

The Latest in Funding for Early Stage Start-ups: Valuations and Term Sheets

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May 25, 2017



Life Sciences Week: May 22-26, 2017

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- Our track record
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 - Advise more U.S. companies on their **initial public offerings** than any other law firm
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Represent more than 500 biopharmaceutical and medical device clients



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Represent more than 300 energy and clean technology clients

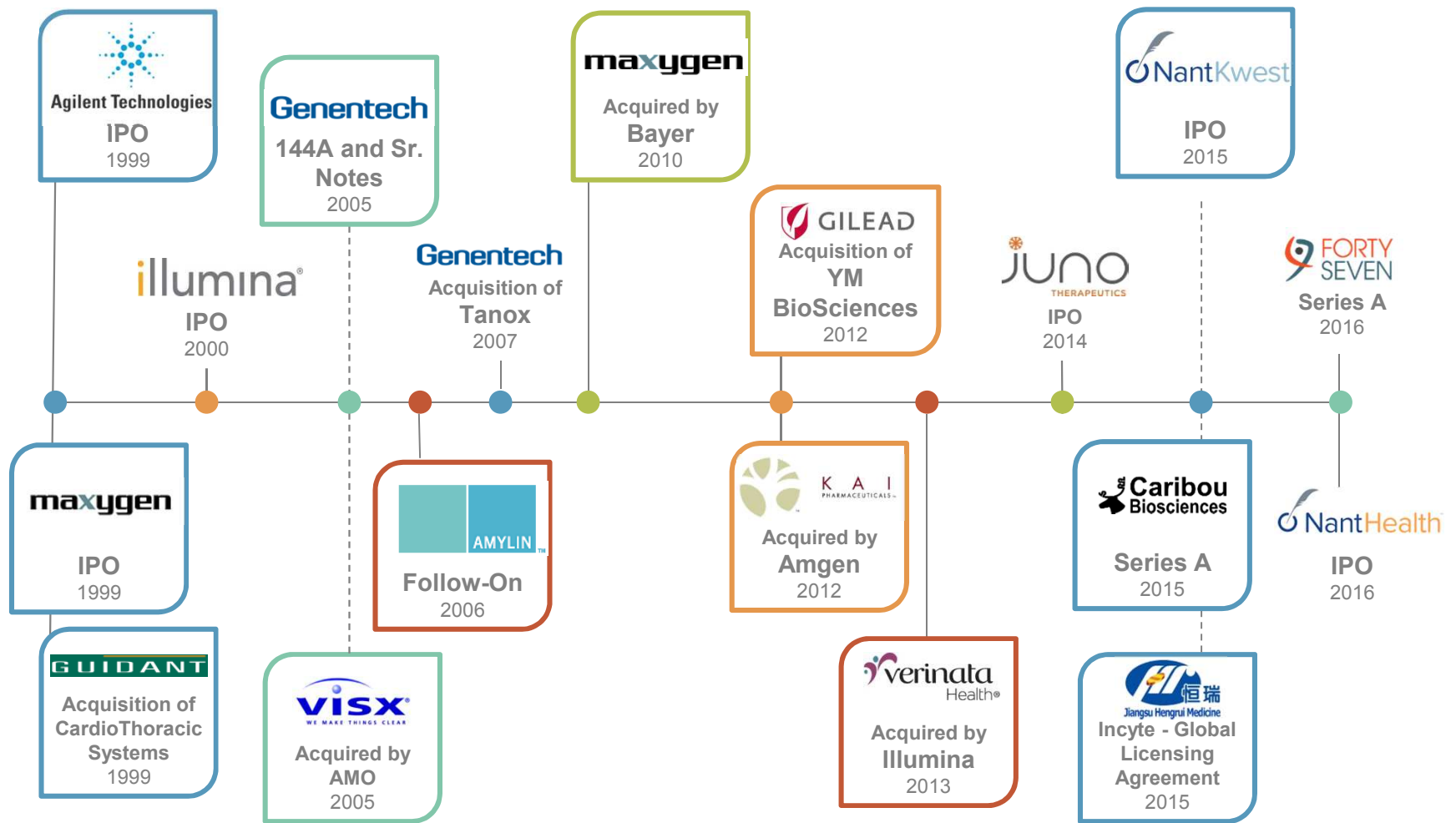


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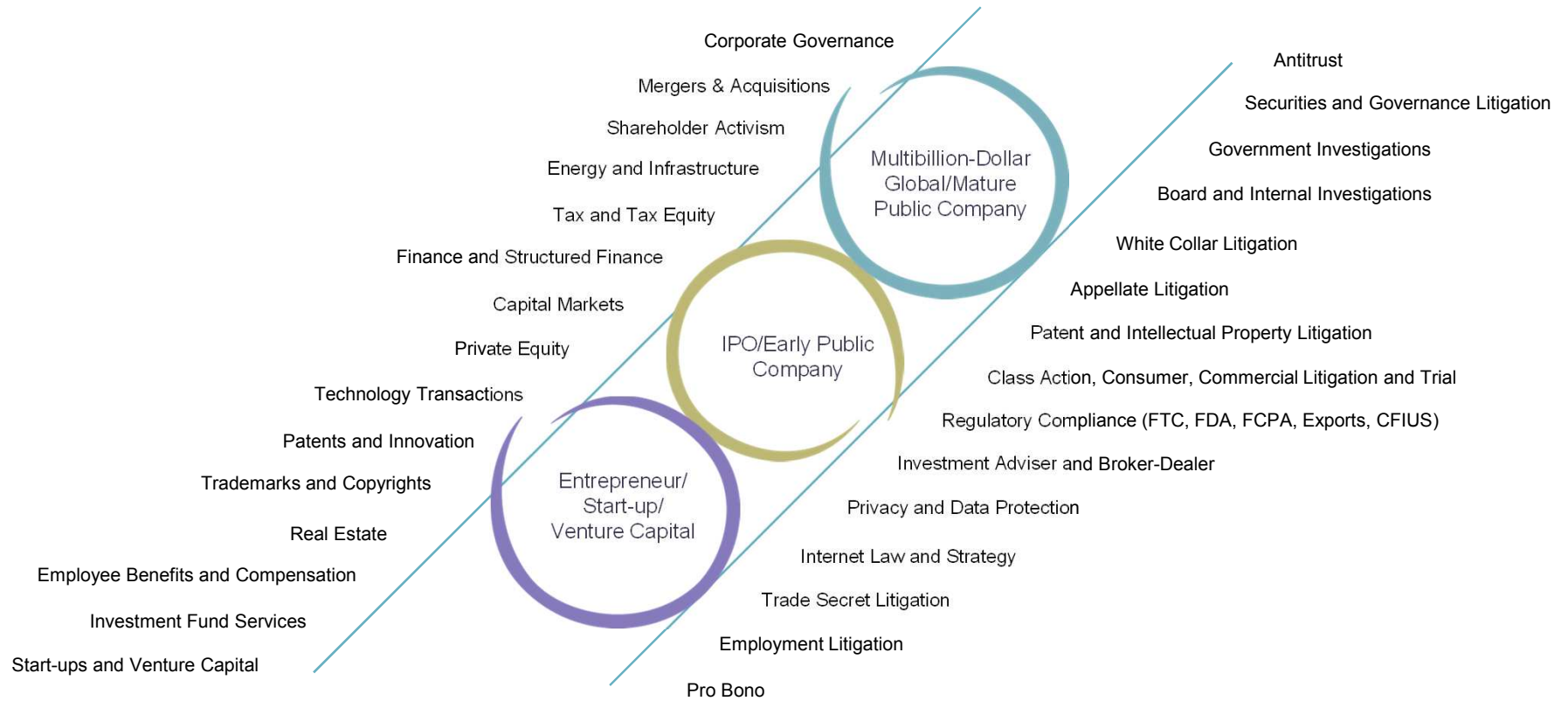


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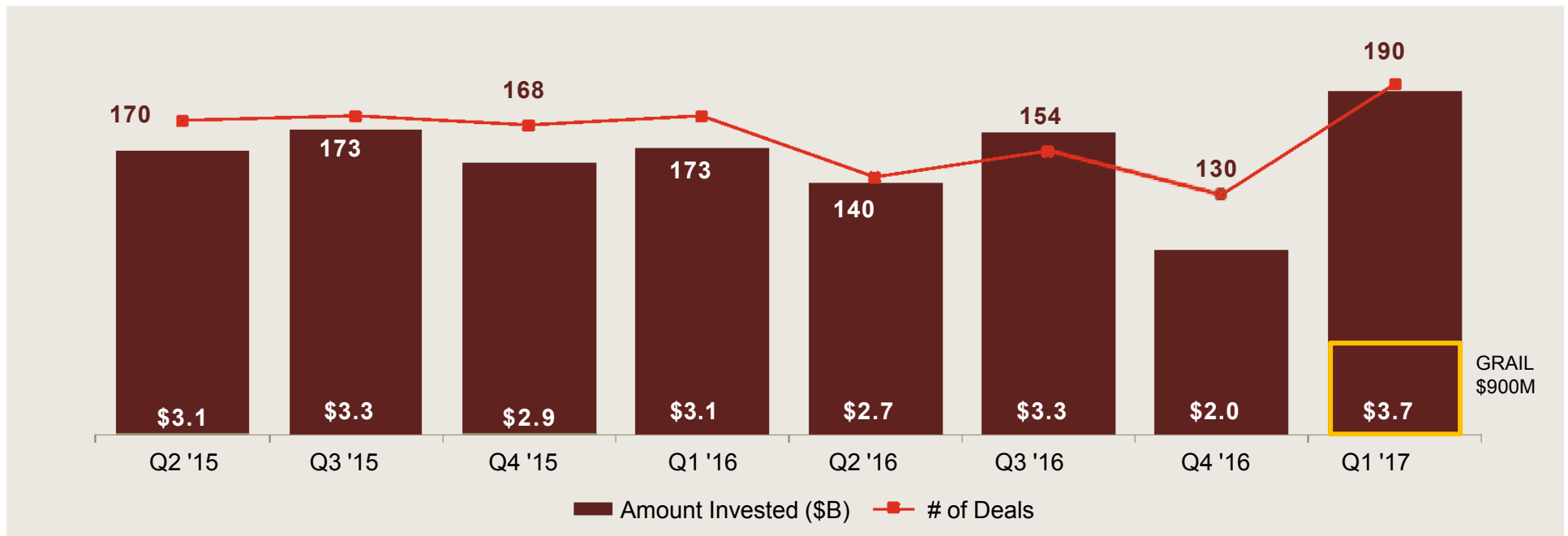


US Healthcare Trends

Investors showed confidence with **\$3.7B invested** in Q1'17, which was an **86% increase** in total funding from the prior quarter, although Q4'16 was a slow quarter.

Deal numbers were also up **46%** from the prior quarter, with **190 deals** closing in Q1'17. The average deal value also increased from \$15.4M in Q4'16 to \$19.6M in Q1'17.

Quarterly deals and dollars both reached **8-quarter highs**, with dollars being buoyed by three mega-deals in the Q1'17 (\$1.2B total).



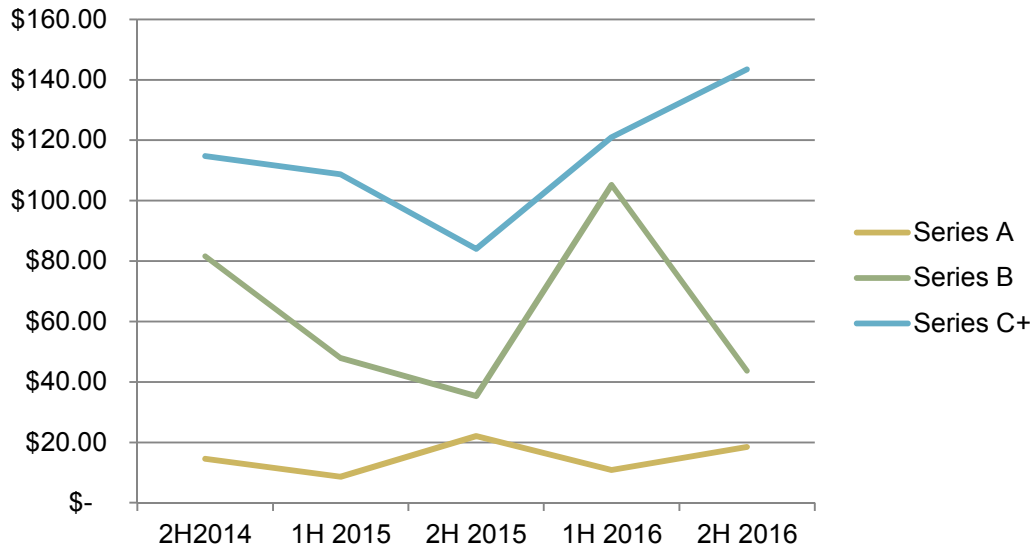
Pre-Money Valuations for all Industries

Early-stage valuations tapered off from the historic highs of 2016:

- median pre-money valuations for Series A and Seed financings **falling** to \$9.6 million
- median pre-money valuation for Series B rounds **fell** to \$27.3 million
- median pre-money valuation for Series C and later deals **rose** to \$143.0 million, well above the full-year 2016 median of \$89.1 million, but just below the 2016 quarterly high of \$147.5 million, set in Q3.



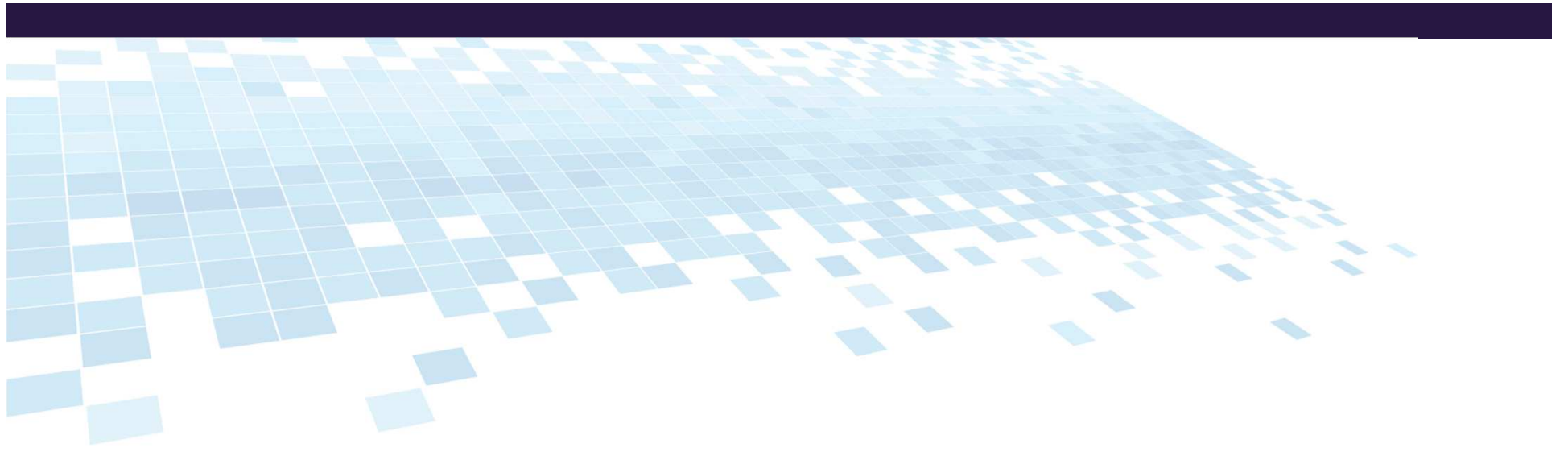
Pre-Money Valuations for Life Science Companies



The second half of 2016 represents the second consecutive six-month period of improved financing activity at the Series A stage in terms of number of closings.

Companies are moving into a greater position of leverage at the Series A stage, as there are more Series A deals getting done and at relatively higher pre-money valuations.

Valuations	2H2014	1H 2015	2H 2015	1H 2016	2H 2016
Series A	\$ 14.60	\$ 8.57	\$ 22.04	\$ 10.86	\$ 18.47
Series B	\$ 81.62	\$ 47.91	\$ 35.36	\$105.20	\$ 43.65
Series C+	\$114.75	\$108.75	\$ 84.07	\$120.97	\$143.45
Delta					
Series A		-41.3%	157.2%	-50.7%	70.1%
Series B		-41.3%	-26.2%	197.5%	-58.5%
Series C+		-5.2%	-22.7%	43.9%	18.6%



▶ **Valuations:** What does it mean and why does it matter?

“We’re willing to put \$2M in at a \$3M pre-money valuation”

“We need to have 40% of the company if we are going to invest \$2M”

Valuation → Percentage of ownership Interest

- Pre-Money Valuation is the valuation of the company before an investor invests
 - Product of Number of Shares Outstanding on a Fully Diluted Basis (not including shares to be issued to new investors, but usually included shares issued to noteholders) Multiplied by the Proposed Price
- Post-Money Valuation is the valuation of the company after investment is made
 - $\text{Post-Money} = \text{Pre-Money} + \text{Investment}$
 - $\text{Post-Money} = \text{Product of The Number of Shares Outstanding On a Fully Diluted Basis After the Close} \times \text{Price Per Share Paid}$
- The higher the valuation, the lower percentage ownership the investor will receive, which means lower dilution to the founders and employers

Valuation (cont'd)

- Valuations are market driven and depend in large part on the level of competition for the deal
- Factors that influence pre-money valuation:
 - Leverage and the fundraising environment
 - Technology and business milestones met
 - Size of market opportunity
 - Experience of team
 - Terms of transaction
- Valuations are sector specific
 - Social Media : Number of registered users and user engagement
 - Cleantech: Square feet under EE management, etc.
 - Biotech: ??
- As much “art” as “science”

“We’re willing to put \$2M in at a \$3M pre-money valuation”

“We need to have 40% of the company if we are going to invest \$2M”

- Pre-Money Valuation = \$3 Million → 60%
- Investment = \$2 Million → 40%
- Post-Money Valuation = \$5 Million → 100%

Formulas to Remember

- Pre-money Valuation (\$) + Investment (\$) = Post-money Valuation (\$)
- Investor Ownership (%) = $\frac{\text{Investment (\$)}}{\text{Post-Money Valuation (\$)}}$
- Investor Ownership (%) = $\frac{\text{\# of Shares held by Investor}}{\text{Outstanding or Fully Diluted Shares}}$
- Price Per Share = $\frac{\text{Valuation (\$)}}{\text{Shares}}$

Valuation is a Funny Thing

What is the pre-money valuation in these scenarios:

- We will invest \$2 million for 20%.

\$2 million = 20% of Post-Money Valuation

Post-Money Valuation = Pre-Money Valuation + New Investment

$$\$2 = 0.2 * (X + 2)$$

X = \$8 million ← Pre-Money Valuation

- We will invest \$2 million at \$1 per share

Pre-Money Fully-Diluted Capitalization = 7,500,000

Pre-Money Valuation = \$7.5 million

- We will invest \$2 million for 20% but we want to increase the option pool by 10% pre-money

\$2 million = 20% of Post-Money Valuation

Post-Money Valuation = Pre-Money Valuation + New Investment

$$2 = 0.2 * (X + 2)$$

X = \$8 million

Post-Money Valuation = \$8 million + \$2 million = \$10 million

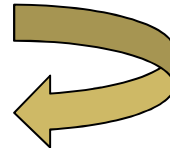
New Option Pool Valuation = 0.1 * (10 million) = \$1 million

Resulting Pre-Money Valuation = \$8 million - \$1 million = \$7 million

Up Rounds vs. Down Rounds

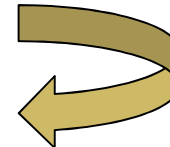
- Series Seed Financing
 - Pre-Money Valuation
 - Investment
 - Post-Money Valuation
- Series A Financing
 - Pre-Money Valuation
 - Investment
 - Post-Money Valuation
- Series B Financing
 - Pre-Money Valuation
 - Investment
 - Post-Money Valuation

\$3 Million
\$2 Million
\$5 Million



Up Round!

\$10 Million
\$4 Million
\$14 Million

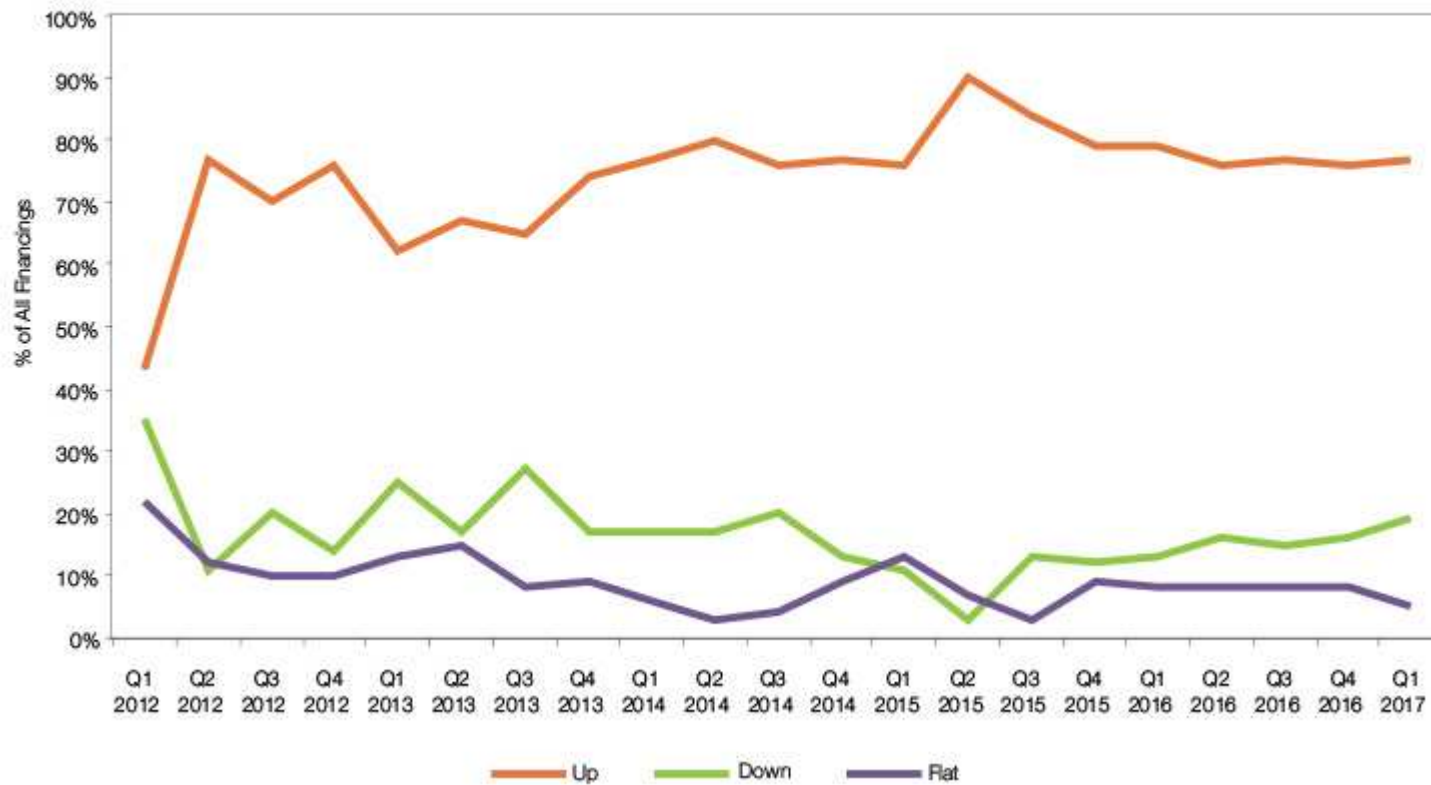


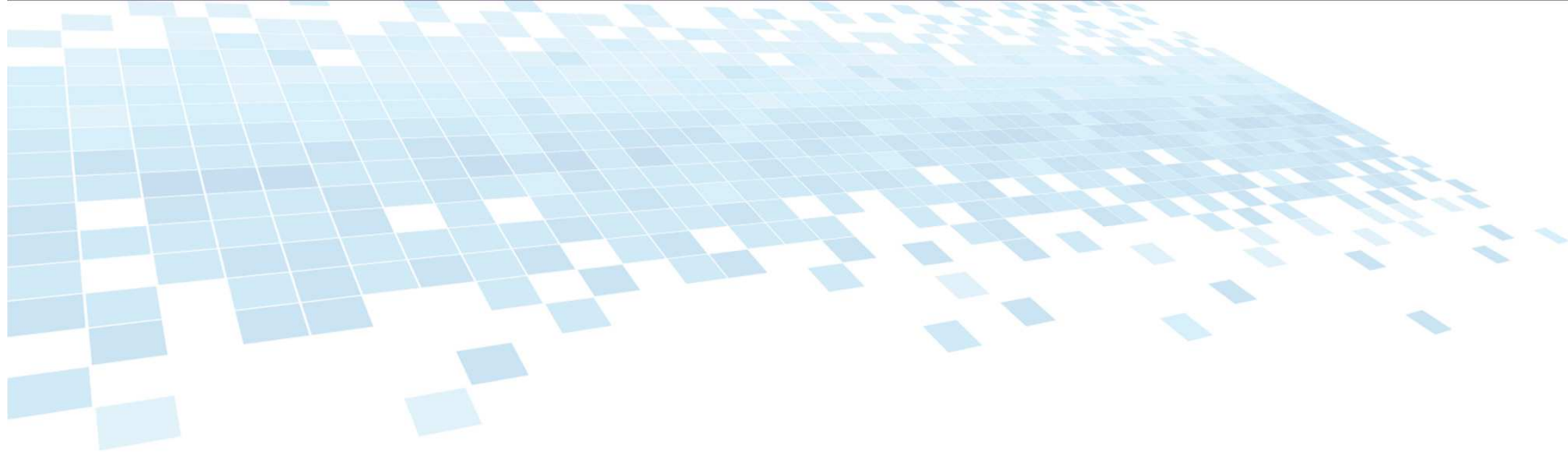
Down Round

\$12 Million
\$10 Million
\$22 Million

Not all financings go up

Up and Down Rounds by Quarter





2 **Financing Terms and Term Sheets**

Series A, B, C

- Basic documents
 - Term Sheet
 - Purchase Agreement
 - Charter
 - Investor Rights Agreement
 - Right of First Refusal and Co-Sale Agreement
 - Voting Agreement
- Fundamentally, the terms are all about
 - Money
 - Control

Most major issues are about money and control

Money

- Valuation
- Option Pool
- Liquidation Preference
- Anti-dilution Protection
- Dividends

Other

- Founder Vesting
- Expenses
- Confidentiality
- Exclusivity

Control

- Voting Rights in Charter
- Board Composition
- Pay to Play
- Drag Along
- Qualified Public Offering
- Covenants
- ROFR/Co-Sale Rights
- Pre-emptive Rights
- Preferred Director Approvals
- Redemption Rights
- Registration Rights
- Information Rights

The Employee Option Pool

- What is an option and an option pool?
- The reserve amount is typically based on anticipated headcount growth
- This time horizon is usually associated with the time the financing dollars last
- The reserve amount is usually assessed and replenished with each financing
- The option pool is a key part of valuation, particularly if the increase is to be “pre-money”
- “3 on 3” means \$3M pre-money with \$3M round
- Let’s assume the required new option pool is 15%
- This is what the cap table will look like:
 - Investors 50%
 - Option Pool 15%
 - Founders 35%
- Assuming option pool is included in pre-money, as it usually is, effective valuation of Founder shares is not \$3M, but 35% of \$6M = **\$2.1M**

Liquidation Waterfall

Creditors, Lenders, Debt Holders



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graph TD; A[Creditors, Lenders, Debt Holders] --> B[Senior Preferred Stockholders]; B --> C[Junior Preferred Stockholders]; C --> D[Common Stockholders]; D --> E[Option/Warrant Holders];
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Senior Preferred Stockholders

Junior Preferred Stockholders

Common Stockholders

Option/Warrant Holders

Liquidation Preference

- Investors get a “Liquidation Preference” in the event of a liquidity event of the company
- “Liquidity events” include M&A transactions
- A typical liquidation preference would provide the investors their money back before any other stockholders receive any proceeds
- Sometimes there are liquidation multiples at 1.5x or 2x
- A “participating” liquidation preference entitles investors to their money back, plus the right to participate in the remaining amounts, often with a cap
- Sometimes one series has preference to other series, other times they are *pari passu*

Conversion / Antidilution protection

- Preferred stock convertible into common stock at option of holder, initially on one for one basis
 - Automatically convert upon an IPO
 - Typically size of deal and share price must exceed certain levels
 - Automatically convert upon the vote of the particular series
- Conversion rate adjusts on certain events
 - Proportionate in the event of stock splits
 - Price based antidilution upon a “down round” financing
 - Weighted average protection: Conversion price is adjusted based on a formula that considers the number of new shares being issued compared to the shares outstanding and the price at which the new shares are issued
 - Full ratchet protection: Conversion price is adjusted so that the price per share is reset to the price per share in the new financing, regardless of the number of shares issued and the price at which they are issued.
 - Provide for appropriate carveouts to antidilution protection (*i.e.*, for option issuances, strategic warrants, etc.)

Board Composition/Voting Rights

- Companies are controlled by the board of directors
 - Control over the board means control over the company
 - Typical board composition post Series A investment is two founders, two Series A investor representatives and one industry expert/independent
- Even if board approves, “protective provisions” require preferred holders to approve certain events, including:
 - Change of control transactions
 - Amendments to charter/bylaws
 - Hiring/firing senior management
 - Issuing senior securities
 - Increasing size of the option pool
 - Incurring debt
- Investor could block future rounds, sales, licenses, and other transactions depending on their rights and hold hostage the company until it gets rights that are beneficial to it
- When multiple investors are involved, they are concerned with getting the right voting threshold so that they can either block transactions or ensure that no other investors can block transactions they support

Questions?



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Jennifer Fang is a senior associate in the Boston office of Wilson Sonsini Goodrich & Rosati. Her practice includes advising start-ups and high-growth, innovative clients and their board and management teams on formation, corporate governance, securities laws, and other legal matters and assisting clients with equity and debt financings, mergers and acquisitions, initial public offerings, and other corporate transactions. She represents clients in a wide variety of industries, including therapeutics, diagnostics, medical devices, informatics, healthcare IT, enterprise software, and clean tech.

Prior to joining the firm, Jennifer practiced corporate and securities law for technology and life sciences clients at Goodwin Procter LLP.

HONORS:

- Named to the 2013 and 2014 "Rising Stars" list published by *Massachusetts Super Lawyers*

SELECT PUBLICATIONS:

- Co-author, "The Serious and Immense Impact of a Medical Device Hack," *Law360*, January 12, 2017

SELECT SPEAKING ENGAGEMENTS:

- Speaker, "Maximizing Ownership of Your Healthcare Start-Up," MIT Martin Trust Center, Cambridge, Massachusetts, 2017
- Speaker, "Fundamentals of Fundraising," inSite/WSGR Entrepreneurship Bootcamp, Harvard Business School, Cambridge, Massachusetts, 2017
- Speaker, "Due Diligence," Pipeline Angels Conference, New York, 2016
- Speaker, "Legal Issues for Start-Ups," Association of MIT Alumnae, Cambridge, Massachusetts, 2015
- Speaker, "Structuring the Deal," Pipeline Fellowship Conference, New York, 2015
- Speaker, "The Post-Investment Relationships," Pipeline Fellowship Conference, New York, 2015
- Speaker, "Private Equity and Venture Capital Financing," Massachusetts Continuing Legal Education, Boston, 2014

ADMISSIONS:

- State Bar of Massachusetts
- State Bar of New York

EDUCATION:

- J.D., University of Pennsylvania Law School, 2009
Internet Editor, University of Pennsylvania Journal of International Law
- M.Eng., Biological Engineering, Massachusetts Institute of Technology, 2006
- B.S., Biology, Massachusetts Institute of Technology, 2005