

Biotech trending high

Investments in both the biotech and medical devices industries have continued to increase year-over-year. However, investments for the two industries declined compared to the exceptionally strong last quarter, which saw record high investments in biotech.

November 2014



US venture capital funding for the life sciences sector¹, which includes biotechnology and medical devices, increased 9% by value but declined 2% by volume on a year-over-year basis during the third quarter of 2014, according to the MoneyTree™ report from PricewaterhouseCoopers LLP (PwC) and the National Venture Capital Association (NVCA), based on data provided by Thomson Reuters. During the quarter, venture capitalists invested \$1.6 billion in 188 life sciences deals.

Overall venture funding increased year over year, with \$9.9 billion in 1,023 deals in the third quarter, an increase of 24% in deal value but a decline of 4% in deal volume year over year. However, following the remarkably strong second quarter of this year, which included the first \$1 billion plus blockbuster deal in the history of MoneyTree™, the quarter over quarter trend was negative for both invested amount and number of deals, with investments declining by 27% and deal volume declining by 9%.

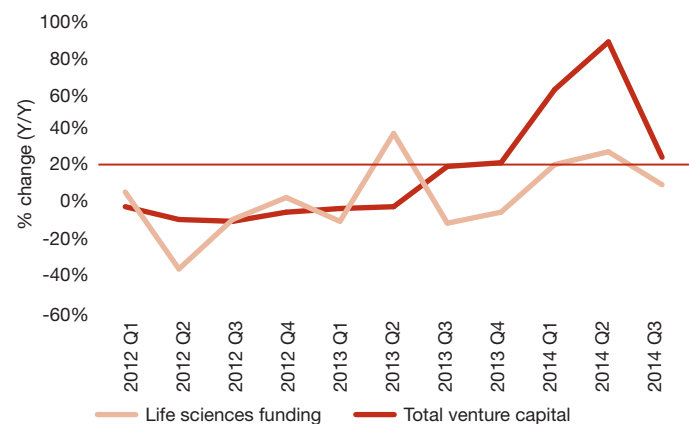
Life sciences venture capital investment

Venture capitalists invested \$1.6 billion in 188 life sciences deals during the third quarter of 2014, compared with \$1.5 billion in 192 deals during the same period of 2013.

The life sciences industry share of total venture funding during the quarter was 17%, compared to 19% in the same quarter of 2013.

The biotechnology industry raised \$1.05 billion in 110 deals during the third quarter, an increase of 7% in dollars but a decline of 13% in deal volume compared with the same quarter last year.

Figure 1: Life sciences funding compared with total venture funding 2012–Q3 2014



“Following the record high investments in biotech in the second quarter of this year, this continued year-over-year growth is a good performance for the quarter,” said Greg Vlahos, life sciences partner at PwC. “In the second quarter, a couple of \$100 million plus mega deals tipped the scales, including Intarcia’s \$200 million round. And, with biotech still accounting for the lion’s share of new initial public offerings (IPOs)—18 out of 23 IPOs in the third quarter were for life sciences companies, including 13 for biotech alone—there’s reason to believe that the overall environment for biotech venture investments remains robust.”

Slipping to the third place in terms of dollars raised, the biotechnology industry fell behind software and media and entertainment, which drew \$3.7 billion in 418 deals and \$1.8 billion in 118 deals, respectively. “In the last decade, this is only the fifth time that the industry was not among the top two in terms of dollars raised. The media and entertainment industry moved ahead of biotechnology with four \$100 million plus

¹ The MoneyTree life sciences sector includes the *biotechnology* and medical device and equipment industries. Biotechnology is defined as “developers of technology promoting drug development, disease treatment, and a deeper understanding of living organisms; includes human, animal, and industrial biotechnology products and services. Also included are biosensors, biotechnology equipment, and pharmaceuticals.”

Medical devices and equipment industries are defined as those that “manufacture and/or sell medical instruments and devices including medical diagnostic equipment (X-ray, CAT scan, MRI), medical therapeutic devices (drug delivery, surgical instruments, pacemakers, artificial organs), and other health-related products such as medical monitoring equipment, handicap aids, reading glasses, and contact lenses.”

mega deals, including a behemoth \$500 million deal,” said Vlahos. “The strong investment flow to industries like media and entertainment point to continued strength in the overall environment for venture capital investments in the near term.”

The medical device industry received \$586 million in 78 deals, in the third quarter of 2014. This was an increase of 13% in dollars and 18% in deal volume, compared with the same quarter last year.

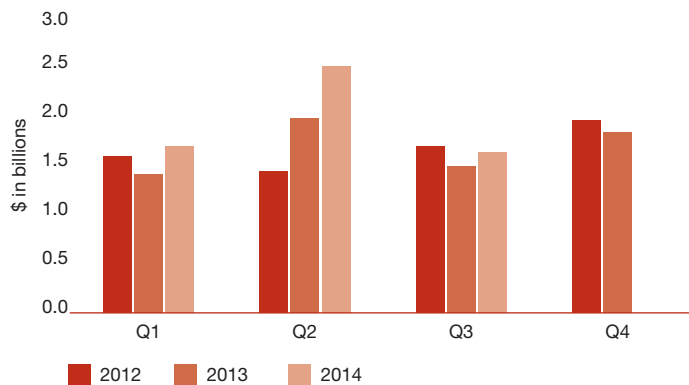
Life sciences funding by quarter

Life sciences investment in the third quarter of 2014 was \$1.6 billion, a decline of 35% compared to the second quarter of 2014, during which \$2.5 billion was invested.

On a year-over-year basis, biotechnology and medical device investments were up by 7% and 13%, respectively, in dollar terms.

Quarter over quarter, the industry witnessed a dramatic decline of 43% for biotechnology and 13% for medical devices. Biotech investments had hit a record high in the previous quarter.

Figure 2: Life sciences funding trends by quarter, Q1 2012–Q3 2014



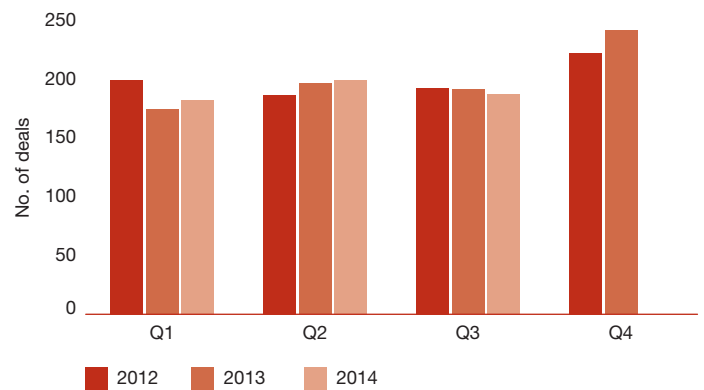
Life sciences deal volume by quarter

In the third quarter of 2014, life sciences total deal volume was 188, a decline of 2% year over year, and 6% quarter over quarter.

The biotechnology sector led with 110 deals in the third quarter of 2014, compared with 126 during the same period last year and 122 during the second quarter of 2014.

During the third quarter, the medical device industry completed 78 deals, gaining from 66 during the same period of 2013, but flat compared to the second quarter of 2014.

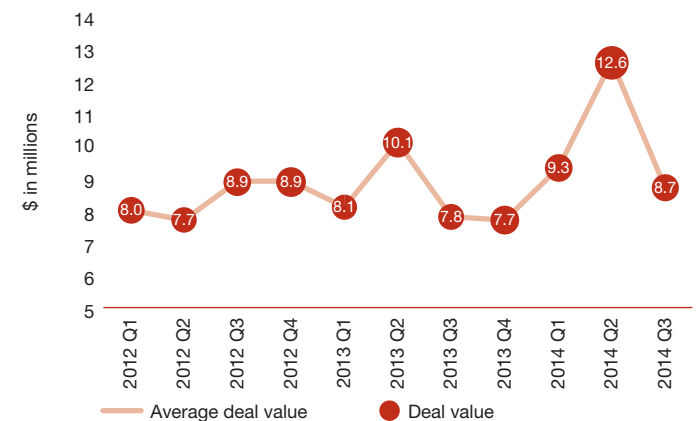
Figure 3: Life sciences deal volume by quarter 2012–Q3 2014



Life sciences average deal size by quarter

The average deal size for life sciences was \$8.7 million for the third quarter of 2014, an increase of 12% year over year but a decline 31% quarter over quarter.

Figure 4: Life sciences average deal size by quarter Q1 2012–Q3 2014



Note: Bubble size represents total life sciences funding in the quarter

Funding for biotechnology and medical devices

Biotechnology captured 64% of the total life sciences investment during the third quarter of 2014. This share ranks lower when compared with the same period last year, and the second quarter of 2014.

Figure 5: Life sciences investment split for the third quarter of 2014

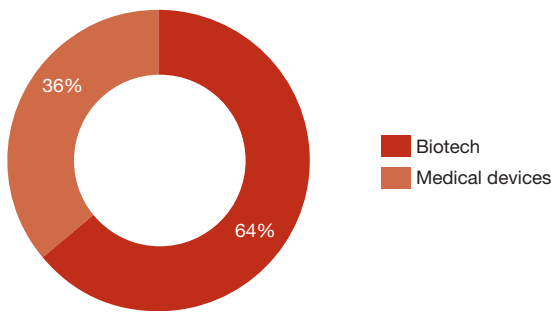
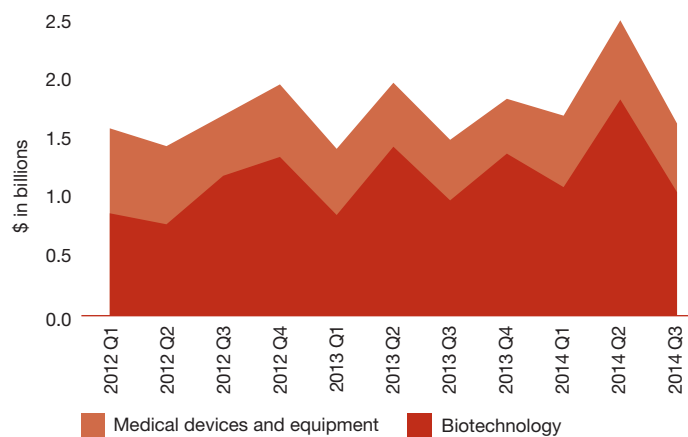


Figure 6: Biotechnology and medical devices funding trends 2012–Q3 2014



Biotechnology funding by subsegments

Out of the total investment of \$1.05 billion in biotechnology during the third quarter of 2014, the biotech-human subsegment captured the largest share of funding at \$732 million.

Funding for the subsegment increased 3% compared to the same period last year, but declined by 49% compared to the second quarter of 2014.

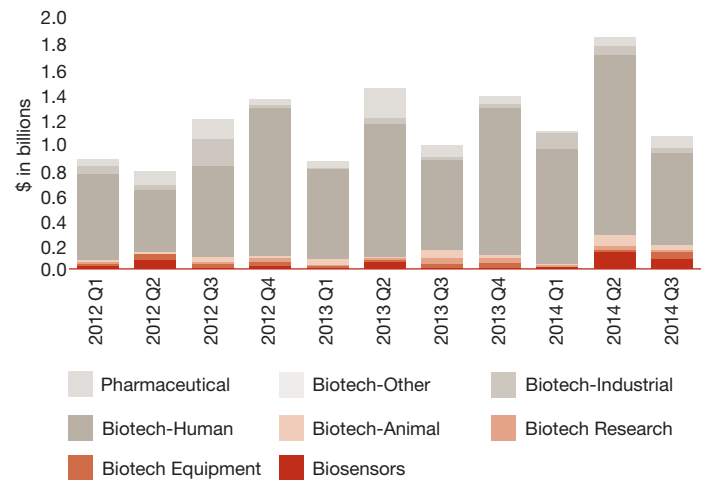
When compared with the third quarter of 2013, four subsegments rose during the same quarter of 2014:

- Biosensors, +2,177% to \$75 million
- Biotech Equipment, +76% to \$60 million
- Biotech Industrial, +58% to \$40 million
- Biotech Human, +3% to \$732 million

Biotechnology subsegments which received less funding in the third quarter of 2014 compared with the same period in 2013 were:

- Biotech Research, -75% to \$12 million
- Biotech Animal, -31% to \$45 million
- Pharmaceutical, -5% to \$90 million

Figure 7: Biotechnology funding by subsegments Q1 2012–Q3 2014



Medical device funding by subsegments

During the third quarter of 2014, the medical therapeutics subsegment, with total funding of \$373 million, attracted the most funding in the medical devices and equipment industry. The amount represented an increase of 13% compared to the same period last year but a decrease of 16% from the second quarter of 2014.

Funding for two medical device subsegments increased during the third quarter of 2014 when compared with the same period of 2013.

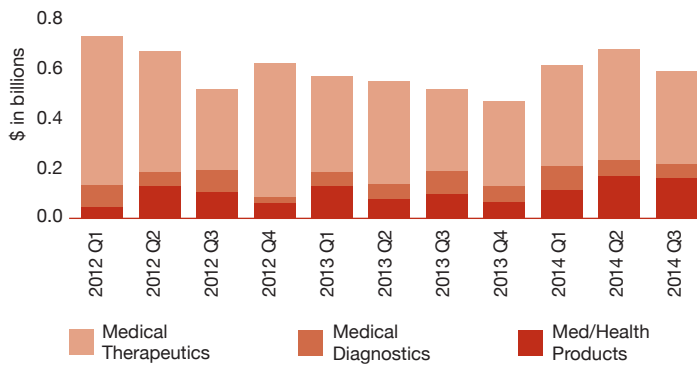
- Medical/health products, +65% to \$161 million
- Medical therapeutics, +13% to \$373 million

The medical devices subsegment, which received less funding in this quarter compared to the third quarter of 2013, was:

- Medical diagnostics, -42% to \$52 million

According to Greg Vlahos, of PwC, “Cutting edge innovations in medical devices, like minimally invasive surgical devices, image guided devices, and cardiovascular and neurological therapy devices, are reshaping the medical therapeutics segment and hence provide high return investment opportunities for venture capital funds.”

Figure 8: Medical devices and equipment funding by subsegments Q1 2012–Q3 2014



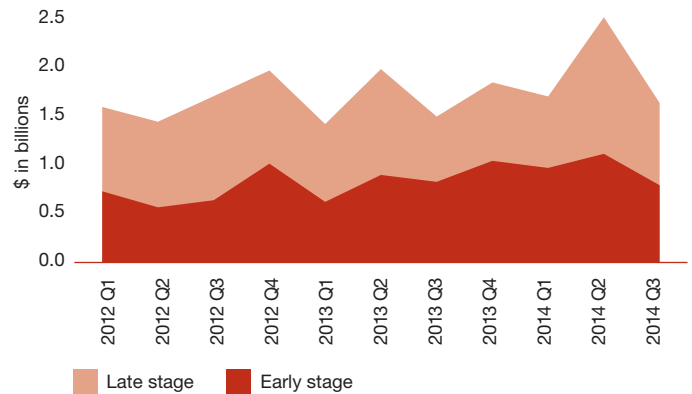
Life sciences funding by stages

Early-stage funding was at \$794 million in 103 deals, accounting for 48% of the total life sciences funding for the third quarter of 2014. Early-stage funding decreased 4% year over year and 29% quarter over quarter.

During the third quarter of 2014, late-stage funding was at \$846 million in 85 deals, accounting for 52% of life sciences investment during the quarter. This represented an increase of 26% year over year, but a 40% decline quarter over quarter.

“Although it was always going to be tough to duplicate what turned out to be a blockbuster second quarter, investment trends for both biotechnology and the medical device sector remain encouraging,” said Greg Vlahos, of PwC. “The relatively higher growth of late-stage funding in recent quarters, especially for biotechnology, shows that venture capitalists are now focusing on companies with the ability to access public markets quicker than in the past”.

Figure 9: Life sciences funding by stages Q1 2012–Q3 2014



Biotechnology funding by stages

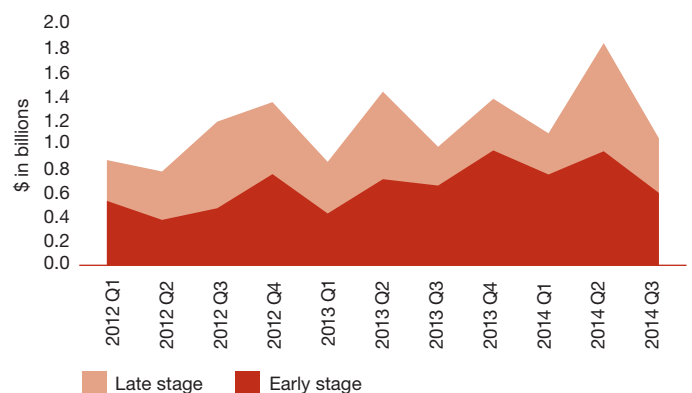
Early-stage biotechnology funding in the third quarter of 2014 dropped 9% to \$601 million in 69 deals, compared with \$662 million in 80 deals for the same period last year.

In the third quarter of 2014, late-stage funding for biotechnology rose by 41% to \$453 million in 41 deals, from \$322 million in 46 deals during the same period in 2013.

On a quarter over quarter basis, biotechnology funding decreased significantly for both stages—early-stage funding down by 36% and late-stage by 50%.

During the third quarter of 2014, average deal size for early-stage biotech transactions was at \$8.7 million, compared with \$11.0 million for late-stage deals.

Figure 10: Biotechnology funding by stages 2012–Q3 2014



Medical device funding by stages

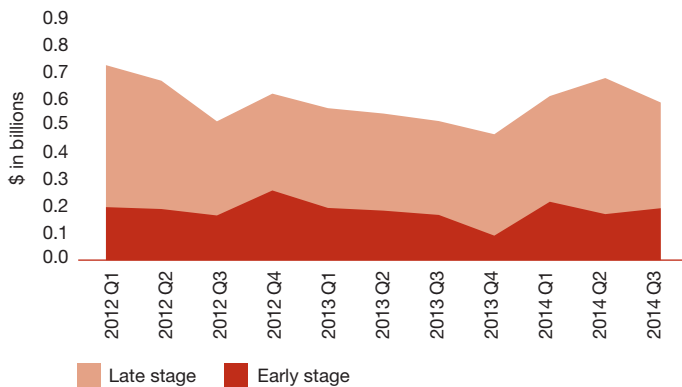
In the third quarter of 2014, early-stage medical device funding rose 15% to \$193 million in 34 deals, compared with \$168 million in 29 deals for the same period of 2013.

Late-stage funding for medical devices increased 13% to \$393 million in 44 deals during the third quarter of 2014 from \$349 million in 37 deals during the same period last year.

Medical device funding, on a quarter over quarter basis, increased by 13% for early-stage deals but decreased 22% for late-stage.

Average deal size for early-stage medical device transactions was \$5.7 million, compared to \$8.9 million for late-stage medical device deals, in the third quarter of 2014.

Figure 11: Medical device funding by stages 2012–Q3 2014



First-time funding compared with follow-on funding

In the third quarter of 2014, first-time funding for the life sciences sector increased 39% to \$217 million, and the number of deals increased 9% to 50 deals, when compared to the same period of last year.

Follow-on funding for the life sciences sector also increased 6% to \$1,423 million, but the number of deals decreased 5% to 138 deals during the third quarter of 2014, when compared to the same period of last year.

Quarter over quarter, both first-time and follow-on funding registered declines of 11% and 37%, respectively.

Figure 12: Life sciences follow-on compared with initial investments 2012–Q3 2014

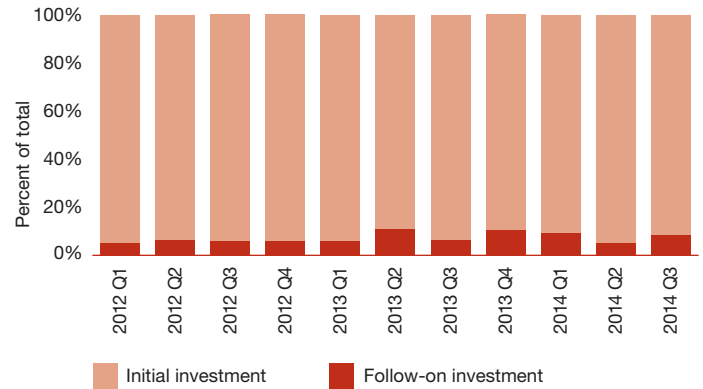


Table 1: Life sciences investments 2014 third-quarter growth factors (Y/Y growth)

	% change in deal volume	% change in avg deal size	% change in investments
First-time	+9%	+28%	+39%
Follow-on	-5%	+12%	+6%

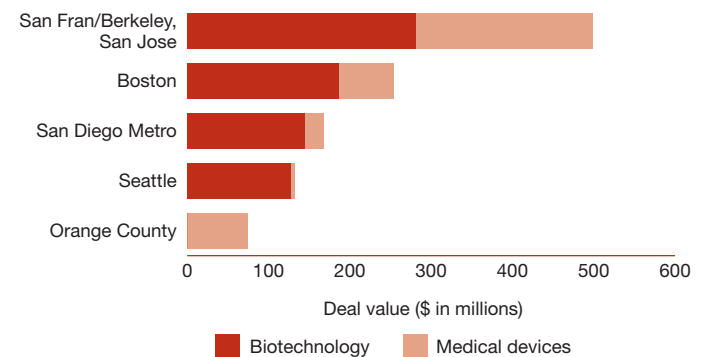
Regional funding trends

During the third quarter of 2014, San Francisco Bay², Boston, San Diego Metro, Seattle, and Orange County, received the most life sciences venture capital dollars.

The leader, San Francisco Bay, received \$499 million, with \$281 million going into biotechnology and the remaining \$218 million going to medical devices.

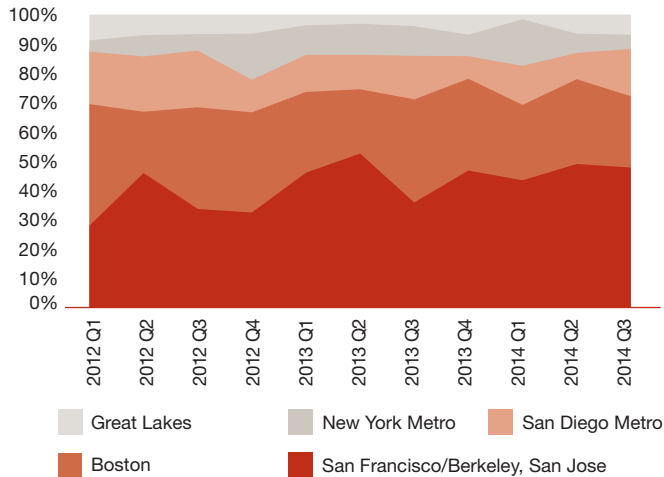
The San Francisco Bay area closed 42 deals during the third quarter of 2014, with an average deal size of \$11.9 million.

Figure 13: Top five metropolitan regions, third quarter 2014



² San Francisco Bay area includes SF/Berkeley and San Jose.

Figure 14: Life sciences funding trends in top five regions, Q1 2012–Q3 2014



Venture capital outlook

The amount of cash invested by venture capitalists in recent quarters makes it clear that companies are moving away from quick ROI investments toward investing as a capital structure.

Total venture capital funds contributed during the first nine months of 2014 reached \$33.17 billion, eclipsing funding for the full year in 2013.

“For the first nine months of the year, investment in the life sciences has almost touched \$6 billion, which is close to the \$6.7 billion invested for the full year in 2013,” said Greg Vlahos of PwC. “Overall 2014 is expected to be one of the strongest years for life sciences investments, especially for biotech. We expect biotech to beat 2013 numbers and the same goes for medical devices.”

According to Bobby Franklin, President and CEO of NVCA, who sees opportunity in a strong IPO market for venture capitalists and the rise of startups, “The emergence of non-traditional investors, including hedge funds and mutual funds, is contributing to the increase in venture investing this year. Another factor that can’t be ignored is the changing nature of our economy, where startup companies are disrupting entrenched industries and, in some cases, creating new industries altogether.” Franklin goes on to say that, “Traditional and non-traditional venture investors alike recognize this and want to get in on the ground floor of innovation.”

Despite a third quarter drop in venture capital funds, Mark McCaffrey, global software leader and technology partner at PwC, sees a continuing trend toward investing. “Venture capitalists have already invested more in the first three quarters of the year than they did in all of 2013, and investments are on pace to surpass \$40 billion in 2014.” He sees the trend aided by the continued participation of non-traditional investors and the increasing prevalence of mega deals. These deals, defined as exceeding \$100 million, have featured prominently in the past few quarters. “According to McCaffrey, “We’ve already counted more than 30 mega deals in 2014 compared to only 16 in all of 2013.”

While investing trends remain strong, the fundraising environment saw slower growth. “Driven by a strong exit market for venture-backed companies and solid distributions over the last several quarters, the fundraising environment improved slightly over the last couple quarters for US venture capital firms, said Bobby Franklin of NVCA. “We are encouraged to see a slight uptick in the number of new funds raised during the quarter and are hopeful this trend will continue as more and more limited partners seek out new opportunities to increase their exposure to the asset class.” In the third quarter of 2014, there were 23 venture-backed IPOs valued at \$2.6 billion. Of the 23 offerings, 18 were life sciences IPOs amounting to \$1.21 billion, and 13 of these were from biotech companies. All but one of this quarter’s 13 biotechnology IPOs was listed on the NASDAQ stock exchange.

Bobby Franklin sees the extended, six quarter streak with over 20 venture-backed IPOs as a positive omen indicating strong demand in the public markets for innovative, high-growth companies. “With the biotechnology sector continuing to lead the way, over three-quarters of the venture-backed exits in the third quarter were life sciences IPOs. This is welcome news for a segment of the innovation ecosystem that has been short on exits and new fundraising in recent years. We are hopeful this streak will continue but we need some assistance from policymakers in Washington, DC to help foster a more favorable funding environment for the next generation of groundbreaking life sciences companies.”

A similar positive outlook holds true for venture-backed M&A deals. A total of 119 venture-backed M&A deals were reported for the third quarter of 2014, including 15 deals valued at \$3.04 billion (for 11 disclosed deals) from within the life sciences sector.

“One troublesome sign for biotech is the current turbulence in the stock market, which could start to frighten away the legions of investors who have enthusiastically backed some of the biggest biotech offerings,” said Greg Vlahos of PwC.

About PwC's Pharmaceutical and Life Sciences Industry group

PwC's Pharmaceuticals and Life Sciences Industry Group is dedicated to delivering effective solutions to the complex strategic, operational, and financial challenges facing pharmaceutical, biotechnology, and medical device companies. We provide industry-focused assurance, tax, and advisory services to build public trust and enhance value for our clients and their stakeholders. More than 195,000 people in 157 countries across the PwC global network share their thinking, experience, and solutions to develop fresh perspectives and practical advice.

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