



Financing Alternatives for Life Sciences Companies

William Blair **MAYER • BROWN**

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Agenda

- During today's session, we will address:
 - Financing alternatives for pre-IPO companies;
 - The late-stage (or “cross-over”) private placement market;
 - Post-IPO financing alternatives
 - Follow-on equity offerings,
 - Registered direct offerings,
 - PIPE transactions,
 - At-the-market offerings, and
 - Regulation A offerings.
 - Sequencing financings in light of clinical and strategic related announcements

Overview

- We hope to be able to highlight during the course of our session today the very different dynamics that affect life sciences companies and the particular industry considerations that strongly influence the financing strategies for life sciences companies

PRE-IPO FINANCING

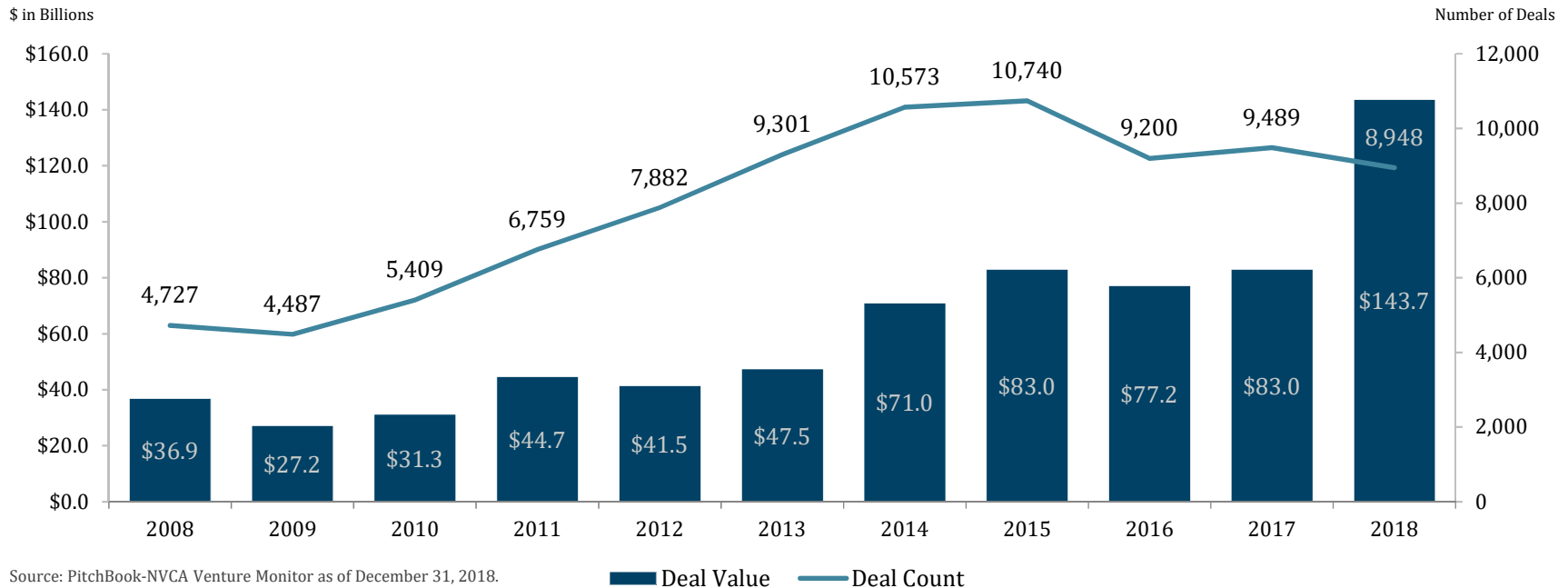
Pre-IPO Financing Trends and Alternatives

- Outside of the life sciences sector, a lot has been written regarding the increased availability of private capital for pre-IPO companies and the increase in the number of “mega” financing rounds
- Private capital sources have improved for the life sciences sector but not to the same extent as for tech. Life Sciences has a continued dependence on committed sector investors and the prospects for success are less predictable
- While tech and fintech companies may have the opportunity to stay private longer and defer their IPOs , or no longer see IPOs principally as financing opportunities, the same cannot be said of life sciences companies
- Life sciences companies still need to undertake IPOs, and in most cases need to establish strong existing investor sponsorship prior to a public listing

Venture capital trends

- Investment in US VC Reached a New All-Time High in 2018. VC investments exceeded \$100 billion for the first time since 2000, totaling \$131 billion (a 58% increase from 2017 levels)

Annual US VC Deal Activity

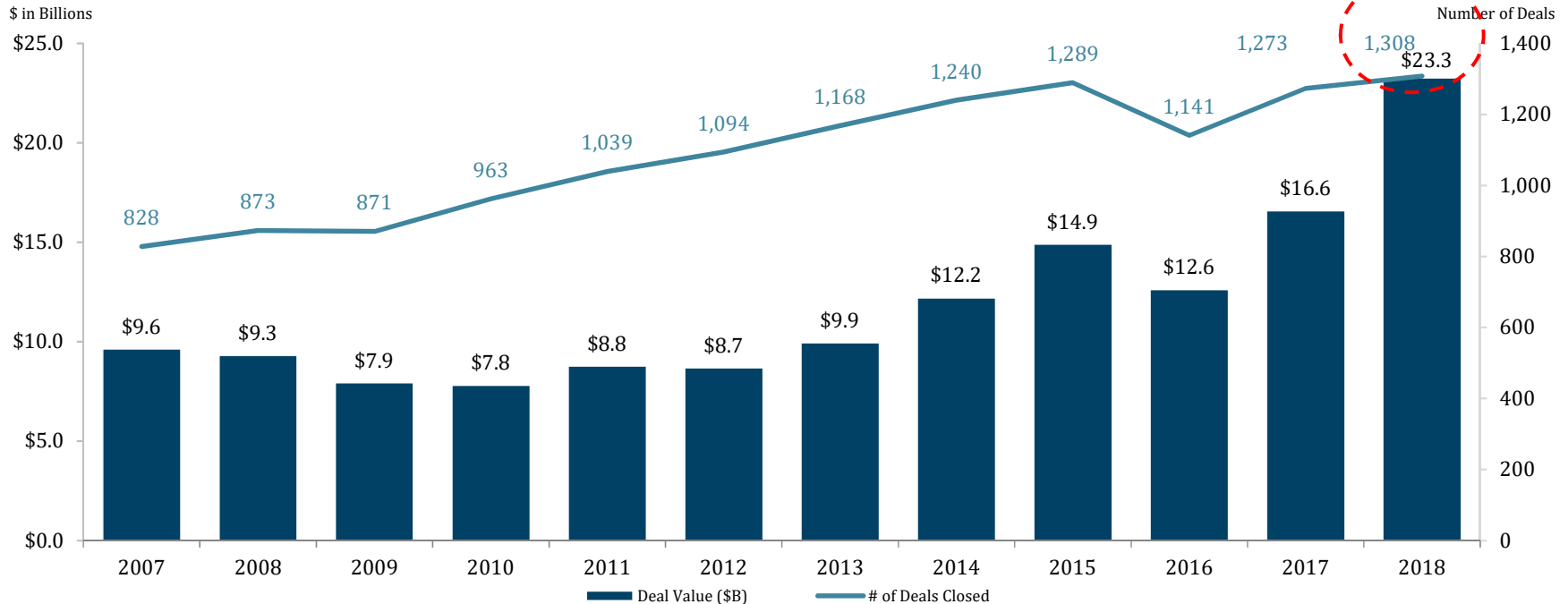


Life Sciences VC Activity

- Life sciences VC activity reached record levels in 2018 but accounted for only 16% of total VC activity

~60% of Life Sciences VC deals in 2018 came from rounds of \$50 million+

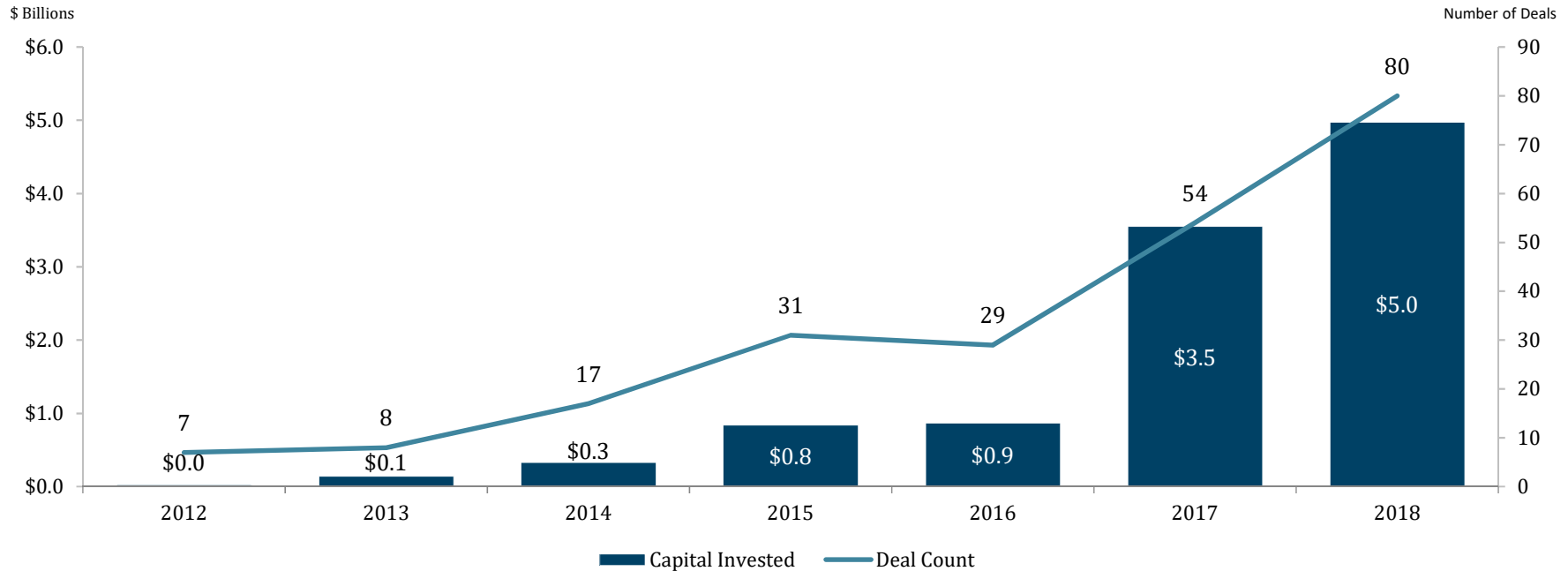
Annual Life Sciences VC Activity



Life Sciences VC Activity

- Chinese venture capital investment in US life sciences companies reached a record high in 2018 and was up significantly from 2017 levels

Chinese VC Investment In US Life Sciences



Debt financing

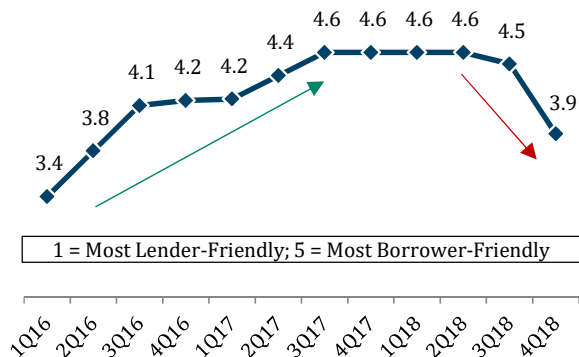
- A notable trend in recent years has been the growth in alternative lenders that are prepared to finance life sciences companies
- Participants in this market include:
 - Some commercial banks
 - Alternative, or direct, lenders
 - Royalty-based financing sources
 - Business development companies
- These transactions may take various forms, from secured notes to bank-style draw-down financing commitments subject to repayment upon the occurrence of specified milestones or liquidity events.
- Often this debt-like piece will be accompanied by warrants or an equity kicker
- Particularly in the case of companies with in-licensed IP, granting security interests may give rise to burdensome diligence and documentation issues

Debt financing (cont'd)

Market Environment and Outlook

- William Blair's Market Index, which measures current market tone has decreased towards levels not seen since early in 2016
- However, 79% of fourth quarter respondents indicated the market was still borrower-friendly (market rated a 4 or 5)

William Blair Market Index⁽¹⁾



- Lenders are increasingly discriminating between cyclical and non-cyclical / defensive sectors
- Market outlook for 2019 appears to shift towards being lender-friendly, with 47% of survey respondents expecting pricing, leverage, and terms to increase or tighten compared to current levels

Q4 2018 Industry Appetite⁽²⁾

	More Cautiously	More Aggressively
Building Products / Construction	83%	0%
Automotive / Transportation	83%	2%
Retail and Restaurant	58%	5%
Energy and Energy Services	49%	7%
Consumer Products / Services	36%	8%
Other Industrial / Manufacturing	31%	5%
Packaging	27%	5%
Media	24%	10%
Chemicals	24%	10%
Education	19%	12%
Distribution	15%	15%
Professional Services	14%	15%
Financial Services / Specialty Finance	10%	27%
Food and Beverage	8%	27%
Healthcare	8%	41%
IT / Software / Hardware	7%	41%

Source: William Blair Leveraged Finance Survey (4Q18).

(1) Weighted average lender response to the question, "How would your firm rate today's lending environment?"

(2) Responses to the question, "Are there any specific sectors or industries for which your firm is proceeding more aggressively or cautiously today compared with 6 months ago?"

Pre-IPO (or crossover) financings

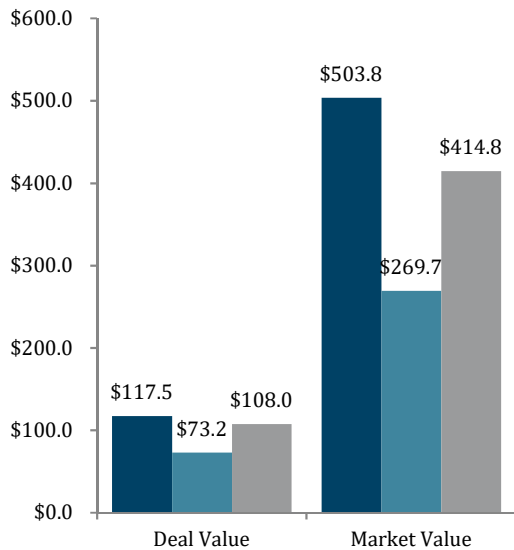
- For companies that are 12 to 24 months away from an IPO, pre-IPO private placements have become an important stepping stone
 - While this is generally true of most IPO issuers, for life sciences companies, it is particularly significant
 - The pre-IPO round not only serves to provide often much-needed capital but more important provides validation from sector specialist investors
 - Also, the understanding is that pre-IPO crossover fund investors will be anchor investors in the IPO

Pre-IPO (or crossover) financings (cont'd)

- IPOs for companies that completed at least 1 crossover round with public institutional investors tend to perform better at pricing and in the aftermarket

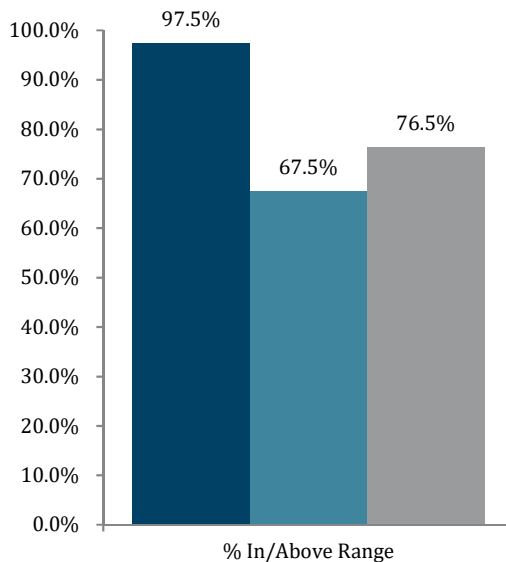
Sizing

\$US in millions

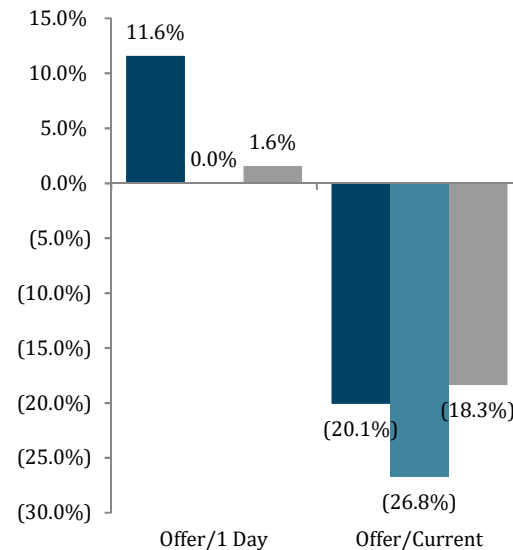


Pricing Performance

vs. initial range



Aftermarket Performance



■ With Crossover (n = 40) ■ Without Crossover (n = 40) ■ Without Crossover Subset w/ MV > \$300M (n = 19)

The Pre-IPO financings

- Considerations
 - Finding the “lead”
 - Deal structure and terms can be highly variable
 - Common stock, preferred stock, convertible preferred, though convertible preferred stock is the most common
 - Board representation
 - Affirmative and negative covenants
 - Information rights
 - Financial statement requirements
 - IPO/Qualified IPO provisions
 - M&A and IPO ratchet provisions
 - Time horizon
 - Pre-IPO investors may have a specific timeline in mind for the IPO and a target valuation

The Pre-IPO financings (*cont'd*)

- By their nature, investments may require more extensive and complex due diligence
 - Current capitalization and issued/outstanding securities (accredited vs. non-accredited former employees)
 - Existing shareholder rights
 - Liabilities – complex credit facilities
 - FDA/clinical pathway
- Especially for life sciences companies, addressing diligence requests requires careful consideration of the timing of future financings
 - Regulatory communications
 - Discussions with key opinion leaders, investigators
 - Detailed trial results

The Pre-IPO financings *(cont'd)*

- Unlike the pre-IPO rounds for unicorns, generally valuations for life sciences company pre-IPO rounds have not been as rich
 - Cross-over funds do expect a bump from pre-IPO round to IPO
 - For the company, it is essential to understand the milestones or other value creation events that will transpire between the pre-IPO round and the IPO
- Timing between the private placement and the IPO
 - Are expectations aligned between the late stage investors and the company?
 - What if the timeline for the IPO is extended?
 - Will the late stage investors need liquidity? Will other existing stockholders of the company or employees require liquidity?

The Pre-IPO financings (*cont'd*)

- Will crossover investors participate in the IPO?
 - Ideally, the pre-IPO round investors will be the “anchor orders” in the IPO
 - No ability in the U.S. to obtain and secure cornerstone investors
 - Only two options: either obtain an indication of interest from the crossover investor that can be disclosed in the IPO prospectus, or do a concurrent private placement to the crossover investor at the IPO price concurrent with the IPO
 - Maybe more uncertainty with the indication of interest option if the market remains volatile and IPOs price below stated ranges
- Did the crossover investors receive confidential information during the pre-IPO process? Has that information been disclosed in the IPO prospectus? Are they cleansed of material nonpublic information?

THE IPO MARKET

The IPO Market

Total Life Sciences IPO Funding



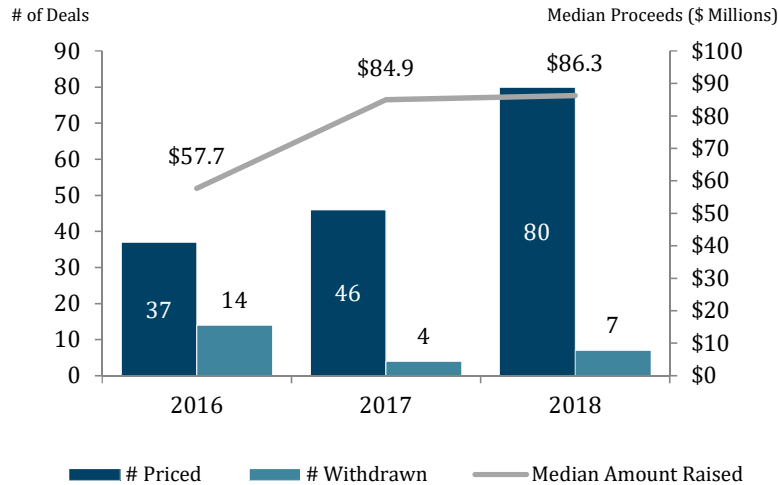
The IPO Market *(cont'd)*

- 80 Life Sciences IPOs priced in 2018 raising a total \$10.0 billion
 - 66 of 80 life sciences IPOs priced in or above initial filing range
 - Aftermarket performance remains weak as only 37.5% of 2018 life sciences IPOs are trading above issue
 - Median offer-to-current of 2018 IPOs is (20.0%) vs. a median of (10.0%) in 2017
 - Median insider participation as a percent of total raise has increased slightly to 25.9% in 2018 compared to 24.2% in 2017
 - 7 life sciences IPOs were withdrawn/postponed in 2018 vs 4 during the full year of 2017
 - 34 offerings in 2018 completed a crossover round within 365 days of IPO

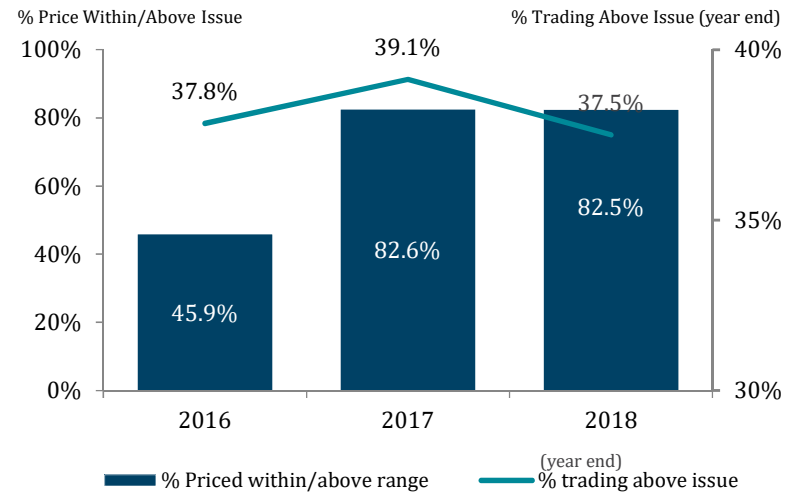
The IPO Market (cont'd)

- Life Sciences IPO volume increased in 2018 while median proceeds raised and performance remained constant compared to 2017. Last year also saw a larger proportion of IPOs with early-stage assets enter the market

IPO Volume

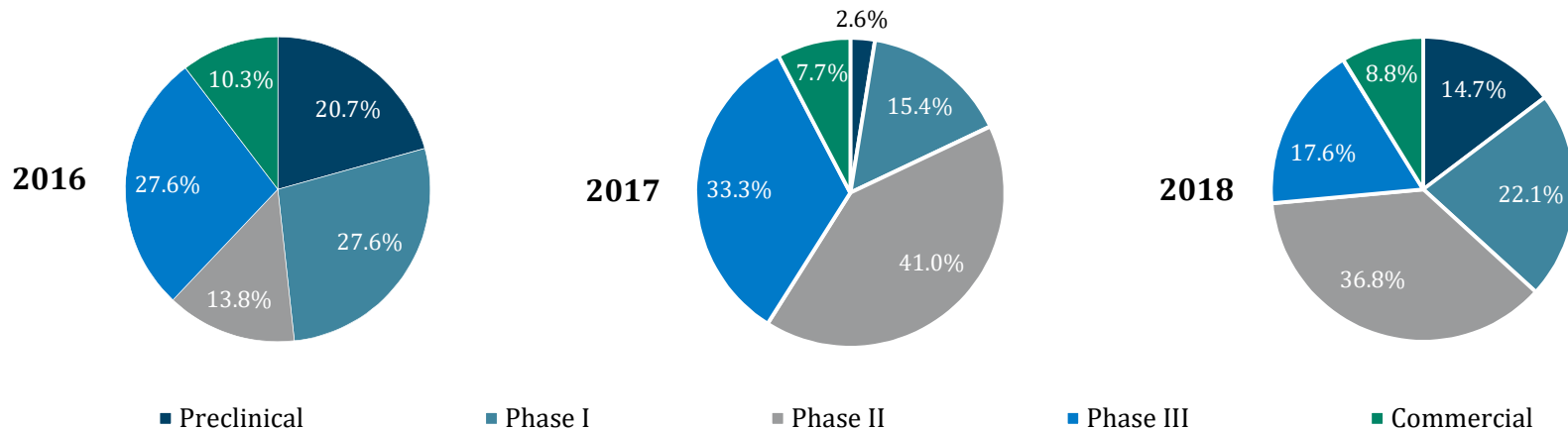


IPO Performance



The IPO Market (cont'd)

Life Sciences IPOs by Development Stage



INSIDER PARTICIPATION IN LIFE SCIENCES IPOS

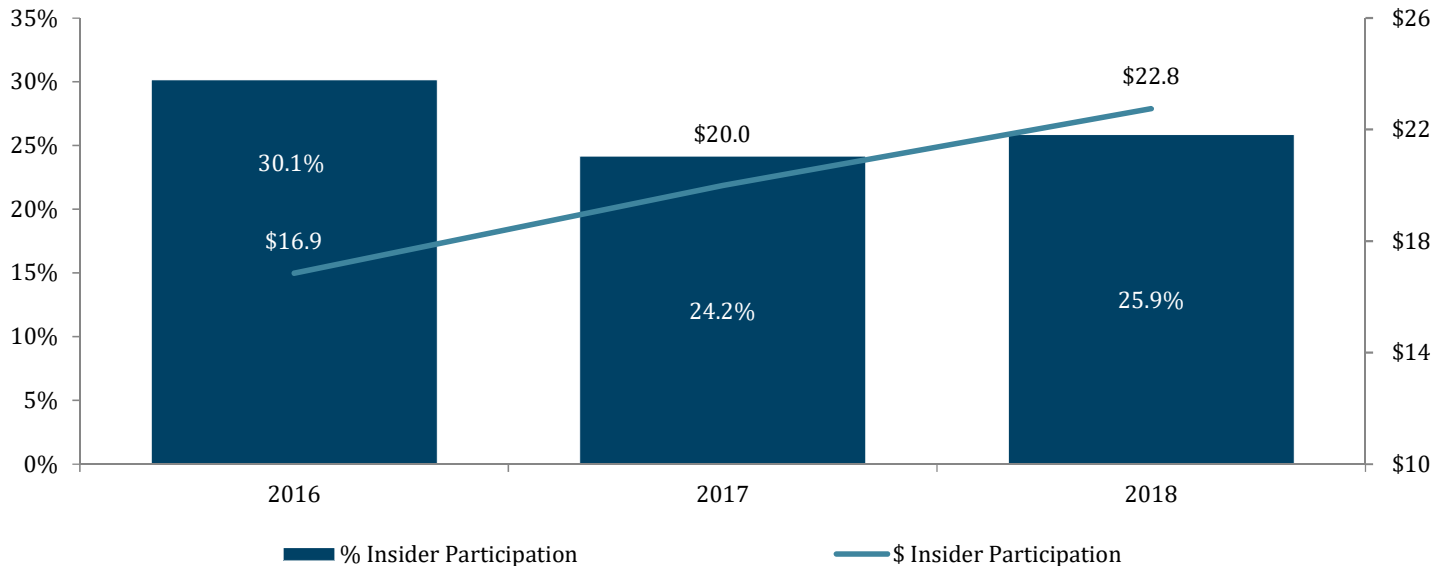
Insider Participation

- Insider participation only accounts for capital committed by affiliates at pricing; excludes broader participation from “existing” investors

Insider Participation

Median Insider Participation %

Median Participation (\$ millions)



Legal considerations

- Insiders may only provide indications of interest; there will be no guarantee of their ultimate orders
- Both FINRA and the SEC will expect to see disclosures relating to insider participation in the IPO
- Depending on the percentage of the IPO that will be allocated to the insiders additional disclosures may be advisable
 - Insider or affiliate holdings may have the effect of reducing public float
 - Future sales by insiders may have a disproportionately negative effect on stock price

PUBLIC IPO QUEUE AND WHAT TO EXPECT

Healthcare IPO Active Public Backlog

- 5 healthcare IPOs currently marketing; an additional 8 healthcare IPOs publicly on file

Latest Date	Expected Date	Issuer	Amount Filed	Business Description	Industry
2/4/19	2/13/19	Avedro Inc	\$75.0	Sells ophthalmic medical systems used in treating corneal disorders.	Medical Devices
1/29/19	2/6/19	Alector Inc	\$176.0	Phase 1 biotech developing therapies for neurodegeneration.	Biopharmaceuticals
1/29/19	2/7/19	Harpoon Therapeutics Inc	\$76.0	Phase 1 biotech developing T cell immunotherapies for various cancers.	Biopharmaceuticals
1/30/19	2/7/19	Gossamer Bio Inc	\$230.0	Developing in-licensed immunotherapies for asthma and other indications.	Biopharmaceuticals
2/1/19	2/13/19	TCR2 Therapeutics Inc	\$75.0	Preclinical biotech developing immunotherapies for solid tumors and blood cancers.	Biopharmaceuticals
1/30/19	TBA	Stealth BioTherapeutics Corp	\$86.0	US-based mitochondrial dysfunction biotech in clinical trials.	Biopharmaceuticals
1/18/19	TBA	Avedro Inc	\$86.0	Sells ophthalmic medical systems used in treating corneal disorders.	Medical Devices
1/14/19	TBA	Brainsway Ltd	\$30.0	Sells medical devices that use magnetic stimulation to treat depression and OCD.	Medical Devices
1/11/19	TBA	Kaleido Biosciences Inc	\$100.0	Early-stage biotech developing microbiome therapies for rare genetic disorders.	Biopharmaceuticals
1/11/19	TBA	Cirius Therapeutics Inc	\$86.0	Phase-2 biotech developing therapies for liver and metabolic diseases.	Biopharmaceuticals
1/4/19	TBA	Poseida Therapeutics Inc	\$115.0	Phase 1 biotech developing CAR T cell therapies for multiple myeloma and prostate cancer.	Biopharmaceuticals
12/21/18	TBA	Ardent Health Partners Inc	\$100.0	LBO'd operator of 31 acute care hospitals.	Facilities & Services
9/28/18	TBA	NGM Biopharmaceuticals inc	\$75.0	Phase 2 biotech developing therapies for NASH and Type 2 Diabetes.	Biopharmaceuticals

Source: CapitalIQ, Dealogic, and Renaissance Capital as of February 1, 2019.

Note: Includes issuers publicly on file for greater than \$20M in gross proceeds. Only includes issuers who have filed/revised within the last 180 days

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FOLLOW-ON OFFERINGS

Publics more private

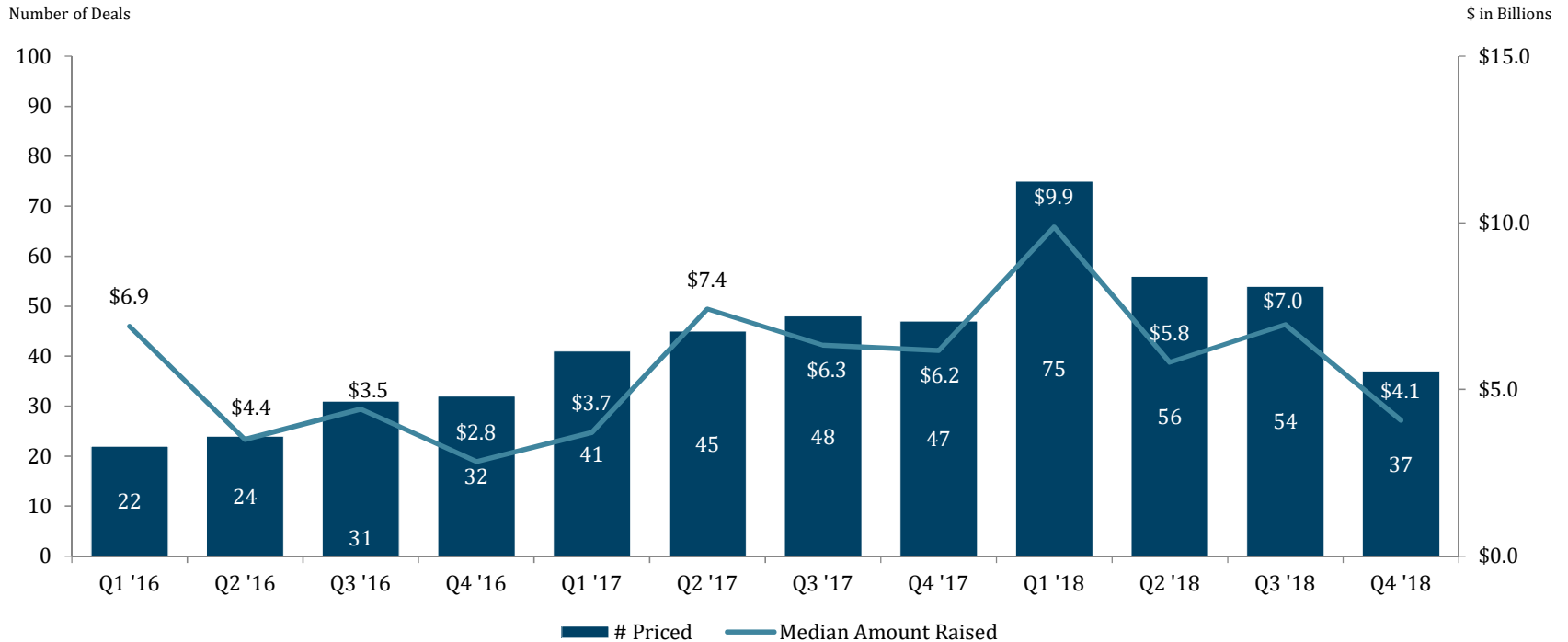
- The most important change in recent years in the United States is that public offerings have become less “public”
 - Due to market developments, such as broadened shelf filing regulations, heightened volatility and concerns about investor front-running
 - Most follow-on offerings begin as confidentially marketed offerings, which may include:
 - Confidentially marketed offerings
 - PIPE transactions (private);
 - Registered direct offerings; and
 - At-the-market offerings, though “announced” have some of the same attributes as these financing alternatives, including the ability to avoid investor front-running
 - However, in 2018 we saw an increase in public marketing as deal activity increased and market conditions were strong in the pre-Labor Day period

Follow-on financings

- Overall, companies that are eligible to file and maintain a shelf registration statement do so and we were all reminded of the value of a shelf registration statement during the SEC shut-down
- Having an effective shelf registration statement facilitates financings and increases issuer optionality
- Most follow-on offerings are now completed off of shelf registrations
- Among deal formats, generally reliance on PIPE transactions has declined significantly, although for the life sciences sector, PIPE transactions remain important

Follow-on offerings (cont'd)

Total Life Sciences Follow-On Funding



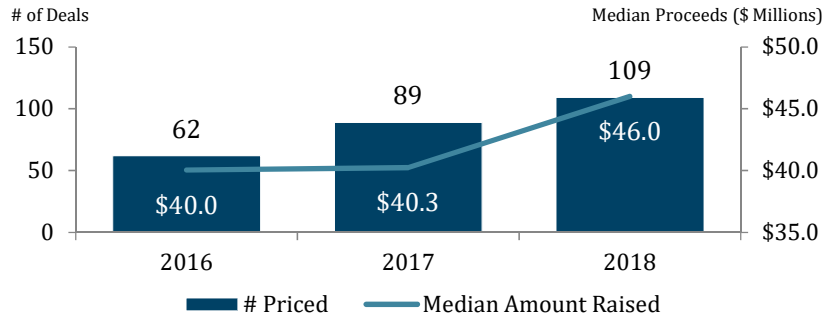
Follow-on offerings (*cont'd*)

- 222 Life Sciences follow-on offerings priced in 2018 and raised a cumulative \$26.7 billion
 - Represents the most active year for life sciences follow-ons since 2015, both in terms of absolute dollars raised and number of deals
 - Despite elevated market activity, pricing discounts for 2018 have remained consistent as the median file/offer discount is (8.4%) vs a median of (8.2%) in 2017

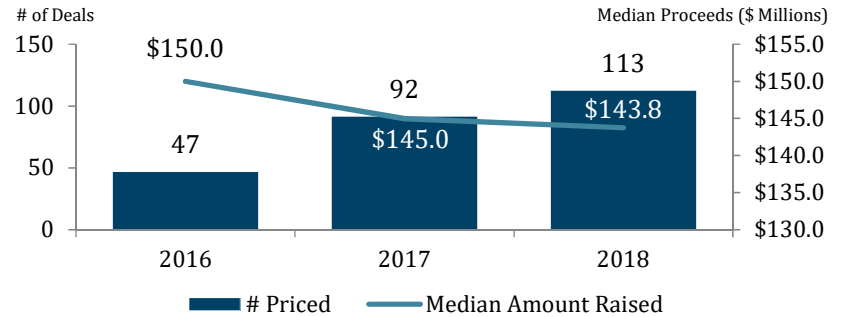
Follow-on offerings (cont'd)

- Life sciences follow-on volume reached record highs in 2018 and issuers of all market caps raised elevated percentages of their market capitalizations

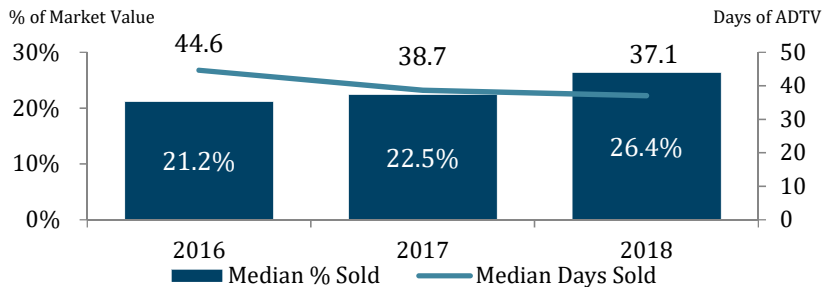
Follow-On Volume (sub-\$500mm Market Cap)



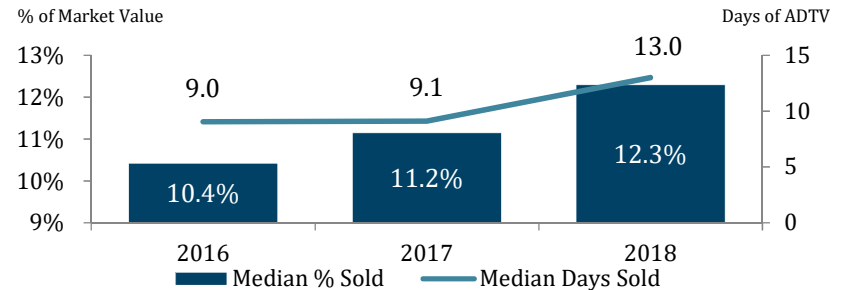
Follow-On Volume (>\$500mm Market Cap)



Median Deal Sizing (sub-\$500mm Market Cap)



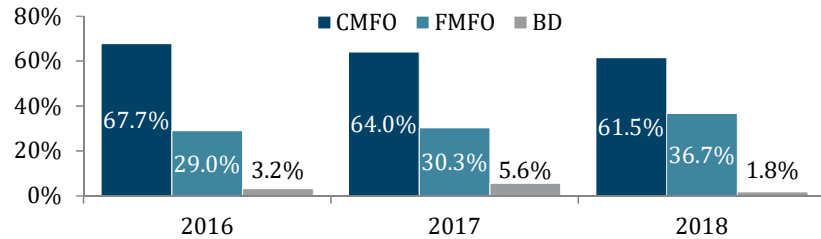
Median Deal Sizing (>\$500mm Market Cap)



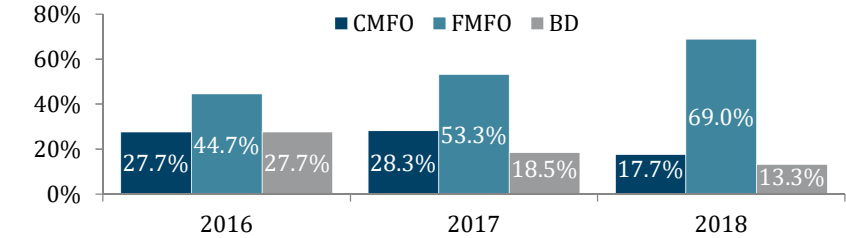
Follow-on offerings (cont'd)

- Confidential marketing remains the most prevalent execution strategy for small/micro cap issuers, while larger companies chose to forgo the wall-cross process
- Investors required wider discounts when pricing follow-on offerings for micro-cap issuers while larger issuers saw narrower discounts and stronger after market price performance

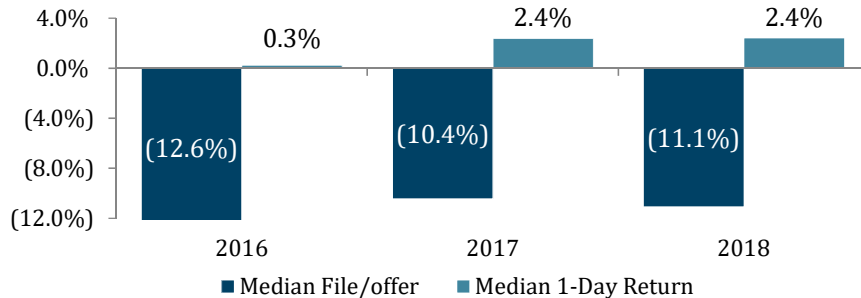
Offering Type (sub-\$500mm Market Cap)



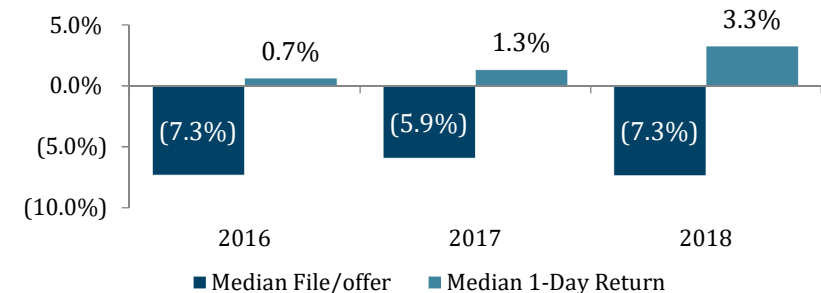
Offering Type (>\$500mm Market Cap)



Median Discount/1-Day Return (sub-\$500mm Market Cap)



Median Discount/1-Day Return (>\$500mm Market Cap)



PIPE market trends

Year	Number of Deals	Dollars Raised
2018	1171	\$46.6 billion
2017	1445	\$44.8 billion
2016	1179	\$48.9 billion
2015	1057	\$41.1 billion
2014	1169	\$34.5 billion
2013	1098	\$23.8 billion
2012	1114	\$36.0 billion
2011	1246	\$29.5 billion
2010	1529	\$38.9 billion
2009	1272	\$41.8 billion

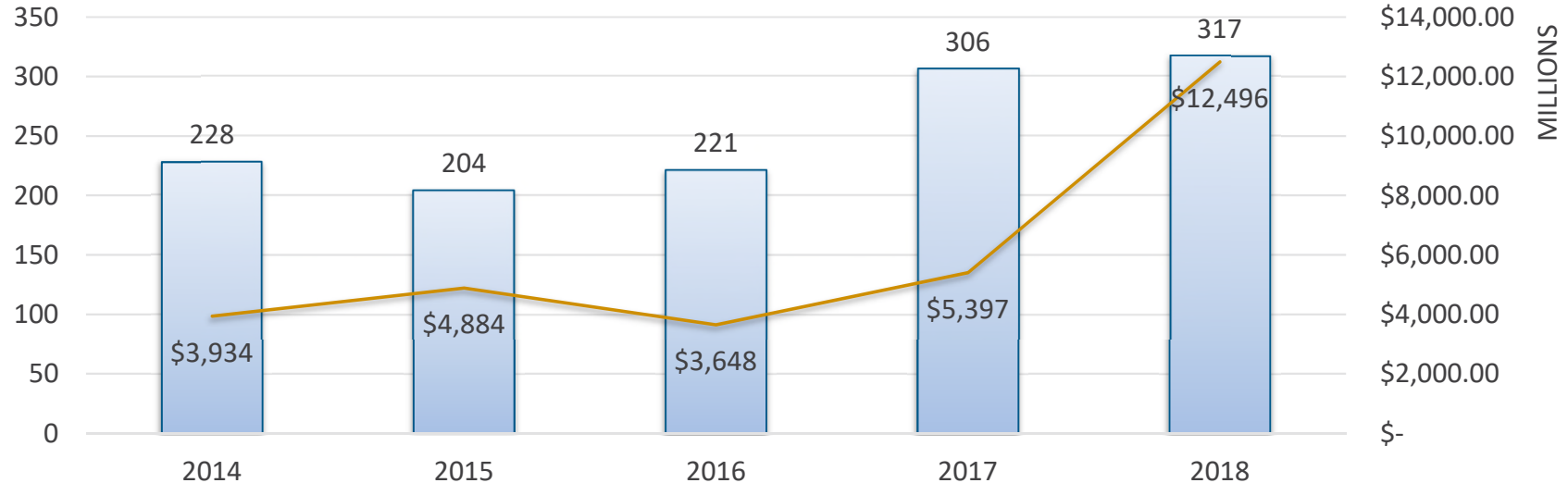
PIPEs by the Numbers, 2018

Security Type	(# of placements)	(\$ millions raised)
Common stock	743	\$26,497
Preferred stock: Convertible	84	\$7,109
Preferred stock: Non-Convertible	3	\$312
Debt: Convertible	182	\$9,527
Debt: Non-convertible	26	\$843
Other: Convertible	2	\$507
Prepaid warrant	58	\$753
Equity line	71	\$1,037
Unknown	2	\$8
Total	1171	\$46,595

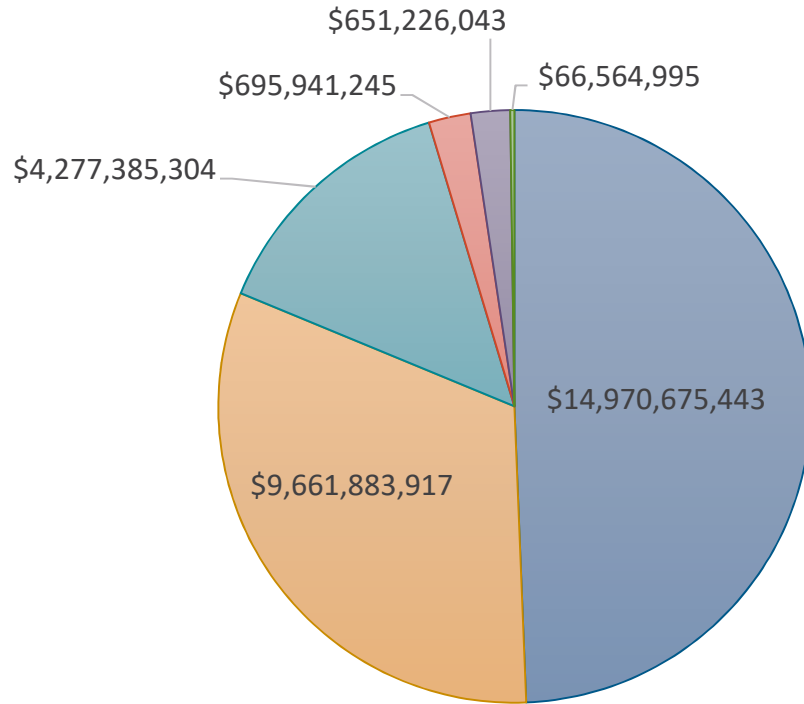
Healthcare PIPE Trends

- Since 2014, the healthcare industry has raised over \$30.4 billion through 1,289 PIPEs.
- In 2018, there were 317 PIPEs completed by healthcare companies, raising \$12.5 billion.

Healthcare PIPEs (2014-2018)



PIPE Trends by Healthcare Subsector (2014-2018)



Healthcare Industry Subsector (Number of placements)

- Pharmaceuticals (491)
- Biotech* (441)
- Medical Equipment (276)
- Personal & Pet Healthcare (33)
- Medical Facilities (30)
- Misc (16)

*Biotech includes biotech: biomedical, gene and agricultural companies.

Considerations for life sciences companies

- There may be strategic uses for a PIPE transaction, such as:
 - To finance an acquisition,
 - To facilitate a VC investment or recapitalization transaction,
 - When a baby shelf issuer needs to raise in excess of the permitted one-third primary offering threshold
- There may be instances where a PIPE transaction simply accomplishes a better result, such as:
 - A selling stockholder PIPE to effect the sale of a VC stake to new sector buyers
 - Enables the execution of NDAs to foster extensive due diligence

Registered direct offerings

Registered Directs allow an issuer to achieve public style pricing while maintaining the relative confidentiality of a private placement.

- A registered direct offering is a “best efforts” placement of registered common stock off an issuer’s existing effective shelf registration statement, generally, to a limited number of institutional investors; the securities are immediately eligible for resale.
- Registered direct offerings have characteristics of both public and private offerings; thus, they are governed by the rules, regulations and market practices specific to each type of offering.
- A registered direct is a “private style” public offering which is, in some ways, an extension of the PIPE; the number of registered direct offerings has been trending upwards in the last several years.
- Registered directs are sometimes being marketed and sold by placement agents as “registered PIPEs” or “strategic publics.”
- For many life sciences companies with a shelf registration statement, a sale of additional to one or more existing holders may be easily structured as a registered direct offering.

Why choose a registered direct?

- Over a PIPE transaction?
 - Same efficient marketing: If an issuer has an effective shelf registration statement, a registered direct offering can be marketed akin to a PIPE transaction — on a “stealth” basis.
 - Often a preliminary prospectus is filed, making the offering known to the public. However, the issuer and placement agent may agree not to file a preliminary prospectus supplement until late in the process.
 - Often better pricing: Investors receive registered, freely transferable securities, thus, no ‘liquidity’ discount.
 - Prompt pricing and closing: If the issuer has an effective shelf registration statement (or is a WKSI that can file an automatically effective shelf) the offering can be priced and closed promptly. In some cases, pricing can occur overnight or in a few days.
 - Not limited to accredited investors: Because these transactions are registered, offerings can be made to any potential investor, subject to suitability requirements

Why choose a registered direct? *(cont'd)*

- Over a traditional underwritten follow-on offering?
 - Advance selling: In a fully marketed underwritten offering, the market has some advance notice of the potential offering, and market participants may begin selling the issuer's common stock in anticipation of the offering.
 - Potentially better pricing: Depending on the length of the marketing period and general market conditions, selling activity (or lack of buying) in the issuer's securities may cause the market price of the issuer's stock to decline (sometimes significantly) by the pricing date. As a result, the pricing in a marketed follow-on generally may be lower than the price in a registered direct offering.
 - Speed and targeted allocation: well-suited for follow-on offerings with a small number of investors.
 - No capital commitment: From the placement agent's perspective, a registered direct offering does not require any capital.

Why a CMPO?

- Over a PIPE transaction or a registered direct offering? In general, many of the advantages of a registered direct offering also apply in the context of a CMPO
 - **Wider distribution:** An advantage of a PIPE and of a registered direct offering is that it is marketed in a targeted manner. However, that often means that the offering is not as widely distributed as other public offerings, in which case a CMPO may be attractive (it can be opened up to retail investors).
 - **20% rule:** If an issuer anticipates offering and selling a number of shares that exceeds 20% of the total shares outstanding prior to the offering, and those shares will be sold at a discount, a registered direct offering may not be considered a “public offering” under the rules of the applicable exchange; thus presenting shareholder vote issues under the 20% rule. A CMPO may be an attractive alternative because it is underwritten (important for NASDAQ) and in the second (public) stage can be opened up to a broader universe of offerees.

Why a CMPO? *(cont'd)*

- **Perceived better pricing:** Many issuers still view an underwritten offering to be the most desirable financing alternative.
- **Underwriter can stabilize or over-allot** (if it chooses to do so): Depending on market conditions, this may be important
- Over a PIPE transaction
 - **Underwritten:** firm commitment underwriting eliminates the need to execute purchase agreements with each investor
 - **Same efficient marketing:** If an issuer has an effective shelf registration statement, a registered direct offering can be marketed similar to a PIPE transaction – on a “stealth” basis.
 - Often a preliminary prospectus is filed, making the offering known to the public. However, the issuer and placement agent may agree not to file a preliminary prospectus supplement until late in the process.

Why a CMPO? *(cont'd)*

- **Often better pricing:** Investors receive registered, freely transferable securities, thus, no “liquidity” discount – attracts the broadest universe of investors
- **Prompt pricing and closing:** If the issuer has an effective shelf registration statement (or is a WKSJ that can file an automatically effective shelf) the offering can be priced and closed promptly. In some cases, pricing can occur overnight or in a few days.
- **Not limited to accredited investors:** Because these transactions are registered, offerings can be made to any potential investor, subject to suitability requirements.

What is an at-the-market offering?

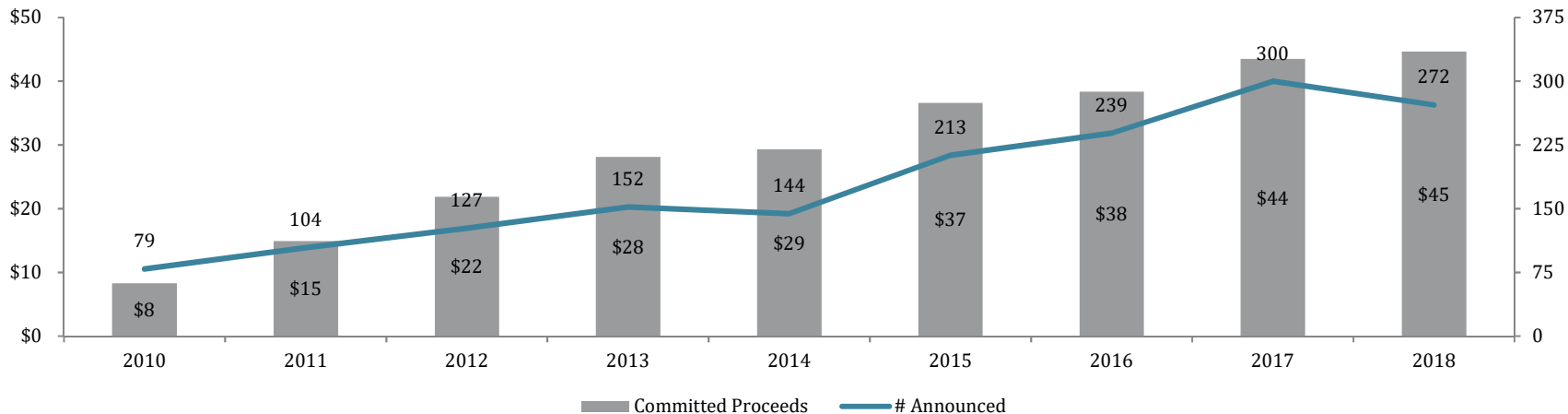
- An offering of securities into an existing trading market at publicly available bid prices
- Commonly referred to as “equity distribution” or “equity dribble out” programs
- Shares are “dribbled out” to the market over a period of time at prices based on the then prevailing market price of the securities
- Generally, sales do not involve special selling efforts
- Can be helpful in facilitating block trades of primary shares for large institutional investors
- For life sciences companies, ATMs may pose special challenges. For example:
 - Some ATM distribution agents only will offer securities of actively traded companies
 - The volume in the stock may not allow for significant amounts of capital to be raised
 - For baby shelf issuers, an ATM “uses up” the one-third primary offering capacity

ATM Market Overview

- ATMs have become more prevalent as issuers seek easy access to capital

ATM Volume Since 2010

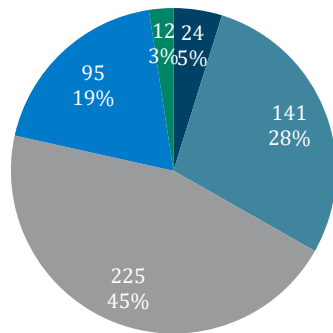
Committed Proceeds (\$ in billions)



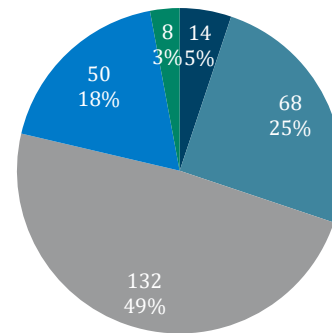
ATM Market Overview (cont'd)

ATMs by Industry

Currently Active



Announced in LTM



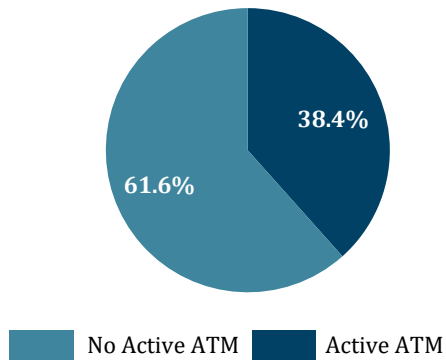
- Consumer
- Financial
- Healthcare
- Industrial/Services
- Technology

Active Healthcare ATMs

- 38.4% of healthcare companies between \$100 million and \$1 billion market cap have an active ATM
- 48.6% of biotechnology companies between \$100 million and \$1 billion market cap have an ATM on file
- 45% of all biotech companies that IPO'd since 2015, and that have been public for 12 months, have an active ATM

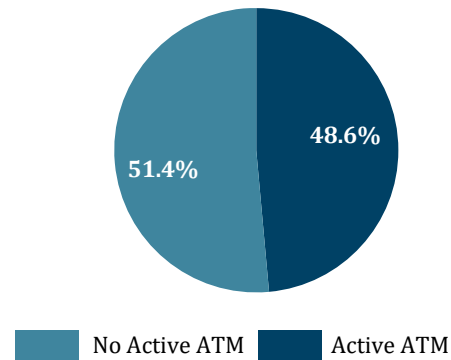
Healthcare Companies (N=289)

Market Capitalizations between \$100 million and \$1 billion



Biotech Companies (N=208)

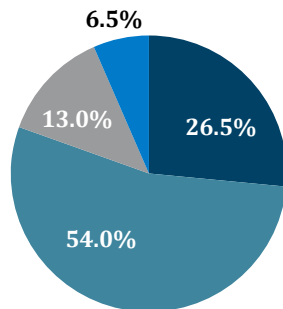
Market Capitalizations between \$100 million and \$1 billion



Active Healthcare ATMs

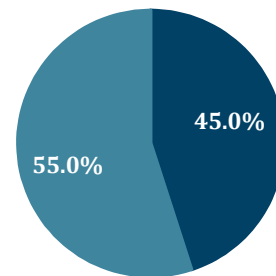
Active Healthcare ATMs by Market Capitalization (N=215)

(\$ in millions)



■ <\$100mm ■ \$100-\$500mm ■ \$500-\$1,000mm ■ >\$1,000mm

Biotech IPOs since 2015⁽¹⁾ (N=100)



■ No Active ATM ■ Active ATM

Regulation A

- Regulation A offerings, which had been contemplated as a means of receiving the smaller IPO market have not fulfilled that objective
 - Although there have been some Reg A offerings for biotech companies, the retail nature of such offerings does not seem well-suited for the sector
- Regulation A was recently amended to permit SEC-reporting companies to avail themselves of the exemption. Will this prove useful to OTC markets listed life sciences companies?

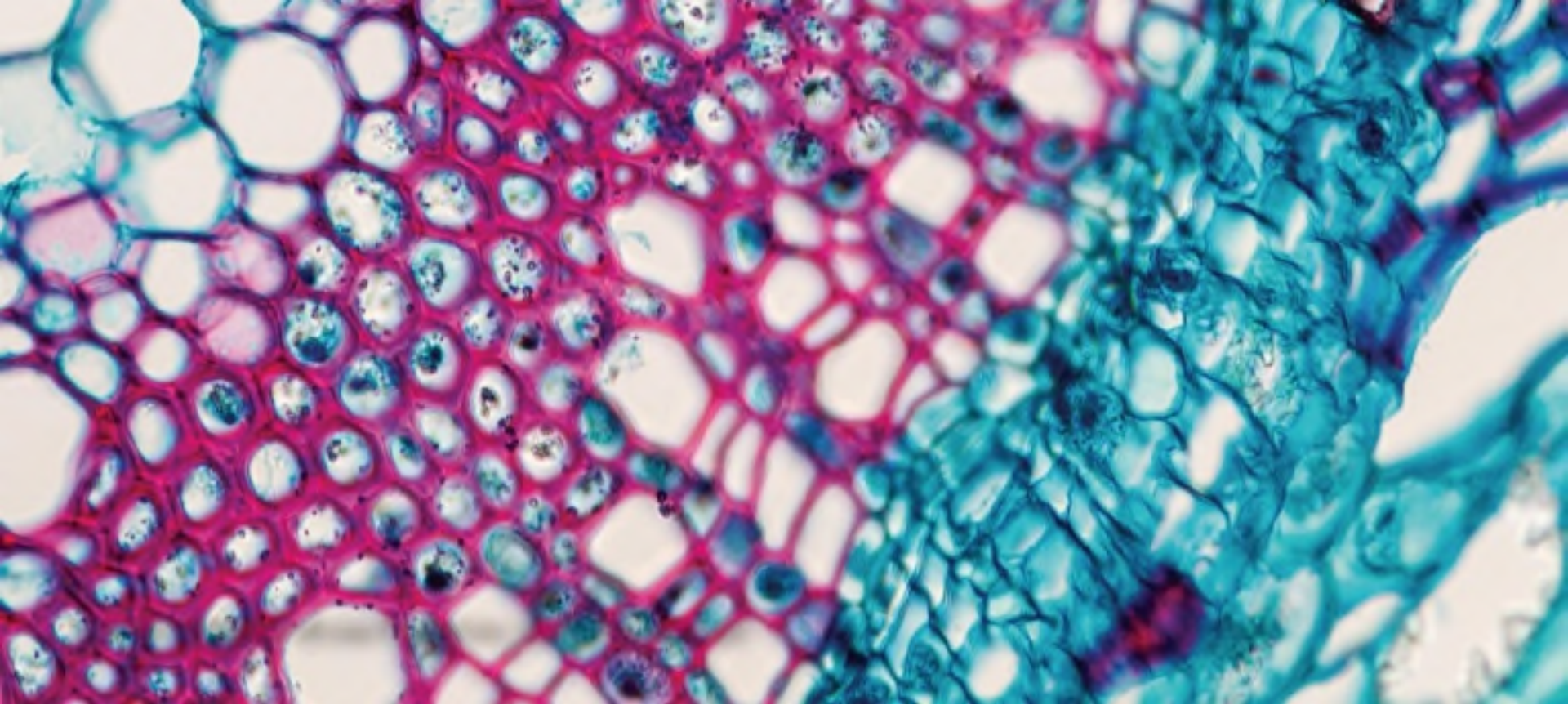
SEQUENCING YOUR FINANCINGS

Sequencing your financings

- IP-based companies must consider the timing of their financings in light of their announcements, such as, new clinical trial data, new strategic relationships and other corporate events, as well as burn rates
- Considerations:
 - How well has the company articulated its clinical trial milestones and when the market can expect news?
 - In the company's public disclosures, including, for example, its MD&A, has it identified major milestones?
 - Market participants and the research analyst community will keep a close eye on burn rate, upcoming milestones, etc. and anticipate that the company likely will consider these factors as part of its financing plan
 - Public investors will not give credit for future partnerships and license agreements

Sequencing your financings *(cont'd)*

- Biotech and life science companies
 - Often must balance their cash needs against the difficulties associated with financing when there is no news or at least no significant news
 - Considerations in undertaking dilutive financings versus financing when financing is available



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