January 2014

Perspectives from the EY Global Life Sciences Center

Firepower Index and Growth Gap Report 2014

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The shifting balance of firepower

Big pharma's challenges in a competitive M&A environment

Summary

A year ago, consensus was that 2013 would be a busy year for acquisitions by big pharma companies as they sought to fill their "growth gaps" — the additional revenue they need in order to keep pace with the overall drug market. But things didn't turn out that way. Big pharma companies executed only a handful of small bolt-on deals, and their share of M&A transactions fell to a new low.

To explain this seeming paradox — and, more importantly, to understand what might lie ahead for M&A in 2014 — we updated the EY Firepower Index (defined in the box below) that we introduced last year. Understanding the changing dynamics of pharma M&A requires that we look at three factors: pharma's growth gap, pharma's firepower (its capacity to conduct M&A) and, of increasing significance, the relative firepower of big biotech and specialty pharma.*

*Unless otherwise specified, specialty pharma includes generics. See the Appendix for the companies we include in the categories of big pharma, big biotech and specialty pharma.

The EY Firepower Index measures companies' capacity for conducting M&A deals. A company's firepower is diminished as its market value, cash and equivalents fall or as its debt levels rise. For more details on the methodology and assumptions behind the Firepower Index, see the Appendix.

Building a better working world

While big pharma's firepower rose in absolute terms, the second measure we focus on, pharma's relative firepower (i.e., firepower adjusted for the higher price of targets), has actually declined by more than 20%.

This report examines the interplay of these three factors and their implications for pharma M&A transactions:

Pharma's growth gap: Despite efforts to accelerate growth, big pharma's 2015 growth gap remains essentially unchanged at US$100 billion, and it would have increased dramatically had industry forecasts not been revised downward. Organic growth is likely to contribute more in the years ahead, but pressure is still on for transactions to help fill the growth gap.

Pharma's firepower: Big pharma's firepower grew by nearly US$100 billion, or around 15% — not specifically the result of healthier cash balances or lower debt levels, but of higher equity values in a booming stock market.

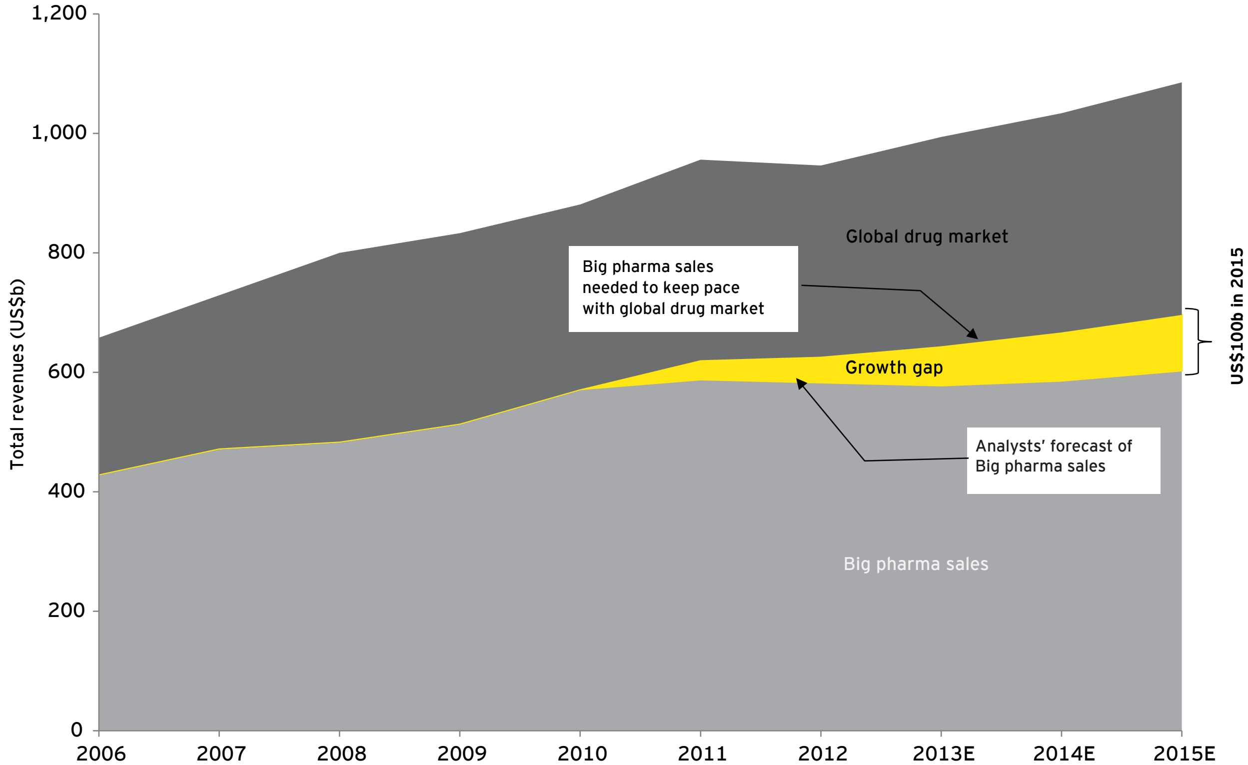
The shifting balance of firepower: The 2013 firepower increase is impressive, but what matters most is what companies will do with the billions of dollars in their war chests. In 2013, the firepower growth of big biotech and specialty pharma companies exceeded that of big pharma, which means big pharma faces increased competition. In this report, we therefore focus on two corollary measures: big pharma's share of firepower and its relative firepower.

Big pharma's share of firepower — its portion of the combined firepower of big pharma, big biotech and specialty pharma — fell steadily from 85% in 2006 to 70% in 2013. This means the valuations of big biotech and specialty pharma, many of which are in the sweet spot as potential acquisition targets, outpaced those of big pharma. So, while big pharma's firepower rose in absolute terms, the second measure we focus on, pharma's relative firepower (i.e., firepower adjusted for the higher price of targets), has actually declined by more than 20%.

Big pharma companies with sizeable growth gaps face tough strategic choices and tactical requirements. There are multiple options and tactics they can deploy:

- **Forge ahead with large-scale M&A:** Transformative acquisitions are always challenging, but especially so when the most attractive assets are priced at all-time highs. Doing deals that satisfy investors today and add to long-term shareholder value demands comprehensive execution skills, from target selection and due diligence to integration and synergy capture — rare commodities in the industry. In addition, many of these acquirers will likely need to consider material divestitures to supplement their firepower.

Exhibit 1: Big pharma's growth gap



Source: Historic big pharma sales from financial data as reported by Capital IQ as of 30 November 2013. Forecast of big pharma sales shows consensus of analysts' estimates from Capital IQ. Forecast of global drug market sales from IMS Health.

- **Rely on organic growth:** As confidence in late-stage pipelines grows and approved products are successfully launched, the need for M&A becomes less urgent. In recent years, this approach has been available to only a few companies.
- **Refine and focus the business model:** Reducing size, scope and management complexity provides more options for companies to reposition for growth. Some big pharma companies have chosen not just to divest non-core businesses, but also to exit therapeutic areas where they would not be a leading player.

The themes we discussed in last year's report will continue to dominate in 2014: the complex and competitive deal environment, higher premiums for targets and more offshore deals. But our central thesis — that big pharma will need to bolster firepower through smarter deal-making — has not yet transpired. On the global M&A stage, pharma was conspicuously absent in 2013 despite its firepower being on par with levels we observed before the 2008 financial crisis.

Big pharma's successful re-emergence as a dealmaker will depend largely on how well it reconciles its organic growth expectations with deploying firepower to close remaining growth gaps.

Pharma's growth gap

Big pharma's 2012 sales were expected to decline following the worst of the patent cliff, but 2013 had been expected to be a year of modest recovery. It wasn't. As the year came to a close, revised guidance issued in conjunction with third-quarter results indicated that aggregate big pharma sales are expected to finish below 2012 levels by about 1%.

Meanwhile, IMS Health's most recent report pegs global pharmaceutical growth at just 1% in 2012,[1] with a range of 3% to 6% annually for 2013 to 2017. The net result: big pharma's growth gap is essentially unchanged at around US$100 billion in 2015 (see Exhibit 1). Had big pharma sales matched early 2013 guidance, the industry could have made progress in narrowing this gap. But it didn't. Without any meaningful M&A to move the needle in either 2012 or 2013, the projected 2015 gap remains essentially unchanged.

While big pharma sales declined, big biotech and specialty pharma companies enjoyed exceptional growth, ranging from two to four times global drug industry growth rates.

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[1] *The Global Use of Medicines: Outlook through 2017*, IMS Health, 19 November 2013.

The aggregate 2015 sales of the 25 leading biotech and specialty pharma companies — those with projected 2015 sales of at least US$1 billion — are projected to approach US$200 billion, or nearly double big pharma's growth gap.

Big pharma's growth headwinds

With most big pharma companies experiencing declining sales and downward guidance, it came as little surprise that the latest Capital IQ projections indicate big pharma sales will finish 2013 down by 1% to 2%.[2] Results and projections can be summarized as follows:

- **Patent cliff hangover**. According to IMS Health, through November 2013, total US prescription volume growth was 3%, up from 1% in 2012. But the growth was all in generics, which rose 4%. Revenue lost to new generic drug launches decreased in 2013, but brand sales entering loss of exclusivity in 2014 are projected to double to close to US$30 billion.
- **Weak new product adoption.** The arrival of the largest new product cycle in 17 years coincided with higher market adoption barriers for new therapies, slowing the revenue ramp and leading to lower-than-expected sales for many new therapies.
- **Decelerating emerging markets.** Big pharma companies enjoyed 12% growth in emerging markets in 2011, but most projected little more than high single-digit growth for 2013. It is estimated that the emerging market growth will be insufficient to offset negative growth in developed markets.
- **Slower adjacent business growth.** Most big pharma companies expected to cushion core drug sales declines with contributions from other health care businesses, such as animal health, consumer, diagnostics and vaccines. But growth in these businesses has slowed, in some cases significantly.

The shifting balance of firepower

In a strong bull market, health care led all sectors (the T. Rowe Price Health Sciences Fund was up 50% over the 12-month span through November 2013[3]). With big pharma's collective market capitalization up 25%, big biotech's market cap up 50%, healthier balance sheets and continued robust cash flow from past industry restructurings, industry firepower increased by about 20% in the past 12 months to over US$1 trillion — a welcome development and a major positive indicator for M&A.

Meanwhile, the most attractive acquisition targets also saw their value (and take-out expectations) rise, increasing the cost of deals. Firepower growth in 2013 was almost entirely driven by rising equity market valuations, which accounted for more than 90% of the increase. Big pharma buybacks declined for the first time in three years, which also helped to boost the segment's firepower.

However, big pharma's rising firepower was exceeded by the growth of firepower in big biotech and specialty pharma, indicating more competition for deals. In the 12-month span ending November 2013, big biotech's firepower increased 55%, contributing to a remarkable 150% increase since 2006 (see Exhibit 2). Specialty pharma's firepower increased modestly over the past year, in part because it made substantially greater use of its firepower for deals than either big pharma or big biotech. Consequently, the segment's firepower growth was dampened by a significant increase in debt to fuel its record M&A volume.

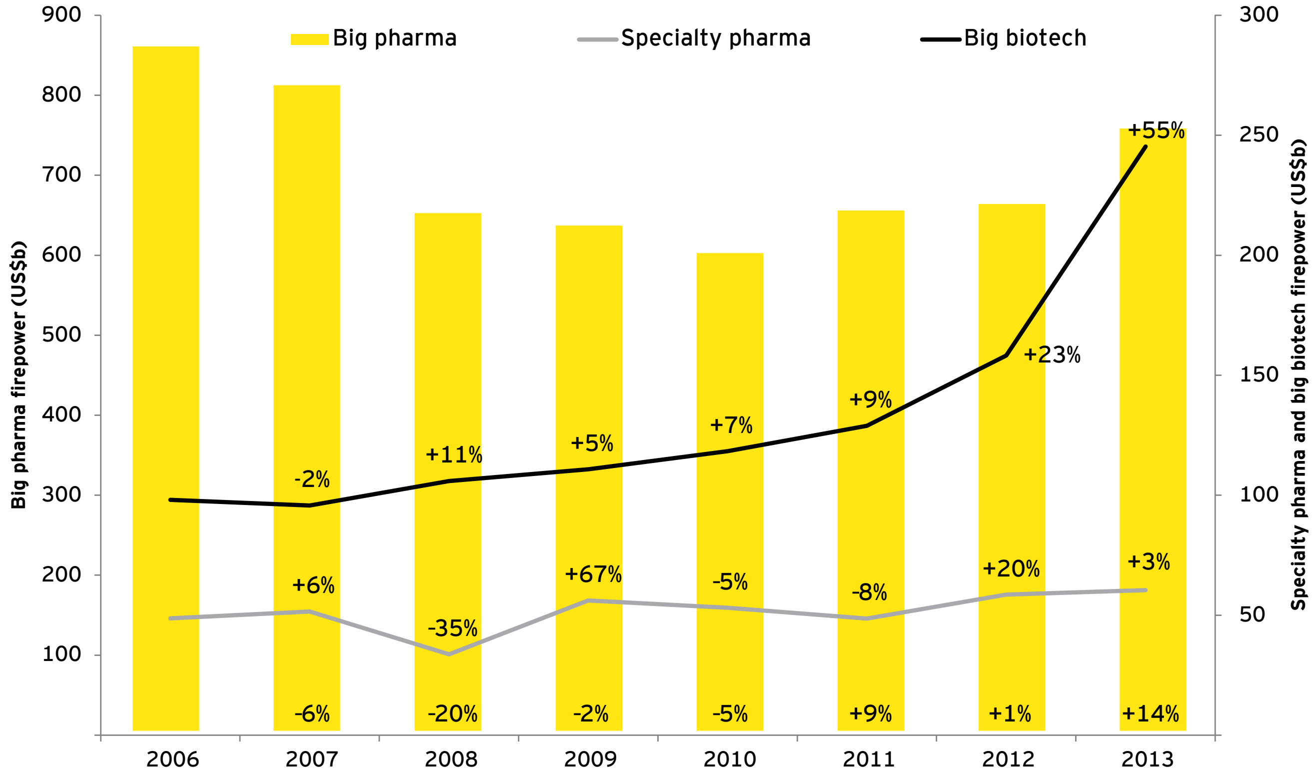
Due to these shifts, big pharma's share of combined firepower fell from 85% in 2006 to 70% by the end of 2013. This shift in firepower has substantial implications for M&A (see Exhibit 3).

Firepower growth in 2013 was almost entirely driven by rising equity market valuations, which accounted for more than 90% of the increase. However, big pharma's rising firepower was exceeded by the growth of firepower in big biotech and specialty pharma.

[2] Capital IQ, 30 November 2013.

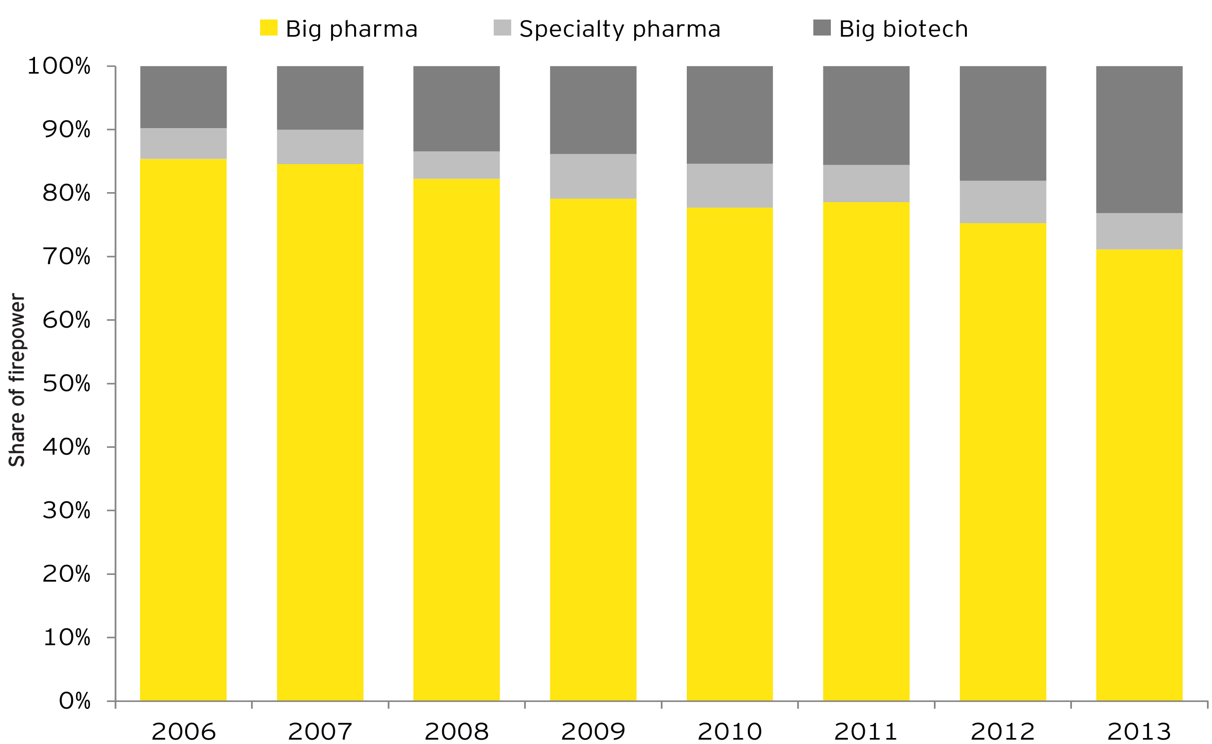
[3] T. Rowe Price, Health Sciences Fund, 30 November 2013.

Exhibit 2: Big pharma firepower rebounds, specialty pharma rises, big biotech soars



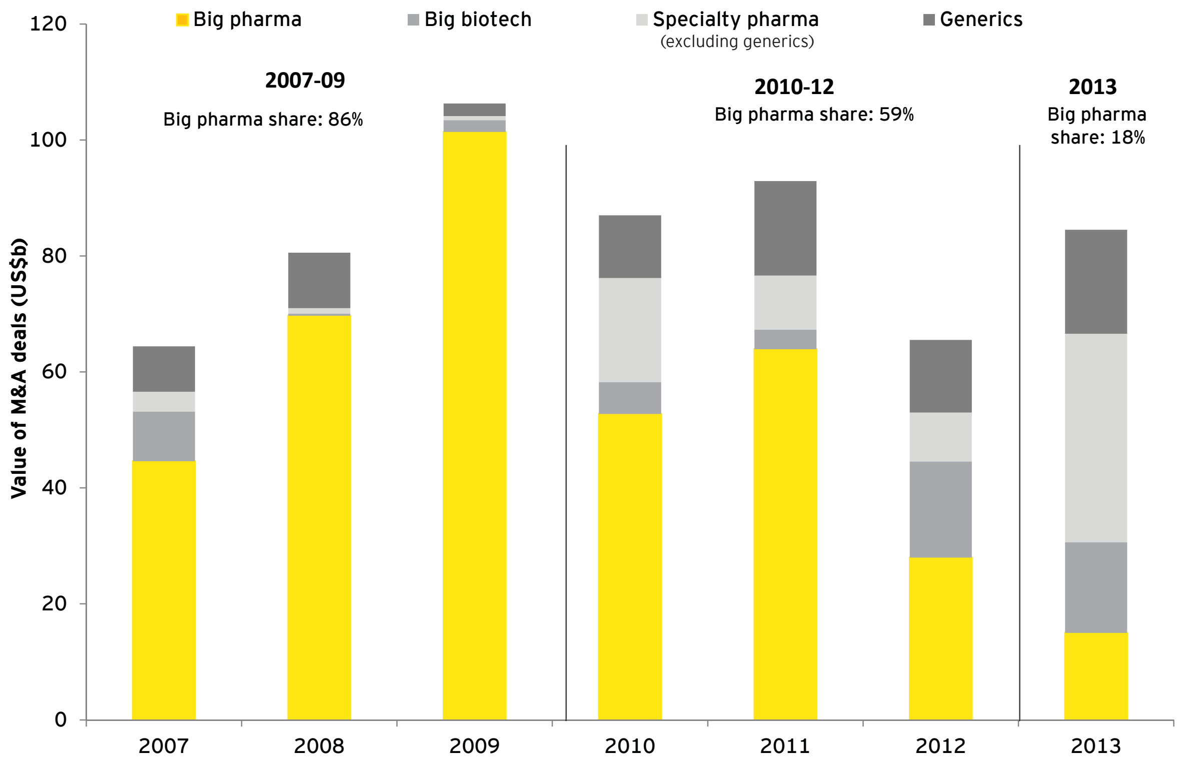
Source: EY analysis of company financial data as reported in Capital IQ.

Exhibit 3: Big pharma's share of firepower has fallen steadily



Source: EY analysis of company financial data as reported in Capital IQ.

Exhibit 4: Big pharma M&A share falls below 20%

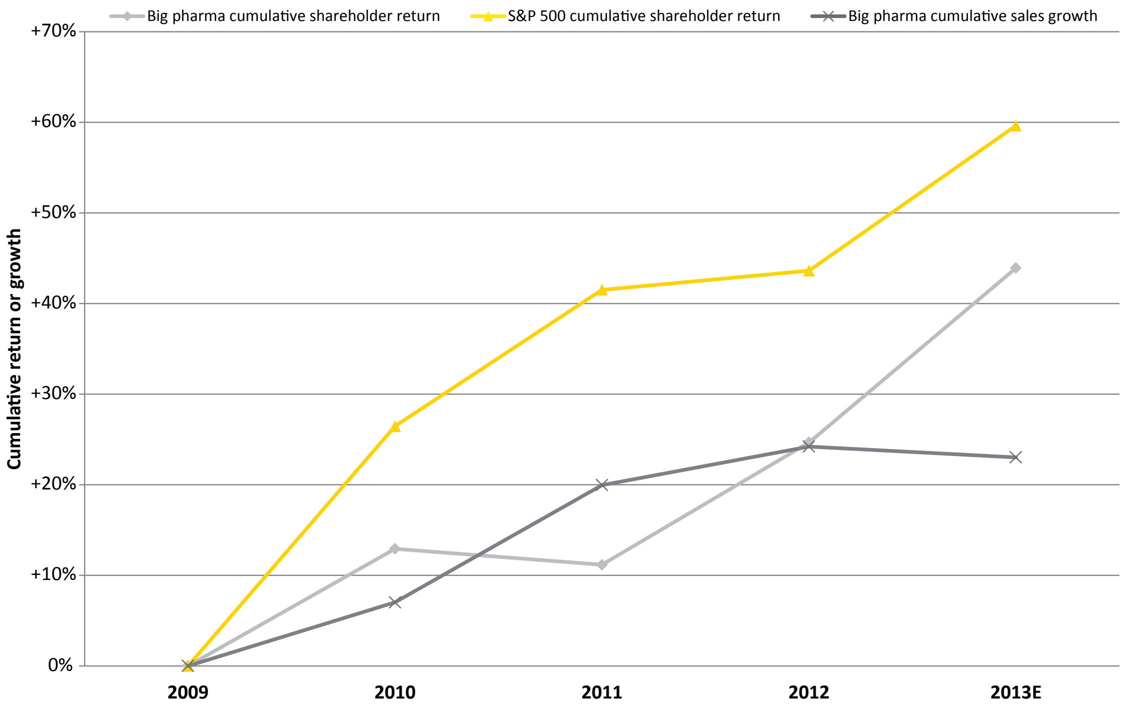


Source: Datamonitor, Capital IQ, IMS Research and EY.

Why is big pharma MIA from M&A?

Perhaps the biggest surprise in 2013 is what did *not* happen. In 2013, M&A deal values rose about 30% over 2012, to more than US$85 billion. But big pharma executed only a handful of small (less than US$5 billion) bolt-on deals with no single transaction greater than US$10 billion. Meanwhile, big biotech and specialty pharma companies continued to punch above their weight, competing among themselves and, in some cases, with big pharma for assets that would drive growth. Big biotech and specialty pharma accounted for more than 80% of M&A activity by announced deal values in 2013 (see Exhibit 4).

Exhibit 5: In a bull market, pharma delivers healthy shareholder returns despite modest sales growth



Source: EY analysis of company financial data as reported by Capital IQ. Big pharma cumulative returns include share repurchases.

Why hasn't big pharma pursued more deals, given its persistent growth gap problem? There are three leading causes:

1. **Shareholder returns remain strong, despite weaker top-line growth.** Big pharma stocks were up 27% in 2013, with dividends adding another 4% and buybacks another 1%, for an estimated 32% total shareholder return. In this environment, pharma companies might perceive less pressure from boards and investors to make bold moves. However, the strong shareholder returns were largely in line with the overall booming stock market (see Exhibit 5).

2. **Replenished pipelines are improving organic growth prospects.** Some big pharma companies may take the stance that current pipelines will restore growth so there is no need to pursue M&A. But this scenario is debatable. Looking at projected revenues for pipeline assets (new drug applications filed in 2013 or projected for 2014) over the next five years shows that only a few companies currently have pipelines that might be expected to fill their growth gaps between 2015 and 2018. These companies will have the luxury of being less aggressive on the M&A front, sticking with a bolt-on strategy. But the rest will need to consider becoming more active dealmakers.

3. **More competition for more expensive targets.** The number of big pharma companies, as well as big biotech and specialty pharma companies, that can afford to engage in deals valued at more than US$5 billion has risen steadily, but the number of players that can step up for deals greater than US$30 billion has nearly doubled in just a year. Big pharma's loss of firepower share now highlights a substantial strategic issue: its relative firepower has slipped while that of biotech and specialty pharma has accelerated, which effectively introduces new M&A competitors that have moved from the periphery to center stage.

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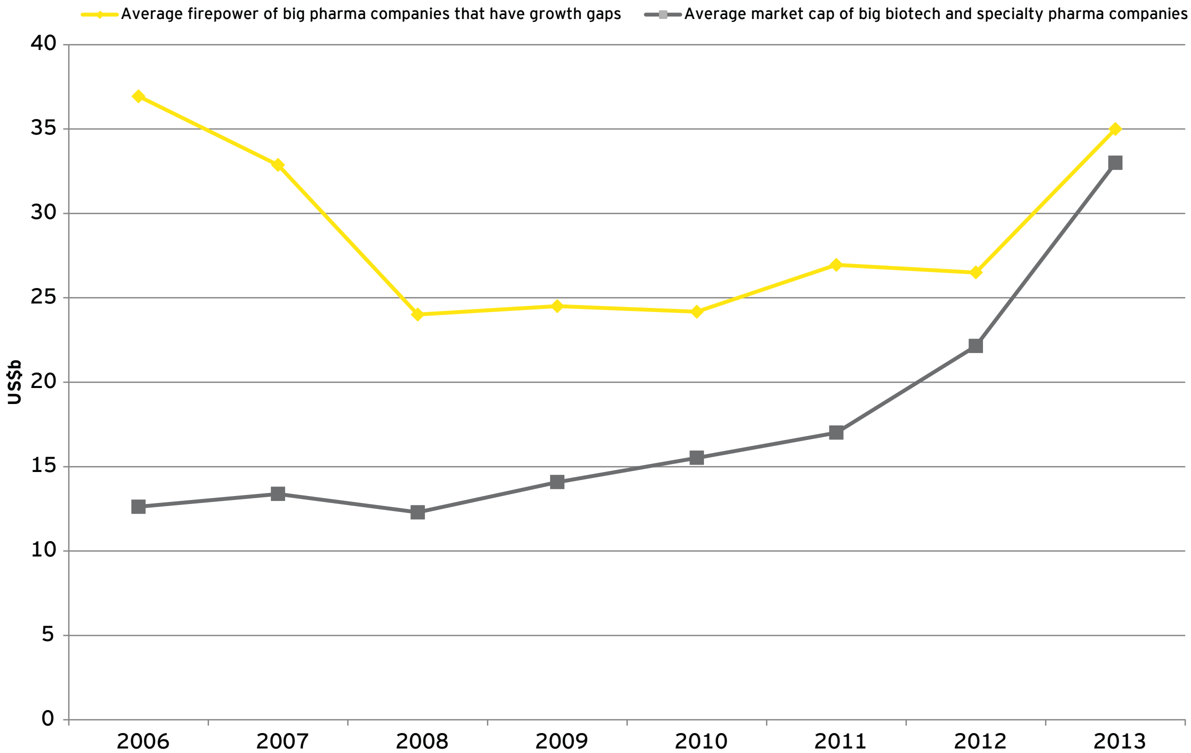
Exhibit 6: Big biotech and specialty pharma valuations may soon exceed big pharma firepower



Source: EY analysis of company financial data as reported by Capital IQ.

The number of big pharma companies, as well as big biotech and specialty pharma companies, that can step up for deals greater than US$30 billion has nearly doubled in just a year.

Another competitive dynamic has emerged: several specialty pharma companies executed transactions that significantly lowered their effective tax rates. As a result, some will be able to extract differentially more value from acquisitions, meaning that big pharma companies will need to be even more careful in their target valuations.

Valuations for the pool of potential growth targets — the 25 biotech and specialty pharma companies with projected 2015 sales over US$1 billion — rose, on average, by 50%. So at the end of 2013, the pool of affordable candidates is shrinking, particularly for the seven big pharma companies whose firepower is below US$30 billion. Close to half of the 25 growth targets are now beyond the reach of this group unless they are prepared to consider dilutive equity deals. Assuming a modest premium of 25% over current valuations, some big pharma companies with growth gaps could not afford to acquire most big biotech or specialty pharma companies.

Implications and outlook

As we move into 2014, the central thesis from last year's Firepower Index and Growth Gap Report, *Closing the gap?*, remains unchanged, as does the growth gap. Company-specific gaps will be further illuminated with upcoming year-end results and 2014 guidance. We are cautiously optimistic about the prospects for continued M&A growth in the sector overall.

Big pharma's re-emergence on the M&A stage will ultimately be determined by how boards and senior management teams realign strategic priorities in response to core business performance, R&D results, competitor moves and investor expectations. Their M&A litmus test is likely to be influenced by the following considerations:

- **More competition and higher premiums.** The best assets will command higher prices and challenge returns on investment. Big pharma's absence from M&A in 2013 suggests a reluctance to pay such valuations. As one CFO succinctly put it in his company's third-quarter earnings call, "We like to provide an attractive return for our shareholders, not the targets." But as a tactic, waiting for target prices to fall could backfire: once a high-profile deal is announced, similar candidates could see a further run-up in their prices.

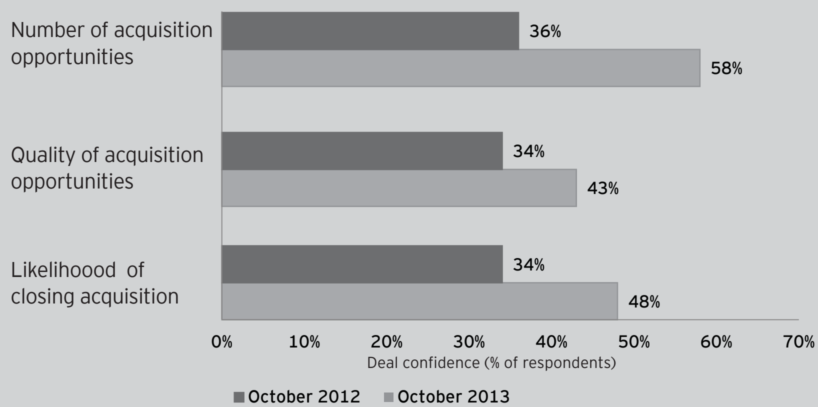
- **Acquisitions to hedge pipeline disappointments.** Among the likely big pharma acquirers in 2014 will be those with growth gaps that decide to hedge potential disappointments in product launches and R&D.
- **Are divestitures necessary to pursue growth targets?** Given the rise in target valuations, the answer to that question seems to be "yes" — at least for those companies with both a large growth gap and the ability to divest non-core assets. Superior shareholder returns for many recent divestitures provide a compelling argument for more divestitures in 2014. We estimate that a dozen or so divestitures — principally from non-core businesses — could be worth up to US$100 billion in incremental firepower that could be redeployed for M&A.
- **Use it or lose it.** For companies whose firepower is expected to remain the same (or even shrink — a possible scenario for several companies this year), "use it or lose it" may become a topic of discussion in the boardroom.
- **Transaction execution self-confidence.** To undertake large-scale acquisitions or divestitures, management groups need to ensure they have the right capabilities, resources and processes onboard. Elevated target prices coupled with rigorous investor scrutiny mean there is little room for error.

Positive sentiment rising on deals

The pharma M&A drought could soon be ending, according to the recent EY Global Capital Confidence Barometer. The sentiment of the C-level pharma and biotech executives surveyed for the Barometer reflected a much more positive outlook than in late 2012:

- Volume of acquisition opportunities: up 62%
- Quality of opportunities: up 25%
- Likelihood of closing deals: up nearly 50%

Exhibit 7: Deal sentiment of C-level pharma and biotech executives



Source: EY Global Capital Confidence Barometer. *ET, 28 October 2013*

Appendix: methodology, definitions

The EY Firepower Index measures companies' capacity to fund transactions based on the strength of their balance sheets. The Firepower Index has four key inputs:

1. Cash and equivalents

2. Existing debt

3. Credit lines and debt capacity

4. Market capitalization

The following assumptions are underlying factors for the Firepower Index:

- A company will not acquire targets that exceed 50% of its existing market capitalization.
- The debt/equity ratio of the combined entity created by a transaction cannot exceed 30% (equity is measured on a market value basis).

While some pharma companies have made acquisitions that go beyond these upper limits, our intent is to apply a uniform methodology to measure relative changes in firepower.

The Firepower Index measures capacity to conduct M&A transactions financed with cash or debt. It does not measure the ability to conduct stock-for-stock transactions. However, increases in a company's stock price do boost its firepower under the Firepower Index's formula, since increased equity raises the amount of debt that the company can borrow to finance transactions.

While the Firepower Index and this report focus on M&A, it is important to acknowledge that licensing will continue to be an important part of big pharma's transactions strategy. However, M&A is more relevant to this analysis than in-licensing, since acquiring companies with commercialized products has a more immediate impact on pharma's revenue gap than does in-licensing pipeline assets.

In this report, we include 17 companies in the **big pharma** category:

- Abbott Laboratories
- AbbVie, Inc.
- Astellas Pharma, Inc.
- AstraZeneca PLC
- Bayer AG
- Bristol-Myers Squibb Company
- Daiichi Sankyo Company, Limited
- Eisai Co., Limited
- Eli Lilly and Company
- GlaxoSmithKline plc
- Johnson & Johnson
- Merck & Co., Inc.
- NovartisAG
- Pfizer, Inc
- Roche Holding AG
- Sanofi
- Takeda Pharmaceutical Co.

We include the following companies in the **big biotech** category:

- Alexion Pharmaceuticals
- Amgen, Inc.
- Biogen Idec
- BioMarin Pharmaceutical, Inc.
- Celgene Corporation
- Gilead Sciences
- Merck KGaA
- Novo Nordisk A/S
- Onyx Pharmaceuticals, Inc.
- Regeneron Pharmaceuticals
- Seattle Genetics, Inc.
- Vertex Pharmaceuticals, Inc.

We include the following companies in the **specialty pharma** category:

- Actavis plc
- Allergan Inc.
- Endo Health Solutions
- Forest Pharmaceuticals, Inc.
- Hospira, Inc.
- Jazz Pharmaceuticals plc
- Mylan Inc.
- Perrigo Company
- Shire plc
- Teva Pharmaceutical Industries
- Valeant Pharmaceuticals International UCB

The specialty pharma list includes four companies categorized as predominantly generics (Actavis, Hospira, Mylan and Teva), which are broken out separately in Exhibit 4.

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How EY's Global Life Sciences Center can help your business
Life sciences companies — from emerging to multinational — are facing challenging times as access to health care takes on new importance. Stakeholder expectations are shifting, the costs and risks of product development are increasing, alternative business models are manifesting, and collaborations are becoming more complex. At the same time, players from other sectors are entering the field, contributing to a new ecosystem for delivering health care. New measures of success are also emerging as the sector begins to focus on improving a patient's "health outcome" and not just on units of a product sold. Our Global Life Sciences Center brings together a worldwide network of more than 7,000 sector-focused assurance, tax, transaction and advisory professionals to anticipate trends, identify implications and develop points of view on how to respond to the critical sector issues. We can help you navigate your way forward and achieve success in the new health ecosystem.

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