

What drives Mergers & Acquisitions in the Pharma industry?



The pharmaceutical industry probably sees more M&A activity than any other industry, both in the number of deals and the amount of money spent on acquisitions and mergers. No other industry can compare when it comes to M&As: large, game-changing deals continuously and profoundly change the competitive landscape, while smaller yet still significant transactions are an integral part of the operations of pharma companies.

Below we describe key drivers that force pharma companies to redefine themselves, and why large M&A is the preferred way to do so. We continue by describing why M&A is a standard component of the pharma business model. Finally, we conclude by showing M&A transaction patterns in strategic business areas, which corroborate our concepts and hypotheses.

Key factors triggering changes in the pharma industry

The single most important driver for changes in the pharma industry is the ever-increasing cost of drug development: most companies can no longer afford to carry out R&D to find innovative compounds.

On average, the development of a new drug (a new active pharmaceutical ingredient) costs around US\$ 1.4bn, if pipeline failures are factored in. It usually takes ten years from synthesis to approval, thus US\$ 1.2bn capital costs accrue to the figure below, which results in average total cost of US\$ 2.6bn to develop a new drug.

One fundamental reason behind the growing costs is the advancement of medicine: To create value, new drugs need either to solve a problem which has previously been intractable, or be significantly better than what already exists on the market. The other driver for the development costs is the ever-increasing regulatory requirements.

Today, a company needs to invest between US\$ 2bn and US\$ 4bn per year in R&D to have a meaningful portfolio of drug development programs. Putting this in perspective: In the long-term, pharma companies spend 20% of their revenue from (high-margin) original drugs on R&D (see Figure 1). Thus, only companies with revenue of US\$ 10bn or higher from originals can afford to have a substantial drug development program.

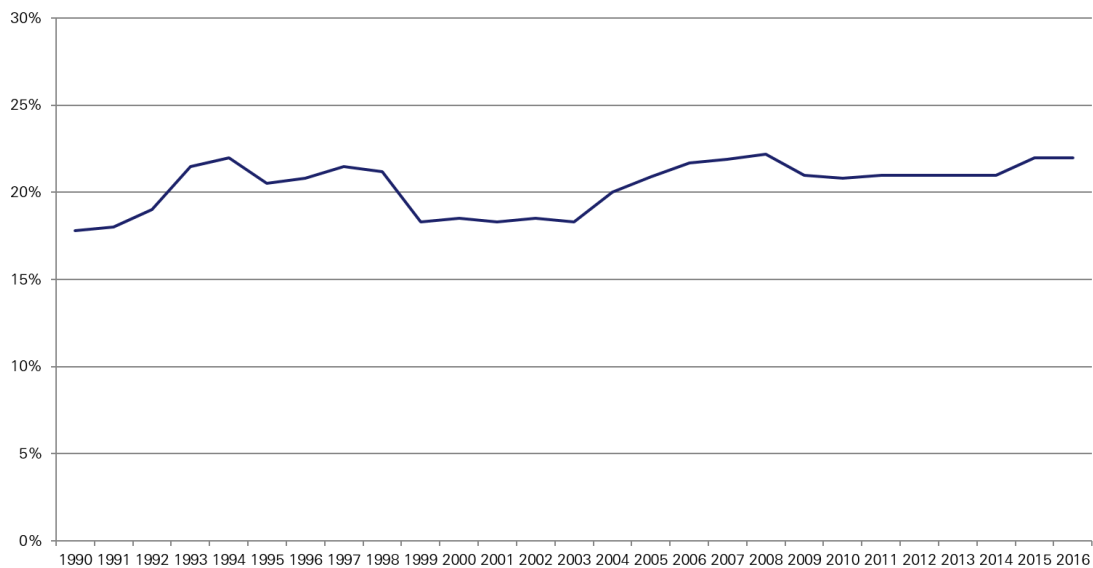


Figure 1: Historic share of R&D costs relative to branded drug sales ¹

Meanwhile, payors and regulators strive to replace as many off-patent original drugs as possible with generics. Reimbursement prices for generics have been lowered everywhere, leading to major consolidation among generic drug providers. Figure 2 gives an overview on key transactions with generic drug companies in the last few years; as can be seen, transaction multiples have decreased and narrowed, with the exception of the very large, game-changing acquisition of Allergan’s generic portfolio by Teva, and the acquisition of US special

generics provider Par Pharma by End. The third classical segment of Pharma (consumer health / OTC) recently also saw large, industry-shaping transactions (Novartis / GSK, Merck & Co. / Bayer and Boehringer / Sanofi). Our analysis suggests that the consumer health / OTC market will go through a consolidation as did the personal care industry two decades ago: local brands will be pushed out by international brands which profit from globalization of consumer (or patient) habits.

Four Strategic archetypes emerge

In this changing environment, we can observe four distinct strategic archetypes emerging². Originators, the classical pharma model, focus on financing the development and marketing of new drugs. Generic drug providers excel in producing and delivering drugs at a low cost - thus are fully backward integrated. Consumer health companies promote drugs directly to patients, using mass-consumer marketing techniques, whereas point-of-call specialists are well established in a specific indication or with a specific group of doctors (such as Novo Nordisk for Diabetes, Lundbeck in Psychiatry, Leo Pharma in Dermatology, or Norgine in Gastroenterology, and by definition all orphan

drug companies).

As the term itself implies, “archetypes” are strategic focal points companies coalesce to, yet organizations rarely meet these pure definitions³. Practical experience however shows that one organization cannot successfully combine several archetypes – a company cannot be a generic drug provider and an originator at the same time, for example.

The required business cultures (e.g. fostering innovation by originators vs. controlling costs by generic drug manufacturers) are incompatible

¹ Sources: Congressional Budget Office (1990-2004), Evaluate Pharma

² Our model is not applicable to emerging markets, and has some limitations for countries with strong local pharma industries such as Japan, Italy and Spain. Also, in the US, the regulatory and pricing framework allows for a fifth archetype, developers of advanced generics. Biosimilars are also not discussed.

³ For a graphical overview, see [here](#).

Year	Acquisition target	Acquirer	Purchase price [USD bn]	Price paid divided by revenues
2015	Par Pharma	Endo	8.0	6.2x
2015	Alvogon	CVC Capital	2.0	2.7x
2015	Allergan (Generics)	Teva	39.6	5.9x
2015	Roxane	Hikma	2.1	3.2x
2015	Kremers Urban	Lannett Company	1.2	3.0x
2015	Amdipharm Mercury	Concordia Healthcare	3.5	6.6x
2014	Abbott	Mylan	5.3	2.8x
2014	Ranbaxy	Sun Pharma	4.0	2.2x
2012	Actavis	Watson	5.8	2.4x
2010	Ratiopharm	Teva	5.0	2.2x
2009	Arrow Group	Watson	1.0	1.6x
2009	EBEWE Pharma	Sandoz	1.3	4.7x
2008	Barr	Teva	7.5	3.0x
2007	Merck KGaA	Mylan	6.7	2.8x
2007	Mayne	Hispora	2.1	3.5x
2006	Ivax	Teva	7.4	3.2x
2006	Andrx	Watson	1.9	2.7x
2005	Hexal	Sandoz	5.3	3.5x
2005	Eon Labs	Sandoz	2.6	6.5x
2004	Sicor	Teva	3.4	6.2x

Historical generic drugmaker acquisitions over USD 1bn ¹⁾

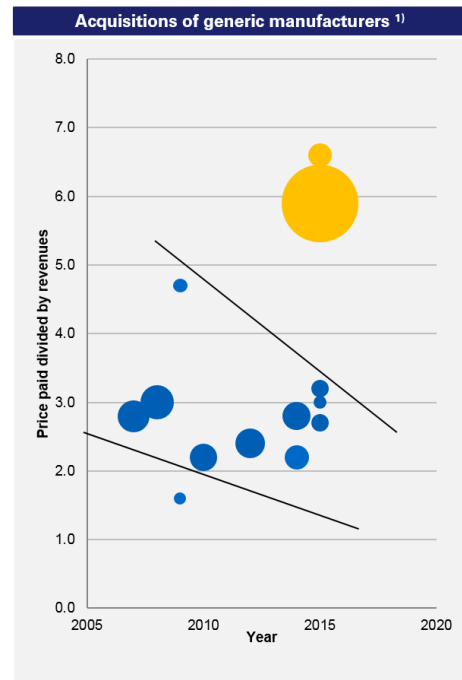


Figure 2: Consolidation in the generic drug industry. Yellow bubbles: Transformative transactions (TEVA / Allergan's generic portfolio) and specialist generics, which both reaped higher valuations.

Why M&A is used for strategic repositioning

There are three basic reasons why pharma companies resort to M&A to implement strategic changes. First, the critical size requirements in each market segment increased much faster than the companies could grow. M&A was unavoidable to build today's originators and generic drug providers – none of the players of 20 years ago could have succeeded on their own. The second reason is the fundamental nature of the required changes: large

mergers allow bundling of sub-critical businesses, to change the culture and to build new platforms.

The third reason is that, except for the effects triggered by a patent cliff, changes in the pharma market are glacial compared to other industries. Hence the top tier of the industry is remarkably stable. Of the 10 largest pharma industry players by sales, only one (Gilead) has roots of less than 100 years (see Figure 3). On the other hand, there are few biotech companies who became firmly established as originators (Amgen, Biotech, Gilead).

Company	In-market sales (ex-factory, US\$ bn)	Roots (earliest beginnings)
NOVARTIS	47.4	1758
Pfizer	45.8	1849
SANOFI	39.8	1834
GILEAD	38.4	1987
Johnson & Johnson	37.2	1886
MERCK	36.2	1891
Roche	35.1	1896
AstraZeneca	31.3	1913
gsk GlaxoSmithKline	29.9	1715
TEVA	26.7	1901

Figure 3: The largest Pharma companies by size and their year of foundation

M&As for efficient capital allocation

The other driver for M&As is efficient capital allocation across the industry, which applies to two areas: R&D and manufacturing.

The large, complex organizations of the originators are unsuited to fostering innovation. An ecosystem of venture capital and entrepreneurs has proven much more effective in selecting early-stage biomedical research opportunities and allocating money to those opportunities. Essentially, venture capitalists today pre-finance the early-stage development for pharma companies.

Figure 4 gives an overview of the amount of money spent on IPOs of Biotechs. The graph reflects the

mood of financial investors regarding the industry, and on the other hand the substantial amounts spent by originators acquiring Biotech companies.

At the other end of the value chain, originators have started to use M&A to outsource manufacturing, selling plants to CMOs in combination with long-term manufacturing and supply agreements. Besides the cost benefits which these deals typically entail, they also increase the return on capital by reducing the asset base of the originator. The expected return on capital in the relatively stable, low-margin, and capital-intensive manufacturing activity is distinctly lower than for the more volatile and more profitable development and marketing of drugs.



(1) Funds raised in IPOs, excluding secondary and follow-up placements
 (2) Courtesy of HBM Partners AG.

Figure 4: Investments in Biotech by financial investors in IPOs, and by originators through M&A. Data courtesy of HBM Partners, Switzerland.

Looking at the big picture – M&A activity pattern

In Figure 5, we mapped M&A transaction over three years to the four archetypes and associated business areas. The resulting patterns confirms the trend to be expected based on the above comments. Originators frequently acquire innovators (top left corner). Interesting is the high number of transactions between innovators. Apparently, the abundance of capital available to successful innovators in the last few years enables them to acquire smaller firms before they are devoured by the originators.

Also visible is the strong consolidation among

CMOs and manufacturing plants (lower left corner), which is the result of the fundamental rearrangement of pharma manufacturing.

Conclusion

In conclusion, M&A is a fundamental tool for strategy implementation in the pharma industry. Deal-making is essential to implement game-changing strategic moves to build companies fit to master future challenges. But M&A is also a standard element of the business model for pharma companies, to get access to innovation, but also to streamline operations in manufacturing or to prune business portfolios.

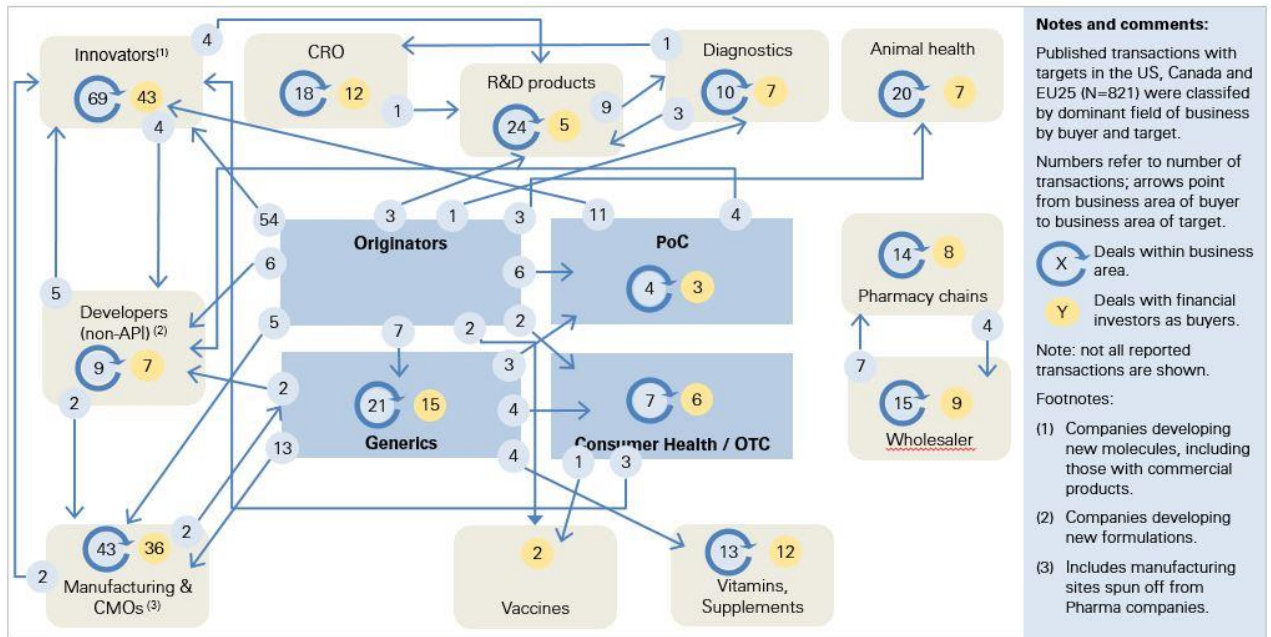


Figure 5: Pattern of M&A activity in the period from July 2014 to July 2016