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Biopharma valuations—onward and upward?

Pharmaceuticals & Medical Products October 2017

Companies focused on biopharma have done well in capital markets. A closer look at performance helps explain why.

Over the past few decades, the biopharmaceutical industry has been able to make significant technological advances that have allowed many unmet healthcare needs to be addressed, including finding a cure for hepatitis C, improving cardiovascular therapies, and creating innovative therapies for cancers and immune disorders. While drug discovery and development at its core is a risky undertaking, across the sector as a whole these advances clearly paid off: returns to investors who put up the risk capital have delivered a premium for the degree of risk involved, at a higher level than the average for the economy as a whole.

Over the past 20 years, biopharma has outperformed the S&P 500 index—delivering indexed total returns to shareholders (TRS) compound annual growth rate (CAGR) of 12 percent for biotech and 9 percent for pharma. And there's been a significant run-up in value since 2011, driven by biotech TRS of 28 percent CAGR for the period 2011 to 2015 (Exhibit 1). That said, in 2016 a correction of the outperformance took place (there was a 14 percent decrease in 2016). This was mainly due to a change in expectations, which had grown to an unprecedented enterprise multiple (EV/EBITA) of 20 times at the end of 2015 but subsided to 17 times by the end of 2016. While this multiple is still high, it is in line with historical valuation levels and consistent with what one would expect if biopharma could continue to deliver on mid-single-digit sales growth while maintaining current margins (around 30 percent).

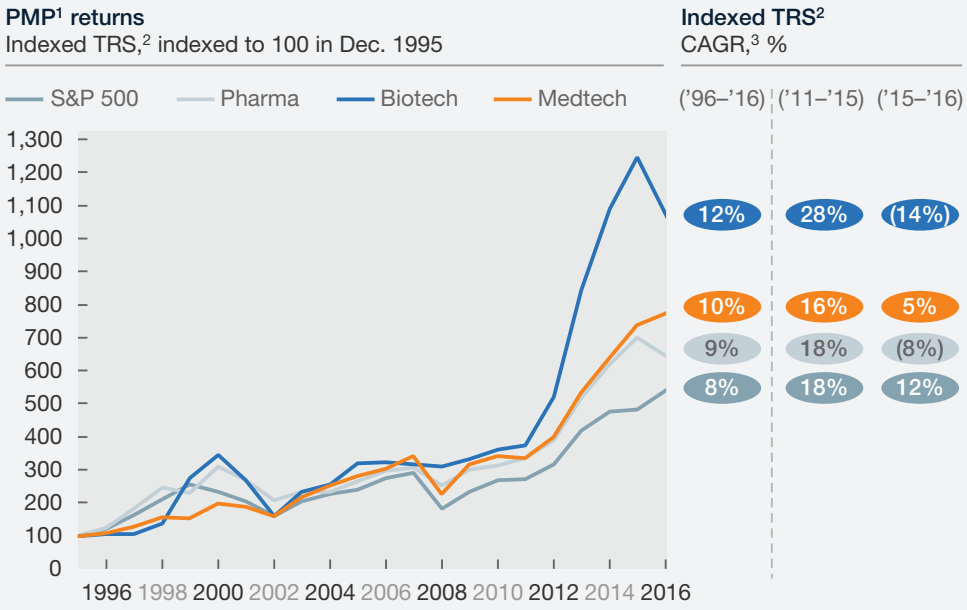
In the past two decades, the biopharma industry has created almost $1.7 trillion in shareholder value in excess of S&P 500 performance ($1 trillion from pharma and $0.7 trillion from biotech), much of this in the past ten years.

What drives biopharma company performance?

In aggregate, public biotech companies grew tremendously in the decade since 2005, with revenue expanding to $141 billion, from $62 billion. The R&D investment in prior decades started to pay off, with margins more than doubling—to 36 percent, from 17 percent—to overtake large pharma margins. However, performance is skewed by a small number of very successful companies—a disproportionate amount of the performance was due to the largest revenue-generating biotech players (Amgen, Biogen, and Gilead), which delivered breakthrough therapies in the past decade.

Exhibit 1

Biotech has outperformed the S&P 500, as well as the pharma and medtech sectors, with a significant run-up in value since 2011.



[1]Pharmaceuticals and medical products industry.
[2]Total returns to shareholders.
[3]Compound annual growth rate.

McKinsey&Company | Source: CPAnalytics

These three mega biotech companies, each with revenue of more than $10 billion, have delivered outsize returns of 23 percent from 2011 to 2015, mainly driven by consistent double-digit growth. They've also been able to expand margins (Exhibit 2). For these largest biotech companies, the valuation multiple has declined slightly, signaling an expectation that future performance will moderate given the size these companies have reached and given that further sales growth and margin expansion become harder for companies of this scale.

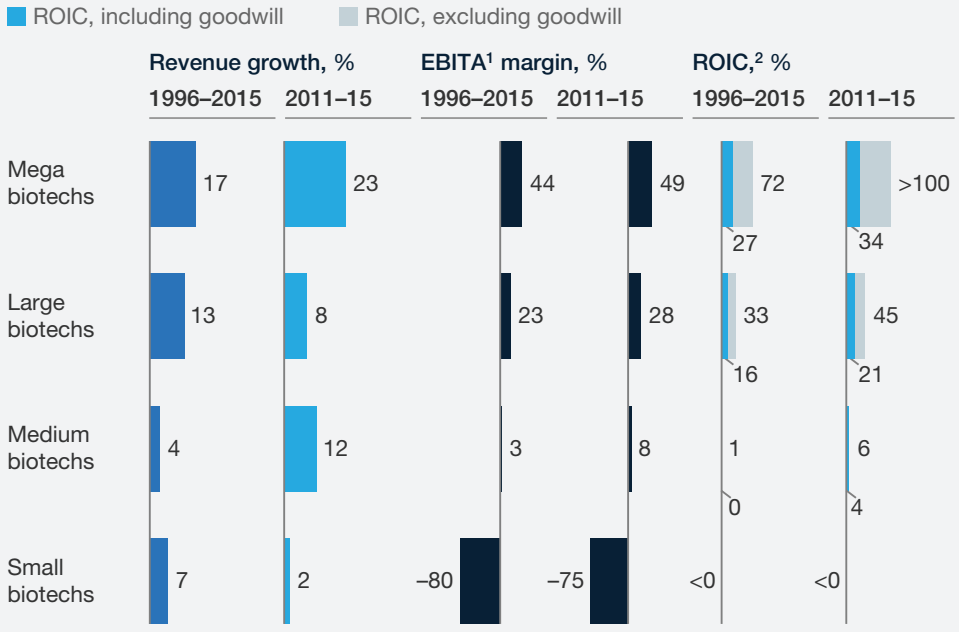
The next tier of large biotech companies, those with annual sales of $1 billion to $10 billion, have grown their revenues at a double-digit pace over the past five years (15 percent growth rate). They expanded their margins by an average of 300 basis points. Their valuation also improved due to higher expectations (up 8 percent), which helped them to deliver TRS CAGR of 26 percent over the past five years (Exhibit 3).

For the next tier, medium biotechs with sales of $100 million to $1 billion, TRS results have mainly been driven by a change in expectations, given that, as a group, they did not outgrow the overall biopharma market (13 percent sales growth) and their margins have remained low or even declined. This change in expectations has likely been driven by investors' perception that this group could include some of the leaders of the next decade.

The vast majority of biotechs—around 160 from our list of approximately 240 publicly traded biotech companies for which TRS data is available for the past five years—are small and not

Exhibit 2

Within biotech, the mega companies have enjoyed the highest growth, margins, and return on invested capital.



[1]Earnings before interest, taxes, and amortization.
[2]Return on invested capital.

McKinsey&Company | Source: CPAnalytics

currently profitable. Similar to the medium-biotech group, we expect this group could contain some of the front-runners of the next decade.

How underlying fundamentals explain biotech performance

Biopharma's outperformance of the broader market in the past two decades and its acceleration over the past five years have been driven by delivering innovative treatments and scientific breakthroughs in the industry's pipeline. This can also be attributed to improvements in operational and commercial productivity as the industry has shifted to address the most significant unmet needs, which are more concentrated within specialty and rare-disease areas.

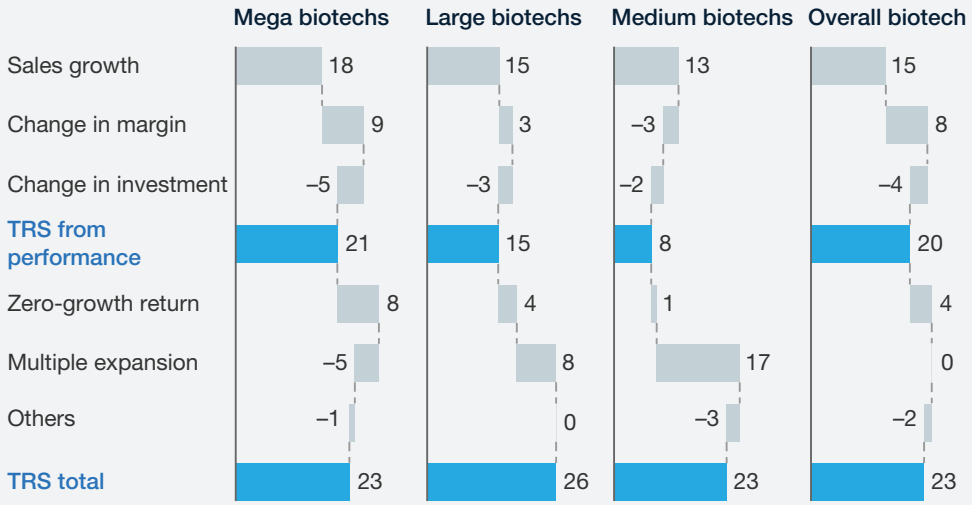
Pipeline composition and innovation productivity. Pipeline composition in the biopharma industry has shifted markedly over the past 20 years with the emergence of new technologies such as non-monoclonal-antibody (mAb) recombinant proteins, ribonucleic-acid-based (RNA-based) therapies, gene therapy, and cell and tissue therapies. Recent acceleration of treatment innovations, driven by scientific breakthroughs and increased investment in translational medicine, has led to the development of highly differentiated treatments (for example, Gilead's Sovaldi for hepatitis C and the rise of immuno-oncology).

While these new technologies require significant initial investment in new capabilities throughout research, development, and manufacturing, biotech companies have been able to translate this technological differentiation into commercial success, thus fueling their performance and raising expectations of high multiples for biotech companies.

Exhibit 3

Biotech has delivered strong TRS performance over the past five years.

Components of TRS[1] by subsegment, 2012–16, %[2]



Note: Excludes TRS decomposition for small biotechs, given that the subsegment witnessed negative margins over multiple years.
[1]Total returns to shareholders.
[2]Please note that numbers on chart may not sum because of rounding.

McKinsey&Company | Source: CPAnalytics

These new therapeutic modalities have given rise to many new entrants in the market, resulting in a fragmented market with many players that have yet to reach profitability. Investors are expecting some of these to deliver in a similar fashion to some of the early entrants in the now more mature monoclonal-antibody market; this was established over a decade ago and has since produced "winners" that have significantly outperformed the rest of the pharma sector, even giving rise to some of today's mega and large biotechs, such as Genentech and Regeneron.

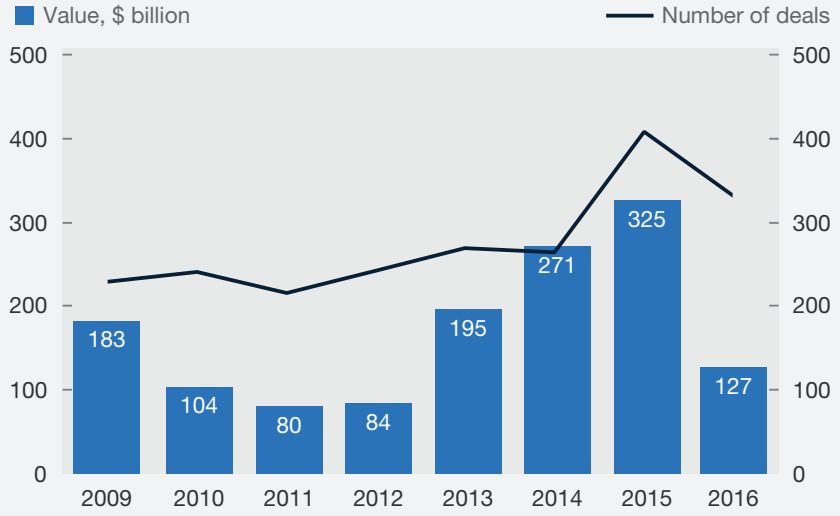
Commercial and operational effectiveness. With the improvement in the standard-of-care treatment in primary-care pharma over the past two decades, the highest unmet needs are now concentrated in specialty pharma and orphan diseases—and this is where biotech has focused its efforts. The share of the portfolio focused on orphan-disease drugs has thus increased from 10 to 20 percent in the 2000s to 40 to 50 percent in the past five years. While the development cost on a per-patient basis for these treatments is high, biotech has enjoyed benefits in other parts of its operations. Given that the commercial and patient-engagement model is different for specialty and rare-disease areas, biotech companies have been able to improve their margins significantly by avoiding expensive commercial programs such as large primary-care-physician (PCP) sales forces and direct-to-consumer (DTC) campaigns.

External risks could reduce future performance. While improving R&D productivity and cost structures has driven performance in the biopharma sector, risks and headwinds that are partially out of companies' control still remain. Further pressure from payors and governments on reimbursement and market access, as well as regulatory uncertainty, may affect revenue

Exhibit 4

While M&A activity was down only slightly, an absence of big deals caused a significant drop in average deal value.

Announced deals[1]



	2009	2010	2011	2012	2013	2014	2015	2016
Average deal size, $ million	799	435	373	346	723	1,026	797	384
Number of large deals	3	3	3	2	6	13	12	4

[1]Includes announced deals (not withdrawn) more than $25 million in deal value; target industry pharma, biomed and medical devices.

McKinsey&Company | Source: Dealogic

growth and margins in the long term, and multiples in the shorter term, if market sentiment shifts to fully factor in these risks. It remains to be seen whether the decrease in the number of US Food and Drug Administration approvals in 2016—from 45 in 2015 to 22 in 2016—is only temporary or a broader indicator of waning R&D productivity or increased regulatory pressure. If this is a broader trend, we might see a further slowdown in biotech valuations and a lower level of M&A activity for a few years.

Healthy returns for investors have created a healthy biopharma ecosystem

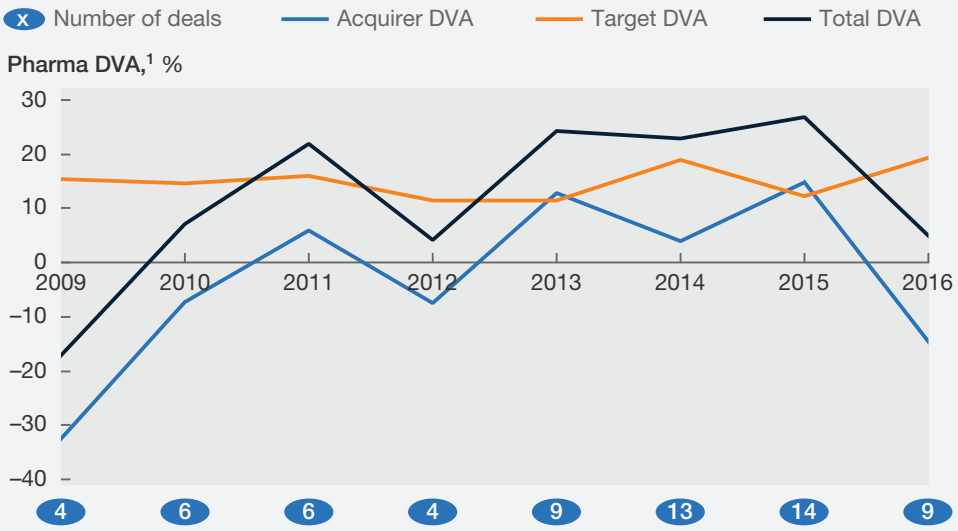
The outsize returns that the most successful biotechs have been able to deliver have attracted early-stage financing from venture capital (VC) and large pharma as they place bets on the next frontier of breakthrough innovation—VC and large pharma provide such financing at an early stage with an eye to potential rich exits. In the past five years, the number of big exits (M&A transactions with up-front payments of $75 million or more) by early-stage VC-backed biotechs has nearly tripled. Furthermore, the average VC investment in biotech has more than doubled over the past decade, from $4.6 billion in 2005 to $12.9 billion in 2015.

Given the liquidity in the biopharma deal market, exits have rewarded investors handsomely. Over the past five years, biopharma has seen an average of approximately 300 M&A deals per year; the median value of deals has increased (it's now some $89 million); and 2016 also saw a spike in deal premiums (there's now a 50 to 60 percent premium over valuation in the month

Exhibit 5

Acquirers no longer get rewarded for just announcing a deal.

Average DVA[1] index for pharma deals, 2009–16



[1]Deal value added calculated for M&A involving publicly traded companies for deals greater than $500 million in deal value. Defined as combined (acquirer and target) change in market capitalization, adjusted for market movements, from two days prior to two days after announcement, as % of transaction value.

McKinsey&Company | Source: Datastream; Dealogic

prior to the deal announcement). Over these five years, the number of IPOs in the biotech space has also increased, from 17 in 2011 to 61 in 2015. However, biopharma M&A activity slowed in 2016: there was a significant drop in the volume of deals (331 in 2016 versus 408 in 2015) and deal value ($384 million average deal value in 2016 compared with $797 million in 2015) (Exhibit 4). Nevertheless, the size of the median deal remained remarkably stable, at around $90 million. The slowdown can be attributed to the lower number of large deals (those greater than $5 billion in value), potentially because the large biopharma sector is focusing on improving operational efficiency following a period of intense M&A activity, while still building out its pipeline by continuing a stream of smaller deals.

Breaking with the trend of the prior couple of years and returning to historical patterns, acquirers no longer get rewarded for just announcing a deal. The deal value—defined as the combined (acquirer and target) change in market capitalization, adjusted for market movements, from two days prior to two days after an announcement, as a percentage of transaction value—has returned to the 2012 level, below 5 percent, from a high of 27 percent in 2015 (Exhibit 5). This decrease in post-announcement deal value has been prompted by the spike in deal premiums that mitigate the potential value to be captured through synergies. Indeed, market reaction is more positive with higher synergies announced and if the deal is perceived as strengthening the core business of the acquirer; a pipeline-building deal usually receives a lukewarm response from the market.

We expect this trend to continue, given that healthy returns are projected for the foreseeable future, attracting the necessary risk capital, and that larger biopharma companies have adapted their business models to source innovation externally through acquisitions, licensing,

and partnerships. However, external factors—especially changes in pricing, reimbursement, and regulatory regimes—may put some of the fundamentals under strain.

In summary, based on our analysis, we expect biopharma companies to continue delivering significant returns to shareholders in the long term, as a reward for the economic value they create in society through the innovation they deliver. ☐

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The authors wish to thank Roerich Bansal, Dhruv Goel, and Dilpreet Kaur for their contribution to analyses used in this article.

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