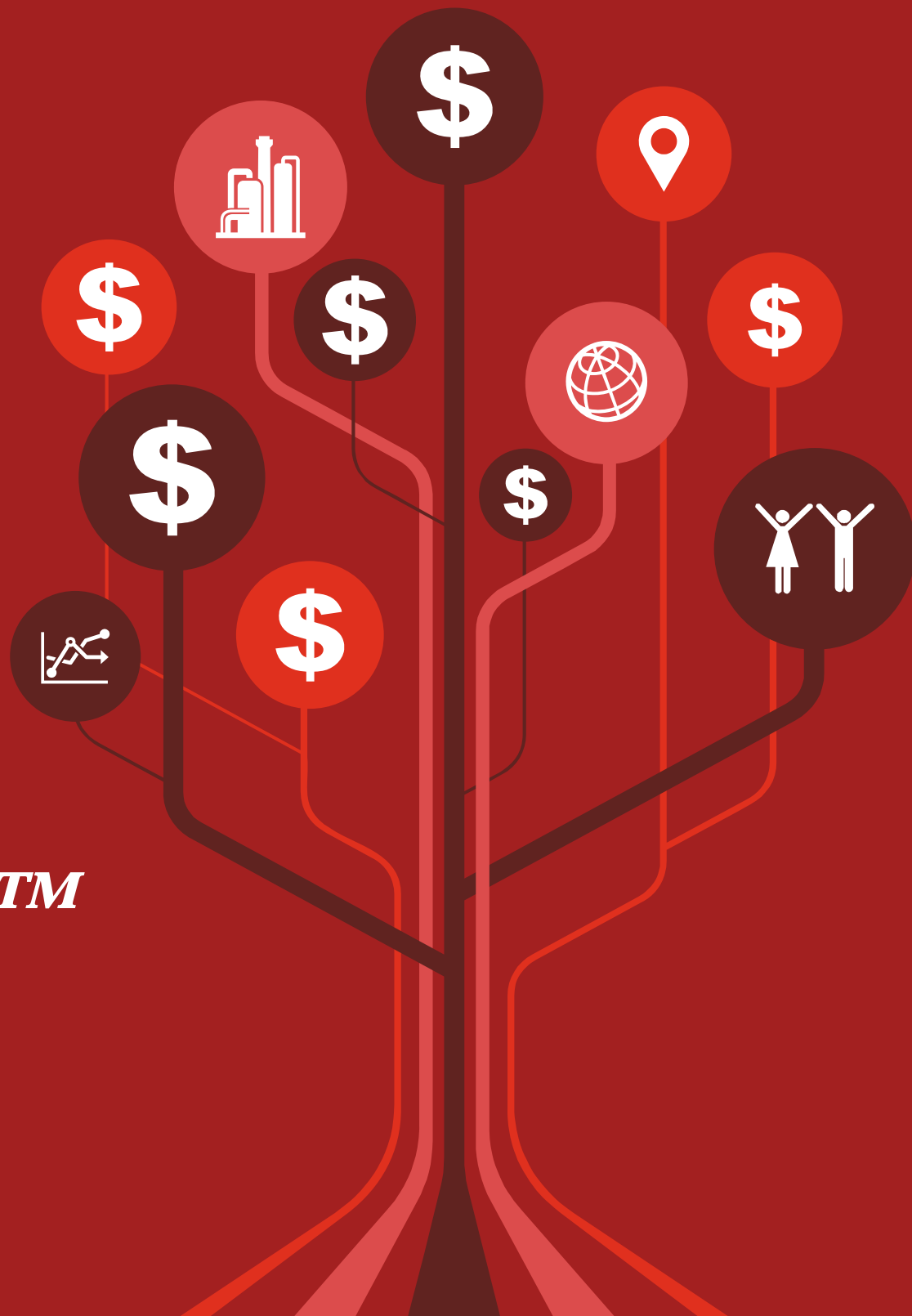


PwC / CB Insights

Healthcare MoneyTree™ Report

Q3 2017





01

US Healthcare Trends

- 1 Funding raised remained relatively constant from the prior quarter with a slight increase in dollars and deals.
- 2 Compared to the same quarter in FY'16, dollars invested in Q3'17 decreased by 4% but number of deals increased by 3%.
- 3 Total dollars raised from four mega-rounds* was \$789M in Q3'17, making up 25% of total deal dollars, down five percentage points from 30% in Q2'17.



02

US Healthcare Industries

- The *Biotechnology related industries* and *Medical Devices & Equipment related industries* increased 20% and 4% in terms of dollars raised respectively from Q2'17.
- Biotechnology related industries remained on top of the Healthcare sector, holding a 70% share of Q3'17 dollars invested, while the Medical Devices & Equipment related industries accounted for 24% of the Healthcare Sector.



03

US Healthcare Places

- The top five Healthcare regions in the US were Silicon Valley, New England, Midwest, San Diego and LA/Orange County.
- Continuing the trend in FY17, Silicon Valley remained at the top spot this quarter with New England trailing in second place.
- Silicon Valley received two out of the four mega-rounds, with Auris Surgical Robotics and 23andMe raising \$280M and \$250M, respectively.



04

US Healthcare Movers and Shakers

- Out of the four mega-rounds in Q3'17, three were later stage deals while the fourth deal was with an early stage company.
- Google Ventures and ARCH Venture Partners were the most active venture capitalists, investing in 6 deals each in the quarter.
- Versant Ventures, Alexandria Venture Investments and New Enterprise Associates were tied with 5 deals each this quarter.

** deals of \$100M or more in value.*



05

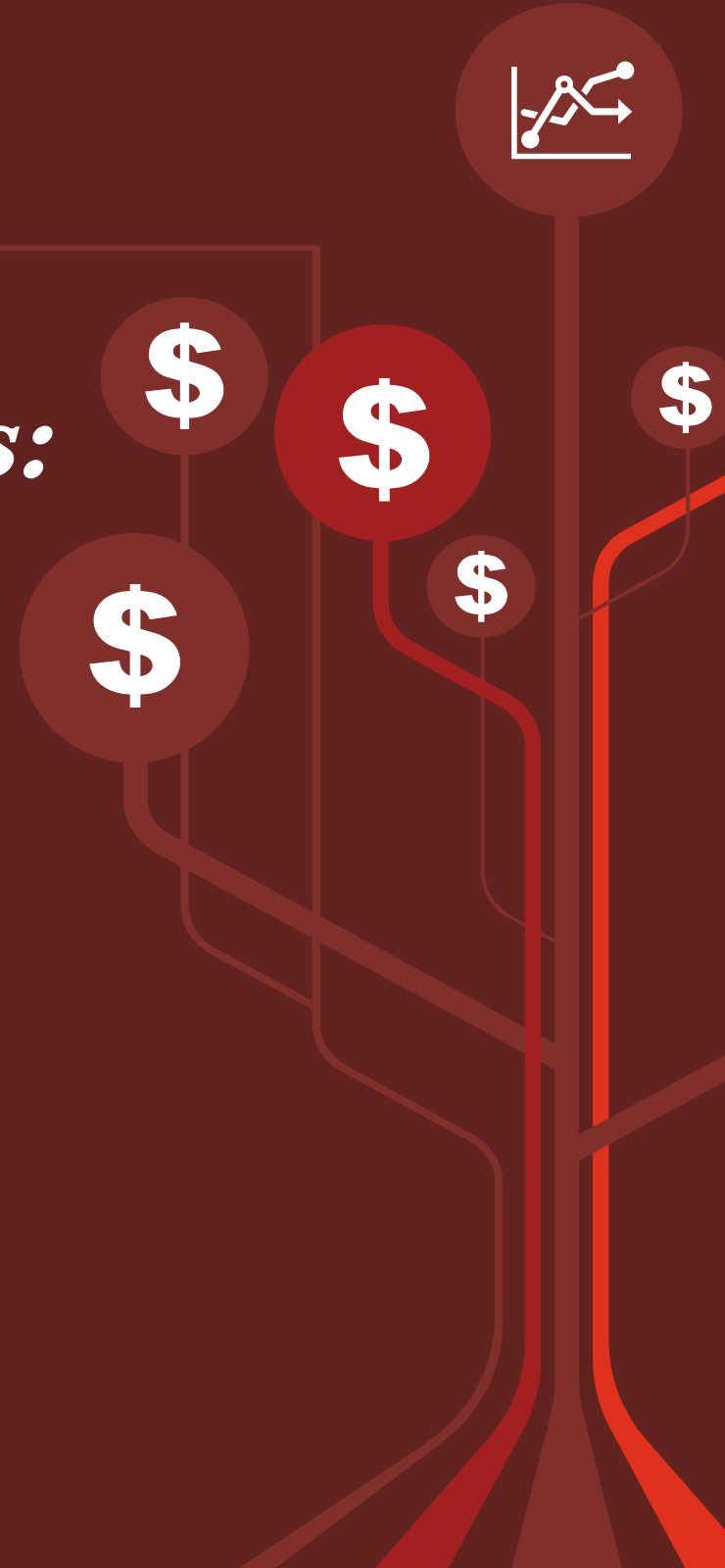
Global Healthcare Trends

- Global Healthcare deals grew from \$4.1B in 263 deals to \$5.8B in 287 deals, which represents a 43% increase in funding and 9% increase in deals.
- In Q3'17, the number of deals that closed in North America (184) was more than triple those in Europe (50) and Asia (52).
- In Q3'17, Asia also doubled the number of deals closed and dollars raised from 27 deals and \$473M in Q2'17 to 52 deals and \$927M in Q3'17. China alone accounted for 29 deals, which was followed by Israel with 10 deals.

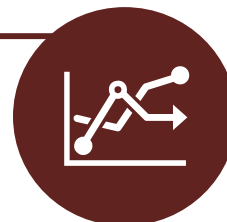


01

US Healthcare Trends: Q3 2017

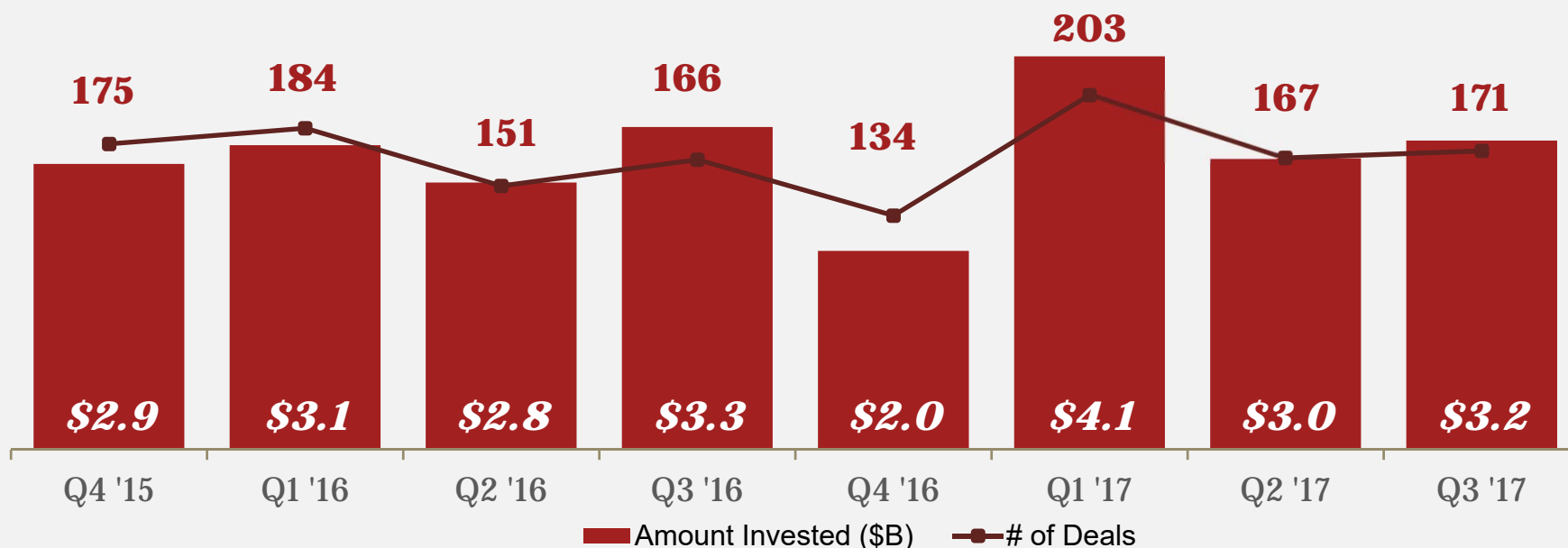


Overall Healthcare financing trends

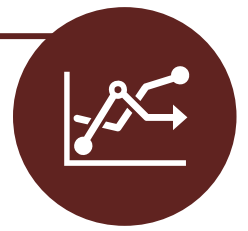


Slight increase in deals and dollars in Q3'17 from Q2'17

- Dollars invested in US Healthcare increased slightly to **\$3.2B** in Q3'17, which was up **6% higher** than the total funding in the prior quarter.
- Deal numbers were **relatively constant with an increase of 2%** from the prior quarter, with **171 deals** closing in Q3'17. The average deal value also increased from \$18.0M in Q2'17 to \$18.6M in Q3'17.
- Compared to the same quarter in FY'16, dollars invested decreased 4%, but the number of deals increased 3% in Q3'17, with a resulting slight decrease in average deal value from \$20.0M in Q3'16 to \$18.6 in Q3'17.

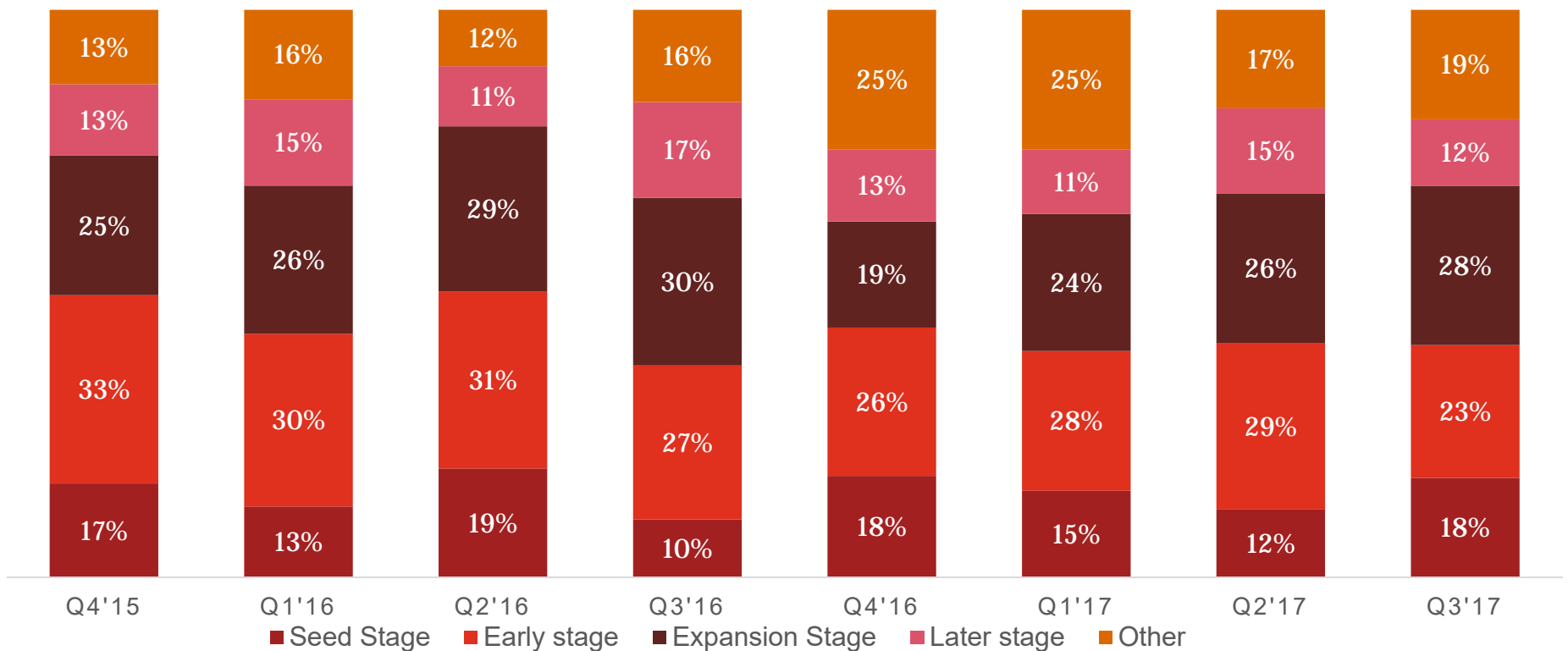


US Healthcare deal share by stage



Early and expansion stages continue to lead with highest market share of deals in Q3'17

- The average deal share for the past eight quarters showed that early stage deals made up 28% and expansion stage deals made 26% of the market, though the most significant deal share by stage switches between the two stages from quarter to quarter.
- Seed stage deals increased to 18% in Q3'17, reversing the downward trend of the previous three quarters.

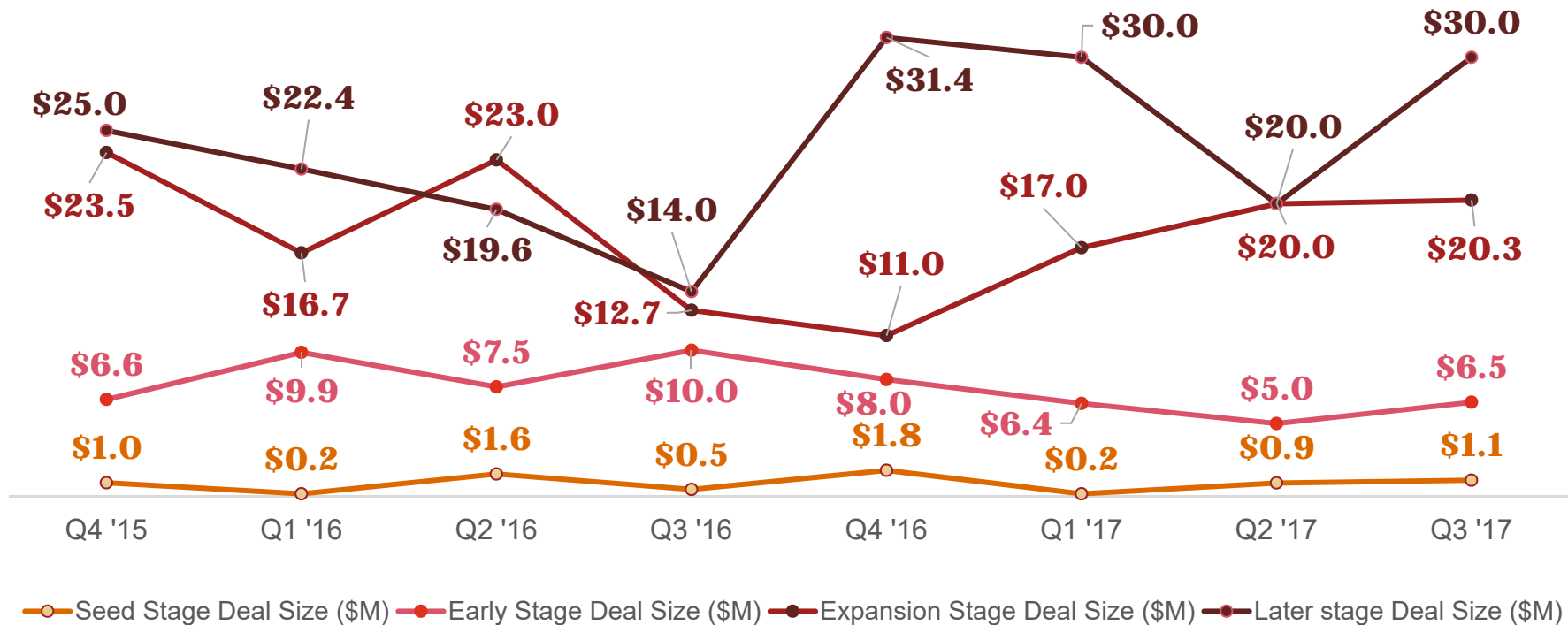


Median US deal size by stage



Median deal size for all stages increased from the previous quarter

- Median deal size for all stages increased quarter on quarter with the greatest increase of 50% from \$20.0M to \$30.0M in the later stage deals.
- The median deal size for the later stage deals of \$30.0M was the furthest from its average median deal size for the past 8 quarters of \$24.0M.
- Median seed stage deals continue to fluctuate between \$0.2M and \$1.8M over the past eight quarters.



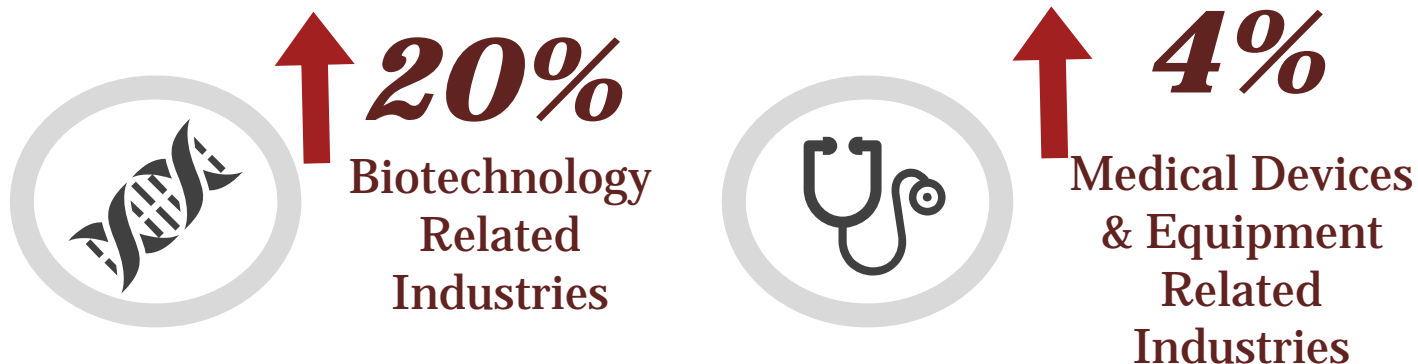
Healthcare sector trends



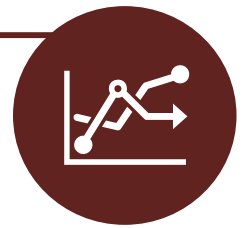
Healthcare sector continues to be led by Biotechnology related industries

- There was a total of **\$2.2B** invested into **Biotechnology related industries** in Q3'17, which represents an **increase of 20%** from Q2'17. Biotechnology deals also increased 10% quarter on quarter to 102 deals in Q3'17.
- The **Medical Devices & Equipment related industries** also saw an **increase of 4%** in funding to \$755M but a 11% decrease in deals from Q2'17. This trend was mainly attributable to a mega-round funding of \$280M to Auris Surgical Robotics, Inc. in Q3'17.
- **Biotechnology related industries** remained on top of the Healthcare sector, holding a **70%** share of Q3'17 dollars invested, which was up 8 percentage points from Q2'17, while the **Medical Devices & Equipment related industries** remained similar to Q2'17 at **24%** of the Healthcare Sector.

Percentage change in dollars invested Q3'17/Q2'17



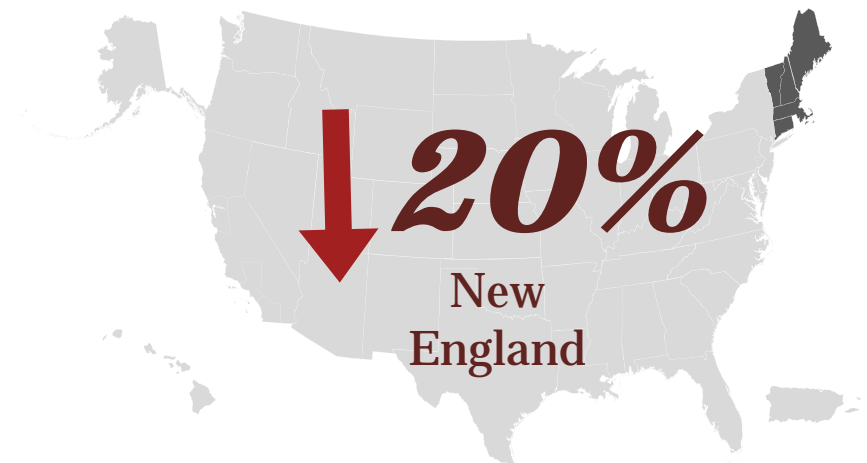
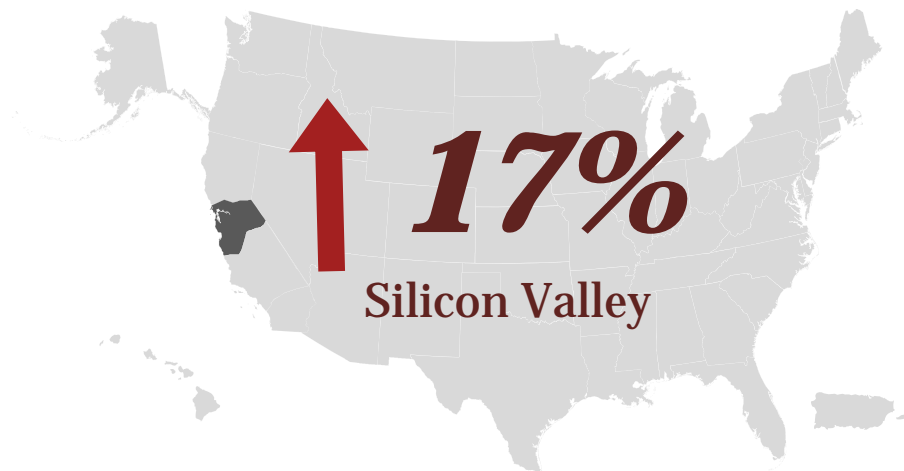
Regional Healthcare trends



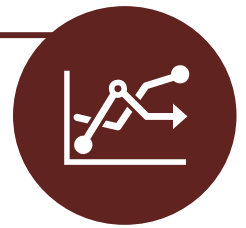
Silicon Valley continues to lead 2017 on top of the regional leaderboard

- Carrying on the 2017 trend, **Silicon Valley** once again upstaged **New England** in terms of dollars invested in Q3'17, with investments of **\$1.3B**. **New England** remained in second place but saw a **20%** decrease in funding to **\$644M** when compared to the prior quarter.
- Silicon Valley saw a jump in number of deals closed in quarter to 49, the highest number of deals the region closed in a quarter for the past 2 years. On the flip side, New England faced a decline in number of deals closed in a quarter to 26, the lowest number of deals the region closed in a quarter since 2016.
- Silicon Valley makes up **41%** of US Healthcare market share of total deal dollars invested in Q3'17, while New England accounts for **20%** of total deal dollars. The Midwest came in third with **11%** of the total deal dollars. Together, the top 3 regions accounted for more than 70% of the total deal dollars in the country.

Percentage change in dollars invested Q3'17/Q2'17



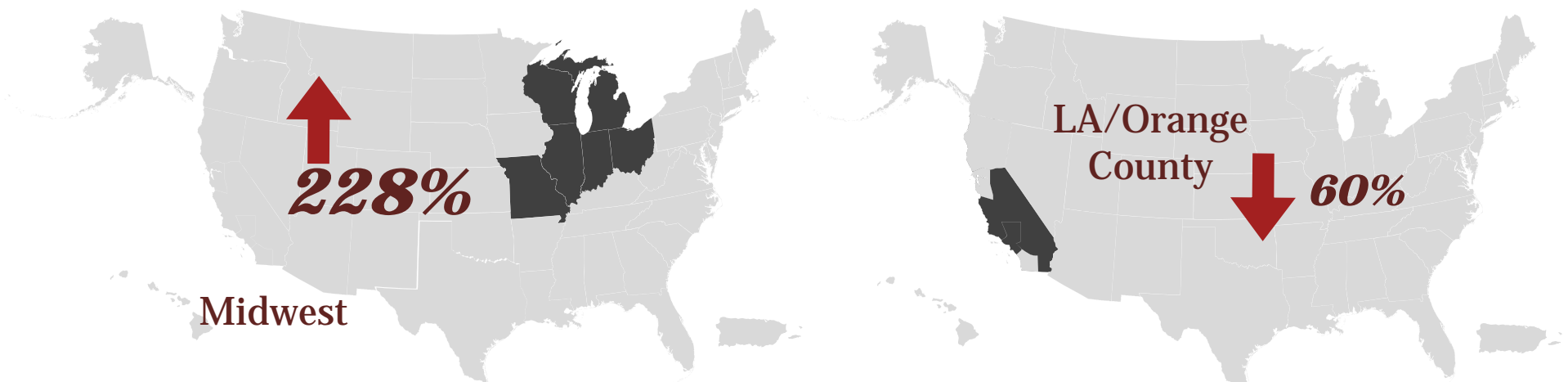
Regional Healthcare trends (cont.)



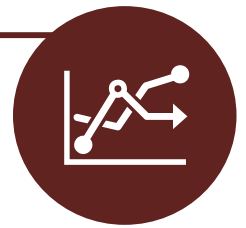
Changes in other US regions:

- **The Midwest region** raised \$336M, a 228% increase from Q2'17, and climbed into the third position. The jump in ranking was due to an increase in average deal size from \$6.8M in Q2'17 to \$21.0M in Q3'17. Number of deals stayed relatively flat with 16 deals in Q3'17 and 15 deals in Q2'17.
- **LA/Orange County** came in fifth, down two places from Q2'17, even though the number of deals for both quarters remained constant at 14. The total investment in Q3'17 for the region was \$139M, a 60% decrease from Q2'17's investment of \$349M.

Percentage change in dollars invested Q3'17/Q2'17



US Healthcare mega-rounds



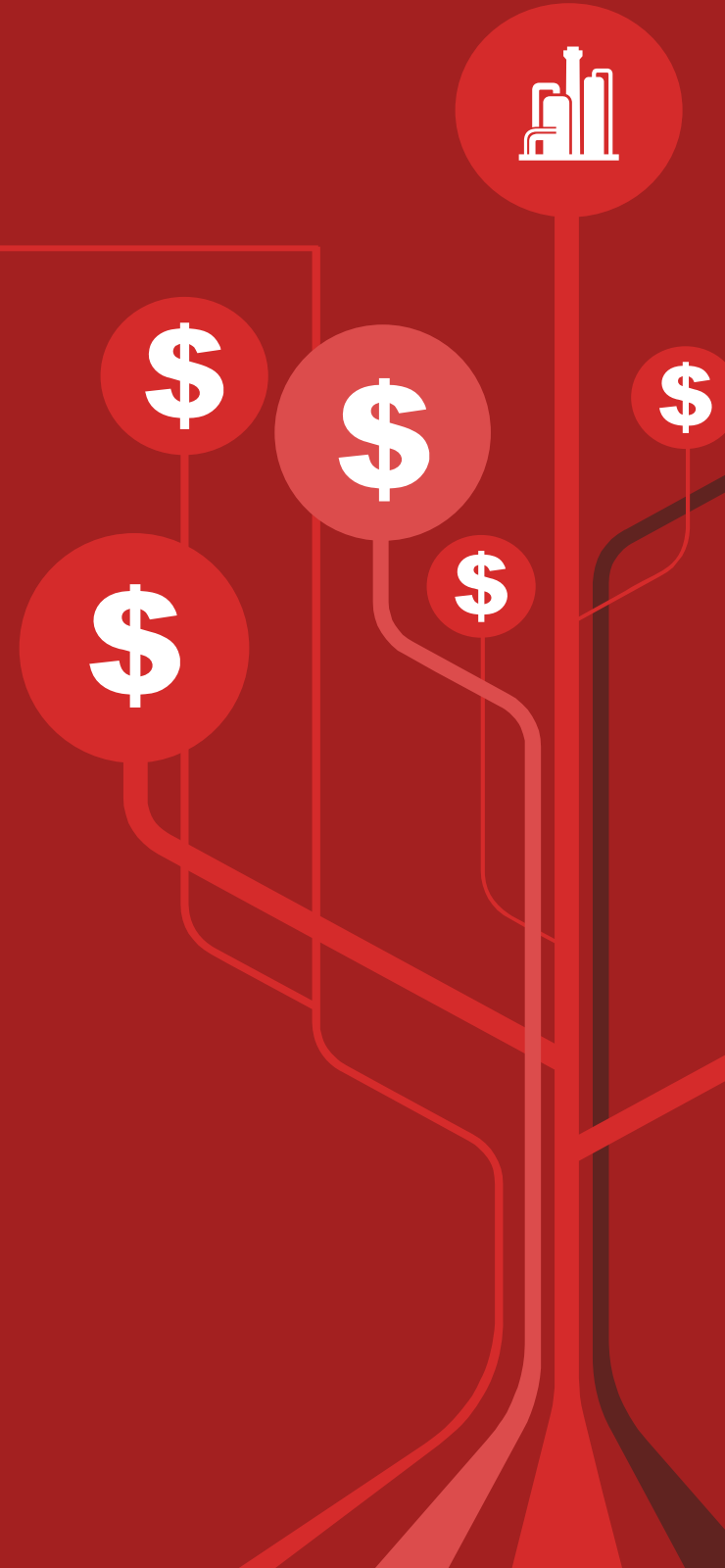
Decreasing trend in total dollar value for mega-rounds for the past 3 quarters.

- The number of financings of \$100M or more (“mega-rounds”) remained relatively flat in 2017 with **4 mega-rounds in Q1’17, 5 mega-rounds in Q2’17 and 4 mega-rounds in Q3’17.**
- The total dollars raised from mega-rounds also saw a decreasing trend from **\$1.3B in Q1’17 to \$914M in Q2’17 and to \$789M in Q3’17.**
- Mega-rounds made up **25% of total deal dollars in Q3’17,** down five percentage points **from 30% in Q2’17.**
- The largest deal in Q3’17 went to **Auris Surgical Robotics, Inc.,** a company which is developing a robotic microsurgical system designed specifically for ophthalmic surgery.



02

US Healthcare Industries: Q3 2017

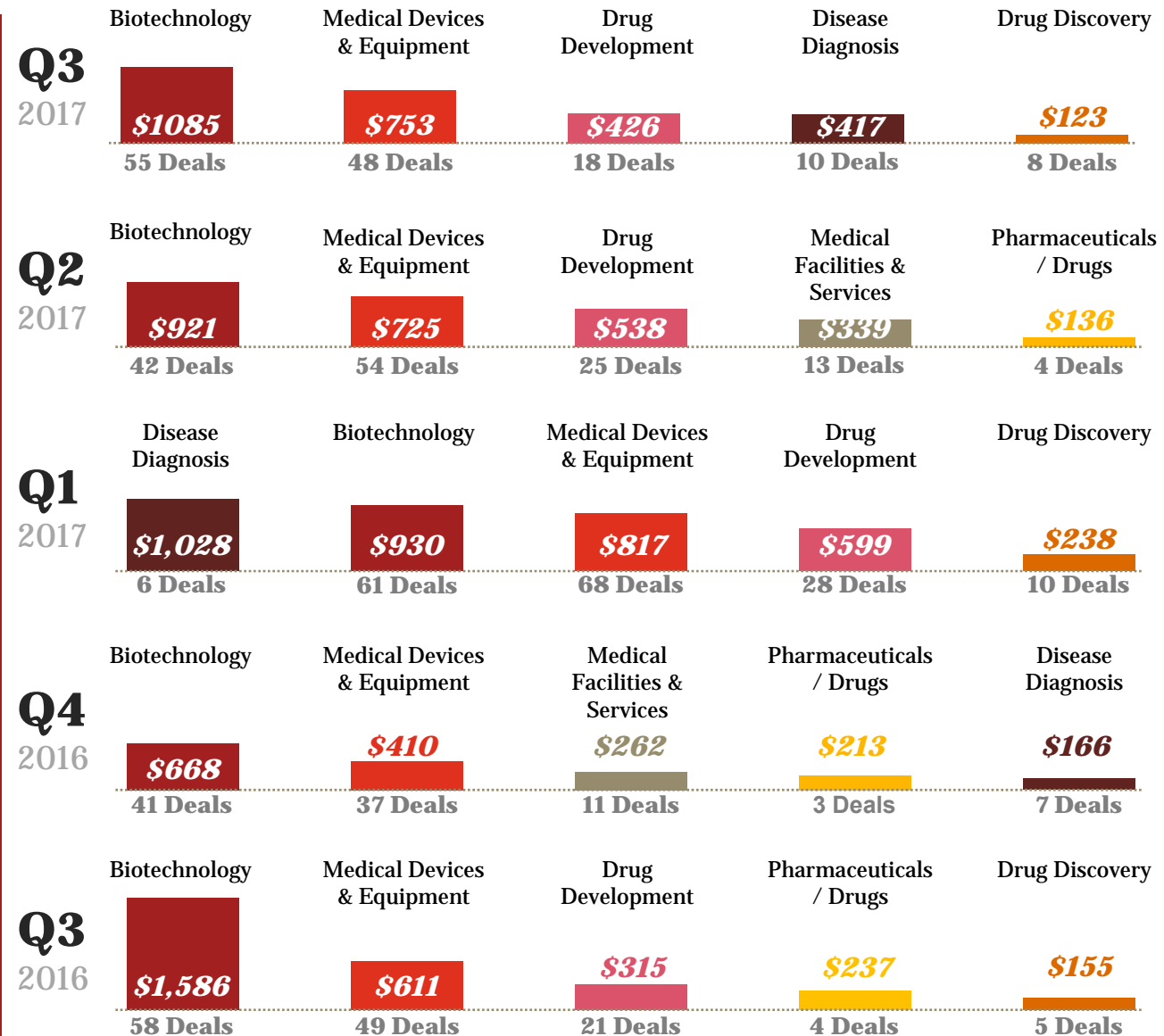


Top five US Healthcare Industries over the last five quarters



Trends:

- **Biotechnology and Medical Devices & Equipment** industries remained in the first and second places at the top of the Healthcare industry dollars and number of deals in Q3'17.
- **Disease Diagnosis** industry came in fourth in Q3'17, boosted by the \$250 million funding in 23andMe, Inc., a personal genetics company dedicated to helping individuals understand genetic information through DNA analysis.





Q3'17 Deep Dive:

Biotechnology and Disease Diagnosis

“In Q3, we saw the continued trend of large-sized financing rounds toward new treatment modalities, such as tumor neoantigens in immunotherapy, and gene therapy/gene editing. We also saw more later stage, growth-oriented financing in agricultural/industrial biotechnology and consumer-oriented molecular diagnostics, as more products reach the market, capitalizing on advances in biological science (such as insights in microbiome), data science and bioinformatics.

— Mikayel Nazloyan, Life Science Partner at PwC

Largest Q3'17 Biotechnology deals:

\$156M *Indigo Agriculture, Inc.*

\$93M *Gritstone Oncology, Inc.*

\$84M *Homology Medicines, Inc.*

Largest Q3'17 Disease Diagnosis deals:

\$250M *23andMe, Inc.*

\$52M *Color Genomics, Inc.*

\$50M *Karius, Inc.*



Q3'17 Deep Dive:

Medical Device & Equipment

“The Medical Device & Equipment industry witnessed deal volume drop again this quarter after a strong Q1, as investors are placing their money in industries offering faster liquidity. Auris Surgical, making up 37% of the industry's dollars raised in Q3 with the largest healthcare mega-round this quarter, helped industry show a slight increase in investment dollars over last quarter.

— Greg Vlahos, Life Science Partner at PwC



4%

Increase in funding
compared to Q2'17

Largest Q3'17 Medical Device related deals:

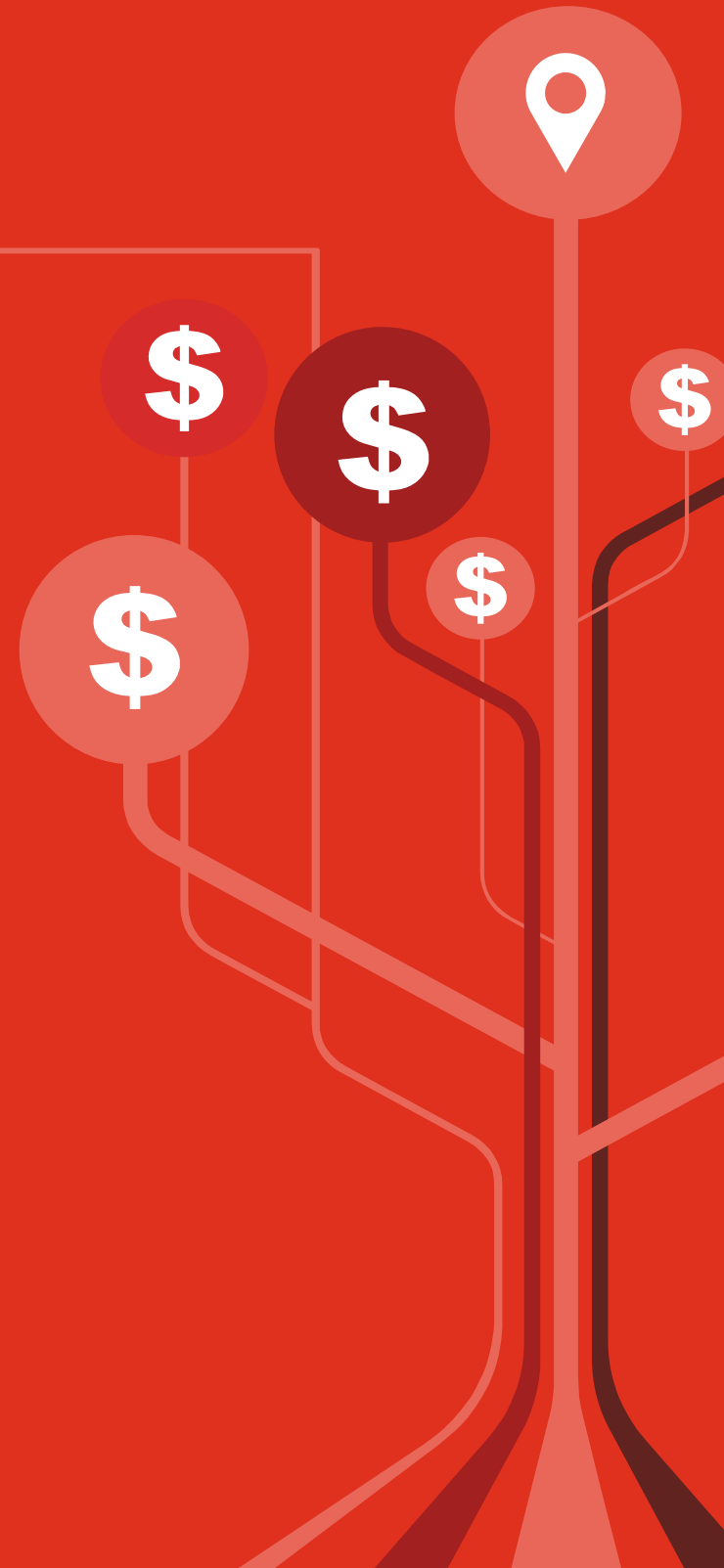
\$280M *Auris Surgical Robotics, Inc.*

\$47M *Silk Road Medical, Inc.*

\$38M *Fractyl Laboratories, Inc.*

03

US Places: Q3 2017



US Healthcare: Top five regions by deal value



49 Deals

Avg. Deal
Size: \$26.7M



Silicon Valley

\$1,311M

26 Deals

Avg. Deal
Size: \$24.8M



New England

\$644M

16 Deals

Avg. Deal
Size: \$21.0M



Midwest

\$336M

5 Deals

Avg. Deal
Size: \$29.8



San Diego

\$149M

14 Deals

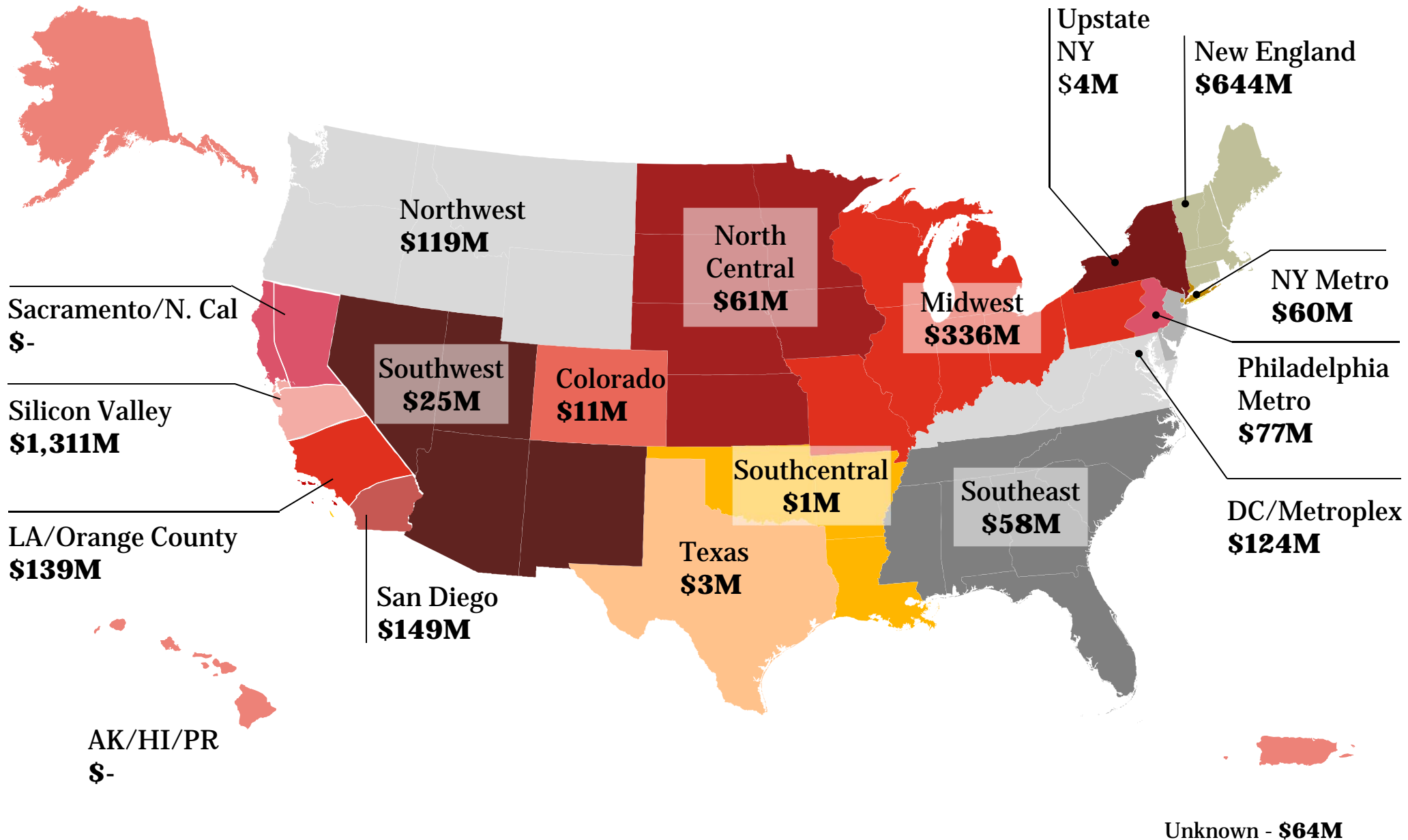
Avg. Deal
Size: \$9.9M



LA/Orange County

\$139M

US Healthcare: All US regions

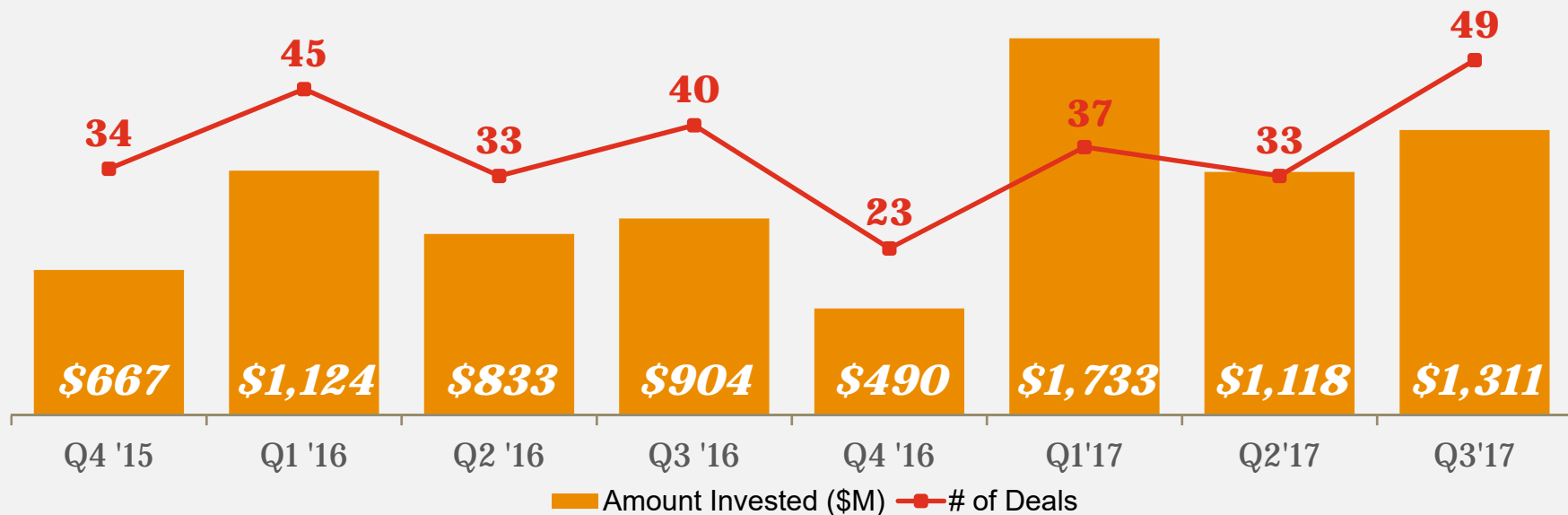


8-quarter financing trend: Silicon Valley



Deals spiked in Silicon Valley this quarter with a slight increase in dollars

- Silicon Valley closed a total of 49 deals this quarter, a 48% increase from Q2'17, and raised \$1.3B in dollars, a 17% increase from last quarter. The Valley also closed the largest two mega-rounds, Auris Surgical Robotics, Inc. at \$280M and 23andMe, Inc. at \$250M.
- There have been 28 Healthcare mega-rounds in the US over the last eight quarters raising \$5.5B, with 12 of these being in the Silicon Valley for a total of \$2.8B. Over 50% of the US mega-round dollars invested over the last eight quarters have been in the Valley.
- In the first three quarters of 2017 alone, there were 6 Healthcare mega-rounds raising \$2.1B compared to 5 Healthcare mega-rounds raising \$606M in the whole of 2016.

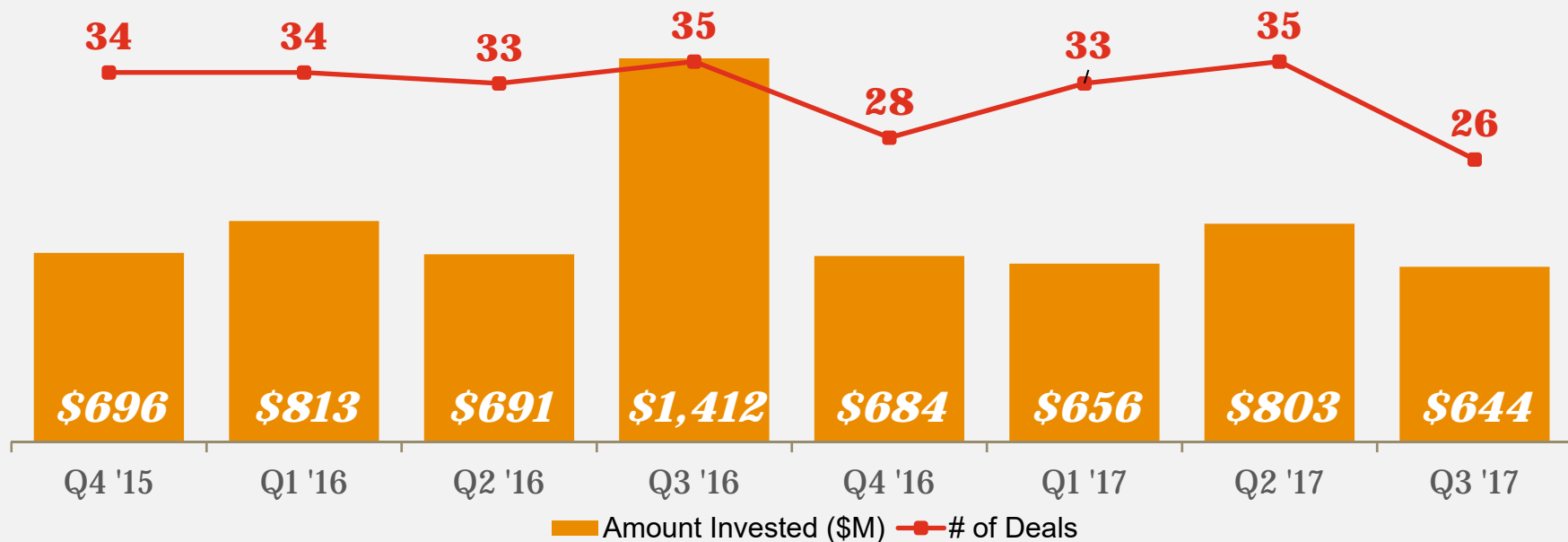


8-quarter financing trend: New England



Deals and Dollars in New England hits 8-quarter low

- Though New England continues to be the second best region in deals and dollars raised, the number of deals and total dollars raised was the lowest in the past 8 quarters with 26 deals closed and \$644M raised.
- However, the average deal size was up 8% with deals in Q3'17 closing at an average size of \$25M compared to an average size of \$23M in Q2'17.



US: Top 10 states by deal value



1. CA

\$1,628M

70 Deals,
Avg. Deal Size: \$23.3M

6. OH

\$108M

5 Deals,
Avg. Deal Size: \$21.5M

2. MA

\$575M

23 Deals,
Avg. Deal Size: \$25.0M

7. IL

\$72M

2 Deals,
Avg. Deal Size: \$36.1M

3. PA

\$145M

8 Deals,
Avg. Deal Size: \$18.2M

8. NJ

\$71M

4 Deals,
Avg. Deal Size: \$17.9M

4. MD

\$124M

4 Deals,
Avg. Deal Size: \$31.0M

9. CT

\$70M

4 Deals,
Avg. Deal Size: \$17.5M

5. WA

\$116M

5 Deals,
Avg. Deal Size: \$23.2M

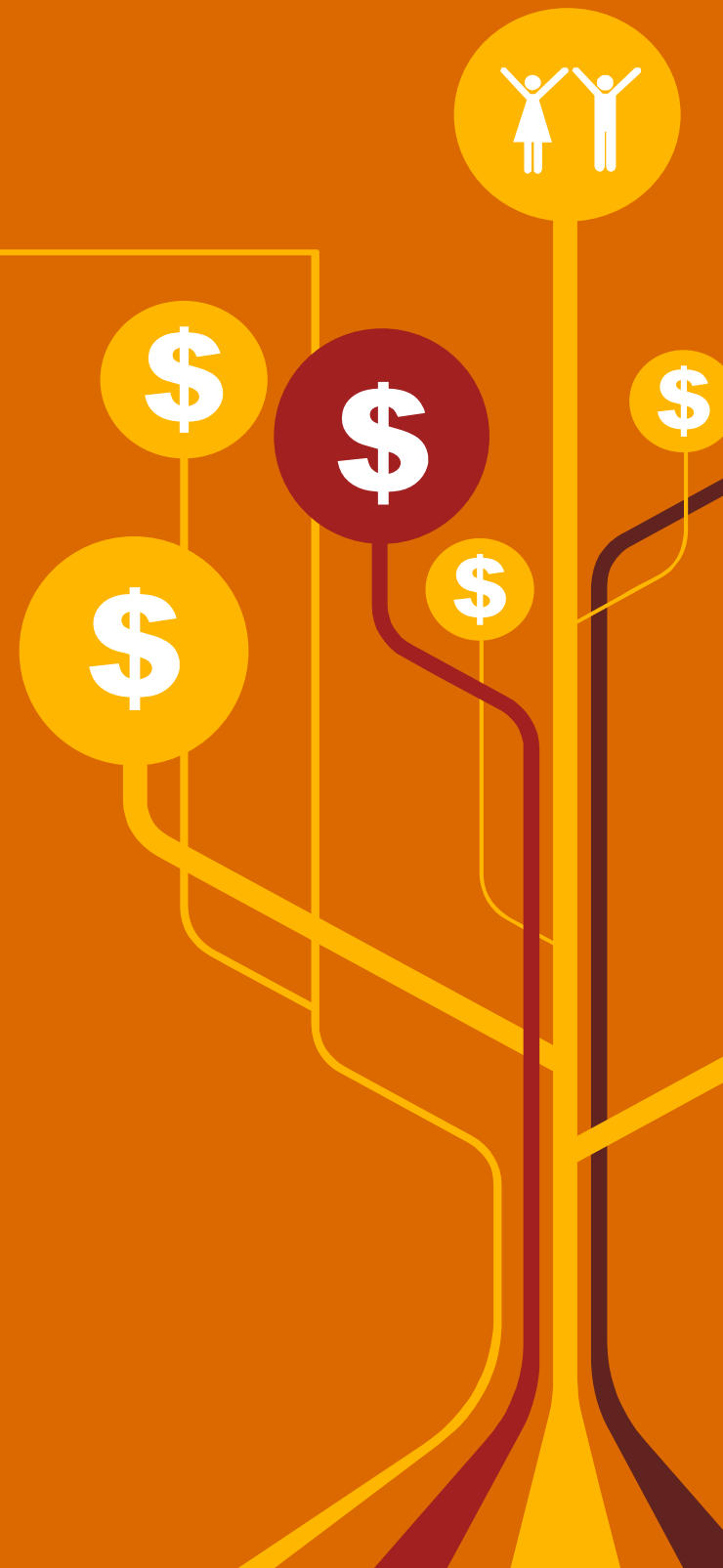
10. KY

\$60M

1 Deal,
Avg. Deal Size: \$60.0M

04

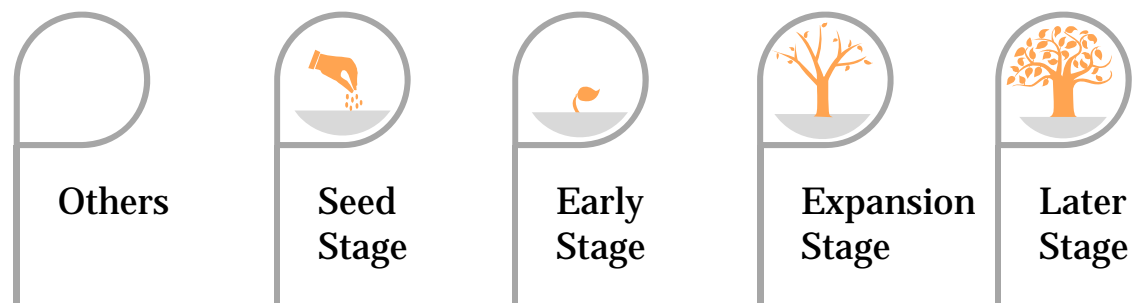
***US Healthcare
Movers and Shakers:
Q3 2017***



Largest Healthcare Deals in Q3'17



Company	Location	Industry	Stage of Funding	\$ Value of Deal	Select Investors
Auris Surgical Robotics, Inc.	San Carlos, CA	Medical Devices & Equipment		\$280M	Coatue Management; Highland Capital Partners; Lux Capital; Mithril Capital Management
23andMe, Inc.	Mountain View, CA	Disease Diagnosis		\$250M	Altimeter Capital; Casdin Capital; Euclidean Capital; Fidelity Investments; Sequoia Capital; Wallenberg Foundation
Indigo Agriculture, Inc.	Charlestown, MA	Biotechnology		\$156M	Activant Capital Group; Alaska Permanent Fund; Baillie Gifford & Co.; Flagship Pioneering
SpringWorks Therapeutics, Inc.	Baltimore, MD	Drug Development		\$103M	Bain Capital; Bain Capital Double Impact; LifeArc; OrbiMed Advisors; Pfizer



Most active venture capital firms in Healthcare

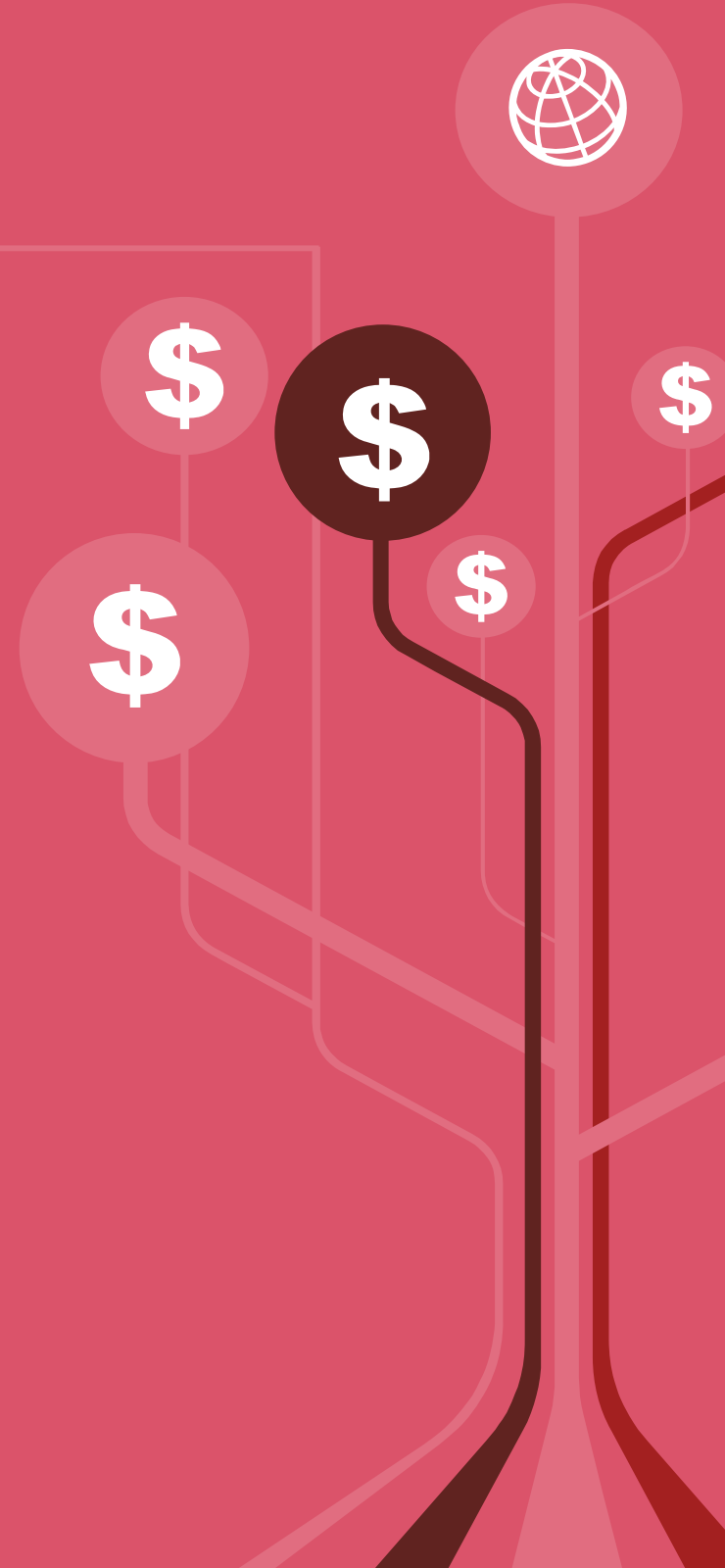


<i>Investor</i>	<i>Location</i>	<i>No. of Companies</i>	<i>Select Q3'17 Investments</i>
1. Google Ventures	Mountain View, CA	6	ARMO BioSciences, Gritstone Oncology, LifeMine Therapeutics
2. ARCH Venture Partners	Chicago, IL	6	Just. Biotherapeutics, Homology Medicines, LifeMine Therapeutics
3. Versant Ventures	San Francisco, CA	5	Sebacia, VenatoRx Pharmaceuticals, Gritstone Oncology
4. Alexandria Venture Investments	Boston, MA	5	Gritstone Oncology, Homology Medicines, LifeMine Therapeutics
5. New Enterprise Associates	Menlo Park, CA	5	Amplifyx Pharmaceuticals, Complexa, Tempus Labs

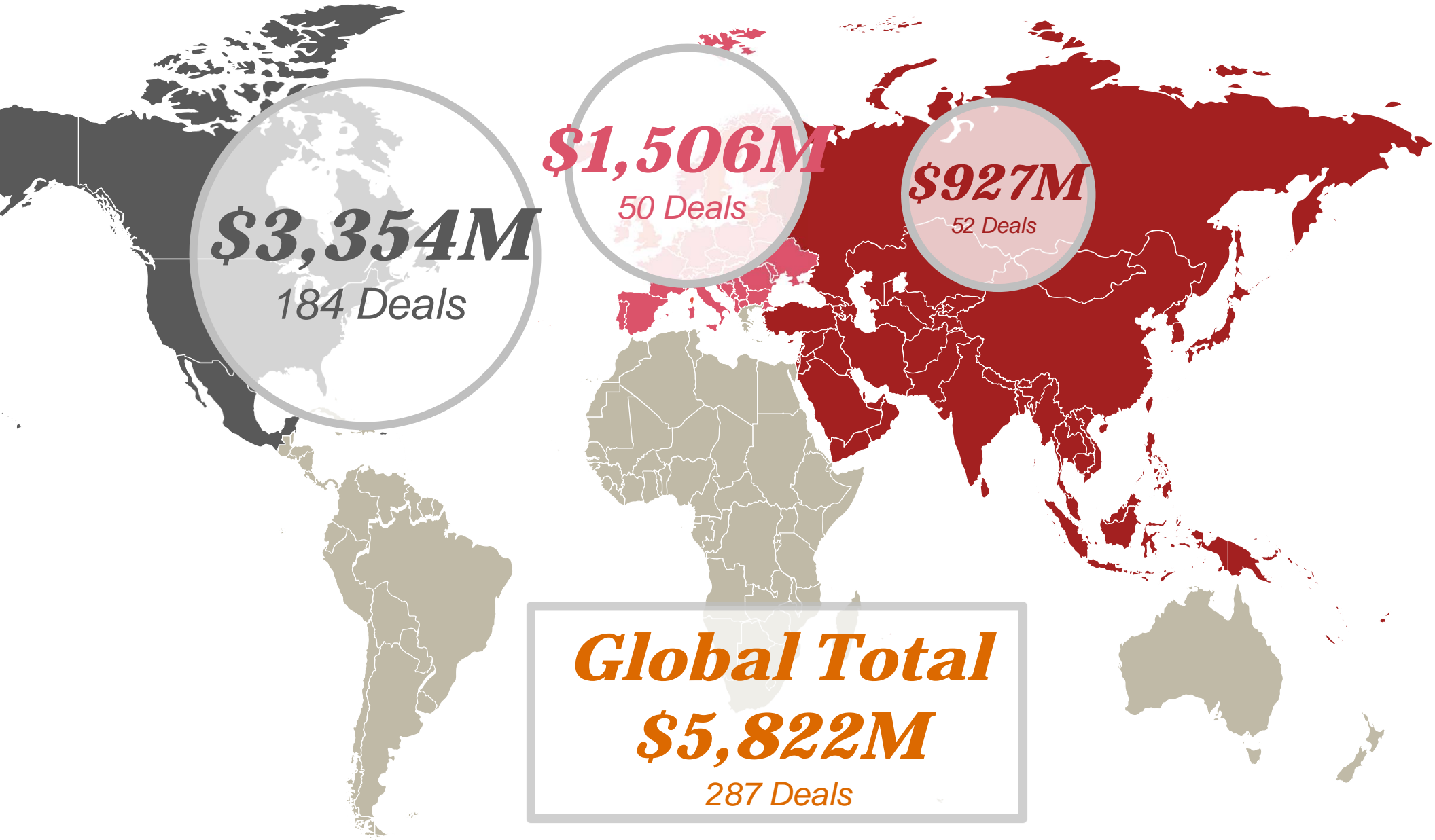


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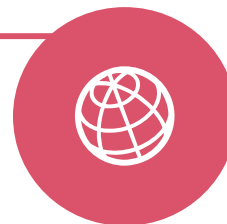
Global Healthcare Trends: Q3 2017



Global Healthcare comparisons for Q3'17

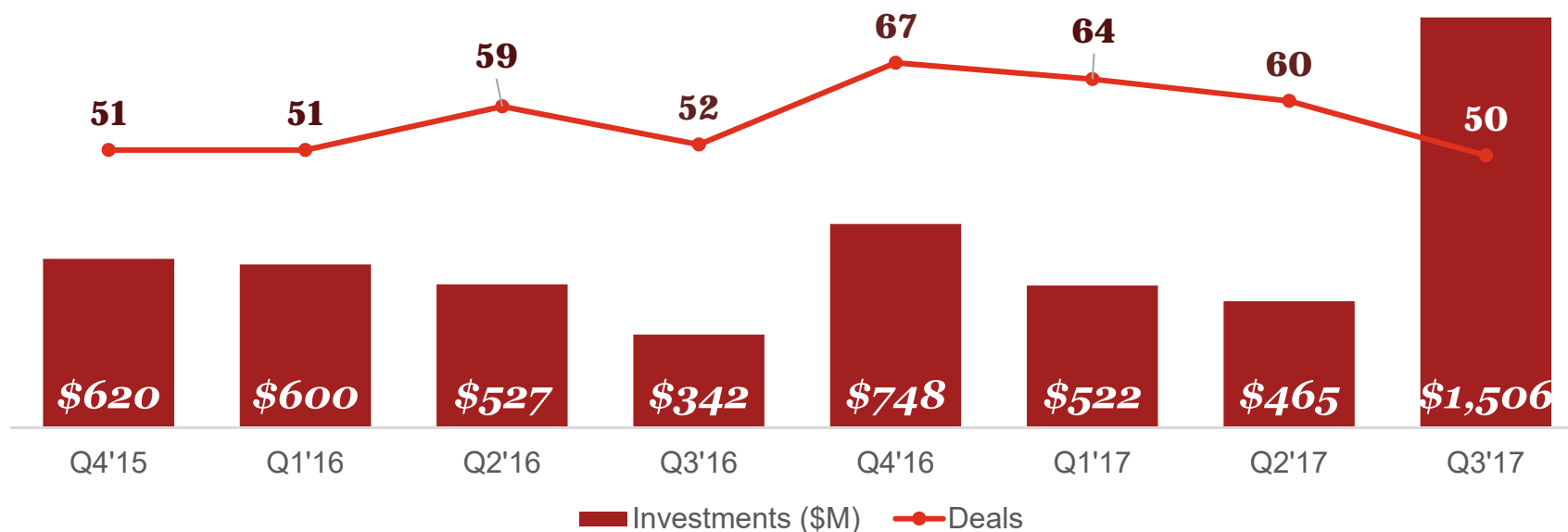


8-quarter financing trend: Europe

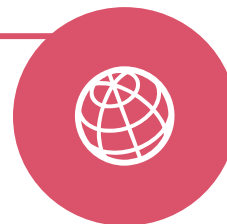


Third-consecutive quarter of decline in deals in Europe with an increase in dollars

- Europe saw an 8-quarter low on the deals front, with just 50 deals in Q3'17, representing a third consecutive quarter of decline in deals.
- While the number of deals decreased, funding spiked due to Softbank's investment into Roivant Sciences of \$1.1B. The next largest deal was a \$80M funding into Autolus Limited. Without the investment into Roivant Sciences, Europe would have seen a third consecutive quarter of decline in funding.
- Excluding the \$1.1B investment into Roivant Sciences, the average deal size for Europe was \$8.3 million, which represents a slight increase of 7% in average deal size from Q2'17.

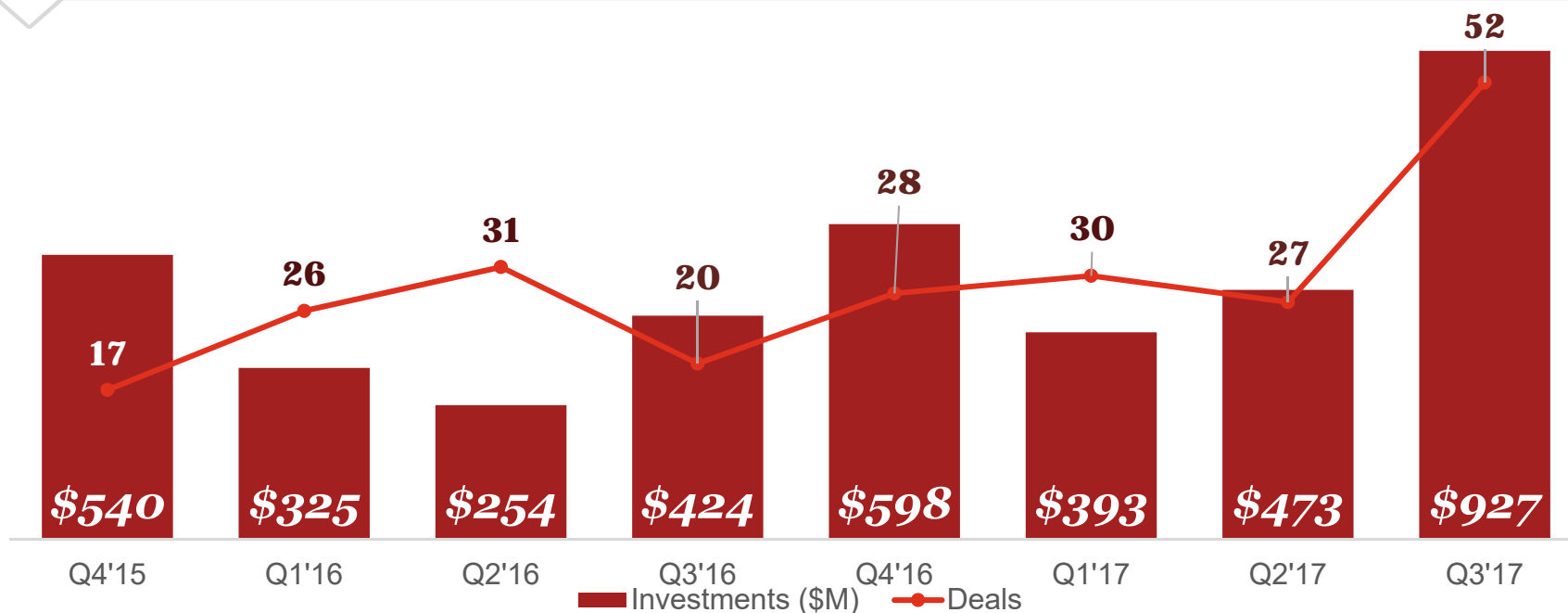


8-quarter financing trend: Asia



Increasing dollars and deals invested in Asia, with a constant average deal size

- Asia continued to see an increase in funding activity into VC-backed Healthcare companies, with dollars jumping from \$473M to \$927M between Q2'17 and Q3'17.
- Deal activity has almost doubled since the last quarter, with 52 deals closing in Q3'17. This is on par with the number of deals in Europe. China led the way with 29 deals, followed by Israel with 10 deals.
- The average deal size in Asia was \$17.8M, which is in line with the average over the past eight quarters of \$17.9M.



Appendix

US States: Full listing

State	\$M	No. of Deals	State	\$M	No. of Deals	State	\$M	No. of Deals	State	\$M	No. of Deals	State	\$M	No. of Deals
Alabama	\$0	2	Illinois	\$72	2	Minnesota	\$60	6	North Carolina	\$4	3	Utah	\$14	1
California	\$1,628	70	Indiana	\$17	2	Missouri	\$9	1	Ohio	\$108	5	Virginia	\$0	2
Colorado	\$11	3	Kentucky	\$60	1	Nevada	\$11	2	Oklahoma	\$1	1	Washington	\$116	5
Connecticut	\$70	4	Maryland	\$124	4	New Jersey	\$71	4	Oregon	\$3	4	Wisconsin	\$1	2
Florida	\$34	3	Massachusetts	\$575	23	New Mexico	\$1	1	Pennsylvania	\$145	8			
Georgia	\$20	1	Michigan	\$2	2	New York	\$15	5	Texas	\$3	4			

No disclosed quarterly activity: AK, AZ, AR, DC, DE, HI, IA, ID, KS, LA, ME, MS, MT, ND, NE, NH, RI, SC, SD, TN, VT, VW and WY. States unknown for 3 deals of \$10M.

Notes on methodology

PwC (pwcmoneytree.com) and CB Insights (cbinsights.com) encourage you to review the methodology and definitions employed to better understand the numbers presented in this report. If you have any questions about the definitions or methodological principles used, we encourage you to reach out to CB Insights directly. Additionally, if you feel your firm has been underrepresented, please send an email to info@cbinsights.com and we can work together to ensure your firm's investment data is up-to-date.

Rankings, e.g., top states and top sectors, are done by quarterly deal value (that is, dollars invested for the given quarter).

For full analysis of Q3'17 activity across all sectors, refer to the PwC / CB Insights MoneyTree™ Report.

What is included:

- Equity financings into emerging companies. Fundings must be to VC-backed companies, which are defined as companies who have received funding at any point from either: venture capital firms, corporate venture arms, or super angel investors.
- Fundings of private companies only. Funding rounds raised by public companies of any kind on any exchange (including Pink Sheets) are excluded from our numbers, even if they received investment by a venture firm(s).
- Only includes the investment made in the quarter for tranching investments. If a company does a second closing of its Series B round for \$5M and previously had closed \$2M in a prior quarter, only the \$5M is reflected in our results.
- Round numbers reflect what has closed – not what is intended. If a company indicates the closing of \$5M out of a desired raise of \$15M, our numbers reflect only the amount which has closed.
- Only verifiable fundings are included. Fundings are verified via (1) various federal and state regulatory filings; (2) direct confirmation with firm or investor; (3) press release; or (4) credible media sources.
- Equity fundings to joint ventures and spinoffs/spinouts are included, given that they meet the VC-backed criteria.
- Geography note: Israel funding figures are classified in Asia.

What is excluded:

- No contingent funding. If a company receives a commitment for \$20M subject to hitting certain milestones but first gets \$8M, only the \$8M is included in our data.
- No business development / R&D arrangements whether transferable into equity now, later or never. If a company signs a \$300M R&D partnership with a larger corporation, this is not equity financing nor is it from venture capital firms. As a result, it is not included.
- No buyouts, consolidations or recapitalizations. All three of these transaction types are commonly employed by private equity firms and are tracked by CB Insights. However, they are excluded for the purposes of this report.
- No private placements. These investments, also known as PIPEs (Private Investment in Public Equities), are not included even if made by a venture capital firm(s).
- No debt / loans of any kind (except convertible notes). Venture debt or any kind of debt / loan issued to emerging, startup companies, even if included as an additional part of an equity financing, is not included. If a company receives \$3M with \$2M from venture investors and \$1M in debt, only the \$2M is included in these statistics.
- No non-equity government funding. Grants or loans by the federal government, state agencies, or public-private partnerships to emerging, startup companies are not included.
- No fundings to subsidiaries of a larger parent corporation.

This content is for general information purposes only, and should not be used as a substitute for consultation with professional advisors. Data is current as of October 6, 2017. PricewaterhouseCoopers and CB Insights have taken responsible steps to ensure that the information contained in the MoneyTree™ Report has been obtained from reliable sources. However, neither PwC nor CB Insights can warrant the ultimate validity of the data obtained in this manner. Results are updated periodically. Therefore, all data is subject to change at any time.

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