

Key Metrics for Technology and Life Sciences Initial Public Offerings

H1 2017

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Survey Introduction and Background

This report has been developed as a resource for our clients and friends interested in understanding recent IPO activity of technology and life sciences companies. This information comprises a number of graphs and charts reflecting selected statistics that we believe provide useful information about activity in these markets. This is followed by the listing of technology and life sciences IPOs priced in the first half of 2017 and second half of 2016. We hope that you find this useful. Please contact Daniel J. Winnike at dwinnike@fenwick.com or Jeffrey R. Vetter at jvetter@fenwick.com if you care to discuss this information or, as always, contact members of your client service team for more information.

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Survey Results

IPO Market Maintains Moderate Pace

The market for technology and life sciences IPOs in the first half of 2017 continued the moderate pace of the second half of 2016. In the 2017 period, there were 12 technology and 15 life sciences IPOs, for a total of 27 offerings. This compares with the second half of 2016, when 14 technology IPOs and 17 life sciences IPOs were completed, for a total of 31 deals. In 2017, 20 of the IPOs were for U.S.-based companies and seven were for internationally-based issuers. The San Francisco Bay Area produced four of the technology and life sciences IPOs in the first half of 2017, and the rest of California had an additional five, primarily in the life sciences space.

The closely watched Snap transaction was the largest IPO in the first half of 2017, generating proceeds of \$3.4 billion. No other technology IPO exceeded the billion dollar threshold. The largest life sciences deal produced gross proceeds of \$168 million.

There was a great deal of publicity about dual-class, high vote/low/no vote capital structures related to the Snap offering, in which the shares offered to the public were non-voting shares. Of the nine domestic technology companies completing offerings in the first half of 2017 other than Snap, five had adopted dual class voting structures, with low-vote shares being sold to IPO investors. None of the life sciences companies completing offerings in the 2017 period had adopted dual class structures.

Once again, technology deals were larger than their life sciences counterparts, with 75% of technology transactions exceeding \$100 million, while just 20% of the life sciences transactions exceeded \$100 million. Technology deals in 2017 were also larger than in the second half of 2016. In 2017, 55% of the IPOs had gross proceeds over \$175 million, compared to 21% in the second half of 2016, and only 25% raised less than \$100 million, compared with 57% in the second half of 2016. Although life sciences offerings were smaller than technology offerings, the size of life sciences offerings increased compared to recent prior periods. In the first half of 2017, 73% of life sciences transactions produced gross proceeds of \$75 million or more, compared to 51%, 43% and 58% in 2016, 2015 and 2014. There were no life sciences IPOs producing less than \$50 million in proceeds in the 2017 period, compared with 16%–18% of such life sciences IPOs in 2016, 2015 and 2014. It is unclear whether this change in 2017 reflects a greater market appetite for life sciences IPOs, thereby leading to larger deal sizes, a reduced market appetite for lower valued life sciences IPOs or other factors.

Life sciences IPOs also appeared to experience more predictable pricing in the 2017 period, as 93% of the transactions priced in or above their red herring price range. This compares with approximately 50%–60% of life sciences IPOs pricing in or above the range in 2016, 2015 and 2014. In the first half of 2017, 83% of the technology IPOs priced in or above the range, which was consistent with pricing results in each of the previous three years.

Of the 12 technology IPOs in the 2017 period, 10 concluded their first day of trading above the IPO price, while of the 15 life sciences offerings, eight traded up and three closed their first day of trading at the IPO price.

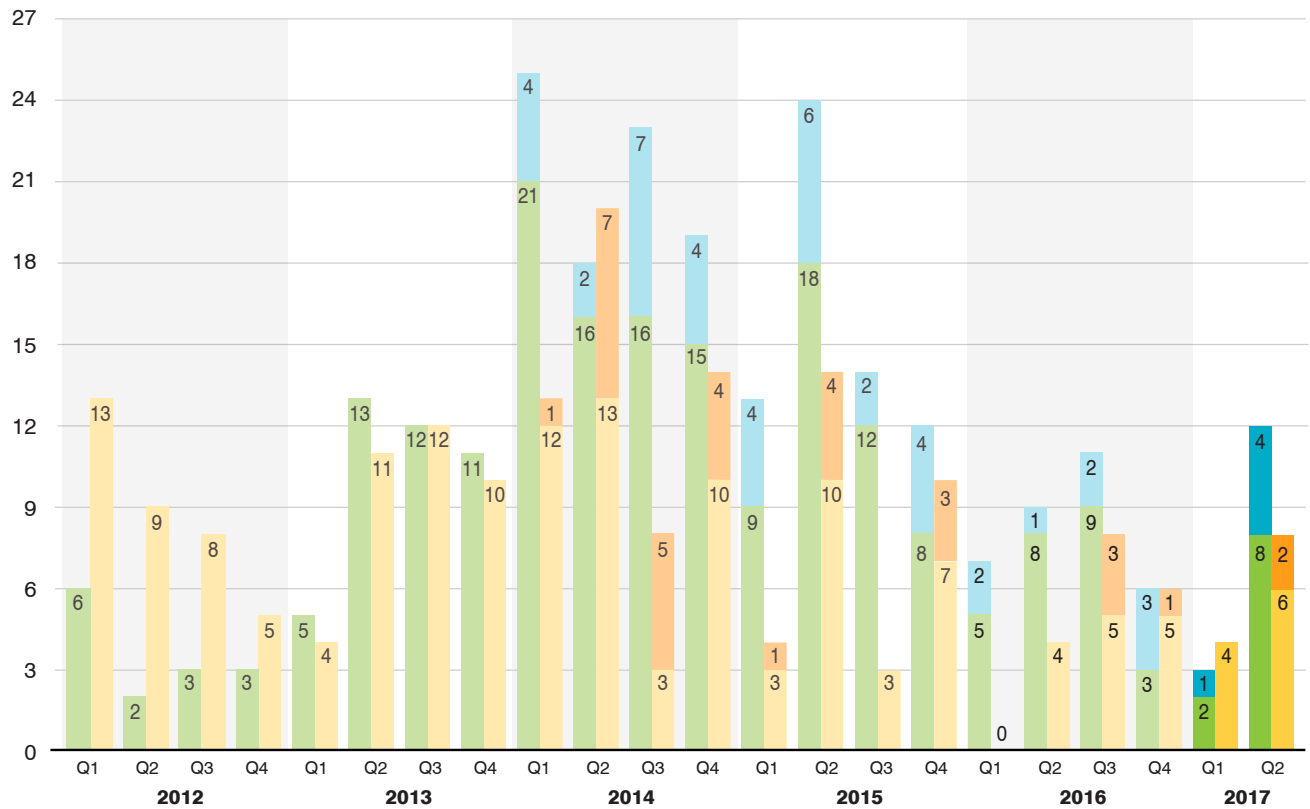
In the life sciences space, significant insider participation continued, with insider participation ranging from 23% to 83% of the offering size. Of the life sciences deals, 10 reported insider purchases. In the technology space, five IPOs had some modest levels of insider participation, more in the nature of typical “directed share” programs, with insiders generally purchasing under 10% of the offering size.

In recent periods, life sciences IPO filings experienced a shorter time for SEC review than technology offerings. However, for offerings completed in the first half of 2017, technology and life sciences IPOs had, largely, similar times from initial submission with the SEC until pricing. Excluding offerings where the period from the initial filing to pricing exceeded 200 days (which we suspect involved discretionary delay by the issuer beyond simply time for SEC processing), technology and life sciences IPO filings each had average periods from initial submission to pricing of approximately 110 days.

Offerings Completed

The graph below shows the number of technology and life sciences IPOs completed during each quarter of 2012, 2013, 2014, 2015, 2016 and the first half of 2017.

IPOS PER QUARTER 2012–H1 2017



Technology—U.S.

Technology—International

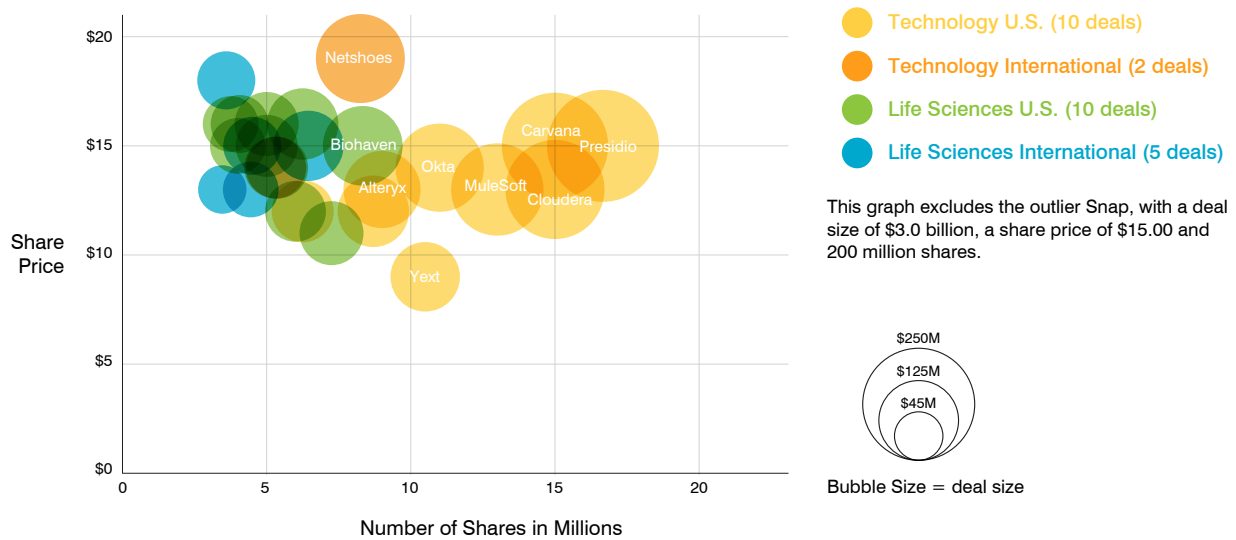
Life Sciences—U.S.

Life Sciences—International

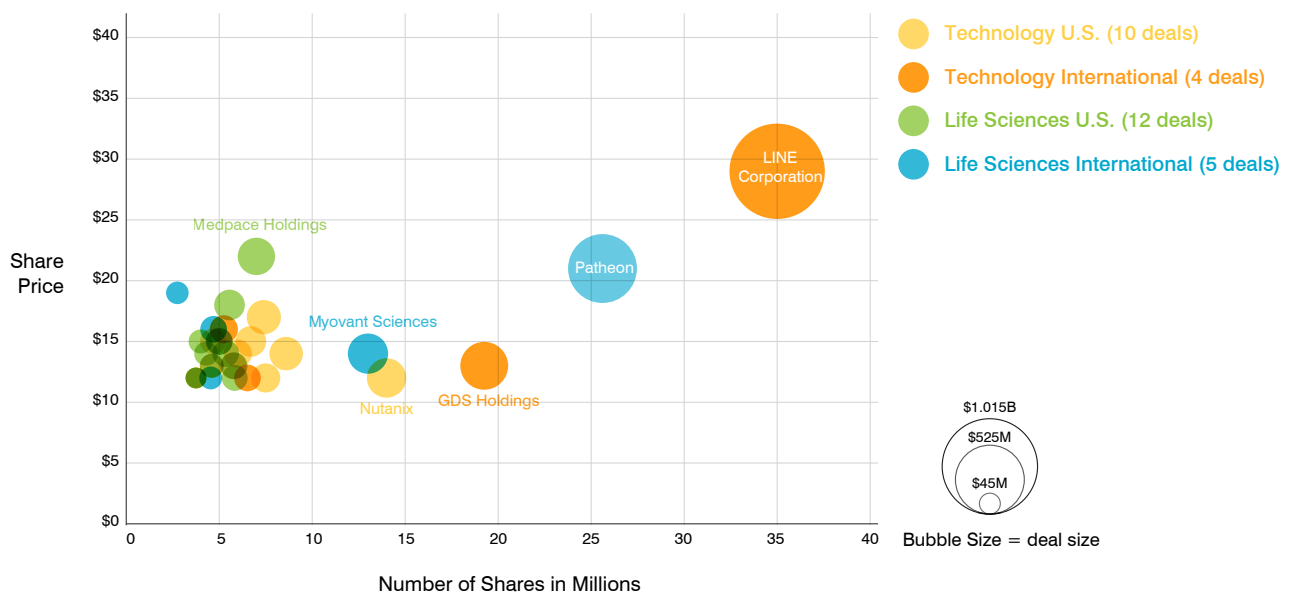
Size of Offerings, Red Herring Midpoint

The following scatter graphs plot technology and life sciences IPOs completed during the first half of 2017 and second half of 2016 in terms of the initial offering price per share and number of shares offered based on the red herring stage of the offering.

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



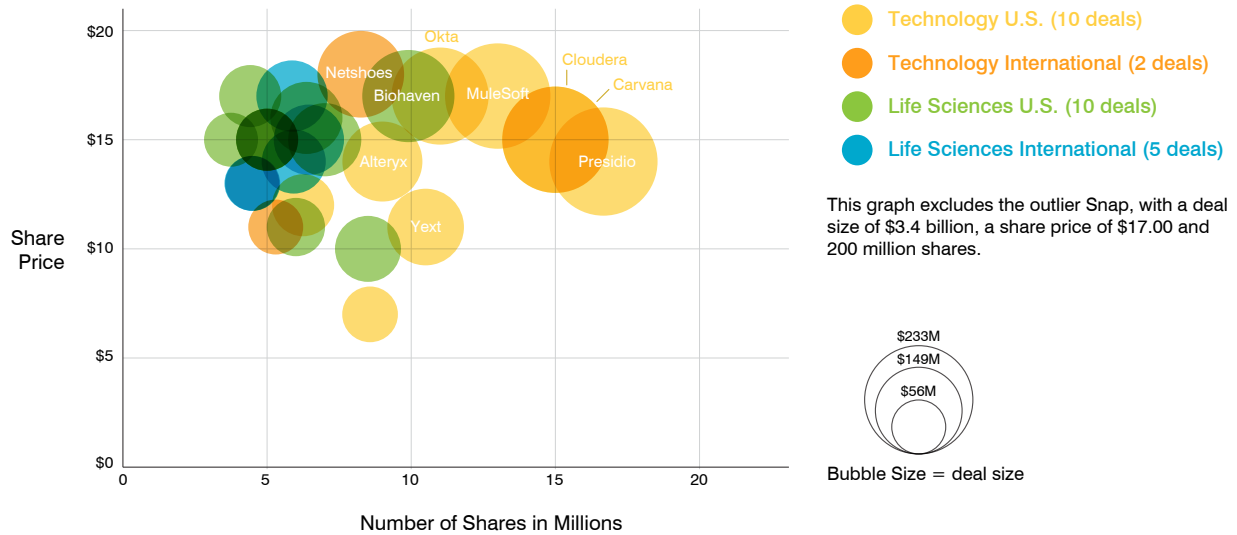
RED HERRING DEAL COMPARISON (MIDPOINT PRICE): 2016, SECOND HALF



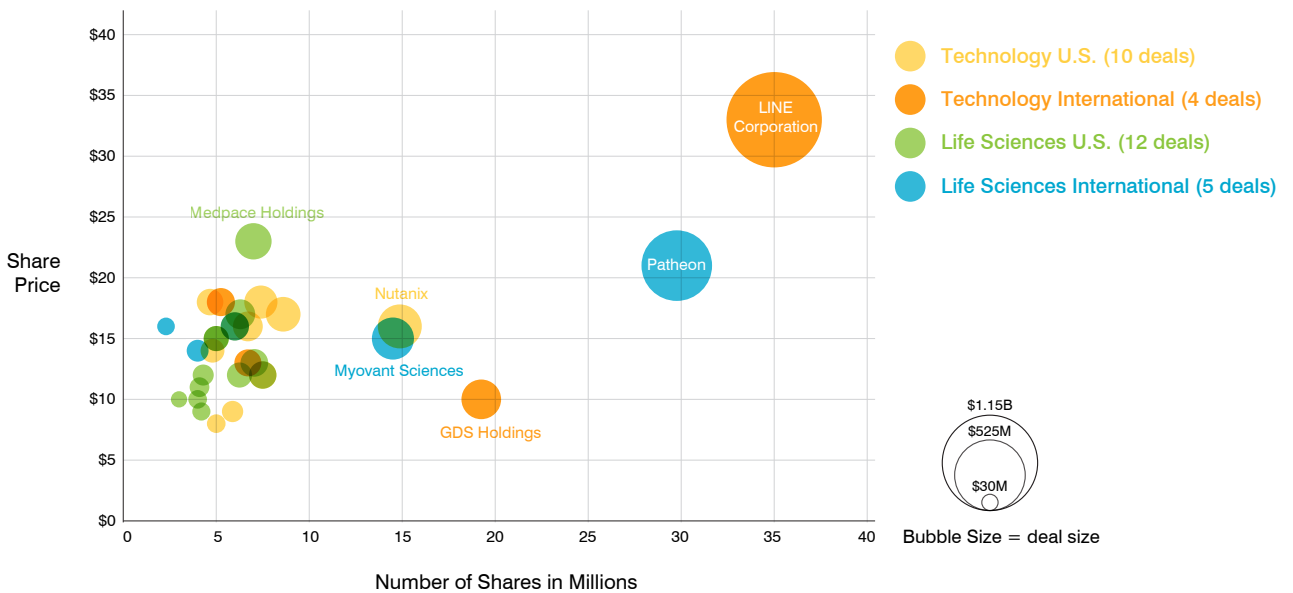
Size of Offerings, Final IPO Price

The following scatter graphs plot technology and life sciences IPOs completed during the first half of 2017 and second half of 2016 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



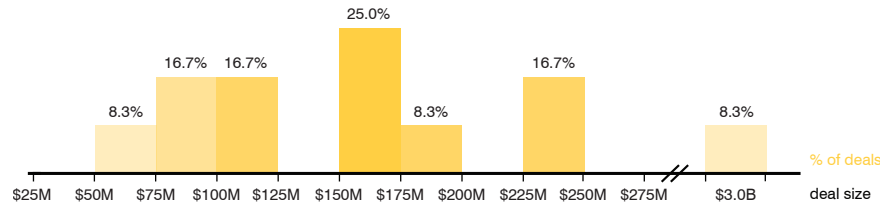
IPO DEAL COMPARISON: 2016, SECOND HALF



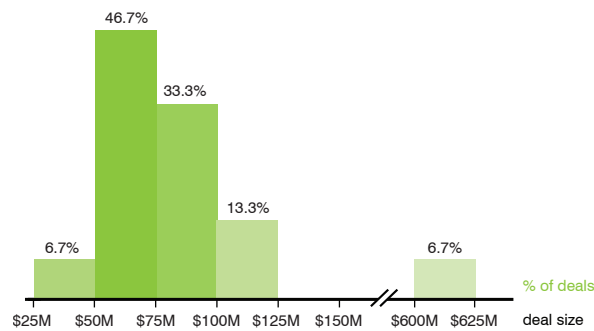
Aggregate Amount Raised, Red Herring Midpoint

The following graphs provide information about aggregate deal size at the red herring stage in the first half of 2017 and second half of 2016.

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

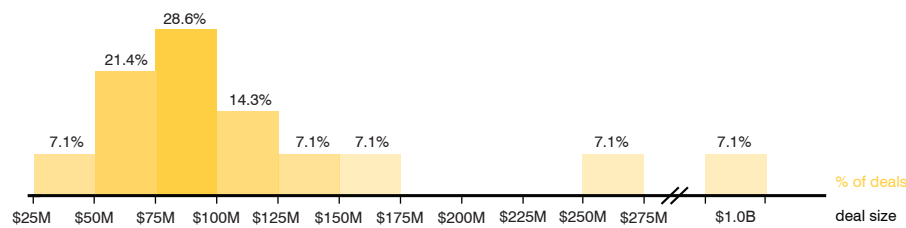


Technology Deal Size Distribution

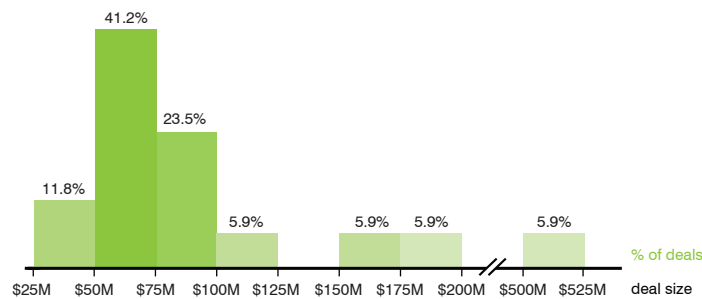


Life Sciences Deal Size Distribution

DISTRIBUTION OF DEAL SIZE (RED HERRING MIDPOINT): 2016, SECOND HALF



Technology Deal Size Distribution

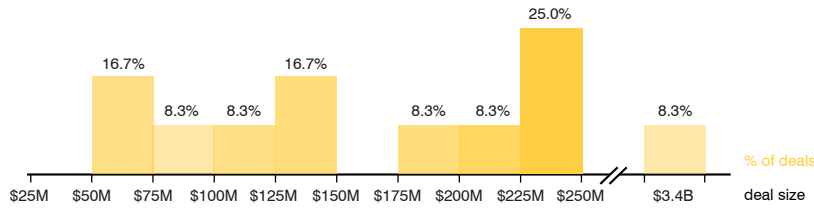


Life Sciences Deal Size Distribution

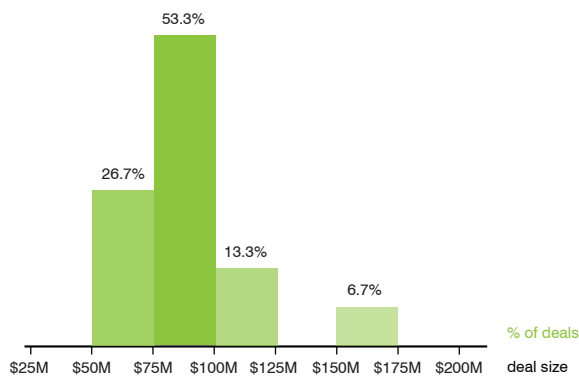
Aggregate Amount Raised, Final IPO Price

The following graphs provide information about aggregate deal size based on the actual pricing of the offering in the first half of 2017 and second half of 2016.

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

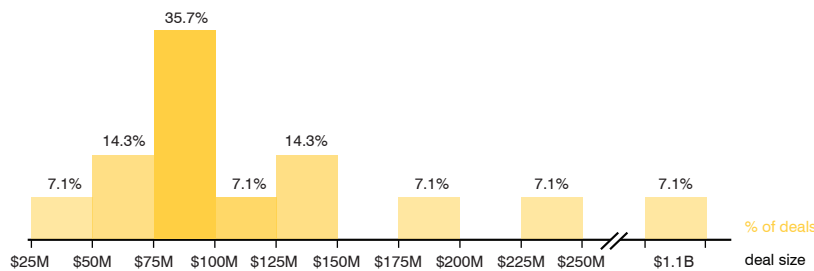


Technology Deal Size Distribution

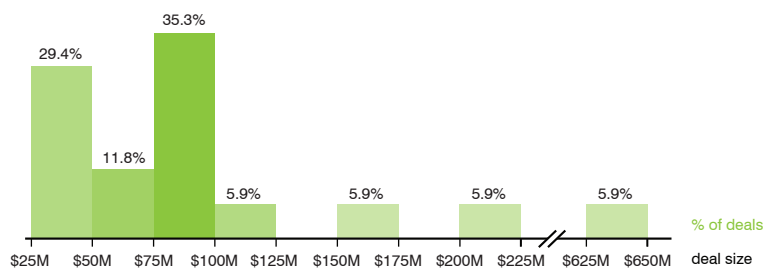


Life Sciences Deal Size Distribution

DISTRIBUTION OF DEAL SIZE (FINAL IPO PRICE): 2016, SECOND HALF



Technology Deal Size Distribution

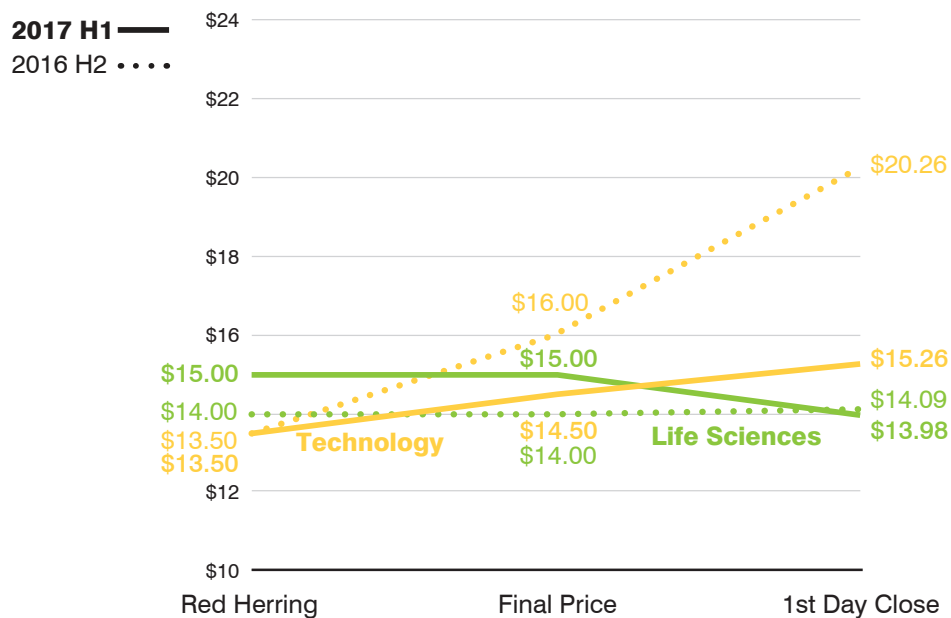


Life Sciences Deal Size Distribution

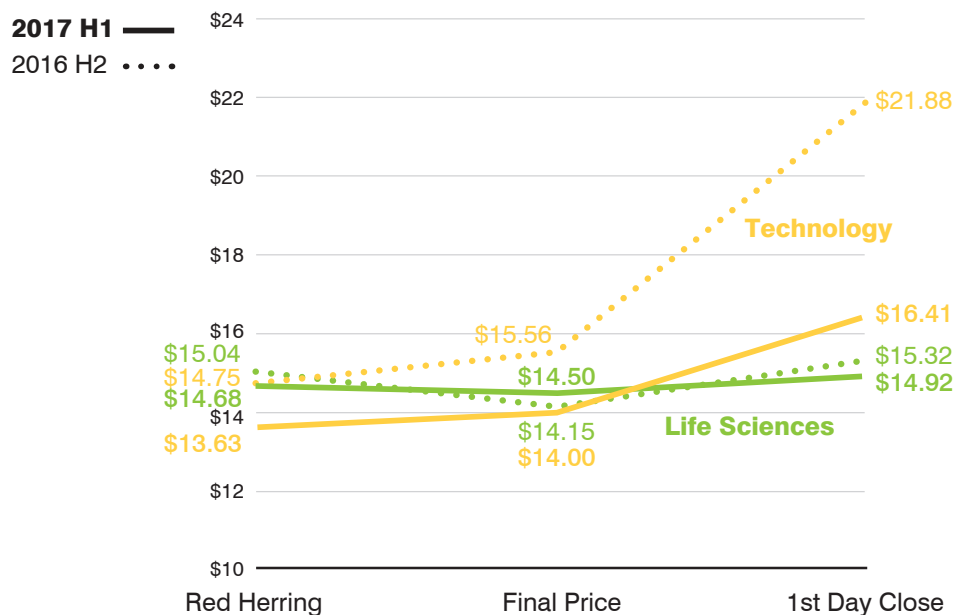
Price Changes Between the Red Herring and Initial Offering Price

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 part science and part art. The graphs below 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 2017 and second half of 2016.

MEDIAN PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS



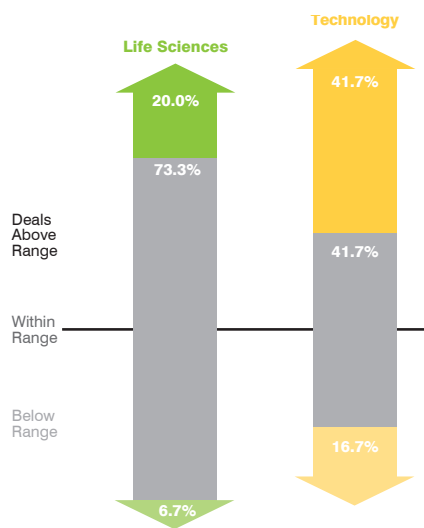
AVERAGE PRICES FOR TECHNOLOGY & LIFE SCIENCES IPO DEALS



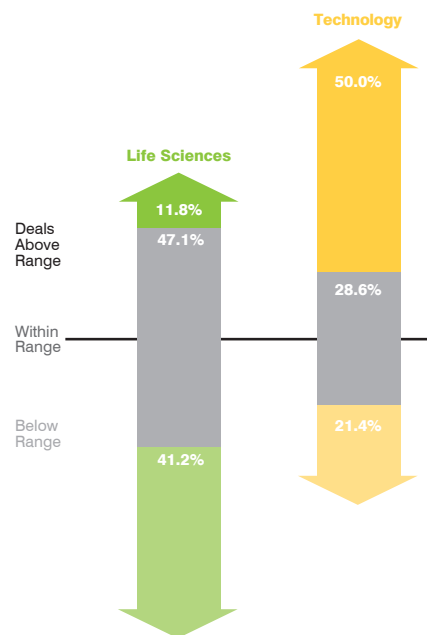
Price Changes *(continued)*

The first two graphs 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 2017 compared with the second half of 2016. The lower graphs 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 2017 compared with the second half of 2016.

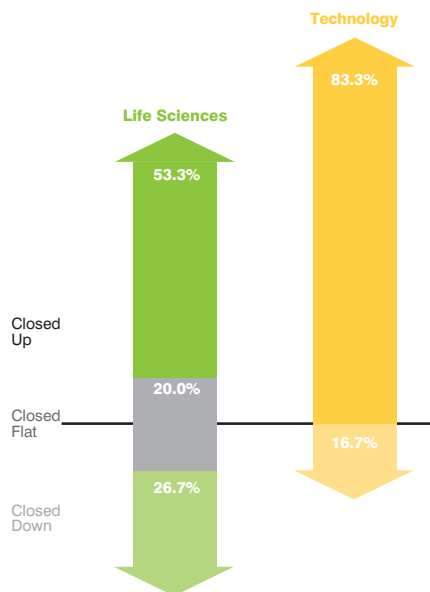
RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS)
2017, FIRST HALF



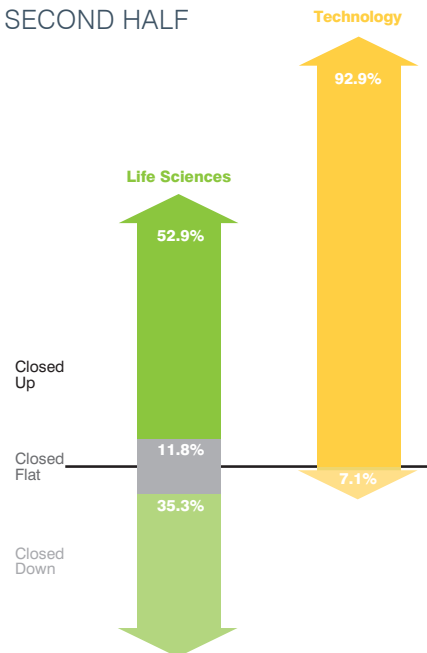
RELATION OF FINAL IPO PRICE TO ORIGINAL RED HERRING RANGE (% OF DEALS)
2016, SECOND HALF



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



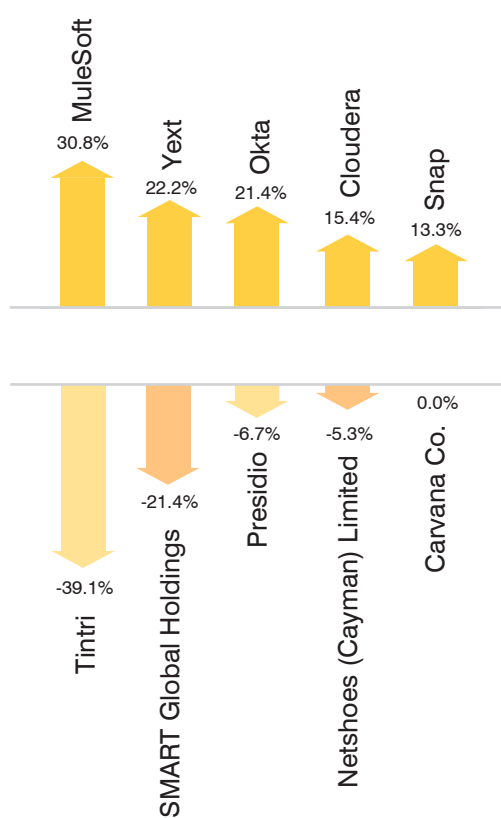
RELATION OF PRICE AT 1ST DAY CLOSE TO FINAL IPO PRICE (% OF DEALS)
2016, SECOND HALF



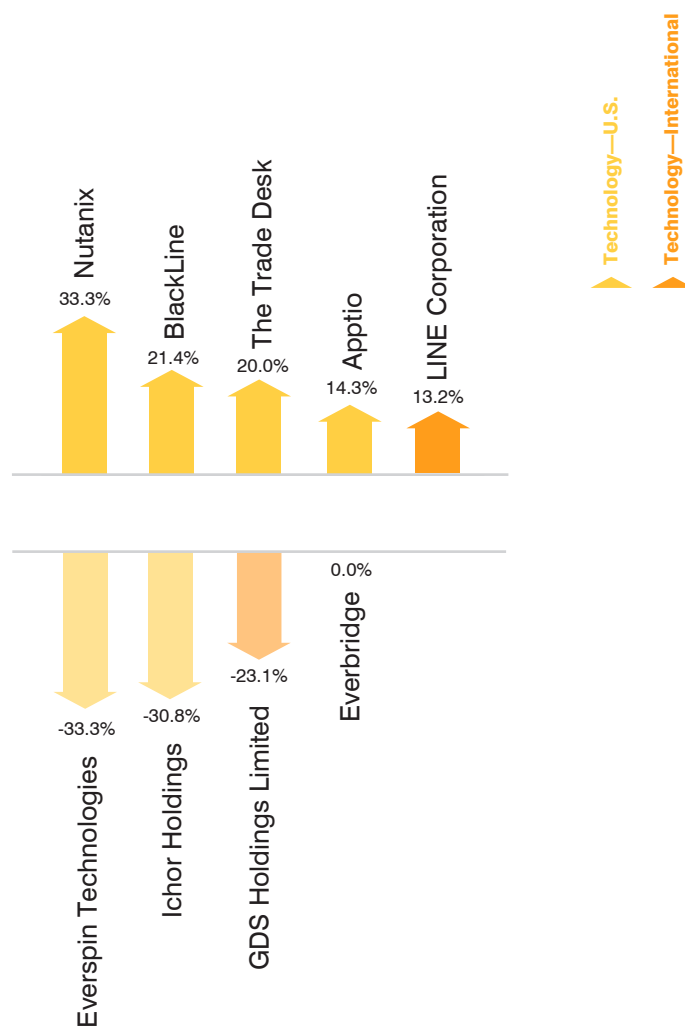
Price Changes *(continued)*

The graphs below show the technology company IPOs with the largest percentage increase, and largest percentage decrease, from the red herring midpoint to the actual initial public offering price for IPOs completed in the first half of 2017 and second half of 2016.

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



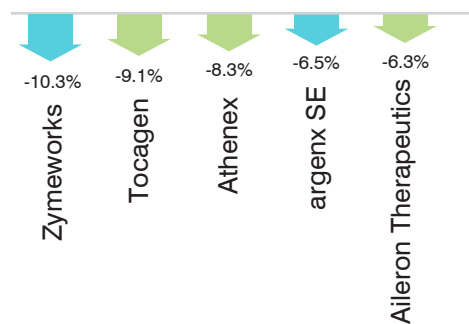
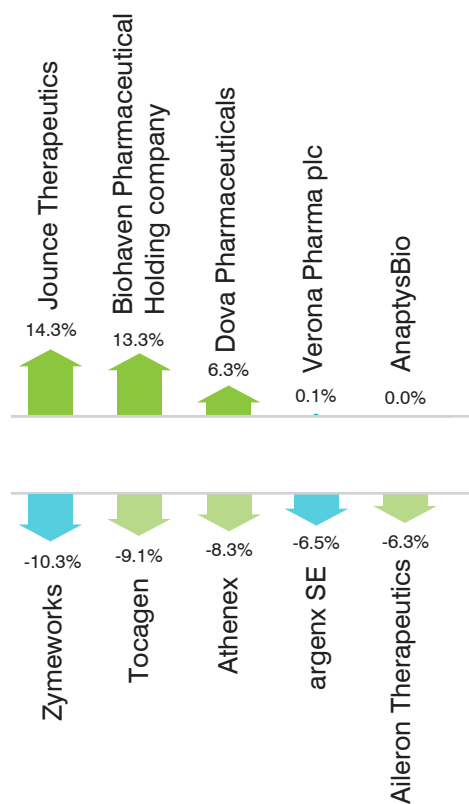
BIGGEST MOVERS—RED HERRING PRICE TO FINAL IPO PRICE 2016, SECOND HALF



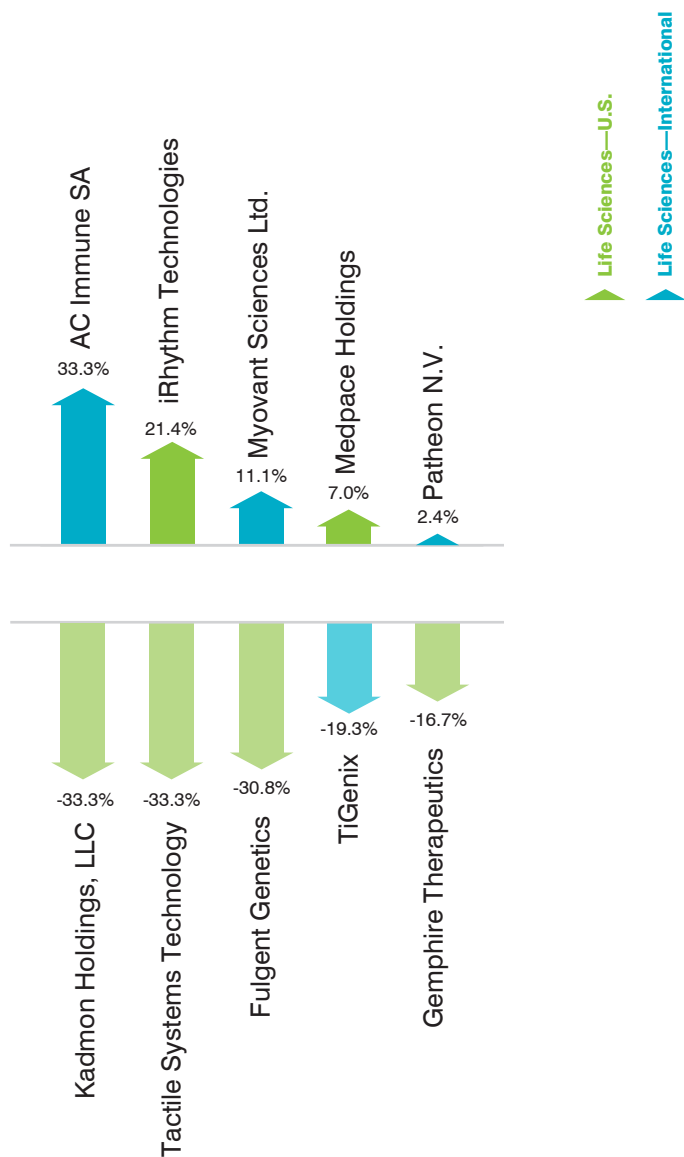
Price Changes *(continued)*

The graphs below show the five life sciences company IPOs with the largest percentage increase, and largest percentage decrease, from the red herring midpoint to the actual initial public offering price for IPOs completed in the first half of 2017 and second half of 2016.

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



BIGGEST MOVERS – RED HERRING PRICE TO FINAL IPO PRICE 2016, SECOND HALF



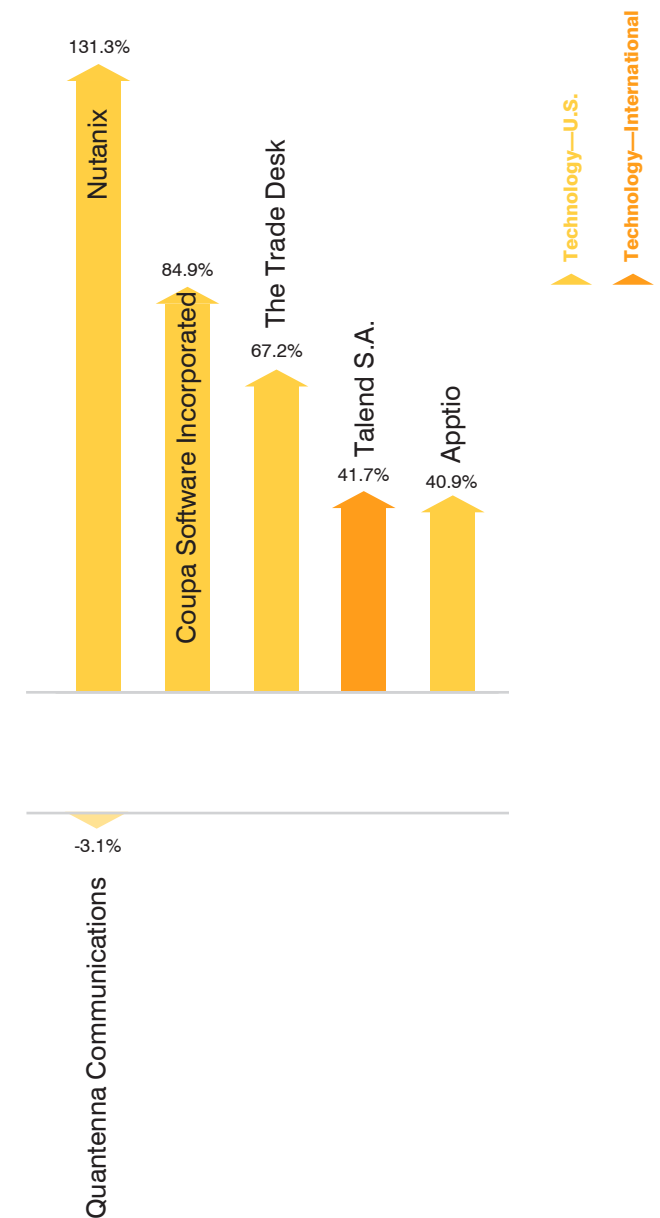
Price Changes *(continued)*

The graphs below show the five technology company IPOs with the largest percentage gain and those with a loss, on the first day of trading for IPOs completed in the first half of 2017 and second half of 2016.

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



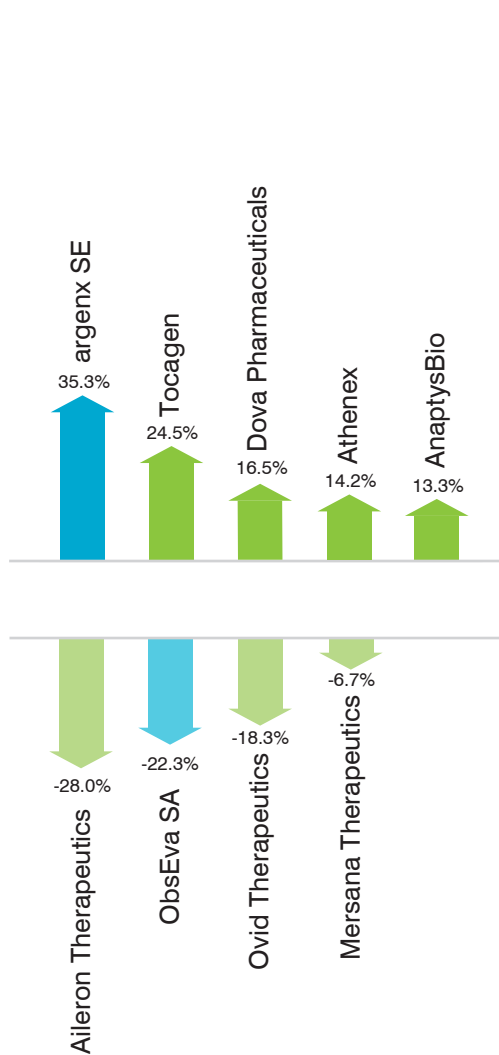
BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2016, SECOND HALF



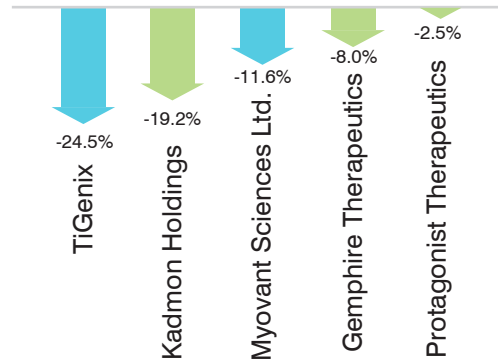
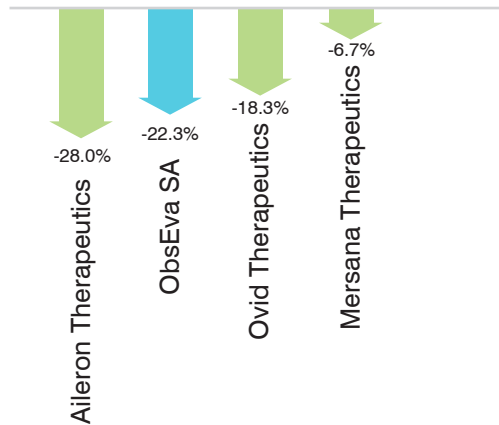
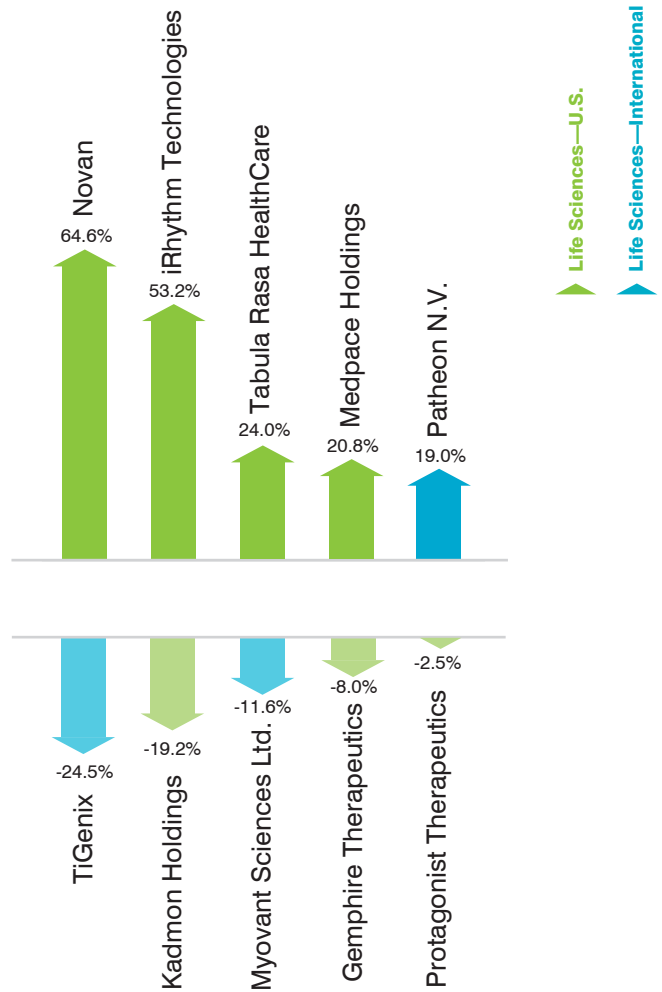
Price Changes (continued)

The graphs below show the five life sciences company IPOs with the largest percentage gain and loss on the first day of trading for IPOs completed in the first half of 2017 and second half of 2016.

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



BIGGEST MOVERS—IPO PRICE TO PRICE AT 1ST DAY CLOSE 2016, SECOND HALF

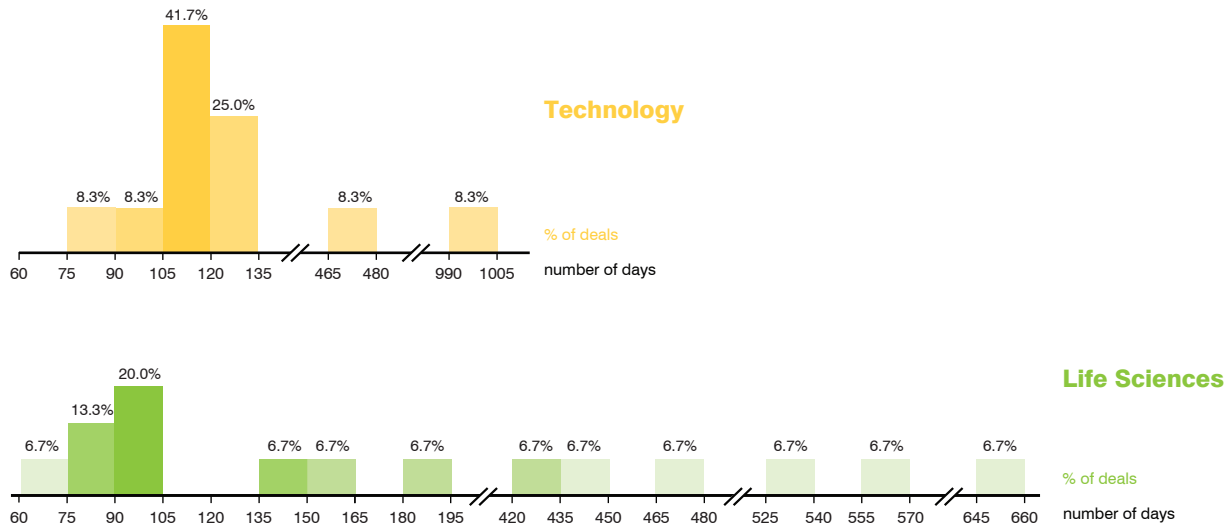


▲ Life Sciences—U.S.
▲ Life Sciences—International

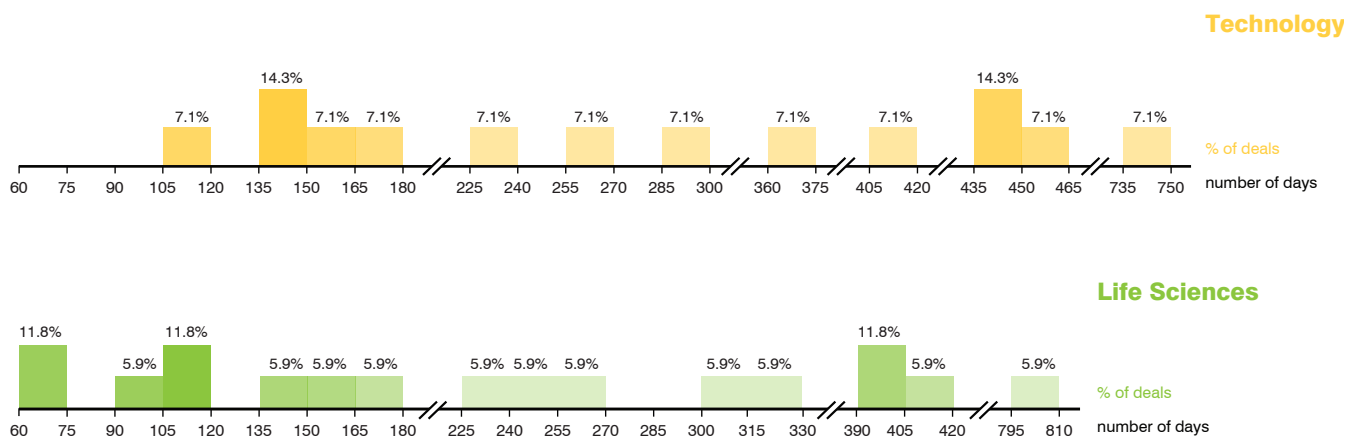
Days on File

The 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



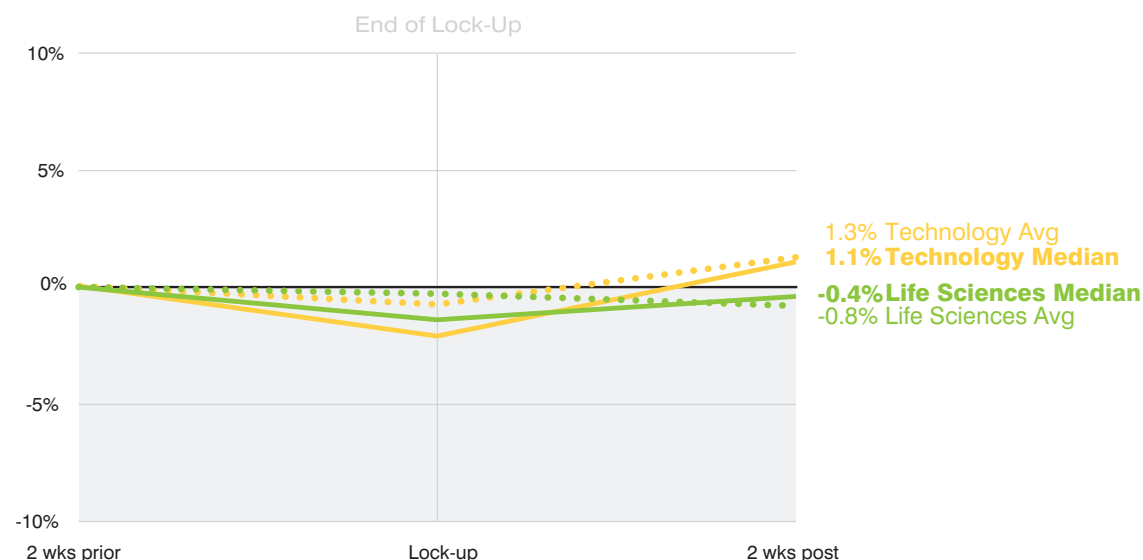
DISTRIBUTION OF DAYS BETWEEN INITIAL SUBMISSION AND FINAL PRICING
2016, SECOND HALF



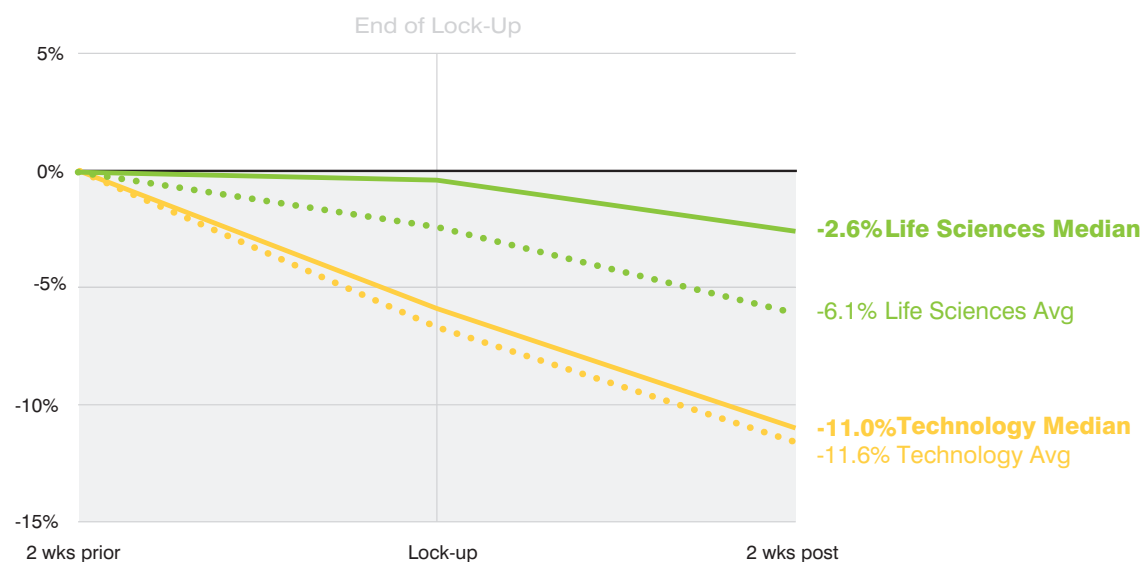
Price Changes Around the Expiration of the Lock-Up

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

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



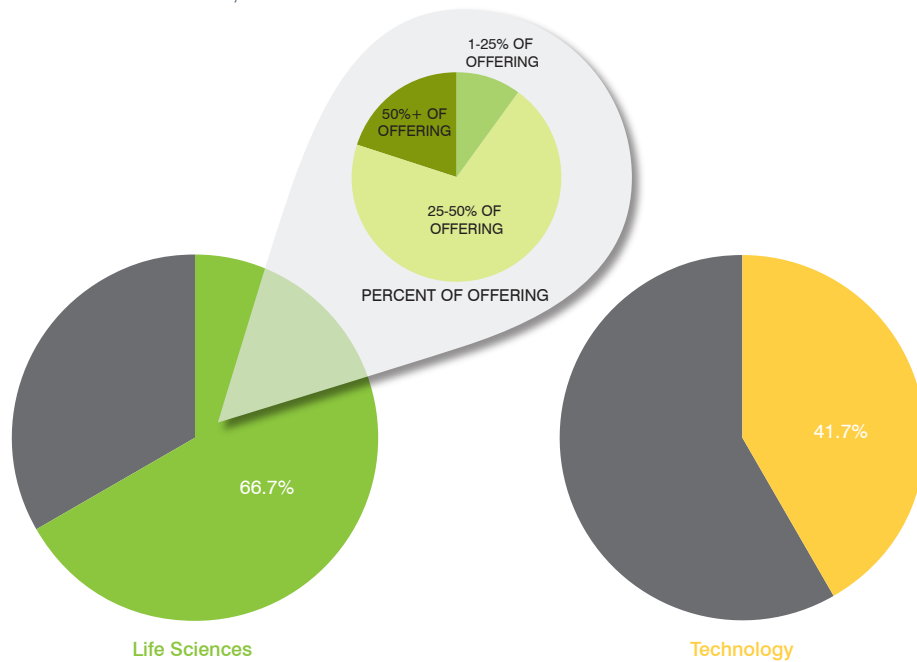
PERCENT CHANGE OF SHARE PRICES SURROUNDING END OF LOCK-UP PERIOD 2016, SECOND HALF



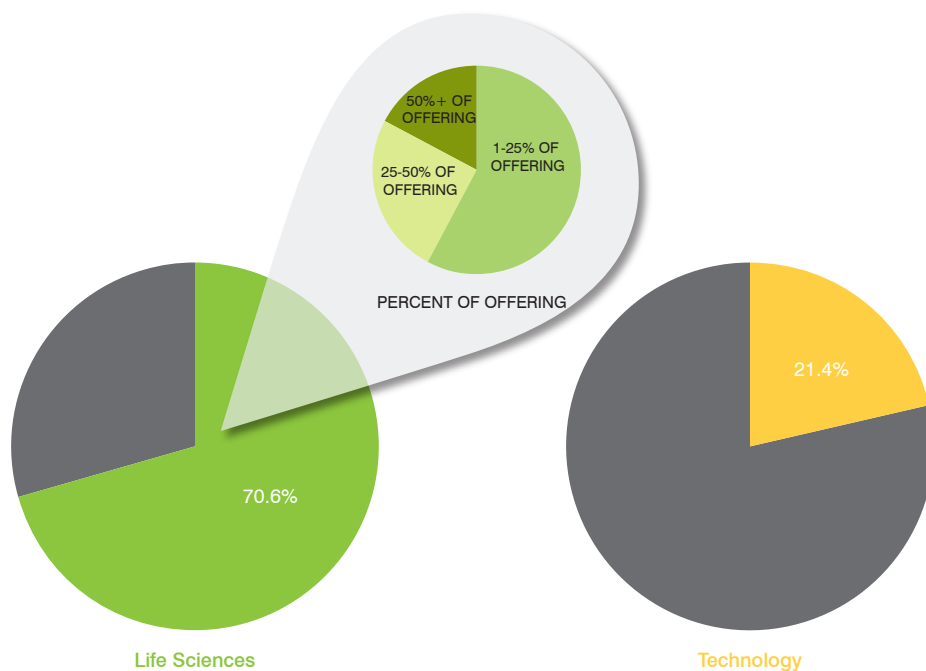
Insider Participation

The charts below show the percentage of life sciences and technology IPOs where the final prospectus indicated that specified “insiders” had expressed an interest in purchasing shares in the offering. 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. 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



PERCENTAGE OF DEALS WITH INSIDER PARTICIPATION AND PERCENTAGE OF OFFERING MADE AVAILABLE TO INSIDERS 2016, SECOND 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

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.

Technology Offerings: H2 2016^{1, 2}

COMPANY NAME/TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
LINE Corporation NYSE:LN	\$29.00	7/2016	35,000,000	\$32.84	\$1,149,400,000
Impinj, Inc. NasdaqGS:PI	\$13.00	7/2016	4,800,000	\$14.00	\$67,200,000
Talend S.A. NasdaqGM:TLND	\$16.00	7/2016	5,250,000	\$18.00	\$94,500,000
Everbridge, Inc. NasdaqGM:EVBG	\$12.00	9/2016	7,500,000	\$12.00	\$90,000,000
The Trade Desk, Inc. NasdaqGM:TTD	\$15.00	9/2016	4,666,667	\$18.00	\$84,000,006
Apptio, Inc. NasdaqGM:APTI	\$14.00	9/2016	6,000,000	\$16.00	\$96,000,000
Gridsum Holding Inc. NasdaqGS:GSUM	\$11.50	9/2016	6,700,000	\$13.00	\$87,100,000
Nutanix, Inc. NasdaqGS:NTNX	\$12.00	9/2016	14,870,000	\$16.00	\$237,920,000
Coupa Software Incorporated NasdaqGS:COUP	\$17.00	10/2016	7,400,000	\$18.00	\$133,200,000
Everspin Technologies, Inc. NasdaqGM:MRAM	\$12.00	10/2016	5,000,000	\$8.00	\$40,000,000
BlackLine, Inc. NasdaqGS:BL	\$14.00	10/2016	8,600,000	\$17.00	\$146,200,000
Quantenna Communications, Inc. NasdaqGS:QTNA	\$15.00	10/2016	6,700,000	\$16.00	\$107,200,000
GDS Holdings Limited NasdaqGM:GDS	\$13.00	11/2016	19,250,000	\$10.00	\$192,500,000
Ichor Systems, Inc. NasdaqGS:ICHR	\$13.00	12/2016	5,877,778	\$9.00	\$52,900,002

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
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: H2 2016^{1, 2}

COMPANY NAME / TICKER SYMBOL	RED HERRING MIDPOINT	PRICED	FINAL SHARES ³	FINAL PRICING	FINAL DEAL SIZE
Audentes Therapeutics, Inc. NasdaqGM:BOLD	\$15.00	7/2016	5,000,000	\$15.00	\$75,000,000
Patheon N.V. NYSE:PTHN	\$20.50	7/2016	29,761,905	\$21.00	\$625,000,005
Kadmon Holdings, LLC NYSE:KDMN	\$18.00	7/2016	6,250,000	\$12.00	\$75,000,000
Tactile Systems Technology, Inc. NasdaqGM:TCMD	\$15.00	7/2016	4,000,000	\$10.00	\$40,000,000
Gemphire Therapeutics Inc. NasdaqGM:GEMP	\$12.00	8/2016	3,000,000	\$10.00	\$30,000,000
Medpace Holdings, Inc. NasdaqGM:MEDP	\$21.50	8/2016	7,000,000	\$23.00	\$161,000,000
Protagonist Therapeutics, Inc. NasdaqGM:PTGX	\$12.00	8/2016	7,500,000	\$12.00	\$90,000,000
Novan, Inc. NasdaqGM:NOVN	\$12.00	9/2016	4,100,000	\$11.00	\$45,100,000
AC Immune SA NasdaqGM:ACIU	\$12.00	9/2016	6,000,000	\$16.00	\$96,000,000
Fulgent Genetics, Inc. NasdaqGM:FLGT	\$13.00	9/2016	4,200,000	\$9.00	\$37,800,000
Tabula Rasa HealthCare, Inc. NasdaqGM:TRHC	\$14.00	9/2016	4,300,000	\$12.00	\$51,600,000
Obalon Therapeutics, Inc. NasdaqGM:OBLN	\$15.00	10/2016	5,000,000	\$15.00	\$75,000,000
CRISPR Therapeutics AG NasdaqGM:CRSP	\$16.00	10/2016	4,000,000	\$14.00	\$56,000,000
iRhythm Technologies, Inc. NasdaqGM:IRTC	\$14.00	10/2016	6,294,118	\$17.00	\$107,000,006
Ra Pharmaceuticals, Inc. NasdaqGM:RARX	\$13.00	10/2016	7,049,230	\$13.00	\$91,639,990
Myovant Sciences Ltd. NYSE:MYOV	\$13.50	10/2016	14,500,000	\$15.00	\$217,500,000
TiGenix NasdaqGS:TIG	\$19.20	12/2016	2,300,000	\$15.50	\$35,650,000

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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.

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