Assessment of the Opportunities for Pharmaceutical Manufacturers in Emerging Markets

Tim Anderson, MD; Ira Das, PhD; Jay Olson; and Doug Sobelman, MD

Overview
Pharmaceutical sales growth in mature markets like the United States and Western Europe has been in decline over the last decade. While these mature markets account for a modest 11% of the global population, they contribute a hefty 67% of total pharmaceutical industry sales.1 For the first time in modern history, year-to-year sales in the United States, the single largest market with about $300 billion in annual sales, could turn negative. A conference for pharmaceutical investors involving industry experts on the topic of emerging markets on May 6, 2009 confirmed that the territories represented by emerging markets are now more important to pharmaceutical manufacturers.2 While still a comparatively minor contributor (around 12%, or about $91 billion, in 2008) to overall global drug sales, the emerging markets over time will grow in size and importance and will continue to shape various aspects of pharmaceutical company strategy. The emerging markets territories, designated as “EM-7” (China, Brazil, Russia, India, Mexico, South Korea, and Turkey), could generate an incremental $80 billion per year or so of badly needed revenues for the pharmaceutical industry in 5 years.

There are 2 primary reasons why the commercial opportunity in emerging markets is finally being realized. First, intellectual property protections are strengthening, often linked to compliance with global trade agreements.3 Second, gross domestic product (GDP) is rising in these markets, with a steady increase in the number of wealthier, middle-class citizens. In several instances, governments have also been building out their health care infrastructure. China, Mexico, and Turkey have committed to providing health care coverage for all of their citizens by the end of the decade.4,5,6 China’s self-imposed mandate goes under the name of Healthy China 2020.

It would be a much simpler exercise to synthesize the data on emerging markets to better understand this opportunity if those data were routinely made available. Unfortunately, this does not yet occur regularly. While drug manufacturers have conveyed genuine excitement about emerging markets, they have been slow to disclose basic information such as sales levels, but this is slowly changing. One of the goals of this report is to pull together as much available information as possible at (a) the company level, (b) the country level, and (c) the macro level to show the few bright spots in an otherwise challenging fundamental landscape for the pharmaceutical industry.

For valuation of pharmaceutical manufacturers, target multiples are determined primarily by assessing a company along 4 principal metrics: (a) research and development (R&D) quality/opportunity, (b) exposure to generic competition, (c) management consistency, and (d) intermediate-term growth prospects. We gather our information from a number of sources, including corporate reports, discussion with management teams, and a variety of industry experts at various outside firms. The future target price is calculated by applying a multiple to the expected earnings for the following 12 months.3 Valuation and future target prices are determined in the context of risks. Risks to the pharmaceutical industry include the following: (a) the failure of late-stage pipeline products, at various companies, to make it to market; (b) the possibility that key patent cases are lost in the courts, for example, Lovenox; (c) greater than anticipated pricing pressure in the Medicare drug benefit plans; (d) softening of demand; and (e) health care reform efforts by the new Democratic Obama administration. These risks could cause further price/earnings (P/E) multiple contractions across the industry and worsen the outlook for the group.

Risks in the United States and European countries may be mitigated somewhat by sales growth in emerging markets that can occur even in the face of low pipeline productivity and innovation hurdles. Pharmaceutical manufacturers may be able to promote mature brands, since some of these brands, even brands that have lost patient protection, have sold well in the emerging markets associated with inefficient generic markets and less control over patients by payers.

The Macro Perspective
Established markets such as the United States, Western Europe, and Japan will likely grow by low single-digit percentages over the next 5 years, whereas emerging markets are likely to continue growing in the mid-teens percent range on average (Figure 1).6 Thus far, the impact of the slowing economy on growth in emerging markets has been minimal. But it is still early, and there are some anecdotes suggesting that certain markets (e.g., Mexico) might slow more than others depending on the length of the economic downturn. Shorter-term disruptions aside, the longer-term momentum in emerging markets seems to be sustainable. This trend is being driven by (a) an increase in the number of middle-class citizens in these regions; (b) more dedicated public spending on health care leading to a more robust health care infrastructure; (c) greater attention/investment by multinational drug companies; and (d) better intellectual property protection. The factors affecting growth of pharmaceutical sales in the
mature markets compared with the EM-7 are shown in Figure 2.

In 2008, the EM-7 generated pharmaceutical sales of approximately $91 billion, and we forecast that this will nearly double in 5 years to around $170 billion (Figure 3). China is commonly viewed as likely to remain the biggest of the EM-7. China’s ranking in the league tables has risen from ninth in 2003 to fifth in 2008. By 2013, China could reach the third spot, with estimated sales of $73 billion (up from $25 billion in 2008), second only to the United States and Japan and ahead of every Western European country.

The contribution of emerging markets to overall industry growth is also likely to continue rising. In 2009, we estimate that it will account for 34% of total market growth; EM-7 contribution to sales growth was 17% in 2006, 23% in 2007, and 32% in 2008 (Figure 4). The disproportionate sales growth will push the EM-7 to 13% of global pharmaceutical sales, in U.S. dollars, in 2009 (Figure 5).

However, it seems evident that the level of infrastructure built up by most drug companies (in terms of field force, R&D investments, etc.) is still at a comparatively young stage. In other words, drug companies have much investing left to do in these markets and will continue to increase their businesses by both internal development and external acquisition. Despite this, we are told that the territories of the emerging markets are profitable, but the degree of profitability varies by company and by market. GlaxoSmithKline (GSK) reported that its operating profit margins in different geographies 2009 Q1 were as follows: 35% for emerging markets, 65% in the United States, 57% in Europe, and 54% in Asia Pacific/Japan. (Note: These operating profit margins calculations exclude R&D and other unallocated pharmaceutical costs.)

Building a presence in emerging markets requires drug companies to do things differently than in established markets such as the United States, Western Europe, and Japan. Despite increasing affluence in emerging markets, many drugs available in Western markets are currently beyond the means of people in these countries. It may well be a different set of drugs that sell well in emerging markets. Often, this will not mirror a given manufacturer’s leading global brands and will subsequently require that portfolios continue to be regionalized. We expect additional deal making and investments in emerging markets that sometimes may seem out of the ordinary (e.g., Sanofi-Aventis’ sudden push into generics in certain territories).

While the sales force “arms race” may be over in mature markets such as the United States, it may just be starting in emerging markets. This has implications on the overall amount of cost savings drug companies will be able to achieve. All drug companies we cover have been pruning back their infrastructure in mature markets, yet all simultaneously seem to be building up their businesses in emerging markets. Investors should expect that overall levels of cost reductions for the drug industry may not be as great as it might seem. Few drug companies have been willing, at least as of yet, to provide much detail behind their infrastructure spending in these regions.

Company-Specific Strategies Differ

There is no standard, proven emerging market business model for drug companies to follow. At present, drug companies are experimenting with different approaches, leading to one source of divergence among the different drug companies. Larger drug companies (e.g., GSK) seem to be taking the approach that the biggest footprint possible is the best way to move forward—this will likely promote further deal making that includes a mix of collaborations and acquisitions. Smaller drug companies (e.g., Bristol-Myers Squibb) seem to be taking the approach that a targeted footprint is better—this will likely cause further pruning of the portfolios of these companies (and the countries in which they participate), by selling these pruned businesses to the larger pharmaceutical companies. Because countries within the emerging market territories can be heterogeneous (e.g., population demographics, health care funding and sources of funds, access to health care, and elasticity of demand), participating in a large number of them requires more portfolio breadth than smaller companies currently have (or want), which helps explains the differences in approach.

Also, there is a divergence in what to sell. Bristol-Myers Squibb, for example, seems ready to stick with innovative, patent-protected molecules as it does in established markets. Sanofi-Aventis, on the other hand, appears to feel that selling branded generics (in addition to its patent-protected medicines) will be an important way to gain share; thus its recent acquisition of local market generic companies such as Medley and Zentiva.

Individual drug company strategy must also acknowledge the
heterogeneity of the EM-7 territories in demand by pharmaceutical class. Data from IMS show that the top 5 drug therapy classes, based on sales in U.S. dollars for 2004-2008) differ substantially among the EM-7 territories (Figure 6). The difference among the EM-7 territories is explained by factors that include demographics, lifestyles, cultural beliefs, medical practice patterns, and health insurance coverage. With respect to coverage, lower out-of-pocket spending is one factor that contributes to higher drug sales, and while out of pocket spending is less than 20% in the United States, Japan, and the European Union, only South Korea has a similar proportion of out-of-pocket spending (Figure 7). Out-of-pocket spending accounts for about 50% of total pharmaceutical sales in China and Mexico and about 80% in India.

Yet another source of divergence we have noticed relates to the level of progress made by different drug companies in emerging markets. It is safe to say that European pharmaceutical companies

---

**FIGURE 2** Growth Trajectories Driven by Multiple Factors in Mature Markets Versus Emerging Markets (EM-7)

- Low Levels of New Product Flow
- Increase in Number of Cheaper Generic Alternatives
- Saturated Markets (High Levels of Per Capita Spend)
- Hostile Payer Systems - Erect Barriers to Access
- Growth of Middle Class Wealth
- Expansion of Healthcare Coverage
- Low Starting Levels of Per Capita Drug Spend
- Changes in Lifestyle, Development of Chronic Disease

*Source: Bernstein analysis.*
*EM-7 = China, Brazil, Korea, Turkey, India, Mexico, and Russia.*

**FIGURE 3** Pharmaceutical Sales in Emerging Markets

Source: IMS Health; reproduced with permission: Cacciotti J. (2009). B = billion; CAGR = compound annual growth rate; E = estimated.
in Brazil is predominantly a public system with approximately 75% of the population relying exclusively upon publicly provided health care. The other 25% of Brazilians have various forms of privately funded health care with the wealthiest paying cash for the most sophisticated health care available.

Patented products account for 6% of Brazil’s drug market by volume but 12% of total sales of $9.8 billion in U.S. dollars (2008). The market is dominated by branded generics or “similars” (locally manufactured generics that have not shown bioequivalence). The government is now forcing the “similars” to demonstrate bioequivalence in order to remain on the market as true substitutable generics or else be phased out. True generics account for around 12% of sales value, while “similars” account for 76% of sales value. These proportions should reverse as “similars” are replaced with true generics. Public sector spending on pharmaceuticals is driven by a government program that mandates free access for treatment of a number of serious diseases, such as AIDS, cancer, and schizophrenia. With this reasonably generous program to support patients suffering from catastrophic conditions, Brazil’s share of global pharmaceuticals spend (about 2%) is nearly in proportion to their share of the global population.

In Brazil is generally ahead of their peers in the United States. Because of their geographic location, European companies historically are more accustomed to dealing with a greater number of countries, even if only those spread throughout Europe and the surrounding regions. This is not to say, however, that U.S. drug companies will not be able to catch up. Multinationals that are relative latecomers to the emerging markets scene (such as Merck and Eli Lilly) are clearly stepping up their levels of investment. In the case of U.S.-based Merck and Pfizer, their respective pending mergers (Merck with Schering-Plough and Pfizer with Wyeth) should leapfrog each into a better emerging market position where various important synergies will be realized. In fact, this may have been one of the motives behind their mergers.

The Brazil Case Study in the EM-7 Portfolio
Brazil has the largest population in Latin America with 198 million people, representing approximately 3% of the global population. Brazil’s GDP ranks 95th globally at $9,800 per capita, and wealth is highly concentrated in a small percentage of the population. Brazil’s population is quite young with 28% aged 14 or younger, and only 6% aged 65 or older. Life expectancy at birth is 69 years for men and 76 years for women, although those figures are projected to increase. A declining fertility rate combined with increasing life expectancy will result in aging of the population over the next few years. The health care system in Brazil is predominantly a public system with approximately 75% of the population relying exclusively upon publicly provided health care. The other 25% of Brazilians have various forms of privately funded health care with the wealthiest paying cash for the most sophisticated health care available.

Patented products account for 6% of Brazil’s drug market by volume but 12% of total sales of $9.8 billion in U.S. dollars (2008). The market is dominated by branded generics or “similars” (locally manufactured generics that have not shown bioequivalence). The government is now forcing the “similars” to demonstrate bioequivalence in order to remain on the market as true substitutable generics or else be phased out. True generics account for around 12% of sales value, while “similars” account for 76% of sales value. These proportions should reverse as “similars” are replaced with true generics. Public sector spending on pharmaceuticals is driven by a government program that mandates free access for treatment of a number of serious diseases, such as AIDS, cancer, and schizophrenia. With this reasonably generous program to support patients suffering from catastrophic conditions, Brazil’s share of global pharmaceuticals spend (about 2%) is nearly in proportion to their share of the global population.

In addition to an increasing aging population, Brazil anticipates increasing medical access of its citizens, which should add...
disease prevalence.

The Brazilian government uses a reference pricing system similar to those employed by European Union countries. In addition to dictating the initial price for a new drug, the government also designates annual price increases. The government requires a mandatory 23% discount for all drugs it purchases. Average drug prices for select medicines in Brazil are compared to 2 different prices for the same medicines in the United States: (a) the Federal Supply Schedule (FFS), and (b) www.drugstore.com, which represents the cash price that consumers without health insurance pay. It appears that prices for the most popular drugs used to treat acute, symptomatic conditions such as pain or sexual dysfunction tend to be closer to U.S. prices than chronic therapies (Figure 8).

Pricing and Market Access

There will likely be only slow price erosion in emerging markets. Brand equity carries substantial weight in many markets, including China, which is further buttressed by occasional scandals in the past involving genuine issues of quality with generic medicines (although quality standards by regulatory authorities are rising). This means that even with older products where patent protection no longer exists, sales can still be meaningful. GSK reports its experience with Augmentin, where in 1 particular market the drug still sells quite well despite there being nearly 15 generic competitors. The company attributes this to the Augmentin name and says that the strength of the brand allows it to maintain market share despite

to the favorable climate for drug utilization. Due to its younger populace, Brazil suffers a slightly different disease burden when compared with the United States. Causes of mortality in Brazil are more weighted towards gastrointestinal/metabolic, cardiovascular, respiratory, and infectious diseases versus the United States, which suffers from more cancer, and Brazil’s pharmaceutical market is accordingly fitted to its underlying

<table>
<thead>
<tr>
<th>Brazil</th>
<th>Russia</th>
<th>India</th>
<th>China</th>
<th>Mexico</th>
<th>Turkey</th>
<th>S. Korea</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angiotensin II antagonist</td>
<td>Antivirals excluding HIV</td>
<td>Angiotensin II antagonist</td>
<td>Other beta-lactam antibacterials</td>
<td>Angiotensin II antagonist</td>
<td>Human insulins &amp; analogs</td>
<td>Antivirals excluding HIV</td>
</tr>
<tr>
<td>Anti-ulcerants</td>
<td>Anti-rheumatic non-steroidal</td>
<td>Human insulins &amp; analogs</td>
<td>All other CNS drugs</td>
<td>Erectile dysfunction products</td>
<td>Oncologics</td>
<td>Angiotensin II antagonist</td>
</tr>
<tr>
<td>Oral antidiabetics</td>
<td>Hormonal contraceptives</td>
<td>Cephalosporins</td>
<td>Kanpo &amp; Chinese medicines</td>
<td>Infant formulas</td>
<td>B2 stimulants &amp; corticoids</td>
<td>Lipid regulators</td>
</tr>
<tr>
<td>Lipid regulators</td>
<td>Cold preparations</td>
<td>Anti-ulcerants</td>
<td>Standard solutions</td>
<td>Anti-obesity preparations</td>
<td>Anti-epileptics</td>
<td>Antplatelets</td>
</tr>
<tr>
<td>Muscle relaxants</td>
<td>Interferons</td>
<td>Oral antidiabetics</td>
<td>Oncologics</td>
<td>Hormonal contraceptives</td>
<td>Antipsychotics</td>
<td>Benign prostatic hypertrophy products</td>
</tr>
</tbody>
</table>

premium pricing relative to generic alternatives.

However, there are several forces to contend with that could jeopardize pricing. Some of these factors include the following: (a) price disparity between different emerging markets versus the older practice of trying to maintain more uniform pricing across a region; (b) more involvement by governments in emerging markets, which includes the formation of health technology assessment (HTA) bodies similar to the National Institute for Clinical Excellence (NICE) program in the United Kingdom (the use of HTAs is expanding in Brazil, Mexico, and Turkey, and South Korea uses HTA aggressively); and (c) a rise in the number of drug companies competing in emerging markets, which will inevitably lead to at least some degree of price competition, especially in markets that rely on tendering (competitive bidding).20 There is also the possibility that the price erosion curve for the branded generics will move slowly (i.e., over the course of many years). The risk is that these markets will mature (prices erode) more quickly than the industry currently anticipates.

Patent Protection and the Market Outlook

Better economic health has been a central driver of the increasing commercial appeal of emerging markets. Another has been better intellectual property protection, which really began in 1994 with the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement).21 Patent protection has generally improved over the last decade but still varies substantially by country within the emerging market territories, so many challenges persist. In India, for example, the biggest challenge is the issuing of patents because of various structural impediments. In Brazil, the patent laws are well enforced, but there is an approximate 2-year waiting period for patent review and approval. In China, the biggest challenge is not patent issuance but, rather, enforcement of patents once they are granted. Despite various problems that still exist in the patent framework of many emerging market countries, we believe that progress will be made, albeit slowly.

![Comparison of Pharmaceutical Prices](image)

**FIGURE 8** Comparison of Pharmaceutical Prices in Brazil Versus the United States


**Authors**

TIM ANDERSON, MD, is Senior Analyst and IRA DAS, PhD; JAY OLSON; and DOUG SOBELMAN, MD, are Associate Analysts with BernsteinResearch, a division of Sanford C. Bernstein & Co., LLC, New York, New York.

CORRESPONDENCE: Tim Anderson, MD, Senior Analyst, BernsteinResearch, Sanford C. Bernstein & Co., LLC. 1345 Avenue of the Americas, New York, NY 10105. Tel.: 212.407.5901; E-mail: tim.anderson@bernstein.com
DISCLOSURES

The authors are engaged in the business of analyzing market valuation of the equity of pharmaceutical manufacturers. Das, Olson, and Sobelman provided the bulk of the analysis of the primary market data. The authors shared equally in writing and editing the manuscript.

REFERENCES


