



Generics and Big Pharma

Time for a New Relationship

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Introduction

The relationship between the major pharmaceutical companies (Rx) and generic drug manufacturers (Gx) has long been difficult, and for good reason: Billions of dollars in intellectual property are at stake. The two also have some uncomfortable history. In the 1980s, when generic drugs first emerged as a potentially formidable source of profits, the major pharmaceutical companies owned or controlled much of the segment. High expectations for profit were, however, disappointed. The generics industry proved to be plagued with quality problems, and the promised explosive growth never materialized. Pharmaceutical companies sold their Gx divisions, and since then they have kept their distance.

The world of generics, however, has changed. The Gx market, while smaller than the prescription drug market, is nevertheless quite large – and growing. There are three main reasons pharmaceutical companies should take another look at their former partners.

First, the quality of generics manufacturers' production has improved dramatically, and these companies are far larger, more sophisticated, and more profitable than they used to be.

Second, the rise in health-care costs means that in developed markets, generic drugs will become increasingly popular, and that in emerging markets, they will be a key to gaining a broader presence.

Finally, Rx companies are facing a well-known shortfall in innovation as Gx companies are beginning to expand into innovative activities cost-effectively. In many cases, there are good formerly-branded drugs that are now generic.

Big Pharma players that find new ways to work with their Gx counterparts can benefit in four ways. They will be able to defend their premium positioning in developed markets (in part by managing product life cycles more effectively), make their cost structures more efficient, enter developing markets, and potentially improve their drug development – especially in the areas of reformulations and alternative drug delivery.

Disappointed hopes

The early 1980s saw a love match between Rx and Gx companies. At that time, the emergence of managed care began to put significant pressure on drug prices – pressure that continues to this day. Although the generics industry was in its infancy, the financial community predicted that it would achieve compound annual growth rates above 25%. As a result, major pharmaceutical companies invested in it heavily. Through either full or controlling equity stakes, big pharmaceutical companies owned about 70% of the Gx capacity in the U.S. by the early 1990s.

But this union was unsuccessful. Pharmaceutical companies soon realized that they could earn more by protecting and growing their product franchises than by manufacturing generic equivalents. Indeed, many pharma players became quite skilled at extending the life cycles of their products by improving their therapeutic benefits. Prilosec, for example, was recently “migrated” into Nexium, and Celexa into Lexapro.










This turn of events, of course, weakened the financial performance of Gx players. To make matters worse, Gx companies found themselves with manufacturing and quality problems. Many received citations and even cease-and-desist letters from the FDA. Copley Pharmaceuticals, for example, ran into a series of management and manufacturing issues that resulted in criminal charges from the FDA and an \$11 million fine. The company lost three-quarters of its value from 1993 to 1999, when it was finally sold to Teva.

In the end, most Rx companies divorced their Gx partners (*Exhibit 1*). Hoechst sold off numerous Gx holdings, including Rugby and Cox; AHP sold Durachemie; AstraZeneca sold HOEI; Roche sold Altimed; and Bayer sold its investment in Schein.

A new reality

Today, however, the Gx picture is vastly different. Of the 3.5 billion prescriptions written in the U.S. in 2004, 56% were for generic drugs – a fourfold increase over the number 20 years earlier. The market increased almost tenfold over the same period, from less than \$2 billion in 1984 to \$19 billion in 2004. Worldwide, \$45.2 billion of generic drugs were sold in the same year.

Exhibit 1**Rx AND Gx BUST-UPS**EXAMPLES

Year	Rx company	Gx divestment
1997		Sold Rugby to Watson
		Sold Durachemie to Merck KGaA
1998		Sold Cox to Alpharma
1999		Sold Copley to Teva
2000	  	Sold European Gx business to Novartis Sold Schein to Watson Sold Apothecan to Geneva
2002	 	Sold Sharp & Dohme to Ivax Sold Bayer Classics SA (France) to Teva

Sources: Literature review; Windhover's Strategic Intelligence Database

The complexion of the industry has also changed. As noted above, there are three main factors at work. First, many Gx companies have become highly competitive operators, and some are growing even more competitive. Perhaps the best-known strength of Gx companies is their capacity to formulate and manufacture – at the lowest possible cost – active pharmaceutical ingredients (APIs) and finished dosage forms (FDFs), meaning pills, doses of liquid medications, and injectables. This ability gives some players a significant strategic advantage.

A number of Gx players have large and truly efficient plants. While a typical Rx plant manufactures FDFs in the hundreds of millions, some Gx plants produce from 10 billion to 15 billion units per year – at far lower costs per unit than Rx companies can manage. These developments have given rise to quite positive financial results.

Almost all Gx companies have put their quality problems behind them. In fact, FDA statistics suggest that in most cases, Gx manufacturers have extremely compliant manufacturing capabilities.

A second factor is the rise in health-care costs. Although painful to many, this shift has benefited Gx players. Substitution laws and managed care (from HMOs to hospitals in the U.S., Germany, and elsewhere) create significant pressure on physicians to reduce expenditures, which has led to a greater tendency to prescribe generic drugs. In emerging markets, Gx products are the predominantly dispensed therapy.

The rise in costs has also put pressure on consumers, particularly those who lack prescription coverage. Among the cholesterol-reducing drugs, for example, lovastatin is available for half the cost of its branded counterpart. In the U.S., even those with insurance commonly face a three-tier price pyramid, in which non-preferred drugs cost consumers four times as much as approved generics. This approach to prescription pricing has gained rapid currency in the U.S. In 1996, 36% of managed-care organizations had adopted this practice; by 2004, their number had risen to over 90%.

The third area in which things have changed is innovation. Gx companies have become more successful at developing new products; some are investing large sums in R&D. As Gx manufacturers have improved and moved rapidly “upstream” in the pharmaceutical business system, developing R&D capabilities, they have sharply increased their technology and in-licensing skills. As they expand, these companies are positioning themselves to emerge as potential future competitors.

A changing relationship

When a branded pharmaceutical product loses its patent protection, its manufacturers must decide whether they should try to capture a small part of the revenue streams that remain after expiry or walk away from that product altogether.

Over the past year and a half, some Rx companies that want to derive royalties from their off-patent molecules have used an “authorized generics” strategy. In this approach, an Rx company typically gives a Gx manufacturer early access to its patent, thus permitting the generics company to start production as soon as the patent expires or at another date that permits the two companies to maintain market exclusivity. The deal permits the Gx company to capture a leading position in the new market in return for a royalty flow to the patent’s originator. A number of companies have made such deals: Par with Bristol-Myers Squibb and GlaxoSmithKline, for example, and Watson with both Johnson & Johnson and Procter & Gamble Pharmaceuticals.

The authorized generics approach, however, has been hotly debated. Some industry members view the practice as advantageous; others believe it undermines the economics and incentives provided by the Hatch-Waxman Act. Recent lawsuits have heightened the debate, and it is likely to be an area in which both law and business practice will continue to evolve.

Four strategies

Authorized generics is just one avenue Rx players can consider, however. The broader principle in effect here is that when dealing with powerful opponents, alliances can be more profitable than wars (*Exhibit 2*).

Exhibit 2

OPPORTUNITIES FOR Rx

Capabilities <ul style="list-style-type: none"> • Manufacturing • Sourcing • Development • Reformulation • Discovery 	New	Outsource API and FDF manufacturing <ul style="list-style-type: none"> • Find opportunities to take advantage of lower Gx cost structures and reduce capital employed 	Develop new products <ul style="list-style-type: none"> • Use Gx skills in reformulation and drug delivery to develop new products and manage life cycle • Leverage the increasing investments of Gx players in discovering and developing NCEs
	Existing	Defend premium positioning <ul style="list-style-type: none"> • Offer a combined Rx and Gx portfolio package • Develop strategies to increase therapeutic benefits and manage product life cycles more effectively 	Penetrate emerging markets <ul style="list-style-type: none"> • Partner with Gx to build position in emerging markets
		Existing	New
		Markets <ul style="list-style-type: none"> • Products • Geographies 	

Source: McKinsey team analysis

Working with Gx manufacturers can help prescription drug companies *defend premium positioning* in their current markets. Rx companies can defend their premium position in developed markets by using generic drugs as part of a portfolio offering to payors. For example, branded manufacturers can offer payors packages of products, providing less expensive generic products in exchange for the right to continue to supply branded prescription drugs as well.

They could also use a combination of generic and branded drugs to maintain a significant presence in a class of drugs or a therapeutic area. Diabetes provides a hypothetical example. Diabetics frequently suffer from hypertension – a situation that could be amenable to such an approach. In such a case, it might be in a pharmaceutical company's interest to offer a package of its (branded) diabetes treatment along with its (generic) anti-hypertensive. This hypothetical package could be priced advantageously to meet the needs of patient, prescriber, and pharmaceutical company.

Pharmaceutical companies should use relationships to manage product life cycles and maximize earnings throughout a drug's life. When drugs are moving from patented to generic status, Big Pharma players can work with Gx companies to reformulate the product in ways that increase therapeutic benefits and extend legal protection – and profits – for both parties, even after patent protection for the original molecule or formulation has ended.

Cardizem (diltiazem, a calcium channel blocker) provides an excellent example of how incremental therapeutic improvements by both a big pharmaceutical company and an emerging player can extend a patent's life. The original patent expired in 1988. Aventis was able to create a new blockbuster with a sustained-release version, Cardizem CD, but was unable to reformulate the drug in a third iteration. Biovail, a well-known company, purchased the patent in 2002. With its intense focus on drug delivery and reformulation, Biovail was able to develop a very successful long-acting version of the drug, Cardizem LA, 14 years after the original protection ended. To this end, more Rx companies should partner with Gx companies that have special skills and this strategic focus.

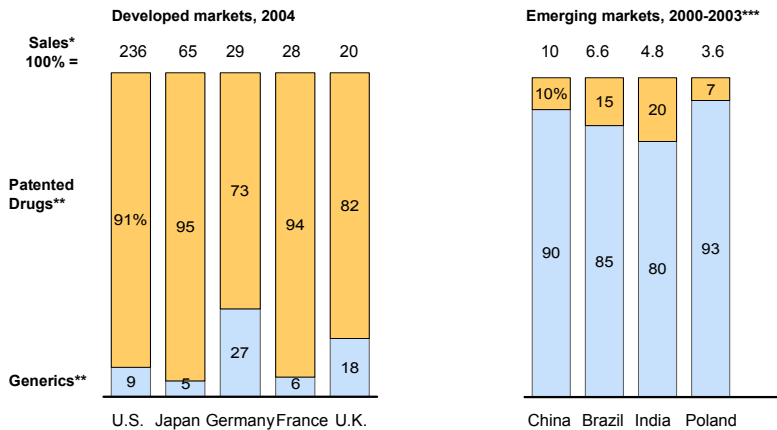
Second, Gx manufacturers that gear their cost structures for utmost efficiency can provide Rx companies with significant *new chemical engineering capabilities* at much lower cost. A number of Indian companies, for example, are already manufacturing drugs for Rx companies: Ranbaxy is making products for Eli Lilly, Lupin for Cyanamid, and Nicholas Piramal for Allergan and Siegfried.

The cost-effectiveness of these manufacturers has made them quite competitive, and Gx manufacturers regularly supply bulk APIs to large Rx companies – often as the sole supplier. A vertically integrated Indian Gx player, for example, can produce drugs at half the cost of a large U.S.-based Gx competitor. Some emerging Chinese players may prove to be even more cost-efficient than their Indian counterparts. In fact, many Indian players are sourcing more than 30% of their APIs from their Chinese counterparts.

Third, although patented drugs represent the vast majority of prescription drug revenues in the U.S. (91%), Japan (95%), Germany (73%), and the U.K. (82%), the balance swings in the other direction in emerging markets. In China, 90% of drug sales are either generic, near-generic, or “copies”; in Brazil, 85%; in India, 80%; and in Poland, 93% (*Exhibit 3*).

Exhibit 3 EMERGENT GENERICS

Pharmaceutical sales %, \$ bn



* Sales data is from IMS World Review (except for China and Poland)

** Patented/generic split is from ESPICOM. Generic defined as a drug whose patent has expired

*** 2001 values for China; 2000 values for Poland; 2003 values for Brazil reflects patented/unpatented (unpatented includes branded unpatented, generics, similars)

Sources: IMS; ESPICOM; Factiva.com; EGA; McKinsey team analysis

Rx companies will benefit by using generic drugs as a way to *enter these large – and growing – markets*. The right alliance with a Gx manufacturer would enable an Rx company to establish a beachhead in Brazil, for example, with its huge under- and uninsured population. Co-marketing patented and generic products is one approach. Selling branded generic products is another way to build both position and reputation.

Finally, many Gx companies are making relatively large investments in R&D, augmenting *new product development capabilities* that will give Rx makers and even biotech firms a run for their money. Ranbaxy Laboratories, for example, started its discovery research in the mid-1990s and filed its first IND (investigational new drug) application with the FDA in 1998. A year later, it signed an out-licensing agreement with Bayer for ciprofloxacin OD. Ranbaxy has also entered into an alliance with GlaxoSmithKline to collaborate on drug development – even though the two companies have clashed in court over patent protection and are likely to continue to do so. Novartis, too, has overlooked a lawsuit and hired Dr. Reddy's for diabetes research. Other major Rx players are investing in India, especially now that India has expanded patent protection laws.

Additional examples abound. Teva has devoted one-third to one-half of its total R&D spending to drug discovery in recent years. Watson has 3,100 employees in its R&D divisions, and its branded products now account for

60% of the company's profits. Pliva has seven new chemical entities (NCEs) in the pipeline, with three more in clinical trials, and has been acquiring companies strong in anti-viral drugs and combinatorial genetics.

We expect to see many more joint ventures in drug development and believe that pharmaceutical companies' R&D portfolios would benefit significantly from alliances with those Gx companies that are moving into R&D.

* * *

In most cases, the market has looked with disfavor on Rx companies that have purchased Gx manufacturers, on the theory that these deals lack synergy and may even entail a conflict of strategic interest. Flexible alliances and partnerships are a more promising route. We believe that Rx companies can no longer afford to ignore the benefits of working closely with Gx manufacturers and should seek paths to such partnerships. The two groups will certainly find themselves in opposition at times. But extending patent protection, making deals for authorized generics, moving jointly into HMOs and emerging countries, improving a molecule's therapeutic benefit, and partnering to develop and market new drugs are all areas in which Rx companies may want to consider working together with reputable generics players. Both sides may find that putting the past behind them will be worth the effort.

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