$15.00	6/2017	5,000,000	\$15.00	\$75,000,000
Aileron Therapeutics, Inc. NasdaqGM:ALRN	\$16.00	6/2017	3,750,000	\$15.00	\$56,250,000
Dova Pharmaceuticals, Inc. NasdaqGM:DOVA	\$16.00	6/2017	4,415,000	\$17.00	\$75,055,000

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 Rows shaded in blue represent International Life Sciences IPOs.

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

Life Sciences Offerings (continued)

H2 2017^{1, 2}

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Akcea Therapeutics, Inc. NasdaqGS:AKCA	\$13.00	7/14/17	15,625,000	\$8.00	\$125,000,000
Calyxt, Inc. NasdaqGM:CLXT	\$16.50	7/20/17	7,000,000	\$8.00	\$56,000,000
Kala Pharmaceuticals, Inc. NasdaqGS:KALA	\$15.00	7/20/17	6,000,000	\$15.00	\$90,000,000
Sienna Biopharmaceuticals, Inc. NasdaqGS:SNNA	\$15.00	7/27/17	4,333,333	\$15.00	\$64,999,995
Clementia Pharmaceuticals Inc. NasdaqGS:CMTA	\$14.00	8/2/17	8,000,000	\$15.00	\$120,000,000
Zealand Pharma A/S NasdaqGS:ZEAL	\$19.30	8/9/17	4,375,000	\$17.87	\$78,181,250
Zai Lab Limited NasdaqGM:ZLAB	\$17.00	9/21/17	8,333,333	\$18.00	\$149,999,994
Deciphera Pharmaceuticals, LLC NasdaqGS:DCPH	\$16.00	9/28/17	7,500,000	\$17.00	\$127,500,000
Nightstar Therapeutics Limited NasdaqGS:NITE	\$14.00	9/28/17	5,360,000	\$14.00	\$75,040,000
NuCana plc NasdaqGS:NCNA	\$15.00	9/28/17	6,667,000	\$15.00	\$100,005,000
Rhythm Pharmaceuticals, Inc. NasdaqGM:RYTM	\$15.00	10/5/17	7,050,000	\$17.00	\$119,850,000
OrthoPediatrics Corp. NasdaqGM:KIDS	\$13.00	10/12/17	4,000,000	\$13.00	\$52,000,000
Restoration Robotics, Inc. NasdaqGM:HAIR	\$8.00	10/12/17	3,575,000	\$7.00	\$25,025,000

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
OptiNose, Inc. NasdaqGS:OPTN	\$16.00	10/13/17	7,500,000	\$16.00	\$120,000,000
Ablynx NV NasdaqGS:ABLX	\$20.95	10/25/17	11,430,000	\$17.50	\$200,025,000
Allena Pharmaceuticals, Inc. NasdaqGS:ALNA	\$15.00	11/2/17	5,333,333	\$14.00	\$74,666,662
Spero Therapeutics, Inc. NasdaqGS:SPRO	\$15.00	11/2/17	5,500,000	\$14.00	\$77,000,000
InflaRx N.V. NasdaqGS:IFRX	\$15.00	11/8/17	6,667,000	\$15.00	\$100,005,000
Apellis Pharmaceuticals, Inc. NasdaqGS:APLS	\$14.00	11/9/17	10,714,000	\$14.00	\$149,996,000
ERYTECH Pharma S.A. NasdaqGS:ERYP	\$23.50	11/10/17	4,686,106	\$23.26	\$108,998,826
Arsanis, Inc. NasdaqGM:ASNS	\$16.00	11/16/17	4,000,000	\$10.00	\$40,000,000
scPharmaceuticals Inc. NasdaqGS:SCPH	\$15.00	11/17/17	6,400,000	\$14.00	\$89,600,000
Odonate Therapeutics, LLC NasdaqGS:ODT	\$25.50	12/7/17	6,250,000	\$24.00	\$150,000,000
Quanterix Corporation NasdaqGM:QTRX	\$15.00	12/7/17	4,275,200	\$15.00	\$64,128,000
Denali Therapeutics Inc. NasdaqGS:DNLI	\$18.00	12/8/17	13,888,888	\$18.00	\$249,999,984

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 Rows shaded in blue represent International Life Sciences IPOs.

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



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.

Sign-Up Information

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