

# Unlocking pharma growth

A blue molecular structure with a globe in the background. The molecular structure is composed of blue spheres connected by black lines, forming a complex, interconnected network. The globe is a light blue color with a grid of latitude and longitude lines. The background is a bright blue sky with white clouds.

Navigating  
the intricacies  
of emerging  
markets



# Unlocking pharma growth

Navigating the intricacies of emerging markets



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# Introduction

As pharmaceutical companies grapple with expiring patents and pricing pressures in developed markets, they are starting to expect more from emerging markets. Although the global economic environment is depressing near-term GDP growth, countries such as China, India, Russia, and Brazil have a bright medium- and long-term future as some of the world's largest economies. Rapid growth can also be expected in some smaller economies in eastern Europe, Southeast Asia, Latin America, and the Middle East. As GDP growth converts into greater personal wealth and higher disposable incomes, spending on health rises disproportionately, and drugs consumption even more so.

Even in the near term, large emerging pharmaceutical markets are likely to grow more strongly than developed markets. The share of revenues and profits contributed by emerging countries is lower in pharma than in other global industries, and major multinationals have yet to tap these countries' vast emerging middle classes. At a typical global consumer goods company, emerging markets account for a share 1.5 to 3 times higher than at a typical multinational pharma company. Such figures indicate that emerging markets are still emerging and offer significant opportunities for further growth.

Such optimism must, however, be tempered by an awareness of the challenges and volatility that multinational pharma companies face in emerging markets. First, government intervention is increasing through both direct actions (such as price setting and compulsory licensing) and indirect measures (such as changes in manufacturing requirements and the terms of government tenders). Second, promotions are reaching saturation point, especially in the big cities where multinational and local companies have expanded their sales forces rapidly over the past few years. Third, as some multinationals shift their focus toward specialty products, managing portfolios of drugs with very different commercial needs is becoming considerably more complex. Fourth, the war for talent continues, and is intensifying in some countries.

Looking ahead, we believe that emerging markets continue to offer attractive opportunities for growth, but pharma companies will need to navigate the intricacies of individual markets and tailor commercial models and approaches to their specific needs.

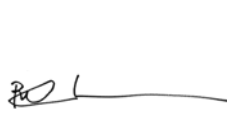
In this compendium of articles, McKinsey practitioners share new perspectives on unlocking growth in emerging markets. The first section focuses on developing tailored capabilities and approaches in key functions such as sales and marketing, R&D, clinical trials, and the supply chain. The second section focuses on individual countries—China, India, Russia, Brazil, and Mexico—and describes models to tackle the challenges and capture the opportunities they offer. If you have any comments on these articles or would like further information, please feel free to contact the authors directly (see “About the authors” for details), or email [pharma\\_emerging\\_markets@mckinsey.com](mailto:pharma_emerging_markets@mckinsey.com).



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# Rethinking the big pharma sales model: Thoughts from China





## As the ranks of China's field forces continue to swell, pharma's traditional commercial model is showing signs of strain. It's time for multinationals to get smarter about how they sell.

Bing Chen, Franck Le Deu, and Jin Wang

Face-to-face selling may be on the wane in developed markets, but it's still the channel of choice for pharmaceutical companies in China. Walk down the corridor of a big hospital in Shanghai or Beijing and you're as likely to meet a sales rep as a nurse or doctor. This traditional sales model has enjoyed years of success, with leading multinationals seeing their China revenues multiplying five-fold between 2005 and 2011, adding \$7 to \$8 billion to their collective top line.

Beyond that, dozens of China blockbusters have emerged with annual revenues exceeding \$100 million. We estimate that 34 drugs attained that symbolic height in 2011, compared with just two in 2005. The largest prescription brand in the market, Plavix, is set to break the \$400 million mark in 2012 (Exhibit 1).

But is this rate of growth sustainable? The commercial model that underpins it is starting to show signs of strain. Challenges in productivity and profitability and the need to get physicians' attention in crowded hospitals are prompting pharma companies to reconsider their sales approach. Many continue to put more feet on the street, but some are calling a halt to expansion until they work out the best next move.

To ensure that the next wave of growth meets profitability expectations, pharma

companies need to consider other sales models and make better-informed choices about staff deployment, sales and marketing initiatives, and resource allocation. Below we explore how they have achieved their recent growth, what the dominant sales model looks like, why its effectiveness has probably peaked, and how companies could pursue a more sustainable model.

### Bucking the global trend

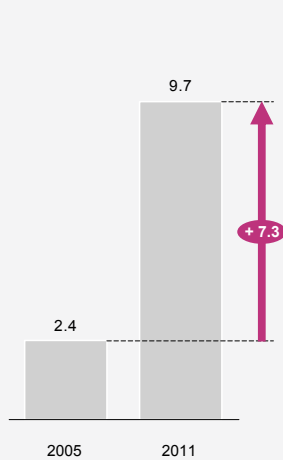
The top 10 multinational pharma companies have added more than 17,000 reps in China over the past five years, with some adding as many as 1,000 in a single year. Pfizer now fields a sales force numbering over 4,000; Bayer, MSD, AstraZeneca, and a few others are not far behind. In Novo Nordisk's field force of more than 2,000 reps, the vast majority cover a single area, diabetes-related products.

This expansion stands in sharp contrast to global trends. In the United States, for instance, multinationals have shed 33,000 sales jobs from a peak of 105,000 five years ago. They are moving to new channels such as service reps and call centers, as well as new models that involve acting like an educational resource rather than making sales pitches.

## Exhibit 1: China's pharma boom

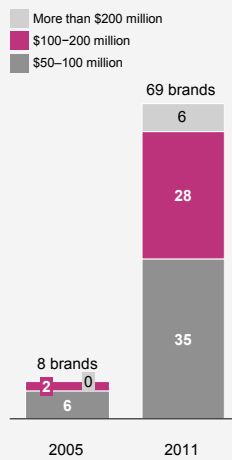
### Cumulative sales of prescription drugs at top 10 multinationals

US\$ billions



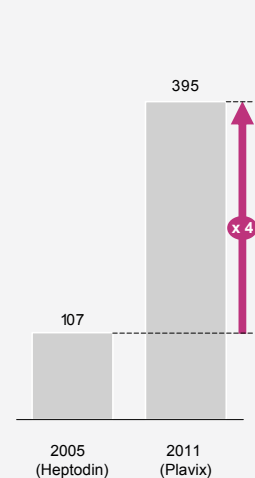
### Bestselling multinational prescription brands

Annual revenue in US\$ millions; number of brands



### Leading prescription brand

Annual sales, US\$ millions



Note: At constant exchange rate of US\$1 = 6.3 renminbi  
Source: press reports; interviews; CPA; McKinsey analysis

These approaches have cut costs and been welcomed by physicians who resented the old hard-sell tactics.<sup>1</sup>

However, the new techniques have yet to make real inroads in China, which still relies on face-to-face selling on a huge scale. There are several reasons for this:

- **The broad range of drugs being promoted.** Many portfolios include not only innovative patented drugs—the mainstay of developed markets—but also off-patent, mature brands that still have room to grow in China despite competition from generics. Both require face-to-face selling to physicians.
- **The need to cover a vast territory.** Most prescriptions are written in hospitals, and there are many large hospitals for reps to visit. Most multinationals derive the bulk of their business from the top 50 to 80 cities and 500 to 1,000 hospitals, but leading

companies cover more than a hundred cities and thousands of hospitals. The field force for blockbuster primary-care brands can easily reach 500 representatives, and teams of 130 reps for one brand are not unusual in specialty care such as oncology.

- **The stage of market development.** Because many therapeutic categories are still at an early stage of development, companies need to invest in educating physicians to improve diagnostics, establish standards of care, and drive large-scale adoption of therapies. It is reps who do the work of conveying medical and product information during their frequent interactions with doctors.
- **The use of single-line sales forces.** Most reps covering larger cities and hospitals sell only one product, and their companies tie their monetary incentives to that product so as to maximize its

chances against heavy competition. This approach also meets physicians' needs, since it helps them split their business among multiple companies and reps so that they aren't perceived as being too close to any individual or organization.

- **The escalation in competitive intensity.** Increasing competition for share of voice, the need to respond to expansion by competitors, and the fear of falling behind in market coverage have all contributed to the growth in field forces.

## Signs of trouble

If this traditional sales model has delivered attractive returns, why change it? We believe that the way the Chinese market is evolving is putting the model under strain. The chief challenges it faces are a lack of productivity growth and intensifying cost pressures.

### Productivity is declining

A crude measure of the average productivity of multinationals can be obtained by dividing total sales by the number of reps. On this measure, the annual productivity of the top 10 multinationals has declined by 2 percent overall in the past five years. Although some companies have managed to raise their headcount and their productivity at the same time, many others found that taking on more reps diluted their performance.

What accounts for this weak showing?  
We see three factors as key:

- **Companies focused on boosting rep numbers, not productivity.** In the rush to scale up, multinationals paid too little attention to the skills, capabilities, and support needed to drive performance in the field. Recruiting and hiring took

priority over training, defining account potential, tracking performance, and building IT support systems. Reliable information on account potential, competitive dynamics, and customer needs was in short supply. Investments in market research, voice-of-the-customer studies, and on-the-ground observation were limited, partly because sales came easily. Accurate data on doctor-level prescriptions and salesforce effectiveness barely existed. As a result, the deployment of field reps was patchy, with big performance gaps between one city or hospital and another.

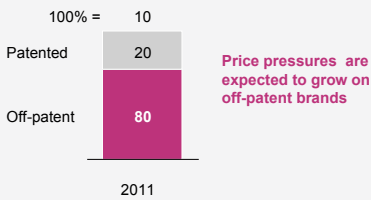
- **Expansion involved moving into less productive accounts.** Having covered the top hospitals and cities, companies started to add lower-tier hospitals in smaller cities and rural areas to their customer base. These accounts cost more to serve and are less productive, so each new rep must visit more of them to cover the same potential. Many are located in territories with entrenched local competition and limited access to the local formulary. As a result, penetrating new accounts calls for patience and strong cross-functional collaboration—often difficult to achieve in China.
- **Staff turnover is high.** Most companies have staff turnover rates in excess of 20 percent per year. As well as direct hiring costs, high turnover creates indirect friction costs, such as the damage caused by leaving a territory temporarily open in a promotion-sensitive market. To reduce turnover, companies are increasing employee benefits and providing better promotion opportunities, but we don't expect a dramatic improvement any time soon.

Other factors also contribute to low productivity. Because turnover and hiring are so rapid, few reps have more than two

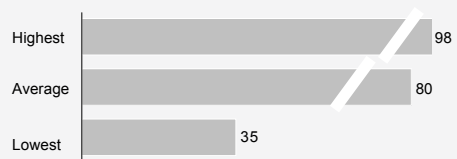
## Exhibit 2: Portfolios are exposed to price cuts

### Share of off-patent brands in total sales remains high...

\$ billions

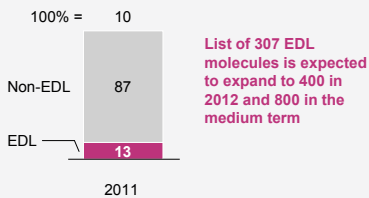


### ...but with large variations between companies

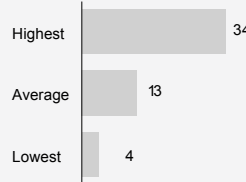


### Share of EDL\* drugs adds to exposure...

\$ billions



### ...and also shows significant variations between companies



\* Essential drug list; currently comprises 307 molecules (205 western medicine molecules and 102 traditional Chinese medicines)

Source: industry association; GBI Source; SFDA; McKinsey analysis

years' experience. Most enjoy considerable freedom in deciding how to spend their time and which doctors to visit, and companies are seldom able to track their activities closely, so they can easily avoid the most competitive accounts in favor of easier accounts with lower potential value.

### Revenue and cost pressures are mounting

The economics of the business face challenges on several fronts.

Prices have taken a battering for “innovative” drugs: molecules that have gone off-patent and been genericized globally, such as Adalat by Bayer and Losec by AstraZeneca. Having benefited from a price premium for many years, such drugs are still among the bestsellers for most multinationals. The government's phasing out of the price premium has had a dramatic effect on

these companies, since on average about 80 percent of their revenues comes from off-patent molecules (Exhibit 2).

In addition, the establishment of the essential drug list (EDL), which covers 205 western molecules, has created severe pricing pressures for some drugs. Its effect varies by molecule, depending on the availability of high-quality supply from local companies, but its overall impact has been to depress prices substantially. The government aims to extend it to 800 or more molecules in the medium term, although how this will be implemented is still uncertain.

As prices have fallen, so costs have risen: the fully loaded cost of a sales rep has steadily increased to some \$45,000 to \$55,000 per year. The rapid expansion of sales forces and the acute need for experienced reps continue to push up

salaries. We expect costs to rise by about 8 percent per year to an average \$80,000 by 2016. A slowing of the pace of field force growth will relieve some of the salary pressure on multinationals, but this may be partly offset by the increase in competition from local companies.

These productivity, quality, and cost issues will intensify in the next few years, and pharma companies will have to tackle them because the field force is likely to remain the dominant model in China for the time being.

### Planning an effective response

How can multinationals anticipate and respond effectively to these shifts? We have identified eight principles for them to consider as they weigh their next steps.

### ***Take salesforce effectiveness seriously and build systems, capabilities, and mindset to drive productivity gains.***

Few multinationals have the data to show which accounts and reps perform well and what the reasons are. Sales, marketing, and market-access colleagues should work together to analyze why a given account is doing well or badly, using common metrics such as share of new patients, preferences of influential hospital stakeholders, and frequency of activity relative to competitors. Once the causes of performance become clear, companies should develop plans to raise lagging accounts closer to the level of high performers and put tracking mechanisms in place to monitor progress.

### ***Revisit the single-line sales model.***

This is the single biggest change lever, and some multinationals are already achieving encouraging results by moving to a new model. They face several challenges, from defining incentive structures to maximize sales of multiple brands to upgrading



sales reps' capabilities. Running pilots in individual cities or hospitals helps to limit risk and enables the new model to be fine-tuned before it is rolled out nationwide.

***Choose your core footprint and focus your field force accordingly.***

Many emerging opportunities, such as community healthcare clinics in large cities and county hospitals in rural areas, require new sales models. Companies busy addressing performance gaps and keeping up with growth in the core business of large hospitals and big cities may not have the capacity to address lower-priority markets. If they do, they should carefully evaluate the tradeoffs, resources, and organizational changes needed. Success calls for a granular view of sources of growth, clarity over resource allocation, and the decisiveness to walk away from some opportunities. Half-hearted short-term efforts are no way to win in China.

***Allocate resources thoughtfully across brands.***

New product launches are likely to expand companies' portfolios of patent-protected drugs, while off-patent drugs should continue to perform well for many years. Both categories require heavy investment to create demand in a developing market. With profitability in mind, multinationals must choose which opportunities to pursue and which to forswear. They should identify mature brands that have limited appeal and could be de-emphasized, low-demand products that could be outsourced, new launches that will require heavy investment to build up capabilities in unfamiliar therapeutic areas, and so on.

***Develop marketing as a key function.***

For many years the sales function took center stage in China while marketing languished in the background. Links

between the two were tenuous at best. But now that brands reach hundreds of millions of dollars in annual revenues and new launches face a more competitive and difficult-to-access environment, marketing budgets can easily stretch to \$30 million. Companies should take a hard look at how resources are being spent and decide whether to double down or pull back on some initiatives. They should also consider how marketing can support the sales team effectively and help implement brand strategy.

***Embrace the power of price elasticity.***

Multinationals have largely overlooked or underestimated the power of price elasticity to boost demand. When local companies launch a generic drug, they typically sell it at a price 30 to 50 percent lower than that of the branded equivalent, spurring additional demand for the molecule at the lower price. For instance, Sino Biopharm has achieved impressive uptake for Runzhong, its generic version of Baraclude (entecavir)—Bristol-Meyers Squibb's drug for hepatitis B—since launching it in March 2010.<sup>2</sup> To get ahead of this curve, companies could review price points for mature brands every three to five years so as to tap latent demand and capture value that would otherwise go to local generics.

***Pilot new channels.*** Although China still lags some years behind developed markets, local companies have started to offer services that allow multinationals to offer services that allow multinationals to target customers or communicate with stakeholders in smarter, more efficient ways.<sup>3</sup> New channels such as online learning modules won't replace traditional channels any time soon, but companies should start investing in them to strengthen prescribers' loyalty, promote academic activities, and expand their market reach.

***Pursue partners while they are***

***still available.*** Partnerships can help secure access to additional products, complementary capabilities, and field coverage. Several multinationals have already formed partnerships with local companies, such as the joint ventures between MSD and Simcere in the cardiovascular market and between Pfizer and Hisun in branded generics. With few attractive prospective partners available, speed is of the essence.



Pharma companies still need armies of local sales reps to cover China's vast territories. But while this sales model is likely to remain dominant for the next few years, scale alone will no longer be an advantage. Before long, how many reps you have walking the hospital halls will matter less than how you deploy them and how you support them with better analytics, integrated marketing, and alternative channels.

## Notes

1 See "Drug sales reps try a softer pitch," *Wall Street Journal*, 10 January 2012.

2 Lefei Sun, Jinsong Du, and Iris Wang, *Bottom-fishing Future Winners in China*, Credit Suisse report, 6 October 2011.

3 See "China's digital healing," pp. 46–51.

This is an edited version of an article first published in *China Healthcare: Entering uncharted waters*, McKinsey & Company, 2012.

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## Winning in the emerging middle class: Findings from Brazil





**Global pharma companies are missing a chance to serve Brazil's increasingly prosperous and growing middle class. Although wealthier segments spend more on drugs per capita, the scale of the underserved middle-class market is almost twice as big.**

Sanjeev Agarwal, João d'Almeida, Tracy Francis, and Paula Ramos

Many multinationals are hungry to sell their goods and services to the emerging markets' growing middle class, comprising nearly 2 billion people with \$7 trillion in spending power. That immense opportunity has put this group at the center of many global corporations' strategies. But the world's leading pharmaceutical companies are holding back: the top five generate less than 20 percent of their sales in these markets.

Our study of Brazil's pharma market, the second largest in the emerging world, confirms that global pharma companies are missing a significant opportunity to make profits serving a big part of the country's middle class—120 million strong and growing fast. Just as important, expanding the reach of research-driven global pharma companies would give millions of Brazilian households access to the highest-quality patented medicines. In 2010, the value of the prescription drugs sold to Brazil's middle class was \$8 billion, mostly for unpatented medications.

While global pharma executives acknowledge the recent increase in the disposable income of Brazil's middle class, they think that this group is more interested in spending money on categories such as consumer electronics, cosmetics, and travel than on health care. In discussions with us, executives

say that the middle class prefers to rely on public health services, whose physicians prescribe only generic drugs. Moreover, these executives believe that even when physicians prescribe branded drugs, cost-conscious middle-class patients ask pharmacists to switch their medications to less expensive generics.

As a result, global pharma companies have concluded that they must focus on Brazil's wealthiest consumers and can reach the middle class profitably only through generics and branded generics—a strategy that at least five of the top ten pharma companies have recently announced. With local players as the driving force, the generic-drug market is growing at a 28 percent compounded annual rate.

But a closer look at Brazil's pharma market suggests that it's time to rethink this approach. Over the past two decades, growing incomes have allowed the middle class to satisfy not only its basic needs but also its interest in beauty products, consumer electronics, and more upscale services. Proprietary McKinsey research conducted during late 2010 and early 2011 found that better health care and education are increasingly important to large segments of Brazil's middle class.<sup>1</sup> Sixty-three percent of it considers brands very relevant for medicine and would pay a premium for trustworthy ones—a finding

typical of the vast majority of consumer goods categories. Most global pharma companies haven't invested in this population segment, however, so it has little or no awareness of their corporate brands.

Three factors lead us to believe that high-quality patented medicines are a large, profitable opportunity.

- Our research identified four middle-class segments (Exhibit 1). Two—SUS compliant (the Sistema Único de Saúde is Brazil's universal healthcare system) and struggling—have views very much in line with how pharma management tends to see the middle class: they rely on public services and purchase less expensive generic drugs. But the other two segments—committed and self-assured, accounting for almost half of the middle class—would pay out of pocket to have access to better health care (for example, to avoid waiting for a medical appointment or exam), and believe even more strongly in a relationship between a medicine's price and its efficacy than the upper classes do. These two segments are willing to make spending tradeoffs and pay extra for more effective drugs, fewer or milder side effects, and well-known brands.
- Middle-class households with older family members who suffer from chronic diseases spend 15 percent more on health care and 10 percent more on medications than the middle-class average. Many of these men and women take multiple medicines and cannot always afford to buy the highest-quality drugs, and so need to make tradeoffs. That's an important factor for pharmaceutical companies to bear in mind when developing their strategies.

### Exhibit 1: Four segments among Brazil's middle class

Willing to spend on healthcare		Rely on public healthcare services	
<b>Committed</b> "I love my health insurance. I go out of pocket to avoid lines and buy what my doctor tells me."	<b>Self-assured</b> "I'm confident about making my own choices and getting the most value out of my healthcare spending."	<b>SUS* compliant</b> "I don't have private health insurance. I follow what my SUS doctor prescribes for me and currently spend little on drugs."	<b>Struggling</b> "I rely on SUS and do not see any value in branded medicines."
Share of total 20%	27%	23%	30%

\* Sistema Único de Saúde, Brazil's universal healthcare system

Source: 2010–11 McKinsey quantitative and qualitative surveys of >800 middle-class patients

Meanwhile, the incidence of chronic diseases is rapidly increasing in this and other emerging markets; for example, Brazil's diabetes rate is expected to become one of the highest of any major country within the next two decades.

- Private health insurance, typically made available through employers, is gaining traction among the middle class. In Brazil, it pays for hospital treatment and visits to physicians, but not usually for drugs. We found that among the 50 percent of the middle class that values and aspires to better health care, the penetration of private health insurance is more than twice as high as it is in the other two segments we identified. This finding suggests that a significant household health budget can be freed up for medications. Moreover, through private insurance, middle-class patients gain access to physicians who are more open to branded medicines.

For the two middle-class segments that value and are willing to spend on health care, physicians play a pivotal role. We found that 40 percent of physicians serving the middle class perceive branded medications as more effective and appropriate for their patients. The challenge, however, is that physicians not surprisingly see affordability as a

major barrier and tend to segment the prescriptions they write by their patients' perceived social status. In our research, when physicians serving the middle class are presented with profiles of different people, the prescriptions they write are determined by accent and appearance. Our research also showed that while physicians think that the ability of middle-class patients to pay for branded drugs has increased over the past three years, they continue to underestimate the willingness to buy these medications among Brazilians who value health care.

Global pharma companies must think creatively about how to develop the middle-class segment of Brazil's pharma market. As expected, pricing is an important issue. The middle class, with an average monthly household spend of \$38 on medications, cannot afford the three top-selling patented drugs in Brazil, which average \$60 each.

Retailers and consumer goods companies, especially local ones, can offer pharma companies valuable lessons in serving the country's middle class. While it does not spend as much per capita on out-of-pocket drugs as the upper classes do, its sheer size translates into total spending almost double that of wealthier segments.



Global pharma companies would do well to take note of these findings and tailor their strategies accordingly. We believe that the lessons from our research apply not only to Brazil but also to China, India, Russia, and other emerging markets that exhibit significant out-of-pocket spending on medications, an increase in the penetration of private health insurance, and a growing aspirational middle class.

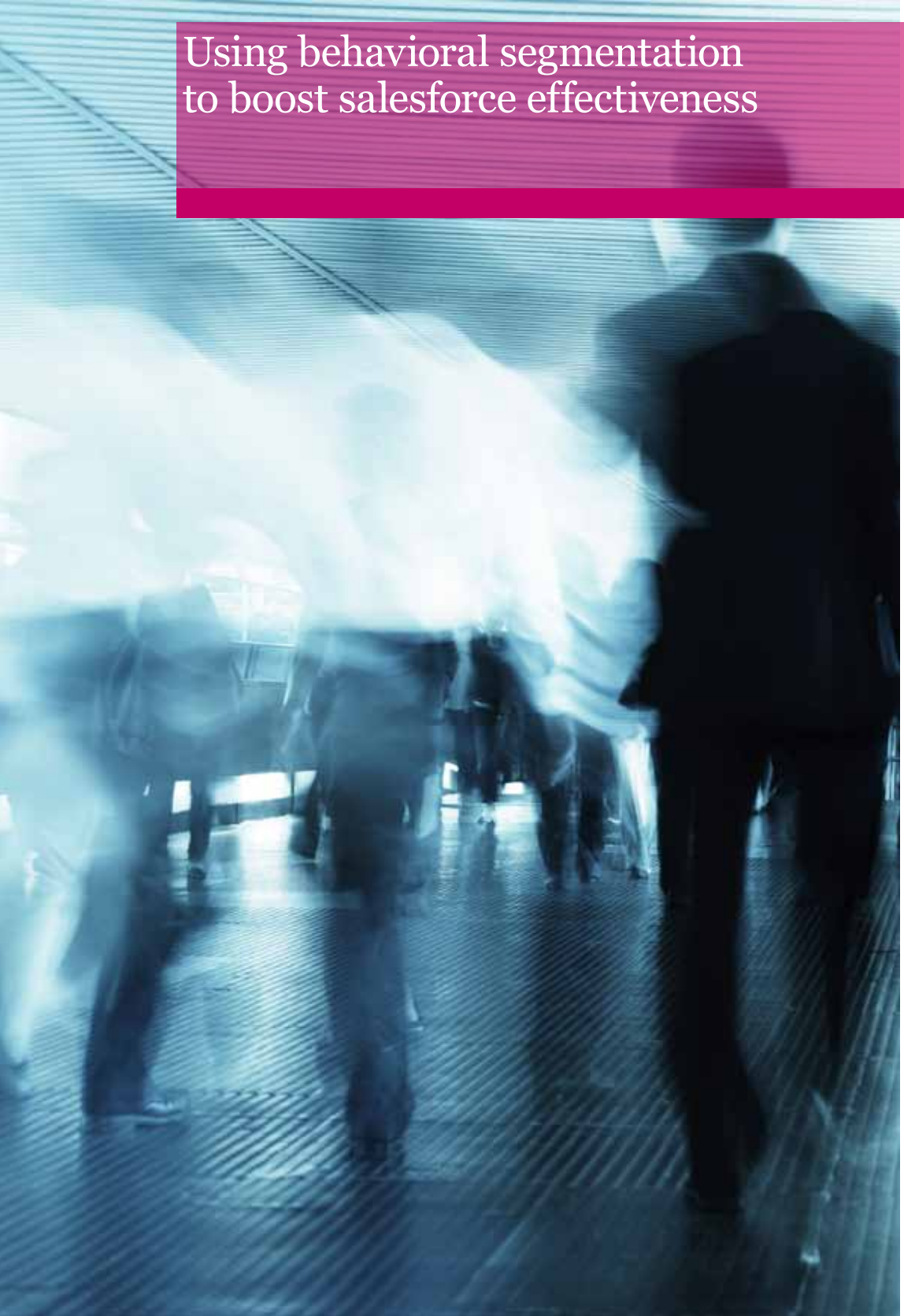
## Note

<sup>1</sup> The research included qualitative and quantitative elements and was conducted in five regions in Brazil. It covered 800 middle-class patients, more than 400 physicians, and pharmacy employees from both independent and chain stores.

This is an edited version of an article first published in *McKinsey Quarterly* in April 2012.

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## Using behavioral segmentation to boost salesforce effectiveness



**Many companies segment their customers by behavioral characteristics to increase sales, but segmenting the field force is a new approach. Early experience in India suggests that it could improve salesforce effectiveness in emerging markets.**

**Kaustubh Chakraborty, Javed Kadir, and Sathya Prathipati**

In India, as in other emerging markets, the pharmaceuticals sector is getting crowded. As companies put more feet on the street, the demand for sales talent is outstripping supply, hindering pharma companies in their efforts to build effective relationships with doctors. Reps are also spending less time interacting with their line managers as sales organizations increase their numbers of levels and spans of control.

Even so, sales reps continue to play a critical role in pharma sales in the absence of other profitable and scalable commercial models, especially in emerging markets. Our projections show that the number of pharma sales reps in India is set to increase threefold over the next ten years. Given the shortage of sales talent and management time, companies will need to improve the way they manage their reps. A few leading pharma companies in India are already making strides in this direction by adopting a new approach that involves segmenting and tailoring incentive systems for their sales forces.

### **The problem with “one size fits all”**

Most large pharma companies in India and other emerging markets have doubled their sales forces over the past four or

five years. In doing so, they have tried to ensure consistency and effectiveness by using traditional tools such as sales reviews and exerting tighter control over effort metrics by, for instance, tracking doctor visits through daily reports. Some companies are investing in formal training mechanisms to increase the effectiveness of their sales managers; others are upgrading their incentive schemes to look beyond sales figures and track metrics such as consistency and brand performance. Leading companies are making more extensive use of technology; some issue their sales reps with tablet computers so that they can track the reps' performance and activities in real time and take corrective actions when necessary.

Up to a point, these steps have worked: companies deploying superior salesforce effectiveness practices have seen the impact of their field forces improve noticeably. However, as sales divisions have grown beyond a few hundred medical representatives, national sales managers have started to encounter a fundamental difficulty. Most traditional field force effectiveness tools involve making interventions across the whole sales force. Yet these interventions influence different people in very different ways. When incentives are redesigned, for instance, some individuals respond positively, while others are indifferent.

Similarly, increasing pressure through tough performance dialogues drives a few to greater efforts, but also hinders a few from performing as well as before.

At the other extreme, recognizing individual differences and devising and implementing a few hundred or so separate interventions would be too complex a task to attempt. Even if an organization were able to develop and execute individually tailored incentives and plans, the extent of attrition, which ranges from 15 to 30 percent among pharma sales forces in India, would mean they would be too short lived to make a difference for long.

If standardized approaches are too blunt an instrument to effect widespread change and individualized approaches are too complex to implement, how can companies improve the performance of their sales staff? Some companies in India are seeing promising results from a new approach: segmenting the field force on the basis of individuals' behavior patterns and then devising interventions tailored to each segment.

## Segmenting a sales force by behavior

Behavioral segmentation involves two steps: identifying patterns by analyzing data and using that information to drive interventions. In turn, identifying segments has two main components:

### ***Salesforce analysis and comparison with classic behavioral segments.***

To understand what drives performance, it is necessary to analyze sales data for the past 24 to 36 months alongside other parameters such as incentives earned, targets given, consistency of effort (such as number of doctor visits), and inputs (such as number of training days). Although every company's sales force has some unique segments, there are eight classic behavioral segments that can be used to categorize most sales reps and managers in most field forces (Exhibit 1).



**Exhibit 1: Classic behavioral segments in a sales force**

	<b>Characteristics</b>	<b>Appropriate interventions</b>
<b>1 Target chasers</b>	Committed to achieve 100% of the target, whatever it is	Set aggressive targets, backed with financial and other incentives
<b>2 Superstars</b>	The best performers, always striving to come first	Recognize in public forums or hall of fame mailers; develop through direct mentoring by senior managers; use them to train others
<b>3 Incentive hunters</b>	Push very hard to achieve financial incentives	Simplify incentive structure to remove restrictive clauses; issue monthly personal communication on status of different incentives
<b>4 Sales manipulators</b>	Create sales imbalances by exploiting loopholes in incentive policy	Exert strong senior manager control to prevent gaming; use monthly reviews to look beyond the numbers
<b>5 ROI maximizers</b>	Experts in extracting the most out of the marketing spend	Do bottom-up problem solving on where to invest strategically; allocate disproportionate marketing resources with a commitment to achieving returns
<b>6 Career aspirants</b>	Focused on career moves and aspiring to make it big in the organization	Develop complete career development path with sales milestones; commit senior managers' time to help reps achieve and improve
<b>7 Lazy laggards</b>	Underperformers who have practically given up	Focus on efforts, maximizing activities, doctor visits, etc.; plan to terminate if no improvement
<b>8 Sentimentalists</b>	People with a strong emotional connection to the organization and managers	Design and communicate emotional hooks; give top management recognition for achievement

**Methodology for behavioral segmentation**

Sufficient data for segmenting individuals can be obtained from a period of 24 to 36 months. The data is typically available in a company's performance management system, though it requires some cleaning up. Each individual's data is tabulated and the patterns they exhibit are identified through the use of simple formulae.

The basic criteria for segmentation are the consistency and quality of target achievement and the inputs that seem to drive it. Individuals are allocated to one of the eight segments illustrated in Exhibit 1 according to their performance against targets.

For instance, *target chasers* hit their target almost every month but don't push beyond that and achieve 110 percent of their target. On the other hand, *ROI maximizers* are great at maximizing the sales of brands that are featured in new marketing campaigns or given heavy promotional spending, but are not so good at driving sales of brands where a company has stopped investing so much.

**Talent baselining.** Once the analysis has been completed, the results are shared with the individual's immediate manager, who combines them with their own observations to create a personal dossier. The manager goes through this process for each of their reports in turn to understand the factors that drive their behavior. A sample dossier is illustrated in Exhibit 2. Then the company holds a workshop to sign off on the final segmentation, specific issues affecting individuals, and customized development plans for each segment.

Once the segmentation exercise is complete, the results can be used to shape two main interventions:

**A monthly “look-ahead” analysis.**

After an individual has been categorized as belonging to a given segment, their sales manager can do a forward-looking

analysis to track areas that may be at risk. Depending on how the individual's performance has correlated with expectations over the past month or quarter, the manager can then intervene to help the individual improve their performance in the next month or quarter.

**Customized interventions.** The segmentation enables the sales manager to devise the most effective tactical interventions for each individual's behavioral type, as outlined in Exhibit 1. For instance, when dealing with a rep who belongs to the *ROI maximizer* segment (number 5 in the exhibit), the sales manager should spend time with the rep to explore where to invest the promotional spend for a new launch to get the greatest strategic return. For instance, should they try to convert new doctors or maximize prescriptions from core doctors?

**Exhibit 2: Part of a dossier for an area manager**

Hypothetical example

Strengths	Development objectives		Interventions	
	From	To	Intervention	Owner
Very willing to learn	Volatile performer	Consistent target achiever	Performance dialogue with national sales manager explaining why quarter chasing would not lead to long-term success	XX
Positive attitude	Quarter-chasing behavior leading to variations	Better upfront sales plans for each region	Help area managers understand method for evaluating marketing spend in a territory to help overcome fear of underperformance	XX
Hard working and sincere; ensures adherence to guidelines			Help conduct first 2 CRMs	
Trustworthy				
Weaknesses	Personal constraints			
Not effective at upfront planning and does not command leadership	None			
Reluctant to take risks over investing in doctors (has foregone some opportunities to invest early on)	<b>Skill and will assessment</b>		<b>Behavioral segment(s)</b>	
Very mild and not hard in pushing stocks with distributors	<b>3 Average skill</b>		Sales manipulator	
	<b>4 High will</b>		Lazy laggard	

\* Manipulating sales to maximize incentives by alternating between excellent and poor performance in successive quarters



In addition, this segment would be an ideal trial audience for marketing investment pilots, and should be allocated a higher share of the marketing spend than other segments. On the other hand, *incentive hunters* (segment 3 in the exhibit) should be given a monthly personal bulletin explaining whether they are on track to achieve quarterly or yearly incentives, how their performance compares to that of peers, and so on. They should also be given a quarterly briefing on any new incentives being introduced.

Finally, to achieve sustainable impact, companies need to develop mechanisms to make the changes stick. Examples might include codifying the performance review process in a formal standard operating procedure to speed up the training of new managers, and using the management information system to generate templates automatically for the look-ahead and risk analysis.

## Measuring the impact

Companies that have adopted behavioral segmentation as part of their sales management approach have been able to accelerate their sales growth within a relatively short period of time. In one case, a division of a leading Indian pharma company that was growing at 8 to 10 percent a year saw its growth rate rise to 18 percent for more than eighteen months following the adoption of a segmented approach. At another company, the average achievement rate among the sales force increased from 99 to 105 percent of targets even though the sales growth targets themselves increased from 17 to 25 percent.

## Counter strategies: Getting more value from the retail channel



**Most pharma companies operating in emerging markets gear their sales and marketing efforts to physicians and hospitals. It's time they widened their horizons: building retail muscle could help them address a large and neglected opportunity.**

Sanjeev Agarwal, Putney Cloos, Alka Goel, and Mary Rozenman

Pharmaceutical companies have traditionally seen the retail channel—pharmacy chains, independent drug stores, and supermarkets, along with wholesalers and distributors—chiefly as a point of sale (POS) and logistics provider. However, retail pharmacies are starting to play an increasingly important role in influencing the decisions customers make when they purchase prescription drugs.

Major global and local healthcare trends are contributing to this shift. At global level, patent expiries, growing price sensitivity, and a shift to generics are combining to grant the pharmacist a bigger say in determining script outcomes. Multinational companies are also expanding their portfolio via acquisitions and through the launch of generic and branded generic drugs. Meanwhile, retailer consolidation and vertical integration in the value chain are giving retail more power in markets such as Brazil. The growing sophistication of local pharma companies—which often play across the spectrum of over-the-counter (OTC) drugs, generics, and branded generics—has opened up new possibilities for collaboration between pharma and retail and reinforced the status of pharmacies as an important stakeholder. Looking forward, the spread of mini-clinics, loyalty cards, and other customer-focused initiatives will serve to strengthen the link between patients and pharmacies.

In the past, pharma companies have paid little attention to the retail part of the value chain. Looking for better ways to access this channel and building the necessary capabilities could help them capture what could be a large untapped opportunity—or, if ignored, a significant threat.

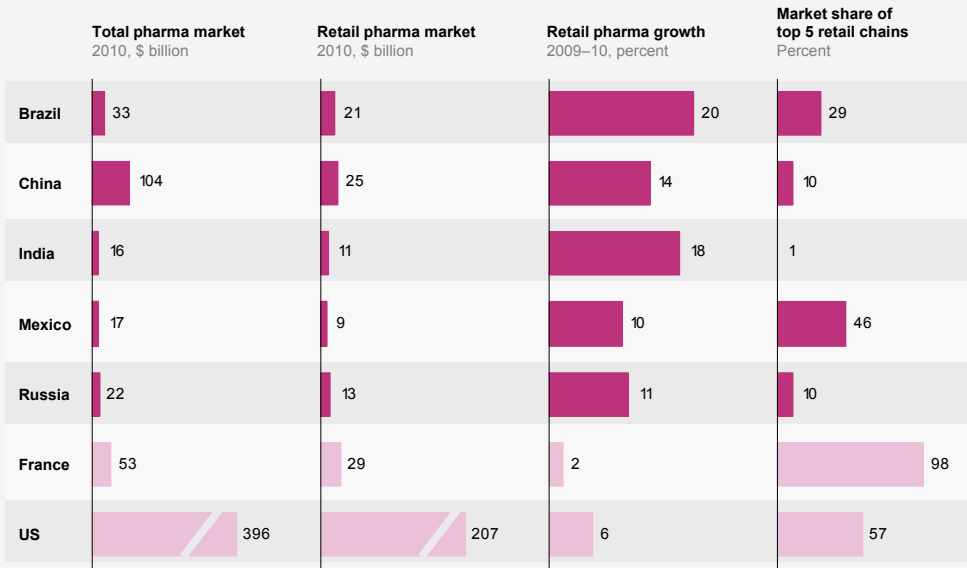
### Deciding where to act

Not surprisingly, there are considerable differences from one emerging market to another in the way that the retail channel operates and the level of influence it exerts on drug purchasing. Understanding the nature of these differences is a prerequisite for any pharmaceutical company developing a strategy to identify and address key retail channels in emerging markets.

Exhibit 1 illustrates the relative size, growth rate, and concentration of retail in the pharma sectors of five major emerging markets, along with two developed markets by way of contrast. Other factors that pharmaceutical companies need to consider when determining the attractiveness of a given retail market include:

- **The nature of the pharmacist's role.** In largely self-pay markets like those of India and Brazil, pharmacists

### Exhibit 1: A variety of retail landscapes



have considerable control over script outcomes. In India, for example, some two-thirds of drugs are sold by a recommending pharmacist or bought by a self-prescribing patient with little input from a physician. In Brazil, on the other hand, pharmacists often prompt switching. A recent survey indicates that more than 40 percent of Brazilian pharmacists suggest generic alternatives to prescription drugs without being asked by the customer.<sup>1</sup> By contrast, the majority of scripts in China are originated and filled at the hospital, and retail pharmacists seldom question physicians' recommendations or suggest substitution.<sup>2</sup>

- The product type.** The level of influence exerted by retailers on drug purchase also depends on the type of product involved. Pharmacists may feel more comfortable switching lifestyle, primary care, or chronic scripts than specialty, acute, or curative scripts. This reflects physicians' tendency to be

more directive when prescribing acute treatments or drugs, such as anti-epileptics, because their effects may be altered by excipients or differences in the manufacturing process.

- The balance between players.** In some emerging markets, wholesalers and distributors exert more influence on the retail channel than pharmacies do. Mexico, for instance, has two major wholesalers, Casa Saba and Nadro, that dominate the market with a combined 70 percent share and have exclusive contracts with some manufacturers. Distributors play a leading role in Russia, where CV Protek, one of the country's largest distributors, is forward integrated with Rigla, a leading pharmacy chain.
- The format and concentration of the retail channel.** Some markets are dominated by chain pharmacies, others by independent stores. India, for example, falls into the latter category, with more than 800,000 pharmacies of which only 3 percent are chains. Turkey

has an even smaller share of chains among its 24,000 pharmacies. In Brazil, by contrast, the top chains have been outperforming independent pharmacies and growing at 25 percent per year. The largest chain, BR Farma, has almost doubled in size to more than 700 stores in just three years. Russia is also experiencing accelerating consolidation, as seen in the recent merger of the A5 pharmacy chain with Mosoblpharmacia to create a joint franchise with 1,300 stores to rival local leader Rigal.

As this complex picture suggests, pharmaceutical companies need to think carefully about the dynamics of individual markets and the nature of the products they are selling before launching their country-specific retail strategies.

## Learning from the consumer packaged goods industry

Consumer packaged goods companies have spent decades refining their approaches to working with retailers, and there is much that pharma companies can learn from them. In particular, there are three best practices that are immediately relevant to the pharma retail context:

### Understanding and segmenting customers

Global mass-market consumer goods companies need to understand the diversity of their retail customer landscape. In order to drive market share, they need to ensure they are relevant to their entire range of retail customers, from highly sophisticated retailers like Walmart to “mom and pop” neighborhood stores, and from bricks-and-mortar outlets to online marketplaces. They also need to understand the role of distributors and wholesalers in each market.

To understand and manage their retail customer base, most consumer packaged goods companies adopt a customer segmentation strategy. At a basic level, this involves segmenting customers by size and format, but best-practice segmentation goes beyond this to classify retailers by attributes such as customer demographics and types of location. In addition, best-practice segmentation is dynamic, with updates every year or two to capture changes in the market; complete, covering all retailers and not just existing customers; action oriented, driving real differences in service levels and investment; and forward looking, reflecting the strategic and economic potential offered by different segments.

Segmenting the retail customer base in this way enables a company to identify priority segments and focus its strategy and resources on them.

### Tailoring value propositions to customer segments

Consumer goods companies have many options at their disposal to vary the value proposition they offer to different retail customers:

**Product portfolio.** Consumer goods companies often tailor the SKUs and merchandise they offer to particular outlets in response to local customer needs. In Brazil, Unilever won market share by offering small rural retailers reduced-size packs of its ALA laundry detergent that were affordable for customers on very low incomes.

**Trade terms and discounts.** One leading consumer goods company invests in long-term growth by offering considerably more favorable trade terms to the future stars among its retail customers. By using its insights into customer segments

and its ability to analyze tradeoffs between value and volume, it is able to ensure that this retail strategy delivers a positive return on investment.

**Service levels.** Companies can offer gold-plated service for high-potential customers by providing extra services such as a representative on site or on call, POS support, tailored promotional campaigns, support for customer outreach, collaborations on new product development, and help with supply-chain improvements. Consumer goods companies like P&G, Pepsi, and Unilever rely on their account reps to be their eyes and ears on the ground, identifying areas for improvement across the value chain and ensuring flawless execution at the point of sale.

**Capability building.** Some consumer goods companies offer their retail customers capability-building programs to help them improve customer insights, logistics, and inventory management, as well as supporting them in installing software and tools to support these capabilities. Colgate, for instance, identifies promising local players in China and sends in “SWAT teams” to assess their needs and aspirations before developing near-term growth plans that outline clear responsibilities for both the retailers and Colgate itself.

### Adopting innovative approaches to reach customers

The sheer size of emerging markets such as Brazil, India, Russia, and China, along with their relatively undeveloped infrastructure, makes it difficult for ambitious consumer goods companies to reach their full customer base. To tackle this challenge, companies often serve their most important retail customers directly while relying on wholesalers to

serve lower-priority or harder-to-reach customers. These wholesalers can provide payments and delivery only or offer value-added services such as marketing and inventory management.

In India, Unilever adopted innovative strategies such as a fleet of rural promotion vans and a dedicated direct sales network to reach remote rural areas. It also provided micro-credit to grass-roots groups that eventually took on roles as direct-to-home distributors for the company.

## First steps to win

Our conversations with pharmaceutical companies indicate that they are becoming increasingly aware of the untapped potential in the retail channel, especially in emerging markets. Capturing this potential will take a lot of work, but we believe pharma companies can kick-start their retail journey by following a simple five-step approach:

### **Step 1: Map the broad retail opportunity.**

The extent of retailers’ influence on drug purchases varies dramatically from market to market. With their product portfolio in mind, pharma companies need to identify the markets that offer them the greatest potential. A simple way to do this is to classify each market according to the retail opportunities it offers: little or no opportunities, opportunities for a limited set of products, or substantial opportunities across much of the portfolio. To set priorities, companies should then make rough estimates of the potential value at stake in the most promising markets.

### **Step 2: Segment, segment, segment.**

The retail channel can be segmented along multiple dimensions. The basic

**Exhibit 2: Using tailored value propositions to attract retailers**

Value proposition	Examples	Appeal for retailers
<b>Merchandising and new products</b>	<ul style="list-style-type: none"> <li>▪ Innovative dosage forms</li> <li>▪ Customer loyalty and discount cards</li> <li>▪ Convenience packaging strategies</li> </ul>	<ul style="list-style-type: none"> <li>▪ Differentiated value proposition to customers</li> </ul>
<b>Point-of-sale innovation</b>	<ul style="list-style-type: none"> <li>▪ Patient education (e.g. educators or materials)</li> <li>▪ Additional health services</li> <li>▪ Improved customer experience overall</li> </ul>	<ul style="list-style-type: none"> <li>▪ Increased customer loyalty</li> </ul>
<b>Co-branding</b>	<ul style="list-style-type: none"> <li>▪ Retailer brands of popular products</li> </ul>	<ul style="list-style-type: none"> <li>▪ Innovation support and enhanced value proposition for customers</li> </ul>
<b>Operations support</b>	<ul style="list-style-type: none"> <li>▪ Help with improving supply chain</li> <li>▪ Margin shift from wholesaler to pharmacist</li> <li>▪ Wholesaler negotiation/vertical integration</li> <li>▪ Disintermediation</li> <li>▪ Additional discounts or OTC offerings</li> </ul>	<ul style="list-style-type: none"> <li>▪ Greater profitability and improvement in operations</li> </ul>
<b>Account management support</b>	<ul style="list-style-type: none"> <li>▪ Inventory management, supply chain, etc.</li> <li>▪ Samples and training</li> <li>▪ Deferred financing terms/locked-in supply</li> </ul>	<ul style="list-style-type: none"> <li>▪ Superior effectiveness and performance</li> </ul>

dimensions might include store format (supermarket, national pharmacy chain, regional chain, independent pharmacy, wholesaler, stockist, and so on), volume of prescriptions sold, percentage of shelf space occupied by prescription drugs, and location. Armed with the segmentation, companies can then prioritize the segments they want to reach.

**Step 3: Develop a tailored value proposition for each segment.**

By profiling the needs, capabilities, and economics of target retail segments, pharma companies can identify the value propositions and products that will resonate most with their priority customers (Exhibit 2). Value-added services such as marketing support, logistics, and account management are powerful tools for developing long-lasting retail relationships. Different segments have different needs, so companies should establish which services each target segment is likely to value most: software that allows them

to fulfill orders instantly? Regular calls from a representative who helps them manage for stockouts and educate their pharmacists? Visits from physicians?

**Step 4: Define go-to-market models.**

Companies then need to decide how to reach their priority retail segments. Should they work through their physician sales force or does the retail channel offer enough potential to justify setting up a separate dedicated sales force? If so, should it be organized by region, retail format, or product portfolio? What role should key account managers play? Do large customers and international chains warrant a global key account management team? What is the best way to reach more fragmented retailers? Should some retailers be served through intermediaries such as wholesalers, or is it better to deal direct? Do some retailers lend themselves to strategic alliances?

**Step 5: Maximize the effectiveness of retail execution.** Monitoring mechanisms should be put in place to ensure effective execution in the field. When measuring performance, pharma companies could again borrow ideas from consumer goods companies. For instance, one leader measures salesforce effectiveness in terms of sales volume, SKU coverage, percentage of stores with sell-in, display quality, and promotion execution.

## Getting started

The five-step approach outlined above is geared to pharmaceutical companies that are designing their retail strategy from scratch. However, some companies have already taken a few steps to build retail competencies and have different needs. We suggest their best move is to assess their existing capabilities in priority markets by asking a few simple questions:

- Do we understand the scale of the retail opportunity in each market? Do we have a list of the markets where we want to focus?
- Do we understand the potential value at stake in each market? Is our business case robust?
- Have we done a segmentation of the retail channel? Have we prioritized the segments where retailers exert the most influence on purchasing decisions?

- Do we understand the needs, priorities, and economics of our priority segments? Can we identify the value proposition and value-added services that will appeal to them?
- Do we agree on the most effective go-to-market model to serve these customers?
- If we have a dedicated retail sales force in some markets, how well does it perform? Are there opportunities for improvement?
- Do we have central capabilities to build tools, frameworks, and approaches for embedding retail competencies in specific markets?

By working through this self-assessment exercise, leaders can start to plan a retail journey tailored to their company's needs.



Although companies are waking up to the potential of retail as a lucrative channel for the pharma industry, most have yet to focus on building their retail muscle. The few that have entered this space are still taking baby steps. We believe that to thrive in the next few years, companies should set to work now to forge relationships that will enable them to win in the next industry battleground: the pharmacist's counter.

## Notes

<sup>1</sup> *Perceptions of Drugs*, IBOPE Inteliência for Interfarma, October 2011.

<sup>2</sup> Retail pharmacies account for about one-fifth of scripts in China, although they are gaining ground on hospital pharmacies.





## Public–private partnerships: An untapped strategic lever



**Traditional approaches to PPPs have focused on their role in raising a company’s profile or improving its corporate image. Now pharma companies are entering partnerships with governments and global organizations that deliver solid business benefits too.**

Doan Hackley, Jorge Santos da Silva, and Lieven Van der Veken

Participating in public–private partnerships (PPPs) is nothing new for pharma companies; many have taken part in global PPPs for R&D, or local partnerships in lower-income markets. However, they have traditionally treated these partnerships as one-off corporate social responsibility initiatives to improve their image among stakeholders, rather than as an integral part of their business strategy.

We believe that companies operating in emerging countries have much to gain from adopting PPPs as part of an innovative commercial approach instead.<sup>1</sup> These partnerships can act as a means to increase productivity, boost demand, facilitate joint investment and risk sharing, deepen market understanding, and establish valuable networks for future business development. Seen in this light, PPPs can create a virtuous circle of benefits for all concerned.

### **Growing in emerging markets**

In recent years multinational companies (MNCs) have significantly increased their investments in emerging markets, and especially the large middle-income markets of Brazil, Russia, India, China, Mexico, Korea, and Turkey. What makes these markets particularly attractive is their high

growth rates, sizeable patient segments that can afford innovative “out of pocket” (OOP) medicines, and governments that have the means to provide health services and medicines for their citizens. To date, most MNCs have focused their efforts on providing government-reimbursed drugs and serving high-income populations usually concentrated in cities – the “top of the pyramid” in these countries. However, MNCs are now seeking to increase their penetration in emerging markets as a cornerstone of their growth strategy.

Achieving this goal will involve moving down the pyramid to less affluent and harder-to-reach customer segments, expanding the range of existing and new products that are commercially viable for OOP or government-reimbursed markets, and venturing into the next horizon of emerging markets. Up to now, most MNCs operating in emerging markets have relied mainly on conventional commercial models, such as distributors or sales reps, and standard interfaces with government, such as regulatory, reimbursement negotiations, and commercial licences. However, these models are relatively expensive, which limits their reach and restricts the number of products that can be viable in these markets. Finding lower-cost models that are able to reach suburban and rural populations will be critical to going down

the pyramid, whether in current priority markets or in next-horizon markets.

In addition, reimbursement systems often favor companies that have built strong relationships with the government, so companies that seek to drive reimbursement for their portfolio will need to cultivate these relationships. They should do so urgently because emerging economies are growing fast and starting to focus on the quality and sustainability of their health system.

Public-private partnerships could provide a powerful strategic lever for MNCs seeking to drive growth in emerging markets. They will benefit from taking active steps to establish collaboration and anticipate how the market can be unlocked, rather than simply reacting to local requests as and when they occur.

## Designing successful PPPs

Many pharma companies are already involved in PPPs in emerging markets, but we believe that these partnerships are not yet as effective as they could be. Nor do they deliver as much value as they could for all the partners, particularly the MNCs.

To ensure the best outcomes, companies need to develop PPPs that are designed to align with both their own strategic objectives and those of the government as the key public sector partner. Experience shows that there are also tactical steps companies can take to ensure that a PPP is not only well designed but also operates effectively.

### Serving company objectives

Historically, pharma companies have embarked on PPPs with the main goal of

establishing or enhancing their corporate image. In new countries or market segments a PPP can be a means to create a company profile, whereas in established markets it can help to pre-empt and mitigate the repercussions of unforeseen events such as product launch failures, recalls, manufacturing accidents, or pricing criticism. At a time when attracting and retaining talent in emerging economies is becoming more competitive, a PPP can also serve an important purpose by helping to create a desirable employer image.

As emerging market activities make larger and larger contributions to overall business performance, the potential impact of PPPs on a company's bottom line is growing. They can help executives to meet a number of important business goals, including:

- **Reaching financial targets**, either by increasing revenue in the short term (as with GlaxoSmithKline's deal to supply Brazil's Oswaldo Cruz Foundation with its Synflorix pediatric pneumococcal vaccine and access to the underlying technology) or by positioning the company for future revenue streams (as with Eisai's partnership with Apollo Hospitals and HelpAge India, a non-profit, to address Alzheimer's disease in India through public education on treatment options and the building of a site for R&D and manufacturing in a tax-advantaged economic zone).
- **Creating a competitive advantage** by developing and testing new local go-to-market models, such as partnerships to hedge some of the risk of moving to large markets with low profitability. An example is Novartis's Arogya Parivar, a social business working with village leaders and NGOs to provide healthcare for the rural poor in many Indian states.

## A brief history of PPPs

Few of the major PPPs in existence today are more than ten years old, yet many have already achieved an impact beyond anything that the public or private sector could have achieved alone. They have raised awareness for causes, made these causes a priority on national and international agendas, secured funding, and spurred the development of new products.\* Many have succeeded in infusing a private sector mindset and culture—especially a focus on performance and outcomes—into areas long dominated by the public and civil sectors. The private sector now provides about half of all health services in many African countries, making a major contribution to public efforts to improve service delivery and health outcomes.†

Although PPPs can generate substantial benefits, they also carry real costs. Substantial resources may be required to create and maintain the infrastructure needed to serve the partnership. All partners must invest time and effort in learning how to work together and understand each other's priorities. In addition, coordinating multiple partners can frequently lead to delays in decision making.

### Changing models

In the past, companies entered into PPPs for largely *philanthropic* reasons, shaping their partnerships around donation or sponsorship programs undertaken as part of a corporate social responsibility effort. Some of these partnerships progressed to a *social investment* model, where companies share their capabilities, knowledge, and technology to improve local health and expect that some indirect and long-term business opportunities will be created in the process, such as access to patients or manufacturing capacity. Our focus in this article is on the third type of PPP, a *business partnership* model where a company works with local public partners to develop products, commercialize them, access new channels, and so on, undertaking activities that are central to its strategy and intended to create near-term business value and competitive advantage.

The business partnership model is gaining traction as public and not-for-profit institutions in emerging countries seek to implement long-lasting change in their local health systems. This means forming partnerships that go beyond low-cost or free drug provision, financial support, and capability building to focus on creating local supply chains, manufacturing capacity, R&D knowledge, and market innovation. MNCs are well positioned to participate in these partnerships to create fully fledged markets by supporting the development and commercialization of products, building new channels, and monetizing services. A few early movers are already pursuing this strategy with the aim of generating new business and gaining competitive edge.

\* Kent Buse and Andrew Harmer, "Seven habits of highly effective global public–private health partnerships: Practice and potential," *Social Science & Medicine*, volume 64, 2006, pp. 259–71.

† *The Business of Health in Africa: Partnering with the private sector to improve people's lives*, International Finance Corporation, World Bank Group, December 2007.



- **Driving R&D on specific diseases**

to secure future revenues.<sup>2</sup> Some companies partner with local technology platforms in high-incidence areas; Roche's partnership with ChemRar on anti-thrombotics in Russia is an example. Others help to address local needs while developing technology with the potential to be applied globally: for example, Genzyme is working with ChemRar to develop vaccines for orphan diseases in Russia, using genetic modification technologies to deliver personalized medicine.

As MNCs apply more rigorous business evaluation to their investments in emerging markets, many are concluding that PPPs should not require a blank check but rather should provide good value for money by comparison with other investment choices. With this in mind, they look for measurable business outcomes in terms of financial benefits, employee retention, market share, and so on, and expect to be able to share risks with partners instead of bearing them alone. Defining such business expectations clearly up front will be critical to avoiding disappointment for company and partners alike.

- **Serving public objectives**

To design a PPP that is fit for purpose, MNCs must understand how it can serve not only their own business objectives but also the needs of the government or other public sector partner involved. Government objectives can vary from country to country, within a given country, by disease type, or by specific area within the healthcare value chain, and may evolve over time. In our experience, governments most often seek to:

- **Increase access to medicines.**

Many PPPs are designed to increase the nation's access to health therapies in a way that the government and patients can afford. Brazil, for example, has set up a comprehensive portfolio of 24 PPPs designed to cut the cost of 29 active pharmaceutical ingredients (APIs) by two-thirds.

- **Drive economic development.**

PPP can create jobs, enable technology transfer, help build R&D capabilities, and generate manufacturing and export revenues for a government. Boehringer Ingelheim and BMS have set up five-year partnerships with the Brazilian government to provide APIs, with goals that include establishing

local manufacturing and transferring technology and knowhow to local public labs.

- **Strengthen health systems.** PPPs can also address infrastructure and capability issues such as health service delivery, supply chain, procurement, regulatory, medical needs, epidemiology assessments, and management capacity. Some donation programs for neglected tropical diseases, such as Pfizer's Zithromax program for trachoma or Merck & Co.'s Mectizan program to prevent river blindness, go beyond philanthropic drugs provision and play an active role in identifying regions where the illness is most prevalent, creating supply chains, and delivering drugs to target populations. In other cases, MNCs take part in holistic approaches to build local healthcare infrastructure and capacity across a particular region. An example is the partnership between Pfizer, USAID, and the Arpana Research and Charities Trust to strengthen health care in 100 villages in the state of Haryana in India, and the partnership between Merck & Co. and the Chinese government to develop a model to address HIV/AIDS prevention, patient care, treatment, and support.
- **Improve delivery.** Some PPPs are prompted by a government's efforts to reduce costs, increase speed, and improve outcomes by shifting responsibility for delivery to private partners with the necessary expertise to increase the efficiency and success of specific projects. An example is the partnership between the Nigerian government and Hygeia to provide healthcare services. When the government introduced a health insurance scheme for its employees, Hygeia, originally a private hospital chain, became an HMO (health maintenance organization) and the

scheme subsequently spread to other employee sectors in Nigeria.

Although none of these public objectives necessarily conflicts with MNCs' business goals, it is important that PPPs should be designed not only to meet the primary objectives of all partners but also to recognize openly any tensions arising from trying to achieve these goals, such as the balance between a company's need to meet financial targets and the government's need to reduce spending on drugs.

#### Understanding success factors

Individual emerging markets and regions have their own idiosyncrasies, which are often highly specific in healthcare. There can be pronounced differences in disease burdens and unmet needs, political and economic risk profiles, and local manifestations of global healthcare trends such as cost of care, changing demographics, and population mobility. In most emerging markets, there is also a shortage of the skills and resources needed to address complex issues.

Although best practices in establishing and operating PPPs in general should not be overlooked,<sup>3</sup> PPPs in emerging markets with a pharmaceutical or healthcare focus present a particular set of challenges. Companies should pay close attention to:

- **Clarifying ground rules during set-up.** When partners are mapping out their expectations, they may well be operating under the influence of different cultural norms, so defining the ethical boundaries under which the PPP will operate is vital. Health partnerships are typically complex, costly multi-year efforts, so all partners need to be in agreement on an operating principle and communications approach along the lines of "be transparent, go slowly, and ensure sustainable success."

In addition, the set-up stage is the best time to instill a performance culture by having all parties agree to clear milestones for delivery and assessment. This sets the tone for the partnership and defines the standards against which the PPP, its activities, and its partners will be judged. It is equally important to discuss and define the exit strategy for all partners. If the PPP has time limits, the partners need to agree on them and put triggers in place for any renewal of the partnership.

- **Taking steps to identify and seize opportunities.** As competition increases in emerging markets and PPPs become more widespread, companies need to be constantly alert to opportunities that can help them achieve their strategic aspirations. A proactive approach can achieve faster impact by helping to position the first mover as the preferred partner. For example, in Russia, Novartis worked directly with members of the cabinet to understand their needs. It was then able to raise its public profile and market visibility with a \$500 million pledge to invest in new R&D centers in Skolkovo, in a direct response to President Medvedev's plan to create a world-class biotech cluster.
- **Creating a strong governance structure.** Partnerships can be complex, especially in emerging markets. Different players have different objectives, and academic centers, global institutions, governments, and companies all operate in different ways and according to local cultural and business norms. A strong governance structure is essential for keeping partnerships on track, and must be developed in close conjunction with governments and their legal structures.

This will help not only to ensure that the partnership meets all its objectives but also to mitigate some of the inherently higher risks of operating in emerging markets.



Every year emerging markets move further up the MNC agenda, and their contribution to overall revenues and margins has reached a record high. With this greater prominence comes more investment in these markets, but also a more rigorous focus on performance, risk, and sustainability. PPPs can play an important role in translating the ambitions of companies, governments, and non-profits into working relationships that satisfy the objectives of all sides. They operate as more than a vehicle for social contribution, increasingly representing a powerful tool for companies to improve their market access and grow their business. When designed for purpose and set up skillfully, PPPs can attain the next level of impact and performance, delivering lasting benefits for both the countries and the companies involved.

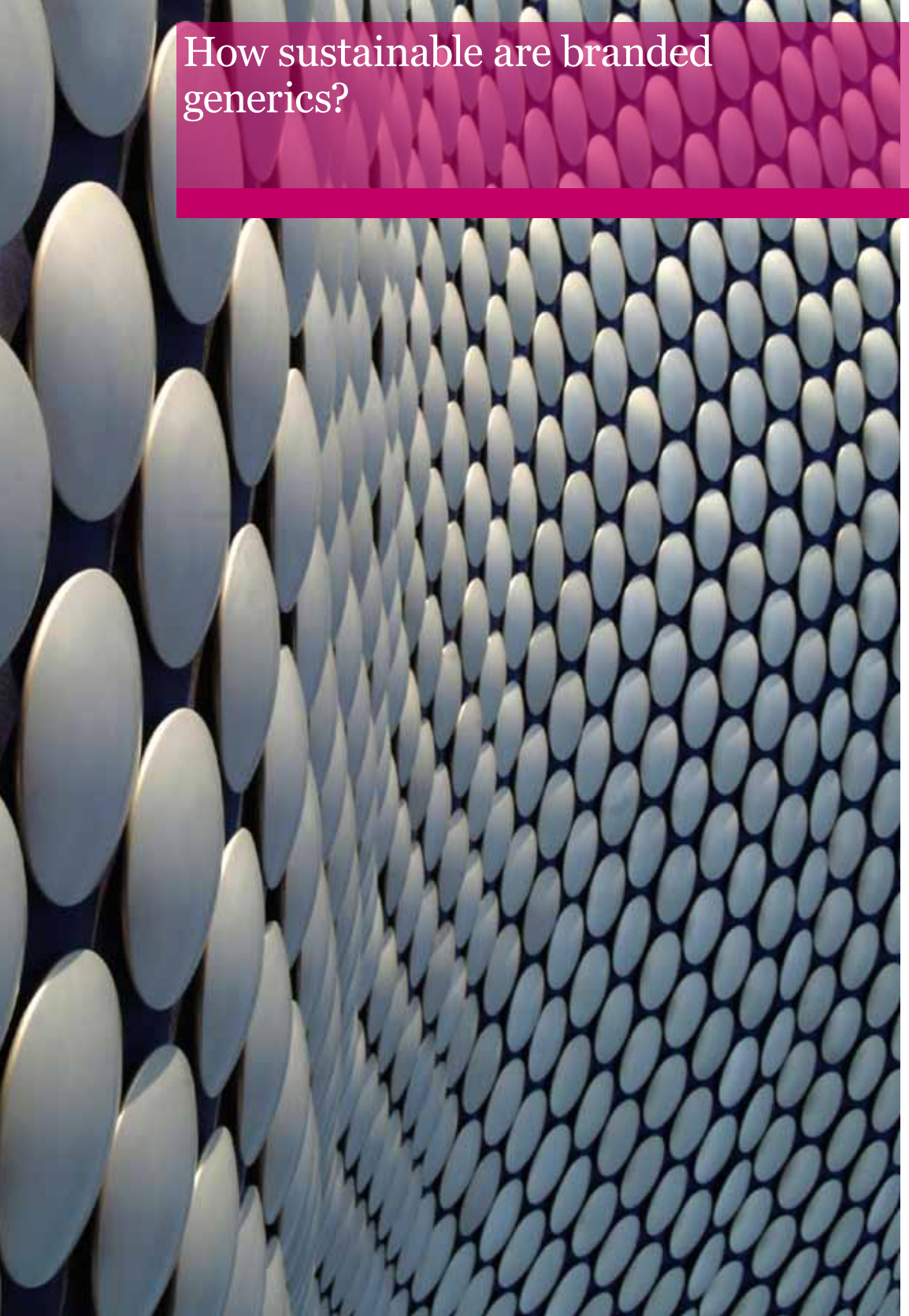


## Notes

- 1 From an emerging market perspective, we define PPPs as any form of collaboration with public or not-for-profit institutions that goes beyond a customer/supplier relationship and focuses on a goal such as economic development, disease awareness, or capability building while providing short- or long-term benefit for the private partner.
- 2 For more on this subject, see “Breakthrough R&D for emerging markets: Critical for long-term success?,” pp. 52–59.
- 3 See *Public–Private Partnerships: Harnessing the private sector’s unique ability to enhance social impact*, McKinsey & Company, 2009, at <http://mckinseysociety.com/public-private-partnerships-harnessing-the-private-sectors-unique-ability-to-enhance-social-impact/>.

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## How sustainable are branded generics?



## Branded generics are delivering great growth and profitability in emerging markets, but how much longer can they continue to do so? A new approach helps companies assess the prospects market by market.

Sanjeev Agarwal, Andrew Cavey, and Ali Murad

Over the past five years, generic and branded generic (BGx)<sup>1</sup> drugs have continued to grow strongly in emerging markets, often at a pace two to five times faster than branded originals. In those emerging markets where brands are seen a proxy for quality, and where physicians retain considerable control over prescriptions and patients over purchasing decisions, branded generics have been more successful than their unbranded counterparts, and have maintained their prices for longer. Recognizing this opportunity, many global pharma companies have announced plans to boost their emerging market business by investing in branded generics, whether by launching their own portfolios or by acquiring those of other companies.

However, the landscape for branded generics is far from uniform, with individual markets evolving in markedly different ways. In some markets, such as Turkey, governments are implementing cost-reduction measures. In other markets, such as South Africa, payors are putting pressure on prices. By contrast, some markets, such as Brazil, are continuing to see rapid growth in branded generics as the emerging middle class acquires increasing purchasing power.<sup>2</sup>

Given such differences, multinational pharma companies need to examine their portfolios and geographic footprints to

identify those markets where branded generics will remain a sustainable proposition and those where conditions are likely to become more challenging. In this article we outline an approach to assessing markets that leaders can use to establish a fact base to inform their discussions on investing in branded generics.

### Recent investments and new challenges

Global pharmaceutical companies have adopted a variety of approaches to enter the branded generics segment in emerging markets:

- **M&A.** Many multinationals pursue an acquisition strategy to build their branded generics business. For instance, Sanofi-Aventis expanded its portfolio and footprint by acquiring the Czech Republic-based Zentiva and Brazil's Medley in 2009. Similarly, Abbott acquired Belgium-based Solvay and India's Piramal in 2010, and in the same year Pfizer acquired a stake in Teuto in Brazil.
- **Long-term partnerships.** Several global pharma companies have embarked on joint ventures with local players. For instance, GSK set up a partnership with Aspen, a South Africa-based generics manufacturer, in 2009

to expand in sub-Saharan Africa. Similarly, Merck partnered with India's Sun Pharma in 2011 to develop and commercialize new formulations and fixed-dose combinations, and in 2012 the company embarked on a three-way joint venture called Supera with Eurofarma and Cristalia in Brazil.

- **Licensing and supply agreements.** These deals are another mechanism used by global companies to expand their branded generics business in emerging markets. Examples include Pfizer's in-licensing deals with India's Aurobindo in 2009 for several branded generics and AstraZeneca's supply agreements covering several therapeutic areas with Aurobindo and another Indian manufacturer, Torrent, in 2010.

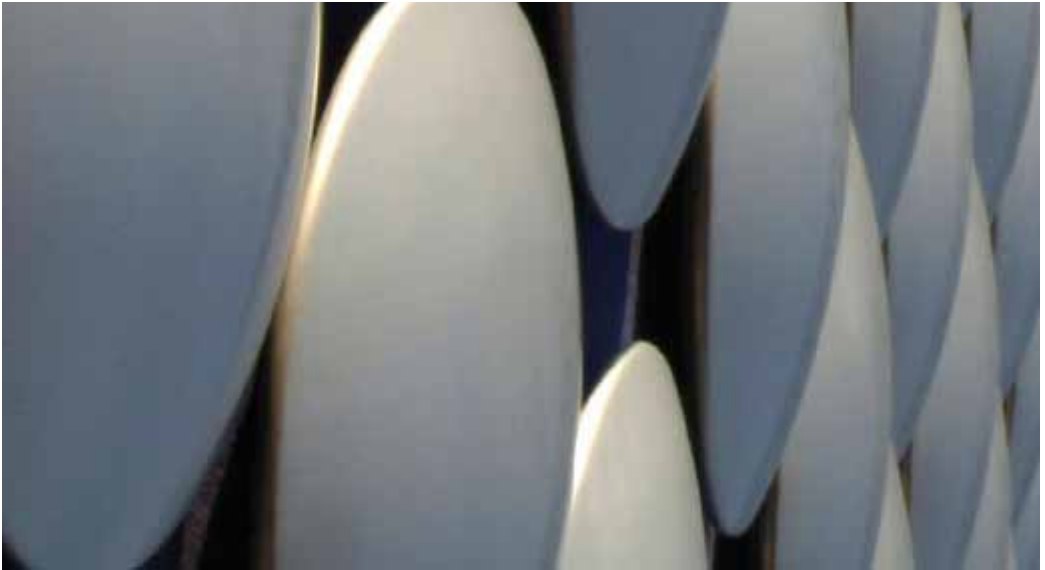
Through these steps, global pharmaceutical companies have secured access to a large and fast-growing market segment. To achieve the best results from this access, they need to understand and address some core challenges presented by emerging markets. The most important of these are:

- **Price pressures from payors.** As institutional payors—governments and private health insurers reimbursing patients for drugs—face economic pressure, they tend in turn to exert pressure on prices. In South Africa, for instance, payors have recently started to use international benchmarking across the private sector to drive down prices. At the same time, the public sector has been investing heavily in broadening healthcare coverage within the national health insurance scheme, a plan that involves purchasing large volumes of inexpensive, mostly generic medicines. Elsewhere, the Turkish government has followed a path of regular and significant price reductions over the past few years.

- **Requirements for local investment.** Several markets are facing a balancing act between the desire to support local companies and the need to manage government spending on pharmaceutical products. In Turkey, multinationals have had to invest heavily in local manufacturing or partnerships with local players in order to meet local good manufacturing practice (GMP) requirements. Similarly, the Russian government's Pharma 2020 plan encourages local manufacturing by requiring regional authorities to buy a certain percentage of locally produced drugs. The Brazilian government has also announced that it will create a price advantage of between 8 and 25 percent for locally manufactured products in government tenders.
- **Increasing consolidation and assertiveness among wholesalers and distributors.** In markets where major multinational retailers have started to establish a significant presence or where retailers have consolidated, as in Brazil, global and local drug companies have faced growing pressures in building their brands and competing against the new entrants. Retailers are also creating a new product segment in the form of private-label brands, which barely existed in emerging markets until recently.

## Assessing sustainability

Given the complexity of a landscape with such substantial differences between markets, it is vital for pharma companies to understand how sustainable branded generics are likely to be on a country-by-country basis. Below we describe an approach for assessing the long-term sustainability of branded generics



in a particular market.<sup>3</sup> The approach provides a fact-based analysis of two key criteria for evaluating a market: how strong is the local preference for brands, and what is the likelihood of the market escaping price intervention by payors?

Our hypothesis was that a market with a strong intrinsic preference for brands and a low likelihood of price intervention by payors should be able to sustain an attractive branded generics segment. On the other hand, if patients in a market perceive brands as less important and payors are likely to cut back on drug spending, branded generics will be less sustainable.

In order to assess *brand preference* in a given market, we used surveys among physicians, pharmacists, and patients to measure four criteria: the market's (meaning physicians' and patients') intrinsic preference for brands, its willingness to pay a price premium for them, its trust in the healthcare infrastructure, and its trust in the regulatory system (and hence in the quality of drugs). By combining these factors, we arrived at a composite score

measuring the strength of brand preference in that market, which we could then index against the scores from other markets.

To measure the likelihood of *payor price intervention* in a market, we analyzed the pressures payors were under to reduce healthcare spending and the strength of the government's desire to support the local pharmaceutical industry.

### The prospects in key markets

The results of our analysis of several major emerging markets are shown in Exhibit 1, which demonstrates how much the branded generics picture changes from market to market. Two established markets, France and Germany, are included as a point of comparison.

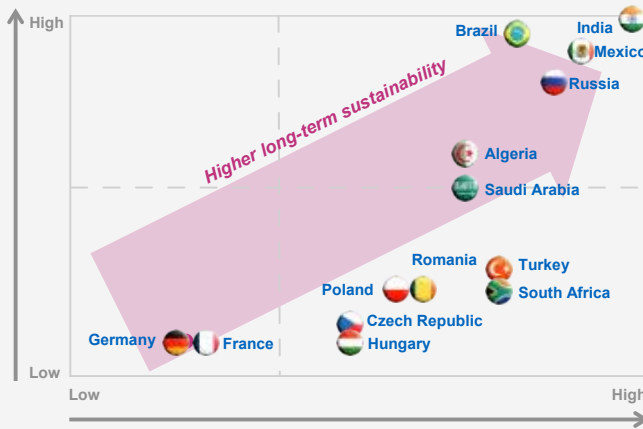
India, Brazil, Mexico, and Russia are the markets where we see the best long-term prospects for branded generics. India, with its majority out-of-pocket segment and limited government price

## Exhibit 1: Long-term sustainability of key branded generics markets

**What is the likelihood of the market escaping price intervention by payers?**

Assessed through:

- Limited pressure to reduce healthcare spend
- Strong desire to support local pharma companies



**How strong is the preference for brands?**

Assessed through:

- Intrinsic local preference for brands
- Patients' willingness to pay price premium
- Lack of confidence in ability of regulatory system to safeguard drug quality

Source: interviews; "How half the world shops," *McKinsey Quarterly*, November 2007; EGA Medicines Association; Economist Intelligence Unit; BMI; WHO; OECD; McKinsey analysis

intervention, looks set to sustain a strong preference for branded generics, although they are likely to stay at today's low prices. Brazilian consumers have consistently displayed a very strong preference for brands in many product categories, including pharmaceuticals. Although the Brazilian government has recently enabled access to one of the world's largest health insurance schemes, the country's largest segment is still the patient-paid retail market, which is expected to continue to grow.

Physicians and patients have a strong preference for brands in Mexico too, and we believe it will remain an attractive market for the foreseeable future. Finally, Russia also has a pronounced bias toward branded generics, and although the government plans to reduce the market share of this segment

as announced in Pharma 2020, we believe it still holds good prospects.

In Algeria, Saudi Arabia, Turkey, and South Africa, the picture is more varied. The preference for brands remains strong in Algeria, a fully reimbursed market. However, the attractiveness of branded generics is being dampened by stringent price controls that favor pure generics, under the influence of a payor system similar to the French system.

Although Saudi Arabia retains a strong preference for brands, branded generics are losing their appeal, a trend that is likely to continue as the government introduces measures to reduce prices. Government tenders have become more systematized thanks to NUPCO (the National Unified Procurement Company for Medical Supplies), price reductions have

become sharper following the introduction of international price benchmarking, and regulatory standards have risen as the Saudi Food and Drug Authority evolves.

In Turkey and South Africa, meanwhile, government pressures to reduce pharmaceutical costs are making the branded generics markets less attractive despite the strong preference for brands in these countries.

Across eastern Europe, trends are emerging that have drastically reduced the appeal of branded generics. Faced with tight austerity budgets, government payors are making efforts to reduce their spending on drugs. For example, Hungary's 2011 economic reform package requires OEP, its national health insurance fund, to make significant savings in its drug reimbursement budget. However, this trend does not affect all countries in the region in the same way. For instance, in Romania, which still has a strong out-of-pocket segment, the government's share of spending on branded generics remains small and consumers continue to demonstrate a strong brand preference, meaning that sustainability is higher.

That said, the preference for brands in eastern Europe is expected gradually to weaken as the introduction of EU standards leads to a rise in quality across the board. Over time, these markets could begin to resemble those of France and Germany, where strong regulatory systems have combined with austerity pressures to limit the appeal of branded generics.



The branded generics segment continues to deliver fast growth and strong profits in emerging markets. Although we can't offer a crystal ball, an analytical approach to forecasting how markets are likely to evolve can help pharmaceutical companies plan their investments to capture maximum value.

## Notes

1 Branded generics are off-patent products sold under a trade name and usually at a price premium by companies other than the originators. Formulations and dosages are modified in some cases.

2 See "Winning in the emerging middle class: Findings from Brazil," pp. 10–13.

3 The approach is not predictive and does not take into account every aspect of sustainability.

## Growth in Brazil's branded generics market: Perspectives from Maurizio Billi, president of Eurofarma





## The leader of one of Brazil's most eminent pharma companies talks about building a platform for growth and how local players can capitalize on their market knowledge.

Nicola Calicchio and Tracy Francis

Founded in 1972, Eurofarma has secured a position among the most admired Brazilian pharmaceutical companies, largely thanks to its success with branded generics. Accounting for 62 percent of sales in Brazil's large and growing pharma market, branded generics face a rosy future. In this interview, Eurofarma's president, Maurizio Billi, shares some thoughts on that future for his company and for the rest of the industry in Latin America.

### Foundation for growth

Billi believes that Eurofarma has built a strong platform for growth and highlights three specific actions: "We consolidated our presence with doctors, getting them to prescribe our products more. We created a good research department for new products. We specialized in the art of copying a product, which is difficult. We showed all our employees what we need—to be more agile, more questioning, and have more drive to do things faster because we are very small compared to the large multinationals."

Billi also recognizes that Eurofarma faces challenges to growth: "We often don't have the internal knowledge of how to make the company grow. We know what we want, but don't know too well how to get there."

### Aspirations for growth

Billi pins his aspirations on "regional internationalization": expansion beyond Brazil into other Latin American countries. Eurofarma launched this strategy in 2009 by acquiring a local company in Argentina, and Billi plans to stay on this course because "I believe there are still many opportunities for consolidation, perhaps not so many in Brazil, but many in Latin America. There are many family businesses, many companies without succession perspectives."

Getting more tactical, he adds, "We do not need to make very significant acquisitions. What we really need is a base. We don't have to buy the market leaders—just a company with a median position to serve as a base for us to build our culture and our products."

The growth strategy set in 2005 called for Eurofarma to acquire five companies in five countries, but as the Latin American market evolves, so does the strategy. "Our original concept was to cover 90 percent of the Latin American market," Billi volunteers, "but Venezuela now represents 15 percent, so if it stays out, we will never have 90 percent. Peru was not on our radar, but now it is." He continues, "I believe we will end up buying a bit more than originally planned."



To date Eurofarma has made four acquisitions outside Brazil and has taken a consistent approach to integrating them: “We are keeping their management because it makes sense to do so. They understand more about those markets than we do.”

### Financing growth

Executing a growth strategy predicated on acquisitions can be expensive. But Billi outlines a clear financing strategy: “Our route is, use our own cash and bank indebtedness. There are some lines one can access at a reasonable cost. Then do an IPO. That we are going to do an IPO is certain. We just don’t know when. Our current position is, we will do it when all the alternative financing possibilities have run out.” He excludes private equity from the mix: “If we have to go for private equity, it’s best to do an IPO directly.”

### Competing for growth

Billi expresses respect and even admiration for major multinational pharmaceutical companies: “They are extremely efficient. I would give God knows how many years of my life to have access to the research into new molecules to be able to do the work like Pfizer, like AstraZeneca. I greatly admire the work these companies do in R&D.”

But Billi often cites the need to know a market in order to succeed there. This belief leads him to dismiss multinational pharma companies as an immediate competitive threat for branded generics in Brazil: “The multinationals don’t have our heads. Until they understand how the market works, they are going to take a long time and leave space for us. I’m not worried about this type of competition. I’m worried about the competition from the Brazilian companies. This group of five or six Brazilian companies, they are very good.”

Billi takes these competitors very seriously, admitting: "They have the same problems we have – they need to win space. They have access to the same technology in product development and in marketing. They know where the good physicians are. We are determined to do things the right way, but the others also are."

For Eurofarma, doing things the right way means:

- Remembering that "the major business of a company like ours is to develop products that are losing patent and be one of the first to arrive in the market. A good example is sildenafil, the generic of Viagra. Since it lost its patent, consumption of this pill in Brazil has multiplied by five. This is a sexual revolution. Our strength lies with this emerging Brazilian class that is getting access to medication."
- "Launching new products faster and faster; investing very strongly in marketing."
- "Getting closer to some multinationals and even being an arm of them in these markets."
- Creating a culture of agility "without much bureaucracy, without exchanging too many emails, without too many PowerPoint presentations."

Success also requires motivated leadership. What motivates Maurizio Billi? "To work and be able to work. Be able to face challenges, risks, and problems and have happy outcomes. One doesn't get motivated by financial values. Motivation comes from what we conquer, and having very good competition is even more motivating."

This is an edited version of an article first published in *Perspectives on Healthcare in Latin America*, McKinsey & Company, 2011.

**Nicola Calicchio** is a director and **Tracy Francis** is a principal in McKinsey's São Paulo office.

## China's digital healing



## The world's biggest and most dynamic social media market is talking about health care. But are companies really listening?

Cindy Chiu, Chris Ip, Ari Silverman, and Florian Then

Even without Facebook, Twitter, and YouTube, China's voracious appetite for all things social has spawned a dizzying array of social media platforms, many with tools more advanced than those in the west (Exhibit 1). Chinese users were able, for example, to embed multimedia content in social media 18 months before Twitter users could do so in the United States. That's helped to turn the world's biggest internet user base—513 million people, more than twice the 245 million in the US<sup>1</sup>—into the world's most active environment for social media.

More than 300 million people use blogs, social networking sites, and other online communities.<sup>2</sup> And they are active and engaged: 91 percent have visited a social media website in the past six months, as against 67 percent in the US and 30 percent in Japan. Moreover, three-quarters of users are creators of content—active posters rather than mere spectators—compared to just a quarter in the US. They spend more time on social media too: over 20 percent more than users in the US, and six times the average for Japan.<sup>3</sup>

Chinese users tend to get quite personal, talking in detail about their condition, treatment, and standards of care, and naming the products and brands that feature in their treatment regimes. Mining this wealth of

insights represents one of the largest untapped opportunities for healthcare companies in the Chinese market.

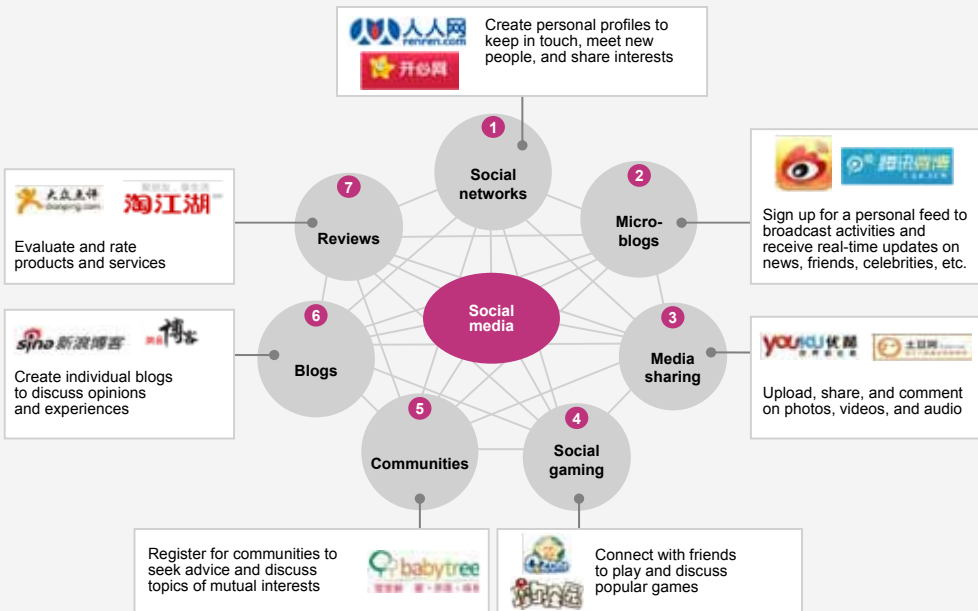
### A matter of trust

Social media began in China in 1994 with online forums and communities, and migrated to instant messaging in 1999. User review sites emerged around 2003, blogging in 2004, and social networking sites such as Tencent's QZone in 2005. Sina Weibo launched in 2009, offering microblogging with multimedia. Location-based player Jiepang appeared in 2010.

China's social media users are not just more active than those elsewhere; more than 80 percent have multiple social media accounts, compared with just 39 percent in Japan.<sup>4</sup> They increasingly use social media on the move too, with mobile users expected to grow at about 30 percent per year from a base of more than 100 million in 2010.<sup>5</sup>

This explosive growth shows few signs of abating, given the increasing affordability of broadband, the proliferation of mobile devices with internet access, and the fact that the government cannot censor social media as easily as other information channels, which leads users to put more trust in social media content.

### Exhibit 1: A complex social media environment



Source: CR Net; NM Incite; McKinsey analysis

Yet untrustworthy sources do exist, notably “artificial writers” that seed positive and negative content in the hope it will go viral. In some cases, negative publicity about companies—such as allegations of product contamination—has prompted waves of microblog posts from competitors and disguised users. Companies need to be on their guard against such situations when mining social media for insights lest they draw the wrong conclusions about users’ behavior and preferences.

### Stakeholders embrace social media

To understand China’s social media landscape better, let’s look at the key stakeholders: patients, professionals, providers, and manufacturers.

### Patients reach out to new “friends and family”

Chinese users greatly value the advice of opinion leaders in social networks, in part because of doubts about the credibility of formal institutions. One survey found that 66 percent of consumers in China relied on recommendations from friends and family when buying moisturizer, for instance, compared with just 38 percent in the US. In effect, social media is serving as a digital extension of friends and family. Recent NM Incite research reported more than 1 million consumer posts about diabetes in just six months on Weibo and other platforms, some of them highly specific: 18 percent mentioned individual products, and 6 percent named brands.

Patients also use online sources to make decisions about their health care. A McKinsey survey revealed that when Chinese patients are selecting a hospital,

they are less likely to seek information from traditional sources such as print media (chosen by fewer than 10 percent of patients) than the internet (17 percent). Younger patients are much more likely to use online information than their elders (28 percent of under-25s, compared with 8 percent of over-45s). Similarly, 12 percent of younger consumers look to social media for information about treatment and medication.

### Medical practitioners take up microblogging

Social media has been widely adopted by medical practitioners as a platform for professional interaction. One prominent site for healthcare workers, DingXiangYuan, is used by 3 million professionals including almost 900,000 doctors, with 30,000 new users joining every month. It offers information on drugs and other topics, blogging, career services, and an online store.

Most doctors are aware of microblogging, and more than half use Weibo themselves.<sup>6</sup> Some leading physicians have hundreds of thousands of followers. Oncologists and doctors who treat chronic diseases tend to be the most popular.

### Providers move online

Healthcare providers are migrating online to recruit and retain patients, improve patient-physician relationships, and expand the influence of their key opinion leaders. Some set up social media accounts for their medical staff, mandate physicians to use them to communicate with patients, and help to maintain the microblogs of popular doctors.

Government departments are supporting this trend too. For instance, Beijing's municipal health department, which boasts 40,000 followers on its Weibo

account, announced in February 2012 that it will integrate the microblog accounts of hospitals, hospital departments, and physicians into a single account. It also mandated more than 50 hospitals, the Beijing medical authority, local health bureaus, and other agencies to open accounts.

### Manufacturers test the waters

Although many multinational pharma companies have been building an integrated digital presence in their home markets, progress in China has been mixed. Some companies have set up Weibo accounts much as they would establish a Facebook or Twitter presence elsewhere; the Mercilon contraceptive and Acuvue disposable contact lenses both have their own sites, for instance. As yet, though, companies have made limited use of social media to bring content to physicians and patients.

There is a large untapped opportunity for companies to listen carefully to physicians and patients to understand their preferences and identify their unmet needs.

### Listening for social media insights

Listening to conversations between patients, caregivers, and healthcare professionals helps companies understand who is talking about which treatments, products, and brands, what they are saying about disease management and treatment, and what their needs are. Leading companies are already taking steps in this direction: for instance, in March 2012 GlaxoSmithKline signed a multi-year, multimillion-dollar global deal with Infosys and Fabric Worldwide to monitor and

analyze social media discussions to inform its marketing and promotion strategy.

Companies should strive to identify all the needs and priorities of their target patient groups, including what information they find valuable and where they get it. Listening and monitoring trends can help companies shape their strategies and business decisions and inform product design, brand campaigns, and rapid responses to customer concerns. However, patient privacy rules are still evolving, so companies need to be careful about how they use patient-specific information from social media.

Some companies are going a step further by providing medical information for opinion leaders and physicians via social media. Such approaches should be crafted carefully with an eye to potential regulatory issues. For example, some multinational pharma companies have closed their Facebook pages because of concerns that they may be seen as spreading false information posted by patients.

### Making a start

As executives look to generate value from this opportunity, they need to address a few important questions:

- Where do our key stakeholders tend to have their discussions?
- What do they say about therapeutic areas, treatment paradigms, products, and brands? What are their unmet medical needs?
- How do they feel about specific products and brands, and why?

- How can we draw out actionable insights from the wealth of information available? How will these insights change the way we engage with physicians?
- How well do we understand the rules of the social media game? Do we know how to listen to stakeholders properly? How far should we go in engaging customers? How can we mitigate regulatory risks?
- How does social media fit into our planning processes? Who in our organization should take responsibility for it? What capabilities do we need?



No pharmaceutical company operating in China can afford to ignore social media. Although some regulatory questions remain unanswered, that shouldn't deter companies from moving ahead. Investing in understanding and learning from China's digital conversation should prove well worth the effort.



## Notes

1 Internet World Stats data as of December 2011; US figures from March 2011.

2 McKinsey's 2012 iConsumer survey on Chinese consumers also finds that 91 percent of internet users in tier I to tier III cities use social media. Tier I cities include Beijing, Guangzhou, Shanghai, and Shenzhen; tier II comprises about 40 cities and tier III about 170. The tiers are defined by urban population and by economic factors such as GDP and GDP per capita.

3 McKinsey's 2012 iConsumer survey.

4 McKinsey's 2012 iConsumer survey.

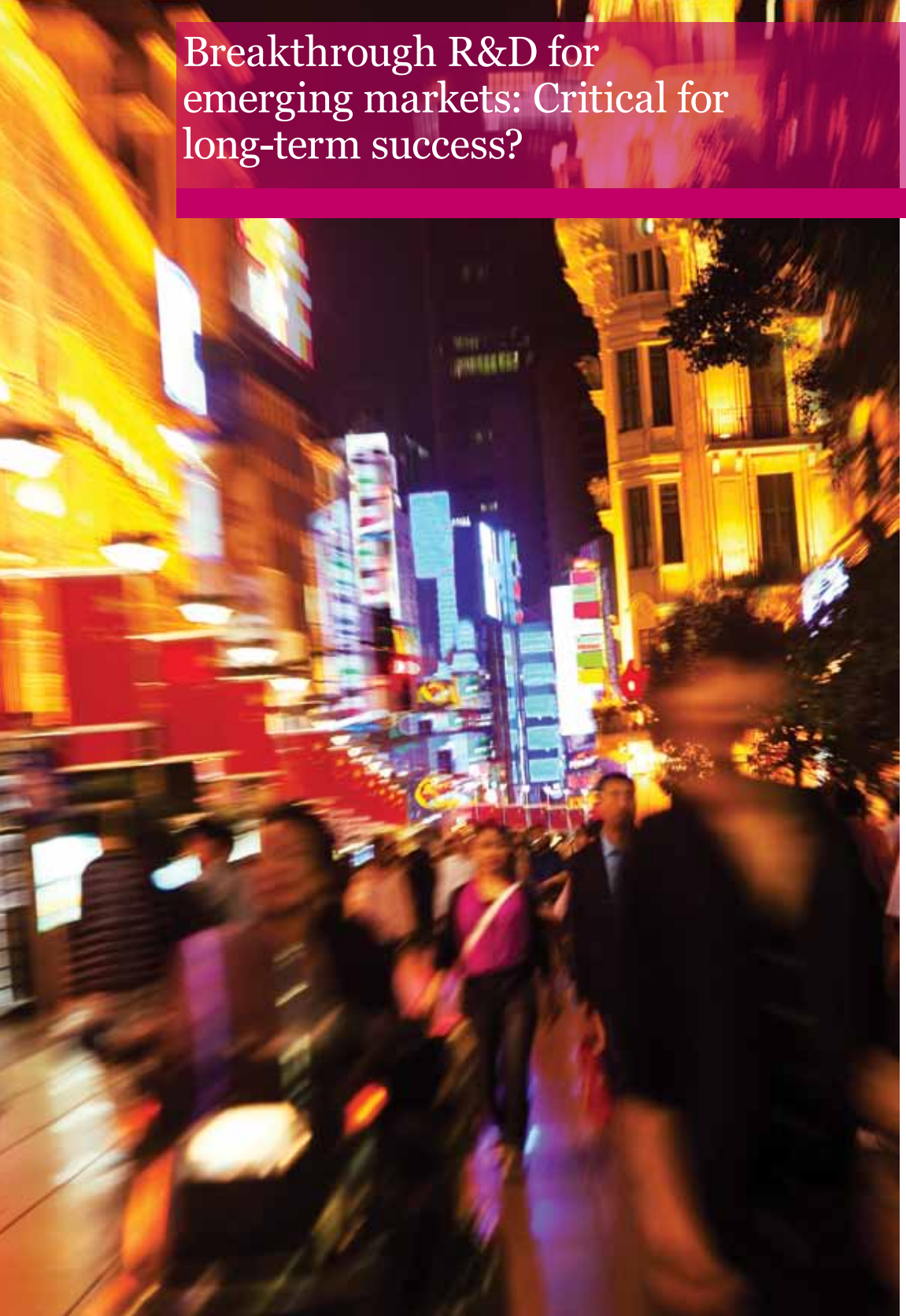
5 IDC and iResearch.

6 DingXiangYuan survey, June 2011.

This is an edited version of an article first published in *China Healthcare: Entering uncharted waters*, McKinsey & Company, 2012.

**Cindy Chiu** and **Florian Then** are consultants and **Ari Silverman** is a principal in McKinsey's Shanghai office; **Chris Ip** is a director in the Singapore office. The authors would like to acknowledge the contributions of NM Incite, TC Chu and Davis Lin to the development of this article.

Breakthrough R&D for  
emerging markets: Critical for  
long-term success?



**Pharma companies pursuing growth in emerging markets will increasingly need to adapt their portfolio to address local requirements. The right R&D strategy will involve reducing costs so that they can develop innovative drugs tailored to emerging market needs and still make a profit.**

Sanjiv Talwar, Shail Thaker, and Matthew Wilson

With cost pressures in established pharmaceutical markets set to continue into the foreseeable future, emerging markets will soon start to contribute the largest share of industry growth. This rising share is driven by a large and growing unmet medical need and by an improvement in these markets' ability to pay for drugs that is driven by increasing affluence among patients and expanding and deepening government coverage. As a result, many leading pharma companies have committed to ambitious growth plans for these markets and are placing material investments to back them up. However, the success formula for these markets has yet to be firmly established and we believe that a new approach to R&D will be a critical component.

### **Approaching the tipping point?**

In the past, multinational corporations (MNCs) have approached emerging markets as an opportunity to capture additional revenue for existing products rather than as a diverse set of markets with unique needs of their own. Even when successful innovative products have been created for local markets, they have come about either through leveraging existing breakthroughs (for example, when the understanding in traditional Chinese

medicine of the herb artemisinin was exploited by Coartem to treat malaria) or by necessity (as with the identification of ethnic sub-populations where drugs are effective, for instance in the case of Iressa).

In the past five years, pharma companies have received a great deal of publicity for their investments in R&D sites and partnerships in emerging markets. As an example, more than 20 sites have been built by global pharma companies in China,<sup>1</sup> and some emerging markets have seen rapid growth of up to 30 percent per year (compared with 7 percent in the US) in the number of clinical trials initiated.<sup>2</sup> However, these investments have generally been focused on supporting the global portfolio by sourcing services and patients for trials at low cost, or developing capabilities in incremental product innovation such as fixed-dose combinations.

This approach is implicitly underpinned by the belief that developing innovative products specifically for emerging markets does not make economic sense. However, several factors are now challenging this viewpoint:

***There is evidence that tapping unmet needs provides a credible revenue opportunity.*** Local companies in India, China, and Korea have had success

### Exhibit 1: Innovative molecules from emerging markets go global

Number of molecules discovered in India or China in EU or US registration process in 2011		Molecule (pharmacology activity)	Originator company	Indication
Phase I	India	P1736	Piramal	Diabetes
		Revamilast	Glenmark	Rheumatoid arthritis
		GBR 600	Glenmark	Acute coronary syndrome
		GBR 500	Glenmark	Multiple sclerosis
	China	Chidamide	Shenzhen Chipscreen Biosciences	Oncology
		Retagliptin	Jiangsu Hengrui	Diabetes
Phase II	India	SUN-1334H	Sun Pharma	Allergic rhinitis
		Oglemilast	Glenmark	Asthma, COPD (chronic obstructive pulmonary disease)
	China	WST11	Wockhardt	Biliary cancer; macular degeneration
		GRC 15300	Glenmark	Pain (osteoarthritic, neuropathic)
		Sulcardine Sulfate	Jiangsu Furui Pharmaceutical	Premature ventricular contractions
		Huperzine A	Shanghai Institute of Materia Medica	Alzheimer's
		Dan Shen Di Wan	Tianjin Tasly	Angina
		Hypocol	Shandong Luye Pharma	Hyperlipidemia
Phase III	India	Balaglitazone	Dr Reddy's	Diabetes
		NAB001	Dr Reddy's	Onychomycosis
	China	DP-b99	Jiangsu Wanbang	Stroke

in developing products to meet local needs. They go beyond duplicating or reformulating global drugs and develop genuinely innovative drugs. Examples include Simcere's innovative cancer drug Endu in China, Hanmi's novel combination Amosartan in Korea, and CP Guojian's pipeline of innovative monoclonal antibodies, again in China.

#### **Local R&D capabilities are improving.**

Academic, government, and private sector investments into life science research are beginning to pay off. If we take publication as a measure, China now ranks fourth in the world for medical publications in general<sup>3</sup> and is not far behind Japan for publication in top journals.<sup>4</sup> Other countries are not far behind, with average citations for papers produced in South Korea, Singapore, and Russia running at levels comparable to those of many western European nations.<sup>5</sup>

Early evidence of the quality of local work can be seen in the innovative products developed in emerging markets that are beginning to reach global markets. As Exhibit 1 indicates, there are at least 11 such drugs from China and India alone in Phase II and III at the moment.

Another indication of improving local capabilities is the growing number of new partnerships in which multinationals seek out innovation from local emerging market players. Examples involving Indian companies include Sanofi's deal with Glenmark on an immunology monoclonal antibody, Pfizer's pact with Biocon for its insulin portfolio, and Merck's joint venture with Sun Pharma for innovative formulations. The alliance between Roche and Russia's TeaRx for the development of Factor Xa inhibitors is another example of a global company pursuing innovation with the help of a local partner.

**Local R&D can help to secure access to some key growth markets.** Governments are increasingly rewarding local R&D efforts that go beyond including local patients in global clinical trials. Many countries have identified the development of local pharma R&D as a strategic priority and are aligning their policies to support it.

As an example, the Russian government has outlined a strategy for long-term innovation as part of its Pharma 2020 vision. Its aspiration is to replace 50 percent of imported innovative branded drugs (that is, those other than generics and branded generics) with locally developed ones. This strategy, like Russia's local manufacturing policy, is likely to be underpinned by legislative and regulatory mechanisms

In response to such initiatives, MNCs are showing early signs of movement to develop innovative products specific to emerging markets. For instance, Lilly's new R&D center in China focuses on developing diabetes products exclusively

for the local market. However, such efforts are still in their infancy and do not represent a general trend as of yet.

### Where is the real opportunity for innovative R&D?

As emerging markets develop and start to share common health challenges with developed markets, we can expect to see a broad convergence in epidemiology, particularly in chronic diseases such as cardiovascular and metabolic diseases. Consequently, many emerging market needs can be met by means of R&D focused on developed markets, as the historic global success of many major drugs from the US and Europe would suggest.

However, there are unique opportunities specific to emerging markets that exist alongside these shared needs. We have identified five types for multinationals to consider, as itemized in Exhibit 2. All could

**Exhibit 2: Attractive areas in emerging markets for innovative R&D**

	Area	Examples of therapeutic areas and products	Considerations for multinationals
Diseases specific to emerging markets	1 Previously neglected widespread indications that may become commercially viable	<ul style="list-style-type: none"> <li>▪ Malaria</li> <li>▪ Tuberculosis</li> <li>▪ Zoonotic diseases (e.g., Chagas disease, Dengue)</li> </ul>	<ul style="list-style-type: none"> <li>▪ Emerging mechanisms to foster additional R&amp;D (e.g., product development partnerships)</li> <li>▪ Molecular genomic approaches (e.g., for malaria, zoonosis) to reduce discovery and development costs</li> <li>▪ Drug resistance patterns</li> </ul>
	2 Genotype-specific diseases	<ul style="list-style-type: none"> <li>▪ HCC (hepatocellular carcinoma)</li> <li>▪ Myopic CNV (choroidal neovascularization)</li> </ul>	<ul style="list-style-type: none"> <li>▪ May be able to access government funding to reduce costs</li> <li>▪ Innovation approaches could filter to developed regions</li> </ul>
Global diseases with local nuances	3 Opportunities created by differences in local standard of care or epidemiology	<ul style="list-style-type: none"> <li>▪ Diabetes</li> </ul>	<ul style="list-style-type: none"> <li>▪ May involve research in different areas (e.g., gene polymorphism in diabetes)</li> <li>▪ Alternative target product profiles may be needed to meet local prescribing preferences</li> </ul>
	4 Diseases with high incidence in emerging markets but low priority at global level	<ul style="list-style-type: none"> <li>▪ COPD (chronic obstructive pulmonary disease)</li> <li>▪ HPV (human papillomavirus)</li> <li>▪ Hepatitis</li> </ul>	<ul style="list-style-type: none"> <li>▪ Must be well recognized by payors or prescribers (e.g., depression has high incidence in emerging markets but is often not diagnosed or treated)</li> </ul>
	5 Differences in consumer preferences	<ul style="list-style-type: none"> <li>▪ FDCs (fixed-dose combinations)</li> <li>▪ Devices</li> <li>▪ Heat-stable formulations</li> <li>▪ Cheaper versions</li> </ul>	<ul style="list-style-type: none"> <li>▪ Substantial variations from country to country</li> <li>▪ May require more than simple bioequivalence</li> <li>▪ May include branded generics, generics, biosimilars, biobetters</li> </ul>

address substantial unmet needs and all have the potential to generate material revenues, though these might be at different margin levels from those currently enjoyed by the industry. However, traditional R&D approaches have yet to target or capitalize on these areas in any significant way.

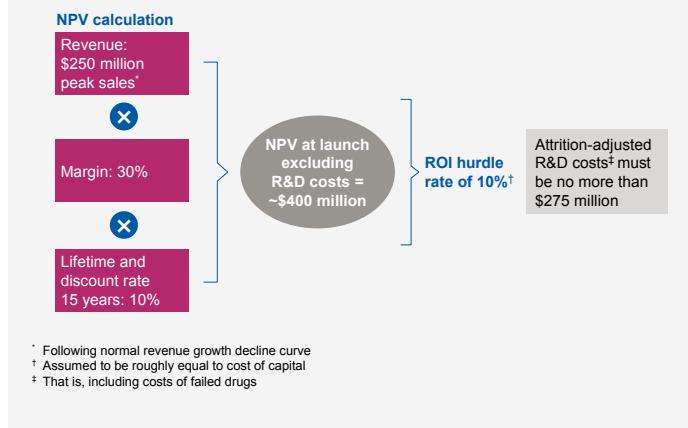
So what's stopping the industry? The most common objection we hear is "Emerging market opportunities are too small—the numbers won't add up." No doubt scale does pose a challenge. Peak potential revenues of a successful product in emerging markets are in the region of \$300 to \$500 million, with lower margins than in established markets. However, the longer product lifecycles and significant growth in these markets have a positive impact on the calculation of the drug's net present value (NPV).

If we make a conservative set of basic assumptions about the development costs of a drug focused on key emerging markets and factor in attrition, the implication is that an MNC will need to be able to develop such a product for no more than \$275 million. Exhibit 3 lays out the calculation for an illustrative product under these assumptions.

The analysis does not take into account the possible benefits of conducting targeted R&D in terms of improved access to the market concerned. Such benefits are difficult to quantify, but could be material. Even without them, we believe that pharma companies could deliver profitable products if they were willing to modify their classic developed-world R&D approach.

### Exhibit 3: Conservative calculation of R&D cost threshold

Illustration using standard assumptions, with adjustment for attrition



### What do MNCs need to do differently?

To capture the opportunity, global pharma companies would need to do three things: choose the right opportunities, change their approach to R&D, and adjust their NPV equations.

#### Choose the right opportunities

We see five broad areas of opportunity, as laid out in Exhibit 2. The relative weighting of these opportunities differs by country, depending on local needs. To find the right targets, an MNC will require deep local knowledge about both the nature of these needs and the willingness of payors to support them. This in turn will typically require its R&D organization to form partnerships with high-performing local medical and market access functions.

#### Change the R&D approach

Applying a traditional approach to the development of a drug for emerging markets would incur high costs that would exceed the drug's projected net present value on an attrition-adjusted basis. However, focusing exclusively on emerging markets allows companies to:

**Explore new drug development paradigms.** Leveraging adaptive trial design to reduce the powering of trials and rethinking trial arms offer opportunities to depart from the traditional drug development approach.

**Take advantage of low-cost local R&D capabilities.** Conducting all aspects of the R&D process in emerging markets—for instance, using local patients only, rather than those from Europe or the US—and taking advantage of lower labor and per patient costs will help save money across the entire value chain. Factoring in lower costs for internal clinicians and forming partnerships with large hospitals to recruit patients rapidly and at lower cost per patient would enable a Phase II trial to be run for \$8 to \$16 million as opposed to the usual \$30 to \$50 million in developed markets. Interviews with local companies in

India and elsewhere suggest that they may be able to shave even more off this cost.

**Target filing with regulators in emerging markets only.** In the past, regulators in emerging markets have been unlikely to approve products from multinationals that target only emerging markets. However, the SFDA (State Food & Drug Administration in China) and DCGI (Drugs Controller General of India) have shown increasing willingness to make independent approvals, and pathways such as EMA Article 58 and WHO prequalification offer potentially cheaper and faster alternatives to a traditional FDA or EMA filing.

As Exhibit 4 illustrates, rough estimates indicate how these approaches could cut risk-adjusted R&D costs from traditional levels of \$750 million to \$1.3 billion down to as little as \$220 to

Exhibit 4: An alternative R&D paradigm

	Target to hit	Hit to lead	Lead optimization	Pre-clinical	Phase I	Phase II	Phase III	Registration	
<b>Traditional western R&amp;D</b>	1–2	3–5	6–12	7–15	10–20	30–50	80–150	20–30	Total risk-adjusted cost per NCE*: \$750–1,300 million
<b>Cost (\$ million)</b>									
<b>Success rate</b>	80%	75%	85%	70%	60%	33%	60%	–	
<b>Alternative model</b>	1 Focus mainly on published, validated targets	2 Source leads from low-cost HTS† providers	3 Conduct all R&D in emerging markets to leverage savings in cost base (e.g., in per patient costs)		4 Leverage adaptive trial design to reduce powering of trials	5 Focus on local standard of care for trial arms (e.g., arms against traditional medicine, not expensive comparators)	6 File only with EM regulators		Total risk-adjusted cost per NCE*: \$220–475 million
<b>Cost (\$ million)</b>	0–1	0.5–2	2–4	3–5	4–8	8–16	25–50	4–8	

\* New chemical entity  
† High-throughput screening



\$475 million, assuming attrition rates that are comparable with those in traditional drug development. That means that MNCs may be able to meet the required cost hurdle for profitable drug development purely by changing their R&D approach.

Moreover, the cost could come down even further if attrition proves not to be as high as it is in traditional areas (for instance, if there are fewer failures due to lack of differentiation since the standard of care is limited) or if novel techniques like adaptive trial design are fully applied.

### Adjust the NPV equation

To shift the economics in their favor, companies can seek out new sources of funding, capitalize on low-cost manufacturing, and pursue alternative commercial models.

#### **Seek out new sources of funding.**

Substantial pools of government and other institutional funding have emerged that companies could access to conduct R&D in emerging markets. Governments increasingly view R&D as a core capability that they want to have in their country, and they are offering a variety of incentives. Funding opportunities include:

- Brazil: billions of dollars of funding in FINEP, FAPESP, and other institutes, as well as tax breaks of 160 to 180 percent
- Russia: funding and preferential access in exchange for local investments at Skolkovo, the R&D “city” near Moscow
- China: local R&D capability development given priority and funding in the twelfth five-year plan (at least \$6 billion committed to local R&D up to 2015), as well as through national biotech zones
- Malaysia: healthcare industry development agency with standing budget for co-investments.

In addition, foundations and product development partnerships are taking more and more interest in investing in emerging markets, particularly in the area of neglected diseases.

#### **Capitalize on low-cost manufacturing to support margins.**

There are multiple business models that can be adopted to reduce capital and operating expenditure while still maintaining MNC standards for quality and compliance in active pharmaceutical ingredient (API), formulation, and packaging. Options range from captive manufacturing plants (like those of Sanofi-Aventis in India)



to tactical short-term one-off contract manufacturing deals (like that of Jubilant and GlaxoSmithKline). There is some variation from region to region, but opportunities for cost savings go beyond lower manufacturing labor costs to include improvements in cost of goods sold through a reduction in overhead and capital costs, lower API sourcing cost, and other benefits such as tax shields.

***Integrate alternative commercial models.*** The rapidly evolving commercial landscape in emerging markets presents incremental opportunities to broaden the revenue base via options such as new distribution models, a multi-channel approach for the emerging middle class, and partnerships for joint promotion or marketing. There is also an opportunity to broaden the accessible patient base by developing effective pricing approaches.



Success in emerging markets is a strategic pillar for many pharma companies, but the increasing complexity of these markets means that players are likely to need a portfolio of mutually reinforcing initiatives in order to achieve it. The approach outlined above could be a powerful ingredient in this mix, and a useful complement to the portfolio expansion and branded generic deals we see today. Companies that aspire to long-term leadership in emerging markets need to invest considerable effort to get this approach right. However, the winners could reap considerable rewards in the form of a high-growth emerging markets portfolio and a major boost in the value of their global portfolio in these markets as well.

## Notes

1 For more on China, see “Debunking the myths about R&D talent in China,” *Evolution or revolution? McKinsey perspectives on drug and device R&D 2012*, McKinsey & Company, 2012, pp. 96–105.

2 “Clinical trials submitted in marketing authorization applications to the EMA,” EMA, November 2010.

3 SCImago Journal & Country Rank, October 2010.

4 PubMed; the top journals are *Science*, *Nature*, *Cell*, *New England Journal of Medicine*, and *PNAS*.

5 Robert D. Atkinson and Scott M. Andes, “The Atlantic century: Benchmarking EU and US innovation and competitiveness,” Information Technology & Innovation Foundation, February 2009.

This article was first published in *Evolution or revolution? McKinsey perspectives on drug and device R&D 2012*.

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Cutting through the complexity:  
Insights into the future of clinical  
trials in emerging markets



## As investing in emerging market infrastructure becomes a pillar of pharma growth strategies, conducting clinical trials in these markets should be more attractive than ever. So why are such trials declining, and how should executives evaluate the opportunities in this increasingly complex environment?

Jackie Hua, Shail Thaker, and Matthew Wilson

The pharmaceutical industry has long recognized the value of clinical trials in emerging markets. Since the late 1990s, trials have spread to Asia, Latin America, eastern and central Europe, the Middle East, and Africa. Most of the factors that prompted this shift remain relevant today, yet over the past two years there has been a decline in trial numbers in all of these regions except eastern Asia. To explore recent trends and likely future changes, McKinsey held in-depth discussions with heads of clinical operations at leading pharma companies.<sup>1</sup> Below we offer insights into what is happening, what is in store, and how executives can prepare their organizations to capture the most value.

### Compelling advantages

Three main factors have made emerging markets attractive for clinical trials in the past, and continue to apply today:

**Availability of patients and speed of recruitment.** The large populations of target patients and relatively low concentration of clinical research in many emerging markets can make finding and recruiting qualified patients easier and quicker than in the crowded landscape of developed markets. This was and remains the most important reason for

global pharma companies to conduct clinical trials in emerging markets.

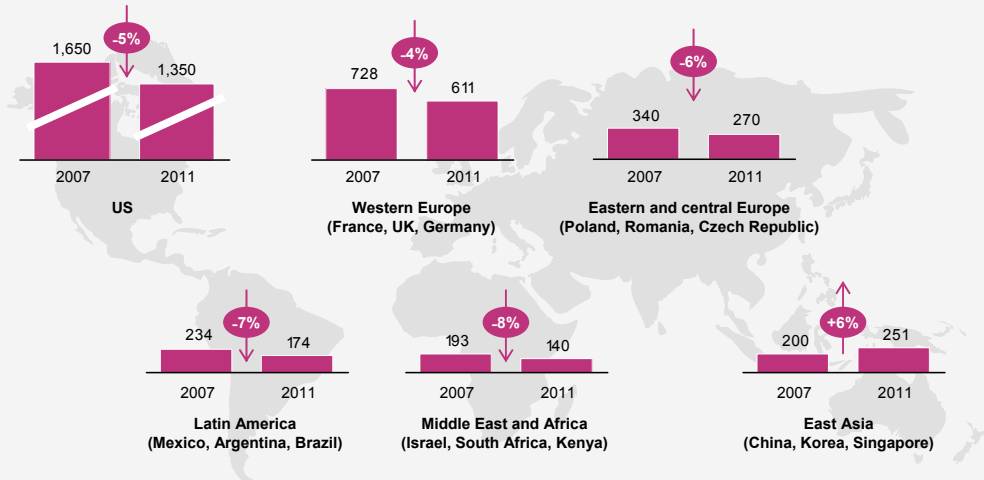
**Cost advantages.** As R&D budgets continue to be squeezed, the lower cost per patient incurred in emerging markets represents a compelling advantage. Savings can be as high as 70 percent of the developed market cost and are most pronounced in certain elements of the cost structure, such as investigator grants. In addition, some countries, such as Brazil, offer R&D tax credits that can be used for clinical trials.

**“Ticket to play” in emerging markets.** Some governments in emerging markets, such as China, Russia, and Vietnam, require companies to use local patients in trials before they can register products locally. Others, such as Brazil, appear to offer faster approval times for drugs when trials are conducted with local patients. These regulatory requirements reflect the need to understand how the effects of a drug vary across ethnicities and genotypes, but they are also driven by the desire to promote local biomedical R&D development, as prioritized in China’s twelfth five-year plan and Russia’s Pharma 2020 strategy. More and more general managers in global pharma companies now view local clinical trials as part of a portfolio of initiatives alongside local manufacturing and

## Exhibit 1: Clinical trial initiatives decline except in east Asia

 CAGR

Number of clinical trials initiated\*



\* Phase II and Phase III trials sponsored by industry; 2011 number annualized based on January to October count  
Source: Clinicaltrials.gov; McKinsey analysis

product enhancement to demonstrate commitment to key emerging markets.

### Recent shifts

Following decades of steady increases, the number of clinical trials initiated globally took a downward turn in 2008 and has continued on this trajectory, with a particularly steep drop in 2011. No doubt this trend reflects the reduction in R&D pipelines resulting from megamergers, cost-saving programs, and low productivity, but it has not affected all countries equally.

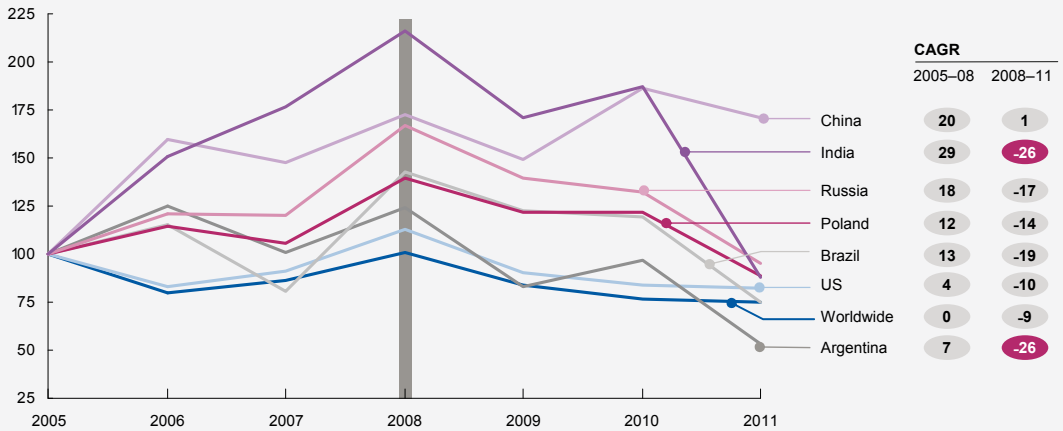
As Exhibit 1 shows, trial numbers have declined in western Europe and the US, but they have fallen even more sharply in eastern and central Europe, Latin America, and the Middle East and Africa.

The numbers are even starker at the country level, with Russia, India, and Argentina showing the steepest drops (Exhibit 2). The exception that proves the rule is east Asia, where rapid growth in the pharma markets of some countries have made them a priority for global companies. While the data set is admittedly partial—not all trials outside the US are reported to the FDA and included in the ClinicalTrials.gov database—it is enough to indicate a reversal in direction that disproportionately affects emerging markets.

It is not yet clear whether these changes represent a short-term blip or a long-term trend. Some of the underlying challenges driving the changes, such as the uncertain regulatory landscape, are institutional but have become more evident in the last few years as multinational corporations gain experience in emerging markets. Other challenges, such as the

**Exhibit 2: Some markets suffer more than others**

Number of clinical trials initiated,<sup>\*</sup> indexed to 2005



<sup>\*</sup> Phase II and Phase III trials sponsored by industry; 2011 number annualized based on January to October count  
 Source: Clinicaltrials.gov; McKinsey analysis

availability of qualified investigators, have been exacerbated by the exponential growth of trials in the years up to 2008. The main challenges include:

- **Long and sometimes unpredictable timelines for approval.** The clinical trial approval process required in some countries—for instance, by the State Food and Drug Administration (SFDA) in China and the national health surveillance agency Anvisa in Brazil—can cause unacceptable delays in clinical trials with competitive timelines, as is the case with many oncology trials.
- **Lingering compliance concerns.** The liability and reputational damage associated with breaches of clinical conduct in a number of trials conducted in emerging markets in recent years has highlighted the risks associated with these trials and the need for constant diligence even stronger than that exercised in developed markets.
- **Uncertain regulatory landscape.** Regulators in emerging markets sometimes change regulations with little or no warning, as seen in Russia's 2007 ban on the export of human biological samples. Such changes can disrupt trials.
- **Scarcity of investigators trained in good clinical practice (GCP).** The shortage of investigators with previous clinical experience to global standards means they can be a bottleneck to scaling up trials in emerging markets. For instance, China has only 333 SFDA-approved GCP compliant sites.
- **Eroding cost advantages.** Although substantial differences remain, the overall cost gap between emerging markets and the US and EU is narrowing because of economic growth and policy changes in some emerging markets. For example, Brazil requires pharma companies to

supply lifelong medical supplies for patients participating in trials. In some other countries the cost of cross-border drug and biosample delivery has soared and is now higher than in developed markets.

Collectively these factors add up to a significant complexity challenge for global pharma companies.

### What next?

Our discussions with heads of clinical operations at major global pharma companies revealed that there are substantial variations between companies in the proportion of patient trials conducted in emerging markets and the strategies adopted to pursue them. As Exhibit 3 illustrates, there is a cadre of companies that are yet to shift significant trial volumes to emerging markets, but plan to do so in the next five years to catch up with their peers. A consensus seems to be emerging that the “right” allocation of trials in emerging markets is about 40 percent.

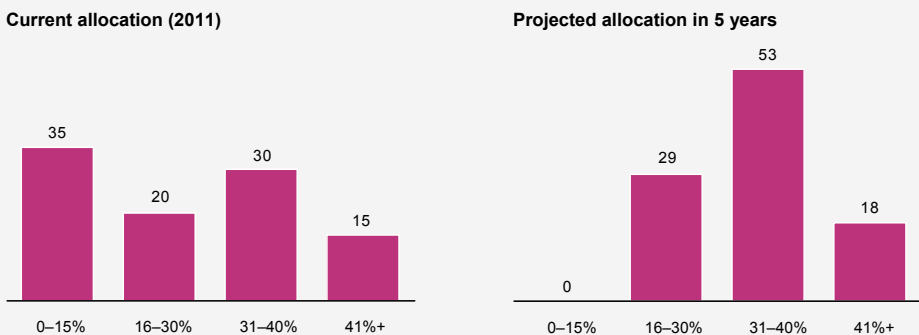
This transition is likely to happen against a backdrop of considerable evolution over the next five years. Many challenges in the clinical development ecosystem will ease as regulatory capabilities advance and the investigator base matures. As global contract research organizations (CROs) gain scale in many emerging markets, they will be better able to support local trials. In addition, some local CROs, such as TigerMed and Fountain Medical in China and the Sino-Japanese joint venture Rundo, are developing their capabilities to meet the needs of global pharma companies.

We also foresee a growing emphasis on the role of clinical trials within a portfolio of initiatives demonstrating commitment to local markets. Regional and local trials focused on market-specific needs will continue to grow, and will include outcomes research and investigator-initiated trials to help engage opinion leaders and key institutions on local medical needs.

### Exhibit 3: Company portfolios shift toward emerging markets

Emerging market trials as a percentage of global trials

Sample: 30 companies, representing 70% of global spending on clinical trials



To capture the most value from trials in emerging markets, companies need to get the following things right:

- **Global footprint.** To ensure an efficient and streamlined approach, companies need to strike a balance between breadth of exposure to emerging markets and focus in key markets. Most of the clinical leaders we spoke to are exploring the possibility of reducing the number of countries where they conduct trials by giving lower priority to second- and third-tier emerging markets. For instance, one company has reduced its clinical trial footprint from 60 countries to just 25.
- **Investment.** The winning formula is likely to involve investing heavily in a few key markets in order to secure access, mitigate compliance risk, and retain talent. Companies will need to build solid relationships with investigators and institutions, work with regulators to drive quality standards, and develop world-class local talent. This could mean investing in captive centers in the near term, as Pfizer did with its Phase II supercenters in India and Argentina, or pursuing a virtual model via local partners, as Merck did through its relationship with Fuwai hospital in Beijing, China.
- **Collaborations.** Companies should develop creative collaborations with their peers to tackle key local challenges such as the availability of GCP-trained investigators. These collaborations should also be used to address compliance concerns and provide a uniform view for regulators.

- **Objectives.** Clinical objectives need to be aligned with enterprise-wide strategic objectives, not emerge out of ad hoc decisions by study teams. To develop a thoughtful strategy on global trial allocation, companies need to establish a genuine dialogue between their R&D and commercial people and weigh up the challenges and benefits of each market. The needs of individual trials will always vary substantially, but decisions on where to invest and how to balance the often conflicting goals of speed, quality, cost, and commercial potential call for an independent holistic analysis to align the organization and provide strategic guidance to teams.



In this rapidly evolving landscape, each company will need to revisit its approach to clinical trials in the light of its commercial aspirations for emerging markets, its overall cost requirements, and its existing footprint. Companies need to be clear about their strategic objectives and about the scope for industry-level actions to help unlock opportunities. For those companies that are able to navigate the growing complexity of this landscape, the next five years continue to offer great potential.

## Note

<sup>1</sup> Our discussions took place during McKinsey's annual conference for heads of clinical operations in November 2011.

**Jackie Hua** is a consultant in McKinsey's New Jersey office, **Shail Thaker** is a principal in the London office, and **Matthew Wilson** is a principal in the New York office.

## Managing pharma supply networks in emerging markets





**Before they rush to secure sources of supply in emerging markets, pharma companies should take care to ensure they have the right long-term strategy, the right partners, and the right organizational resources to manage their partnerships.**

**Vikas Bhadoria and Jaidev Rajpal**

For global pharmaceutical companies, emerging economies are becoming increasingly important both as rapidly growing markets and as sources of supply. Ninety percent of the incremental growth in the global pharmaceuticals market over the next five years is expected to come from emerging economies. Moreover, manufacturing sources in these regions already account for 15 percent of the formulated drugs sold in the US.

Developing and managing sources of supply in emerging markets is a challenging process for any company, but it is uniquely difficult for pharma companies, with their highly regulated, quality-focused manufacturing processes and history of vertically integrated production. Pharma executives frequently ask us about their emerging market supply strategy. How should they select the right supply partners in a complex and highly fragmented market environment where accurate data on supplier capabilities is not always available? How do they pick the right governance and contract models? How do they manage quality, product safety, and delivery risks? How do they ensure their intellectual property is appropriately protected?

Some big companies that have made substantial investments in emerging markets supply are struggling with exactly these issues today. One top-five

generics company experienced a six-month delay in active pharmaceutical ingredient (API) supply from a large supplier. Another pharma company had to suspend API supply because of poor supplier compliance with technical and quality standards, adding cost and delays to a critical product launch.

For many companies, however, the principal challenges in their emerging market supply networks have been linked to commercial and management issues rather than technical ones. Some companies have found that their supply arrangements don't deliver the cost benefits they are looking for, or that lack of transparency in the relationship makes it difficult to ensure that suppliers are complying with quality, cost, and delivery targets. Others have spent time and effort identifying and engaging many individual suppliers, only to find that these suppliers lack the organizational capabilities to work smoothly together.

### **Avoiding the external supply trap**

Having worked with the emerging market supply networks of more than a dozen pharmaceutical companies over the past three years, we have seen that companies can avoid many of the most common

issues by doing some smarter thinking up front. Rather than taking tentative steps and adopting a piecemeal approach, they should think about their emerging market efforts in an integrated way. In particular, we recommend three important departures from today's common industry practices:

1. Plan the end state of the network first, considering internal capabilities as well as those of potential suppliers.
2. Take a more comprehensive approach to supplier qualification and selection, considering cultural issues and commercial as well as technical capabilities.
3. Actively manage supplier relationships, with particular emphasis on the first six to 12 months with a new supplier.

## Defining the end-state design

As pharma companies build their external supply networks, they can opt for a number of different designs. The network design can be based on straightforward vendor relationships, sourcing either a small number of products from multiple vendors or a wider range of products from one or two large vendors. It can be built on a collaborative model, with joint ventures, long-term partnerships, or technology transfer deals. Alternatively, companies may choose to outsource an entire value chain, with external suppliers handling every stage of production from API manufacturing to packaging and final distribution.

The right model for any company depends on its commercial objectives and its own capabilities. Companies must decide how emerging market capabilities will be integrated into their overall networks, for example. Are they willing to outsource

some types of manufacturing process entirely in order to focus their attention on others? Do they have the organizational resources to manage multiple vendors and complex supply chains, or would they do better to outsource that activity to an organization with more capacity and experience in the region? Do they have an appetite to make investments in assets in emerging markets?

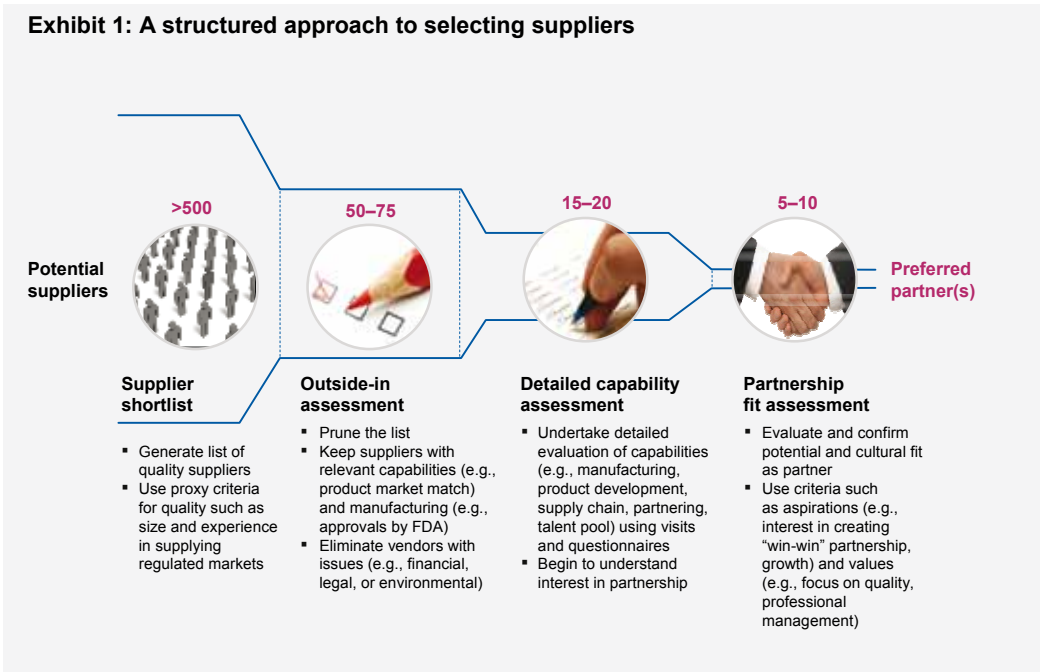
One top-ten pharma company chose to invest in long-term partnerships with two principal suppliers, fulfilling any additional requirements through a few select deals with other suppliers as needed.

## Selecting the right partners

Once they understand exactly what they need from their supply partners, companies can make smarter decisions about which suppliers to select. Although a clear vision of the end state will help to focus the search on companies with the right basic qualifications, our experience indicates that there is no shortcut for a comprehensive and time-consuming supplier assessment process. Companies should ensure that this is completed even if it means delaying the start of supply.

For companies used to sourcing suppliers in developed markets, the lack of available data on their emerging market counterparts can be a shock. Many potential suppliers may be privately or family owned, making access difficult even to straightforward financial data, let alone accurate information on production capabilities and quality performance. To enable pharma companies to build and then prune the best possible list of potential suppliers, we recommend they adopt a structured approach using

**Exhibit 1: A structured approach to selecting suppliers**



proxy information—such as the share of overall sales to developed markets as a proxy for quality, or overall size as a proxy for stability—combined with visits and detailed questionnaires (Exhibit 1).

As the characteristics that make or break a successful supplier relationship in the long term are as likely to be commercial as technical, supplier selection should be a truly cross-functional process, with leadership from the top. Are the senior management team happy that they can have constructive relationships with their counterparts at the supply partner? Are the supply chain, manufacturing, and quality functions satisfied that the partner can provide what they need to make the relationship work?

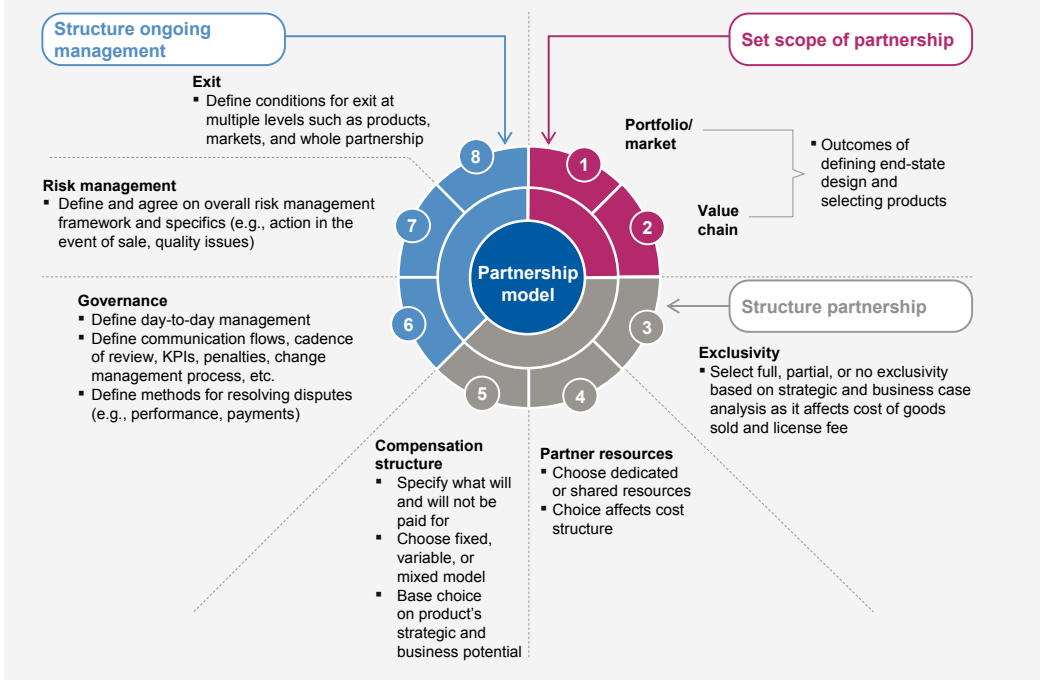
The outcomes of these cross-functional supplier negotiations should also inform the design of any eventual supply contract (Exhibit 2). Only when a company has a detailed understanding of its supplier's

capabilities can it determine the best possible allocation of resources between itself and that supplier, and put the right risk management and governance clauses in place to ensure that the arrangement works as expected. Even the best-planned supply relationship can go wrong, so contracts must also include an ordered, multiple-level exit process to allow the arrangement to be terminated at the product, market, or partnership level.

### Actively managing supply relationships

Outsourcing capacity does not mean outsourcing responsibility. In practice, the management of external supply capability requires a different approach to that needed if the same capacity were sourced internally. Even if well-designed contracts stipulate detailed performance criteria and reporting requirements, companies must

**Exhibit 2: Eight partnership dimensions to cover in contract design**



ensure they have the right mechanism in place to monitor ongoing supplier behavior (such as right-time delivery and quality), and they should be able to respond quickly to correct issues as they occur. In our experience, this is the step that most often trips up pharma companies. What they need is a proactive approach to the management of new supply contracts. One top-ten pharma company seconded a supply executive to its partner to manage the relationship early on. Another scheduled monthly supplier reviews involving senior management from both sides at the beginning of the relationship.

Managing supply relationships effectively involves establishing rigorous procedures for performance management and issue resolution as well as designing an effective organization to support the external supply network. The size and nature of this organization will naturally depend on the

size, complexity, and strategic importance of the deal. At minimum, it could be an account manager within the purchasing function, but such a light approach should be limited to the very simplest, non-strategic supply arrangements. Most substantial ventures require a dedicated cross-functional management team based either at corporate HQ or, ideally, on the ground in emerging markets so that staff can build strong relationships with their counterparts at the supplier and respond quickly when things go wrong.

In most cases, there will be a handover between the cross-functional team that negotiated and established the new supply relationship and the one that will run it. Companies must manage this process with great care, particularly as it happens during the early stages of supply when problems and disputes are common as company and supplier iron out their

working relationship. It is vital that the pharma company ensures it has resources in place—whether in the transition team or in the supply management organization—to take a proactive approach to managing the situation, insisting on thorough root-cause analysis of any quality or delivery problems, for example, and calling the supplier to task for late or missing management information.



The cost, capacity, and market-access benefits of supply networks in emerging markets will be critically important to most large pharma companies over the next decade. The performance of these global networks tomorrow will be rooted in the decisions companies make at home today.

This is an edited version of an article first published in *Pharmaceutical Manufacturing*, October 2011, pp. 29–30, and reprinted with permission of Putnam Media.

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## The outlook for China's medical products industry



**Robust growth prospects are creating tailwinds for China's medical products industry. However, multinationals should prepare for turbulence ahead as market access becomes more complex, pricing pressures increase, and local competition intensifies.**

Lifeng Chen, YINUO LI, Rajesh Parekh, and Jin Wang

China's medical products industry is enjoying rapid growth thanks to demographic changes, increasing affordability, healthcare reform, and government investment. This strong growth looks set to continue for at least the next five years. However, multinational companies can expect to meet turbulence as well as tailwinds as they grapple with the complexity and fragmentation of market access, increasing pricing pressures, and intensifying competition from local and multinational companies.

Below we explore the state of the market today, the opportunities and challenges it is likely to present in the next few years, and the issues that multinational companies need to consider as they develop their China strategies.

### The market today

To understand the growth prospects of China's medical products market, we need a clear view of its size and structure. This is not easy to obtain, for several reasons. The market is heterogeneous and fragmented, with more than 6,000 manufacturers; the channels for distributing products to hospitals and other treatment centers are complex; and reliable data is in short supply.

We used McKinsey's proprietary industry database, interviews with experts, and external reports to analyze the market's size, product segments, and competitive structure.

**Size.** China's medical products market is worth about \$20 billion.<sup>1</sup> It has grown at about 20 percent per year over the past five years and is now one of the three biggest medical products markets in the world, as well as one of the biggest growth opportunities.

**Product segments.** For multinational companies, the key segments of the market are capital equipment (worth \$5 billion), personal medical equipment (\$3 billion), implantables (\$2 billion), *in vitro* diagnostics (\$2 billion), and other high-value medical devices or consumables (\$1 billion). The remaining third of the market (\$7 billion) is made up of low-end consumables and equipment such as surgical dressings, drug delivery systems, and standard diagnostic equipment.

**Competition.** Multinational companies face strong local competition in all market segments. Overall, local companies command 40 percent of the \$13 billion market addressable by multinationals—that is, all major segments except low-end consumables and equipment. However, the balance of market share between

multinationals and locals varies greatly from segment to segment. Local companies have a majority share of 60 percent in personal medical equipment, and large shares of 40 percent in capital equipment and implantables. On the other hand, multinationals have a 65 percent share in *in vitro* diagnostics, and a 75 percent share in other high-value medical products such as top-end surgical tools.

Similarly, there are marked differences within subsegments such as orthopedic implants. For instance, a few large multinationals—Medtronic, Johnson & Johnson, Stryker, and Synthes (acquired by Johnson & Johnson in April 2011)—collectively account for more than 70 percent of the market for spinal implants, with the remaining 30 percent split between some 50 local companies. By contrast, local companies such as Trauson and KangHui Medical currently have about 60 percent of the market for trauma implants.

## Drivers of future growth

In the next five years we expect China's medical devices market to continue growing at 15 to 20 percent, more than doubling in size. This growth will be driven by steady increases in patient flows, the scope for market development, the increasing affordability of treatment, and the effects of healthcare reforms.

**Growth in patient flows.** Two main demographic changes will affect the market for medical products. First, China's population is aging rapidly. Between 2010 and 2020, the over-50 population will grow by about 150 million, roughly the population of France and Germany combined. Second, massive

urbanization is continuing: the number of city dwellers reached 680 million in January 2012, outnumbering the rural population for the first time.

### **Scope for market development.**

There is still plenty of scope for growth in the market, especially in complex therapies, but even for more mature therapies too. For instance, the use of coronary stent implants among urban Chinese patients with acute coronary syndrome was only about 9 percent in 2009, lower than India, with 11 percent, and much lower than Germany (44 percent), South Korea (60 percent), and Switzerland (71 percent).

**Increasing affordability.** Along with rising disposable incomes, an expansion in medical insurance is making medical devices more affordable. Government-sponsored insurance coverage extended to more than 95 percent of the population in 2011, affecting rural as well as urban dwellers.<sup>2</sup> The government's focus will shift from expanding coverage to increasing insurance subsidies, with the aim of bringing out-of-pocket spending—which stood at more than 60 percent in 2006 and had come down to 35 percent by 2011—below 30 percent of total health expenditures by 2015.

**Healthcare reforms.** The mandate for developing a system of primary healthcare services has boosted demand for medical products, particularly for capital equipment for lower-tier medical service providers. Central and local government spending on refurbishing equipment in county and township hospitals and clinics has brought the total national expenditure for medical products to about \$6.2 billion. Over the next five years, the priorities set out in the government's Twelfth Five-Year Plan should help the sector to sustain healthy



### Exhibit 1: Government priorities for the industry

As outlined in the Twelfth Five-Year Plan for the medical products industry, announced 18 January 2012

Themes and goals	Policies and measures
<b>Scientific</b>	<ul style="list-style-type: none"><li>▪ Obtain 200 core patents</li><li>▪ Develop 50 to 80 key items of medical equipment</li><li>▪ Establish 10 national engineering and science research centers and key laboratories</li><li>▪ Build 8 to 10 national scientific industrial bases</li><li>▪ Build 20 to 30 technology research platforms</li></ul>
<b>Technological</b>	<ul style="list-style-type: none"><li>▪ Focus on prevention studies through disease screening and early warnings in order to achieve early diagnosis and improve cure rates</li><li>▪ Develop 50 to 80 diagnosis and treatment technologies, health promotion technologies, and innovative products for rural areas</li></ul>
<b>Economic</b>	<ul style="list-style-type: none"><li>▪ Improve export value beyond 5% of the global medical products market</li><li>▪ Form 8 to 10 large medical products companies with revenues exceeding 5 billion renminbi (US\$800 million)</li></ul>

Source: industry reports; McKinsey analysis

growth, although their real impact will not be seen until more specific implementation plans are put in place (Exhibit 1).

### The challenges ahead

Most companies competing in the medical products market in China have been reasonably successful for the past 5 to 10 years, but from now on we expect to see an increasing separation between winners and losers. The three main challenges for multinationals are the complexity of market access, mounting pressure on prices, and the growing intensity of competition.

#### Market access remains fragmented and complex

Market access for medical products companies in China has never been straightforward. Decision-making processes differ from place to place, even among hospitals within the same city. As multinational companies penetrate more deeply into China, they will need to invest in building capabilities to

overcome hurdles such as new product registration, distribution, and tendering.

Registering new products is a complex endeavor. Since the publication of the first guidelines for medical device registration in 1996, the government has released about ten revisions and addenda of increasing stringency. For instance, local clinical trials are increasingly required for imported Class III products (such as implantable medical devices). As a result, although the number of registered medical products has steadily risen, the number of registered Class III products has remained largely unchanged for the past five years.

The distribution system is another source of complexity. There are more than 15,000 medical products dealers, mostly small, regional, and focused on a few products. To reach the market efficiently, multinationals have to make use of multiple distribution models based on product, geography, or both, and deal with hundreds of distributors either directly or via intermediary distributors.

The complexity of market access and pricing pressures are magnified by another distinctive feature of the Chinese market. Tendering for medical products has historically been chaotic, and in its search for a better model, the government recently moved tendering to the provincial level. In 2011, tenders in Guangdong and Henan led to price cuts of 20 to 30 percent. The status of the ongoing Beijing tender is unclear, but the capital city government is said to be aiming for a similar level of price reduction on high-value consumables such as drug-eluting stents.

The fragmentation in the tendering process is echoed by China's system of service charges and reimbursement, where policies are formulated and applied at local level. This leads to considerable variations: for example, the usage fees for one surgical procedure range from 200 renminbi in Yantai to 30 renminbi in Changzhou, and are not chargeable in Shenyang. The process for obtaining approval for service fees is also quite cumbersome, and can take more than a year. Similarly, reimbursement for medical products varies by city, and the processes for obtaining it vary significantly at local level, with some hospitals operating their own policies.

### **Pricing pressure intensifies**

As noted, recent changes in the tendering system have intensified pricing pressures. The government is also exploring policies to control mark-ups in the channel that are likely to affect the ex-manufacturer price. In parallel, the government is piloting measures to move away from the current payment-by-item scheme to contain medical costs more effectively, and has set clearly defined policies with real teeth. As hospitals pay more attention to their spending, such cost-

containment measures will put indirect but real pressure on medical product pricing.

### **Competition heats up**

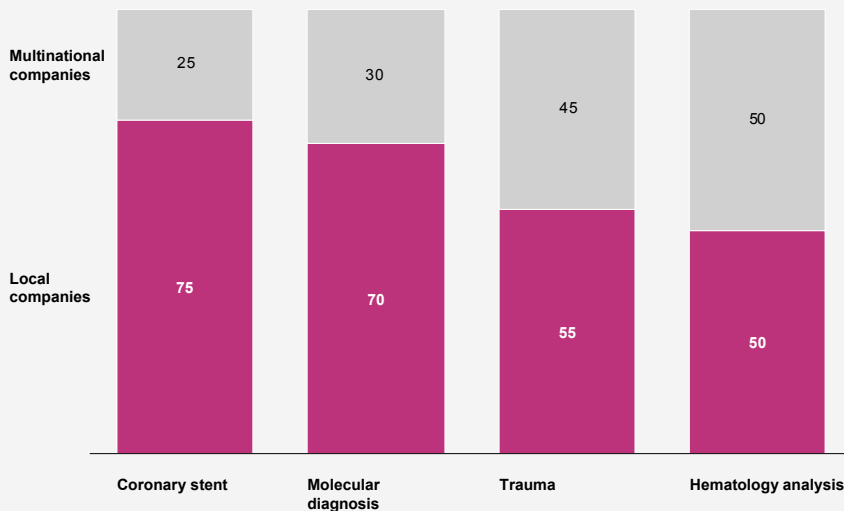
In the past, there was a clear distinction between multinational and local companies in terms of market segments, product quality, and technical sophistication. More recently, though, boundaries have blurred: for example, locals have taken over the coronary stent market created by multinationals and now command a 75 percent share (Exhibit 2). The midrange market—the segment between the premium market and the economy market in which multinational and local companies respectively have the majority share—is set to become a major battleground as companies expand their product portfolios and cater to broader needs among Chinese patients.

Local companies have mostly focused on “easier” categories, including low-end capital equipment in relatively well-developed markets with established procedures. We do not expect to see them spearheading major market developments and therapy introductions in the next few years, but with the support of government policy and capital markets they are likely to move into more sophisticated categories.

Meanwhile, multinationals are tailoring their approach to compete in the midrange segment. Leading companies such as GE, Philips, and Medtronic are planning or have launched products with a more attractive price-to-value proposition, and they are adapting their commercial model to reach deeper into China and exploring partnerships and acquisitions to expand their presence.

## Exhibit 2: Local players overtake multinationals in some segments

Estimates of value share, %



Source: industry reports; McKinsey analysis

### Key questions for leaders

To address these opportunities and challenges and sustain a winning strategy for China, multinationals need to ask themselves a few key questions:

#### ***Which opportunities and segments should we focus on?***

The attractiveness of opportunities varies considerably by segment and product category. Aiming for broad-based leadership in China in every segment in which a company participates globally is likely to prove futile. Unless companies have a deep understanding of the dynamics of a given medical category, it is easy for them to over- or underestimate the likely scale of an opportunity and their ability to capture a share of it. Misunderstandings may arise because of a failure to recognize the differences in rates of adoption across

hospital classes and city tiers, inaccurate predictions about the rate of change in medical standards (which may be faster or slower than experience in the US or Europe would suggest), or a lack of insight into the motivations and incentives of key stakeholders involved in the procurement and usage of medical products.

#### ***How do we navigate the complexities of market access?***

A well-conceived market access strategy and the ability to leverage scale matter more than ever, particularly for companies with multiple business units. Multinationals need to build strategic partnerships and relationships with central and provincial governments. At a local level, they need to develop capabilities and involve distributors as partners to deal with issues such as tendering, service fees and pricing, and reimbursement.



***How can we accelerate growth in the premium segment?***

For most multinationals the premium segment will continue to be the most relevant opportunity. Though its market share may decline over time, it will continue to grow in absolute volume and value across most medical product categories, so multinationals will need to invest in gaining share from their peers. Since the market is underpenetrated in many categories, leading companies need to take steps to accelerate the growth of the premium segment overall by, for instance, increasing the capacity of trained physicians for implants, raising patients' awareness of the benefits of particular medical procedures, and helping to create referral flows between classes of hospitals. They should resist the temptation to milk their rapidly growing China business by focusing excessively on near-term share gain, and instead continue to invest to secure sustained market growth.

***How do we compete effectively in the midrange market?***

Competing in the midrange market is a critical part of China strategy for many multinationals, though the experience of early movers suggests this will be no easy task. Many multinationals have long

development cycles poorly suited to producing midrange products that are fit for China. Their first priority is to work out how to go from ideas to marketable products with the cost, technical features, and development timeline to enable effective competition against local players. They will also need to design the right business model for commercializing their midrange products, and should consider setting up independent sales and distribution channels and a low-cost service model to reach this highly dispersed customer base.

***What organizational capabilities do we need?***

Companies in the medical products sector, as in other fast-growing industries in China, face a challenge in developing the capabilities they need to keep pace with a highly dynamic market environment. They are often so busy scaling up their organization that they devote insufficient attention to capability development. In particular, they should concentrate on salesforce effectiveness, distributor and channel management, market access, and the development of therapies.



In the next few years, China is set to become the world's second-largest market for medical products. It offers the biggest growth opportunities across categories from large imaging equipment to cardiac stents and surgical devices. However, as competition from both multinational and local competitors intensifies, companies that aspire to lead in China need to ensure they have strategies tailored to the product categories and market segments they compete in, and build the organizational capabilities they need to execute these strategies effectively. Only then will the strong tailwinds in this dynamic and growing market take them where they want to go.

## Notes

- 1 The market sizes quoted in this article have been calculated using ex-manufacturer prices and thus do not reflect the channel markup that results in significantly higher purchase prices for hospitals and patients.
- 2 Official government statistics put coverage at 95 percent of the population, but the double-counting of people with multiple types of public health insurance means that the actual figure is likely to be lower.

This is an edited version of an article first published in *China Healthcare: Entering uncharted waters*, McKinsey & Company, 2012.

**Lifeng Chen** is a consultant, **Rajesh Parekh** is a director, and **Jin Wang** is a principal in McKinsey's Shanghai office; **Yinuo Li** is a principal in the Beijing office.



Winning in Russia pharma:  
The next growth horizon

**Over the next ten years Russian pharma will more than double in size. Companies seeking to capture a share of this growth must prepare to face the challenges of increasing pharma regulation and intensifying competition.**

Jan Ascher, Sean O'Connell, Shail Thaker, and Tim Züwerink

Russian pharma offers substantial opportunities over the next ten years as the value of the market grows from \$15 billion to \$41 billion by 2020. However, the environment will also become much more challenging as the state regulates market access, pricing, and compliance more extensively through Pharma 2020, and competitive pressure intensifies from both multinationals and local pharma companies. Below we analyze the drivers of growth, the new challenges that companies will face, and what it will take to win in this increasingly complex environment.

### **A major growth market...**

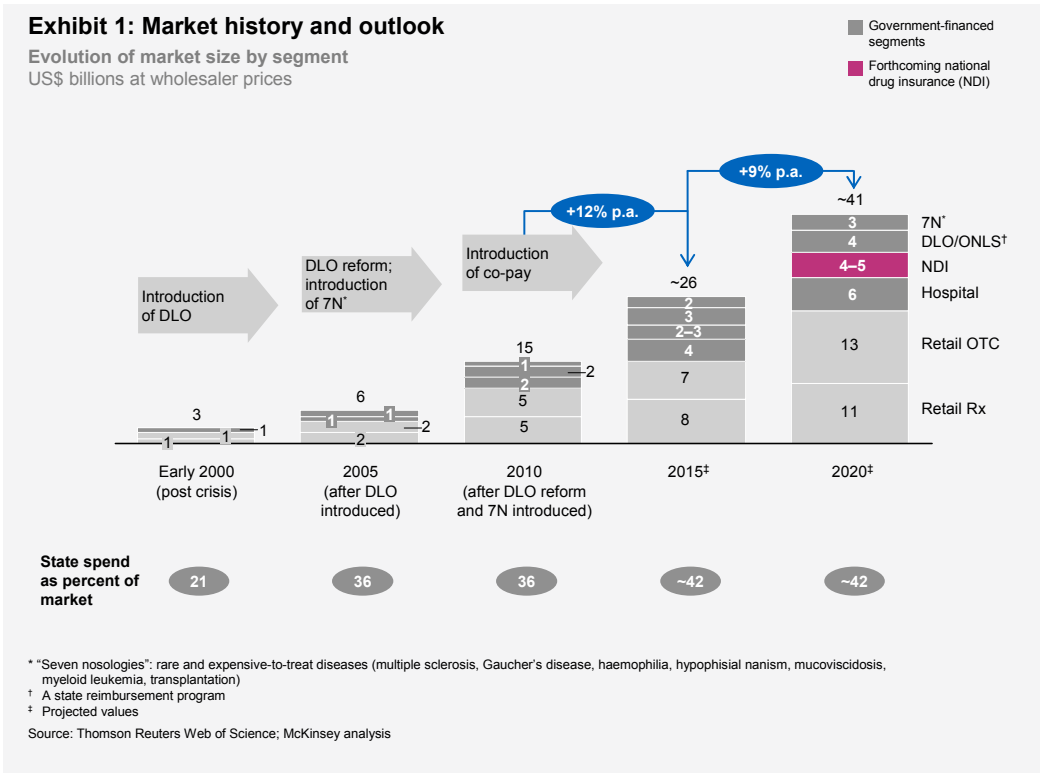
Almost non-existent a decade ago, the Russian pharma market has grown rapidly to its current value of \$14.8 billion, attracting many multinational pharma companies. Fundamental growth drivers continue to be strong, but doing business remains a challenge because of high levels of bureaucracy and perceived corruption: the country is ranked 143rd in Transparency International's 2011 corruption perceptions index. The market is forecast to grow at an annual rate of 11 percent to \$41 billion by 2020 (Exhibit 1), making Russia one of the top three growth markets in the emerging world.

Growth is likely to be broad based across all channels. State-funded channels will grow fastest, with their share of the market increasing from 36 to 42 percent by 2020. A key driver of increased government spending will be the introduction in the next three to five years of a new state-funded national drug insurance (NDI) program for the general population.

Out-of-pocket (OOP) segments could also grow quickly, driven by the rapid expansion of the middle class: the proportion of households with annual incomes above \$10,000 is expected to rise from 35 percent to roughly 50 percent by 2015 (compare this to Brazil, for example, with 30 percent by 2015). Brand awareness and the preference for high-quality western drugs will remain critical as Russian consumers continue to trade up to more expensive branded generics or originals as their incomes rise.

### **... but the easy days are over**

However, capturing growth opportunities will require substantially sharper strategy and greater management skills than in the past. Ramped-up state support and finance for local producers (especially in high-tech areas such as biologics), intensifying regulation, and steadily increasing competition from multinational



corporations (MNCs) will make Russia a more challenging market to win in.

The ministry of industry and trade's development strategy, known as Pharma 2020, signaled the government's intention to increase local presence substantially in a market dominated by foreign MNCs, with their 94 percent share of value and 59 percent share of volume in 2009. Pharma 2020 sets clear though often very aspirational goals for massive development in local manufacturing and R&D by 2020. The strategy stipulates that MNCs must make serious commitments to localization in exchange for stable market access.

Moreover, the degree and pace of regulatory changes are increasing: prices for drugs deemed essential by the state are now regulated and the process for obtaining marketing authorizations

has again increased in complexity. The government is also making a strong push to improve transparency and ethics in the market, with new regulations for fairer and more effective public tenders and a proposed law for imposing constraints on promotional activity that are much more in line with compliance requirements in the west, such as no gifts, limited travel for education, and restrictions on the hours when company representatives may call on physicians.

As regulation has increased, so has the level of competition. Over the past five years all major multinationals have formulated ambitious growth strategies and invested heavily in their field forces. What was once a "penetration game" has turned into a fierce "share of voice battle" in the most attractive territories. On top of this, Pharma 2020 has fueled the rise





of Russian pharma companies such as Pharmstandard and Binnopharm that compete aggressively for top spots in the most attractive state-funded programs. The net effect of these developments is that succeeding in the Russian pharma market will become much more challenging.

First, MNCs face a series of tough strategic choices and will need to reassess their desired risk profile and channel mix. Future market leaders must win not only in out-of-pocket segments but also in state-funded segments, which pose greater risks given the need for substantial investments in access (through local manufacturing and R&D) and exhibit higher sales volatility than the relatively stable out-of-pocket segments. Second, MNCs will need to upgrade several of their functions, including government affairs management and market access, field force effectiveness, and human resources. Third, general managers in Russia will see their roles become much broader and the challenges they face become much more complex. On top of their traditional sales and marketing mandates, they will also need to manage local manufacturing and R&D, act as chief ambassadors to government authorities, and get used to closer scrutiny from headquarters.

### Where the growth is coming from

The growth in the pharma market is driven by strong fundamentals. Russia is already the eleventh largest economy in the world, and its real GDP is forecast to grow strongly, making it one of the world's five fastest-growing economies.

### Out-of-pocket segments}

The fast-growing middle class is likely to fuel the next stage of growth in the OOP segment, with estimated growth of 9 percent per year to 2015. Brand awareness and a preference for high-quality western drugs should remain a major source of value growth at least for the medium term.

The OOP segment offers many examples of how large markets can be built on strong branding tailored to local needs and mindsets. Exhibit 2 features six brands that have achieved impressive sales in this segment. Linex is a probiotic that Sandoz-Lek has successfully positioned as the leading treatment for disbacteriosis (imbalance of bacteria in the gut). Occilococcinum, the biggest success story in the Russian OTC market in recent years, is a homeopathic preparation of sugar-coated micro-balls sold in small plastic cylinders. Arbidol is

**Exhibit 2: Some successful OOP brands**

	Brand (manufacturer)	Rank	US\$ million*		Retail price†	Therapy
			2005	2010		
OTC	Arbidol (Pharmstandard)	1	22.7	126.5	\$6.70	Influenza
	Linex (Sandoz-Lek)	3	16.1	55.2	\$10.30	Disbacteriosa
	Ocillococcinum (Boiron)	5	3.3	47.3	\$10.90	Influenza
Rx	Actovegin (Nycomed)	2	23.3	66.3	\$30.80	Memory enhancement
	Detralex (Servier)	6	11.8	39.8	\$25.90	Varicose vein therapy
	Heptral (Abbott)	9	8.4	34.6	\$61.60	Hepatoprotection

\* At ex-manufacturer prices

† Price per pack (most common dosage and pack size)

Source: Pharmexpert

an antiviral sold only in Russia, where it is the best-selling OOP drug on the market.

Actovegin, Detralex, and Heptral show how prescription drugs with strong branding can develop into bestsellers in Russia. For example, Heptral is an amino acid complex (SAME) sold as a hepatoprotector at more than \$60 per pack.

Future pockets of growth in OOP segments are likely to be found in the continuing growth in high-acuity indications, the increasing use of prophylactic treatments, and the penetration of lower-income regions. In addition, carefully selected lower-price branded generics or second-brand portfolios should open up attractive growth opportunities in lower-income tier III regions such as Kaluga and remote regions such as Chukotka.

### State-funded segments

Despite the increase in OOP spending on drugs, the very high incidence of

developed-country diseases such as cardiovascular diseases and cancer, coupled with diseases typical of developing countries such as tuberculosis and HIV, is creating a healthcare crisis. In addition, hazardous lifestyles and a culture of indifference lead to high levels of alcohol and tobacco abuse, the cause of almost 40 percent of deaths.

As a consequence, life expectancy in Russia stands at 68 years overall—only slightly above Bangladesh, at 65 years—and just 62 years for men. Unsurprisingly, the government has made health care one of its principal policy themes. The ministry of health's Healthcare 2020 development strategy sets out ambitious improvement plan and targets, such as a life expectancy of 75 years. Matching words with action, the government is boosting funding and seeks to double its healthcare budget to \$166 billion by 2015. This would increase government

spending on health care from today's 4.3 percent of GDP to roughly 7 percent.

As expected since 2007, the government aspires to improve access to medicine through the introduction of a new national drug insurance (NDI) scheme for the general public. At present drug reimbursement is limited, with only 10 percent of the population covered by federal and regional programs (Exhibit 3).

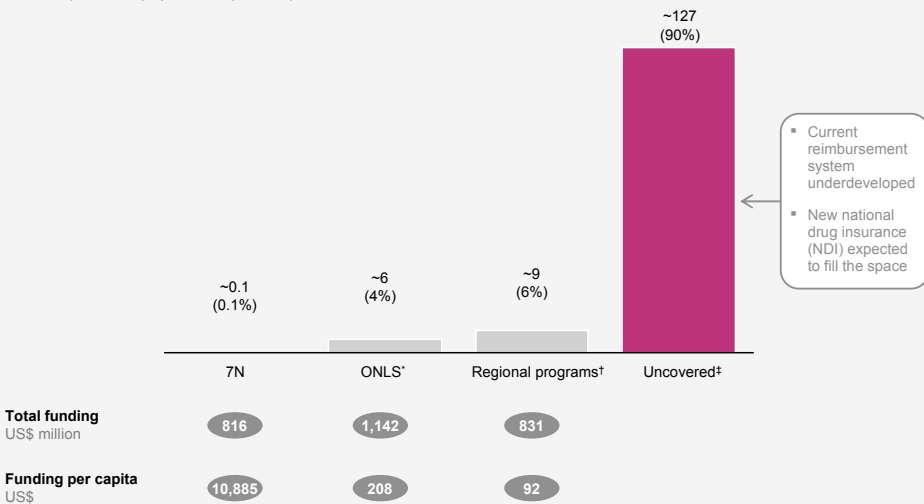
The shape and mechanics of the NDI will have important implications for pharma companies. Key factors will include the intensity of OOP cannibalization and the degree to which patients will chose to co-pay for more expensive branded drugs (co-payments are likely to fall under state influence). One important unknown is the extent to which the government will succeed in driving a shift toward unbranded generics through the NDI. Starting in 2012, it is launching pilots in

ten to 12 regions that will be instrumental in defining the characteristics of the NDI.<sup>1</sup> Pharma companies should follow these pilots closely over the next few years.

Given the attractive growth outlook for both OOP and state-funded channels, winning companies will need to maintain well-balanced portfolios. In the prescription drug market, three different models have been successful: a branded play in off-patent products with focus on the OOP segment (as pursued by Servier, Berlin-Chemie, and Nycomed); growth through acquisitions (Novartis/Lek, Sanofi/Zentiva, Teva/Ratiopharm, and Abbott/Solvay); and growth through leading positions in state-funded channels (Roche and J&J). However, given the rising importance of the state, companies with strong track records in state-funded channels are likely to have an advantage, while purely OOP-focused players need to rapidly build skills at managing government relationships.

**Exhibit 3: Drug reimbursement coverage**

Population covered, 2010  
 Millions (share of population, percent)



\* All diseases for selected groups (e.g., veterans, Chernobyl accident victims, children under 3 years, disabled)  
 † Selected socially important diseases (e.g., diabetes, cancer)  
 ‡ Currently out-of-pocket retail market (Rx and OTC); in 2010 approximately US\$8.1 billion at ex-manufacturer prices (US\$57 per capita)  
 Source: 7N auction result documentation; Ministry of Health and Social Development; RosStat; market experts; press reports

Among the current top 20 companies, only Roche and AstraZeneca are successful without an OTC portfolio.

## How the game is changing

Pharma companies planning for growth in Russia must also take account of major changes in the market as Pharma 2020 is implemented and competition becomes fiercer.

### Pharma 2020

The government's vision for the pharma industry makes local manufacturing increasingly a prerequisite for access to state funds (Exhibit 4). Regional governments and officials receive strong guidance about minimum quotas of locally manufactured drugs in state tenders (currently about 30 percent), although the precise definition of "local" remains open. Market experts assume that local primary packaging is sufficient until about 2014, after which local formulation may

be required, depending on the degree of competitive intensity for each molecule.

As a consequence, all of the top 15 players except two—Roche and MSD—have announced that they intend to create local manufacturing footprints in the near future, or expand them. Local manufacturing has effectively become a must-have for pharma companies aspiring to occupy leadership positions, and an expensive one too: investments typically range from \$100 million to \$150 million. The state is also providing clear guidance on its priorities, which are not always well aligned with MNCs' portfolios or strategies. For example, the ministry of industry and trade has published a list of 57 strategically important drugs that it wants produced in Russia until 2015.<sup>2</sup> A strongly worded statement from the prime minister on the government's website warns that "There will be restrictions for [global drugmakers] in the Russian market if they do not launch production and transfer technology."

### Exhibit 4: Pharma 2020 objectives

#### Phase 1: 2009–12

##### Localize drugs development and production

- Support competitiveness of local pharma companies
- Promote education and innovation investments
- Modernize pharmacopoeia
- Spread good manufacturing practice
- Reduce corruption

#### Phase 2: 2013–17

##### Replace foreign pharma companies and imports

- Push full-cycle production
- Improve effectiveness of state procurement
- Drive modern domestic generics
- License domestic generics of exclusive innovative drugs
- Ensure adequate domestic supply of strategic drugs

#### Phase 3: 2018–20

##### Develop pharma export industry

- Develop and produce innovative drugs with 50% local production
  - Substitute domestic for foreign drugs
  - Substantial exports
  - Pure generics market with fewer branded generics

As this suggests, local R&D is the next horizon. The link between R&D investment and access benefits is less clearly defined than that for local manufacturing, but local R&D represents a critical opportunity to demonstrate commitment to Russia and thus to ensure continuing access to state-funded channels. It is hardly surprising, then, that the early R&D movers are successful players in government channels. For example, Roche has announced the development of 10 HIV compounds in partnership with ChemRar, and GSK the development of a vaccine in partnership with Binnopharm. Clearly, local R&D is an area that still allows MNCs to differentiate themselves by moving quickly and decisively and establishing close relationships with the best scientists and the most influential stakeholders close to government officials.

### **New price regulation**

As well as implementing Pharma 2020, the government is also tightening existing regulation. Since April 2010, new maximum price regulations apply to all drugs included on the essential drug list (EDL) of drugs eligible for state purchases. These regulations differentiate between imported and locally manufactured drugs, and between those new to the market and available previously.

Among the important implications for pharma companies are that manufacturers will bear inflation and currency devaluation risks because prices have to be registered in rubles. In 2011, only locally managed drugs were eligible for compensation for inflation. With inflation running at around 8 percent, the impact on profitability could be significant.

The new price regulation dictates that drug prices must be referenced to a basket of 21 countries including the country of origin. This rule has started

to take effect in recent months as prices come under detailed review as part of recurrent re-registrations of all drugs. In time it could have a major impact given that prices in Russia have been higher than in Europe and other CIS countries.

### **Changes to the registration process**

Some of the changes that the government has introduced in the registration process have increased its complexity and given Russian pharma companies certain advantages over MNCs. A requirement for local trials has been introduced, but is waived if at least two investigational sites in Russia were included in a global development program. MNCs must run local clinical safety and bioequivalence and therapeutic equivalence studies.

### **Draft law on ethics**

The government has also drafted a law to improve ethics in health care. Although market experts initially questioned whether it would ever be passed, an emerging consensus suggests it will become effective during 2012. One of the biggest changes will be a ban on representatives visiting doctors during the hours when they see patients. Pharma companies will need to find ways of interacting with physicians outside the workplace or outside patient hours. Lead physicians and hospital and polyclinic managers will become more important, since they will be responsible for monitoring compliance with the new law.

### **Increased competitive intensity**

Especially since the introduction of targeted drug coverage through the ONLS, a state reimbursement program, in 2004, many MNCs have treated Russia as a priority market. Making large investments in field forces, combined with building a few strong brands, was a winning strategy. The result has been a raging battle for share of voice that has led to intense market competition even as the prospect



of restrictions on promotional activity raises questions as to the profitability of medical representatives in the future.

Moreover, local Russian players are gaining substantial share. Pharmstandard, for example, moved from ninth place in 2005 to third in 2010, largely thanks to the rapid expansion of its OTC sales force. Russian companies are also pushing into reimbursement channels and more innovative products. For example, in 7N, a national reimbursement program covering medicines for seven diseases that are expensive to treat, Pharmstandard introduced an analogue of Novo Nordisk's NovoSeven and took 70 percent of its business in 2010. Pharmstandard has also set up a joint venture, Generium, to produce some of its largest biologics, such as alteplase, by 2015. Other Russian players are active as well: Biocad has launched a biosimilar of Bayer's Betaferon, and Pharm-Sintez is launching a generic of Janssen-Cilag's Velcade, the bestselling drug in 7N.

## Priorities for MNCs

To capture some of the growth in the Russian market and navigate the challenges, pharma companies must make tough strategic choices, upgrade key functions, and find new ways of managing complexity.

### Make tough strategic choices

Creating a local manufacturing footprint entails either making substantial investments or entrusting carefully built brands to a third (often Russian) party for packaging or even formulation. Products funded from state channels can be notoriously difficult to make, as with high-potency active pharmaceutical ingredients and biologics. Venturing into bricks and mortar exposes MNCs to the risks involved in undertaking real-estate projects in an emerging market. In addition, it takes a great deal of commitment from senior management to motivate technical operations or R&D to consider Russia seriously as an addition to their global networks.

Against this backdrop, pharma companies need to redefine their risk appetite and possibly adjust their ambitions: is there really a solid business case to support capital investments of \$100 to \$150 million? Companies that already have critical mass will have an advantage over smaller players.

Further investments in share of voice need to be analyzed rigorously. Pharma companies should pressure-test their deployment models and their investments in the last increment of 20 to 30 percent of reps and ask: is the ROI really attractive enough or are there alternative channels (call centers, the internet, part-time reps) to reach lower-potential customers in remote places?

Reaching critical mass and utilizing sales assets effectively will become even more important as drivers of profitability. In- and out-licensing, second brands, partnerships, and acquisitions should be on the strategic agenda for all pharma companies that are struggling to fill open call slots in their sales lines, or that cover only a fraction of the market with their current portfolios.

### Upgrade key functions

While a broad portfolio of strong brands and a competitive field force will remain key assets, real differentiation will probably come from local embedding and distinctive stakeholder management. The market access and government affairs function will need to position the company as a preferred partner for the government in pursuing its healthcare policy goals. Pharma companies need to design a well-orchestrated set of market-access initiatives and an integrated corporate communications campaign.

Field force effectiveness is becoming an even more important driver of profitability,

given the race for share of voice and notoriously high staff turnover rates. Pharma companies often try to retain rep talent by offering early promotions to first-line sales manager positions, but this leads to a lack of sufficiently experienced and trained leaders in the field and is the first issue that companies need to address. Disease and product knowledge needs to be continuously upgraded, as do reps' sales skills. Segmentation and targeting remain a challenge in this huge and diverse country in which little physician data is available.

Innovating the marketing mix will become more important given the likely limitations on access to physicians and the need for more cost-effective channels to reach remote customers. For example, companies could start testing call centers and using web broadcasts as part of local meetings. The government's push for ethics in health care and price regulation also demands a greater focus on compliance monitoring and a strong pricing function.

### Manage complexity

Pharma companies operating in Russia will see substantial growth in the breadth of their roles and the complexity of the challenges they face. As well as focusing on sales and marketing, it is likely that they will also need to manage local manufacturing and R&D, act as an ambassador to government authorities, and cope with greater attention from headquarters. Meanwhile, their organizations will be growing, and more business issues—such as regional market access—will require a cross-functional approach. Companies will therefore need to build more organizational capacity, perhaps by introducing general managers for larger regions, creating a COO role, or reorganizing local management.

In addition, central functions must contribute strong hands-on support. In particular, local manufacturing and R&D cannot be driven by country organizations alone and need senior patronage at board level. Russia country organizations need strong capability-building support not just in medical areas but in field force effectiveness, innovative marketing, and other functions. Visits from a delegation are not helpful enough; what's needed is support from full-time secondments of experienced experts.

Finally, companies need to define a multi-year strategic agenda that is carefully tuned to their capabilities and bandwidth.

The number of challenges to address is huge, so they must choose priorities carefully so as not to overburden their organizations. Experienced talent is rare in a market that is only 10 years old.

Staff turnover is high and poaching widespread. Losing key talent because of a poor life/work balance is highly disruptive and stops companies delivering on key strategic initiatives.



Russia remains one of the most attractive growth markets for multinational pharma companies. However, regulatory changes and increasing competitive intensity are making it harder for them to succeed. To build sustainable growth platforms, they need to take steps now to rethink their strategies and invest in building capabilities.

## Notes

1 The pilot regions are likely to include Moscow, the Moscow region, St Petersburg, and Bashkortostan.  
2 Decree 1141-p, 6 July 2010.





## Helping Indian pharma reach its full potential



**What will it take for India to join the world's leading pharma markets? As a period of flux brings proliferating opportunities, companies should quickly adapt their sales and marketing models, refocus their commercial investments, and collaborate within and beyond the industry.**

Vikas Bhadoria, Ankur Bhajanka, Kaustubh Chakraborty, and Palash Mitra

The Indian pharmaceutical market presents a unique set of opportunities and challenges that arise from its distinctive nature. Branded generics account for a huge share—more than 80 percent—of the retail market. Local players dominate thanks to their early investments and capabilities in formulation development. And intense competition has kept prices low, which explains why India ranks in the top three markets in the world in terms of volume yet only in the top fifteen in value.

Most of all, though, India's story is one of growth, with an annual growth rate of 13 to 14 percent over the past five years—a sharp rise from the 9 percent CAGR recorded between 2000 and 2005. Our analysis shows that the market is likely to grow to \$55 billion by 2020, driven by a steady increase in affordability and a step-change in market access. This growth would make the Indian market comparable to all developed markets except the US, Japan, and China. The analysis also indicates that India should achieve an impressive level of penetration that makes it a close second to the US market in volume terms. This growth in value and volume should be accompanied by an upgrading of therapy and treatment levels.

Despite the Indian pharma market's enormous gains in confidence during the

past few years, it is now facing a period of flux. The broader healthcare sector is witnessing rising public spending, increasing patient awareness, expanding insurance coverage, and the emergence of new hospital formats. Within the pharmaceutical industry, the leader board has changed out of all recognition in the past few years, with new entrants occupying four of the top ten places, including the number one slot. In addition, sources of growth are changing: we expect that new products will no longer drive growth, and existing large brands will need to make up the gap. Meanwhile, the distinction between local players and multinational companies has become increasingly blurred, to the point that they will all face the same set of imperatives in the next few years, as we explain below.

### **The drivers of growth**

As the market becomes more diverse, the drivers of growth are proliferating and becoming more nuanced. They fall into four main categories:

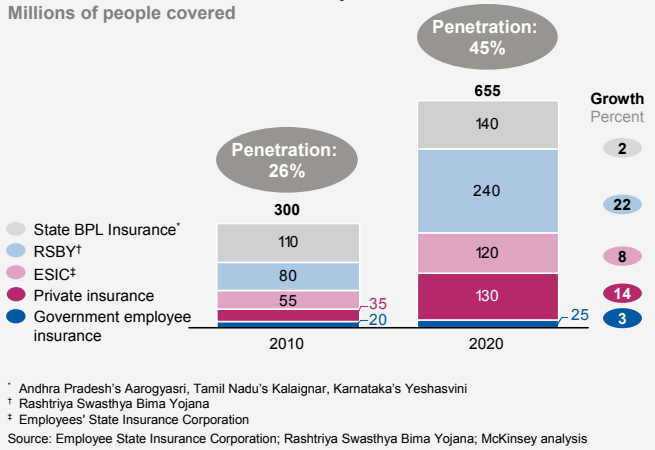
***Epidemiological factors.*** Population growth of around 1.3 percent per year and a steady rise in the prevalence of disease (with an increase of 25 to 40 percent in diabetes and cancer,

for instance) are expected to increase the patient pool by nearly 20 percent by 2020.

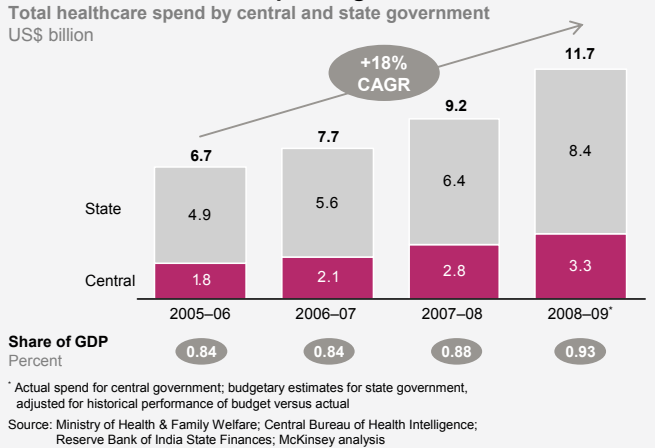
**Affordability.** As incomes continue to grow and insurance coverage increases, drugs will become more affordable. With real GDP growing at nearly 8 percent over the next decade, income levels should rise steadily, elevating 73 million households into the middle and upper income segments.<sup>1</sup> As health insurance spreads in parallel, more than 650 million people should enjoy coverage by 2020 (Exhibit 1). Private insurance coverage is expected to grow by 14 percent a year, but the largest impact is likely to come from government-sponsored programs such as the national Rashtriya Swasthya Bima Yojana (RSBY) program and state-specific programs such as Aarogyasri in Andhra Pradesh and Kalaighnar in Tamil Nadu.

**Accessibility.** The growth in medical infrastructure, increased government spending on health care, new business models for tier II towns and rural areas, and launches of patented products should make drugs accessible to more people. More than \$200 billion is likely to be invested in creating and upgrading medical infrastructure, with more than 160,000 hospital beds added every year, a total increase of 1.9 million by 2020. The annual growth of 18 percent in government spending on healthcare since 2005–2006 (Exhibit 2) should create a \$4.5 billion segment of pharma products within the

**Exhibit 1: Health insurance expands**



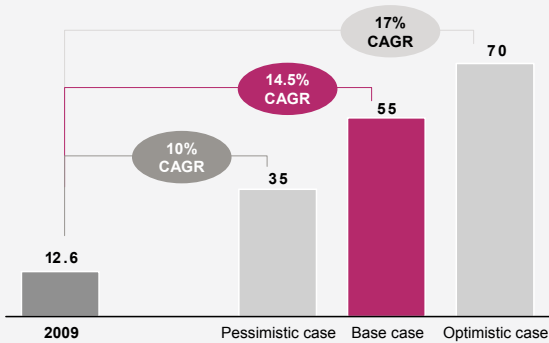
**Exhibit 2: Government spending rises**



government's public health spending. This, combined with new business models such as Sanofi's Prayas and Novartis's Arogyra Parivar, should translate into greater access in tier II and rural markets and reduce the wide gap in per capita spending between these markets and urban areas.<sup>2</sup> Finally, although relatively few patented products have been launched since 2005, the recent successes of Januvia and Galvus indicate that they could drive tremendous growth in a few disease areas.

### Exhibit 3: Three growth scenarios

Projected size of Indian pharma market in 2020  
US\$ billion



### A \$55 billion market by 2020

Thanks to these drivers, Indian pharma is expected to grow more than fourfold, from \$12.6 billion in 2009 to \$55 billion by 2020. With more optimistic assumptions, it could reach \$70 billion; under a pessimistic scenario, the value would fall to \$35 billion (Exhibit 3).

#### The base-case scenario

Our base case relies on strong growth in GDP, insurance coverage, and government

**Acceptability.** Modern medicines and treatments should become more prevalent as a result of therapy-shaping investments by pharma companies, a growing acceptance of biologics and vaccines among patients and physicians, and patients' increasing propensity to self-medicate. Companies are likely to invest in physician education and patient awareness campaigns to improve diagnosis, treatment, and compliance rates, especially for chronic therapies such as cardiovascular and neuropsychiatry. Vaccines are expected to grow by more than 20 percent per year, while biologics should become a \$3 billion segment by 2020. As self-medication becomes more widespread, consumer healthcare could grow at more than 14 percent a year if companies are able to make larger over-the-counter brands easily available and differentiate their products through deeper connections with patients.

and private sector healthcare spending, as outlined above. Under the base-case scenario, the government increases its healthcare spending to 1.5 percent of GDP by 2020, while pharma companies step up their investments in consumer health care, biologics, and vaccines and increase awareness and treatment, boosting the patient pool by 15 percent. At least 25 percent of patented products launched worldwide are launched in India in this scenario, resulting in seven to nine launches per year.

The contribution made by different growth drivers undergoes a shift in this scenario. Our analysis in 2007 showed that between 2005 and 2015, rising affordability should account for 60 percent of the incremental \$14 billion market opportunity,<sup>3</sup> but between 2009 and 2020, accessibility should become equally important. Together these two factors should account for some 70 percent of the incremental \$42 billion market opportunity, while increased acceptability should account for another 25 percent (Exhibit 4).

### The pessimistic scenario

Under the pessimistic scenario, price controls, economic slowdowns, and other external shocks would limit growth. Pricing controls could dampen investments and wipe out a \$10 billion market opportunity by 2020. Add to that an economic slowdown and another \$10 billion could be lost. Growth would slow to 10 percent per year, resulting in a \$35 billion market in 2020.

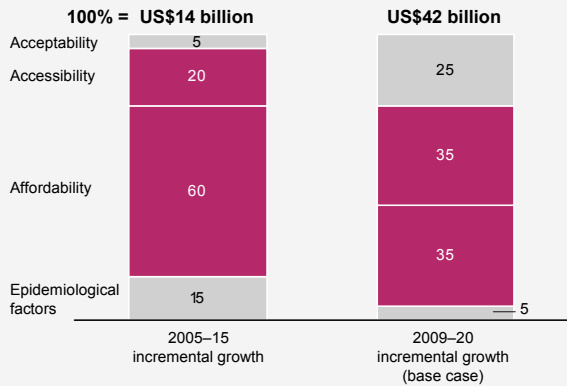
### The optimistic scenario

On the other hand, external conditions and purposeful industry actions could produce a more favorable scenario in which GDP grows at around 8.3 percent, insurance coverage is extended to the entire BPL (below the poverty line) population, providers invest in an additional 500,000 beds beyond the base level, and government health care spending reaches 2 percent of GDP by 2020. Spurred by greater affordability and infrastructure, industry players would focus even more sharply on new opportunities such as biologics, vaccines, and consumer health care, as well as on driving diagnosis and treatment rates, producing an additional 20 percent increase in the patient pool. In the optimistic scenario, the market grows at 17 percent CAGR to reach \$70 billion in 2020.

At this scale, India's pharma market would be comparable to Japan's today. More than half of the \$15 billion gap between the base case and the optimistic scenario would be filled by additional growth in the five "non-traditional" opportunities we describe below; the remaining \$7 billion could come mainly from market-shaping activities to drive diagnosis and treatment.

### Exhibit 4: Affordability and accessibility drive growth

Contribution of drivers to incremental growth  
Percent, estimated



### Traditional segments expand and fragment

Changes in the relative importance of mass and specialty therapies, metro and rural markets, and hospital and retail channels are likely to have major implications for pharma companies in the next few years.

### Mass therapies remain important as specialty therapies increase share

**Mass therapies** are likely to grow at a few percentage points below the market rate, though they should still account for half of the market in 2020. They offer two distinct opportunities. The first is acute indications, where patients' greater awareness and willingness to self-medicate is driving them toward OTC (over the counter) and OTX (initiated or supported by prescription but largely self-medicated) routes, as illustrated by the case of the proton-pump inhibitor (PPI) category. The second segment comprises older therapies in chronic indications such as diabetes, hypertension, and epilepsy. Growth in this segment is being driven by percolation down the physician pyramid to general practitioners (GPs) and consulting physicians (CPs).

**Specialty therapies** for chronic and niche acute conditions have grown at well above the market rate and should command half of the market by 2020. We see three developments in this area: the upgrading of therapies, sometimes in response to the launch of patented products, as with the dramatic rise of the DPP IV category in diabetes; growing awareness and treatment of nuanced medical indications, as in the case of metabolic disorders; and the firming up of treatment protocols, particularly for critical and life-saving treatments.

**Super-specialty therapies** are niche areas such as oncology, urology, and nephrology where fewer than 20 percent of prescriptions come from generalists. They represent only a small segment, but the momentum they have acquired from growing at nearly twice the market rate is likely to increase their value to more than \$5 billion by 2020. We expect growth to be driven by private investments in tertiary and quaternary care capacity in the metros, the introduction of new molecular entities (NMEs), and increases in private insurance coverage enhancing the affordability of high-cost therapies such as biologics.

These trends have two major implications for pharma companies. First, they can't confine themselves to increasing their share in existing markets but must actively shape market evolution if they want to maintain a leadership position. In mass therapies, for instance, they need to move down the physician pyramid to drive growth in chronic segments, a step that will involve tradeoffs between greater scale and near-term dips in profitability. Second, companies need to develop new capabilities such as collaborating with payors and providers to reduce the total cost of treatment in super-specialty therapies.

### **Metro and tier I markets drive growth while rural markets increase share**

**Metro and tier I markets** account for about 30 percent of the market each. They should grow in line with the overall market to produce a market worth \$33 billion by 2020. Growth is likely to be driven by three factors. First, urbanization should see 250 million people moving to towns and cities over the next two decades. Second, medical infrastructure should expand, with corporate hospital chains extending their networks in the top 70 cities and innovative formats plugging gaps in healthcare delivery in tier I markets. Third, organized initiatives could sharply push up compliance, which is comparable to that in rural areas even though diagnosis and treatment levels are higher.

**Rural markets** are likely to grow by a few percentage points above the overall market as a result of income growth and greater penetration, and their share should rise from 20 to 25 percent by 2020. By contrast, tier II markets are likely to get marginally squeezed, though they will stay relevant.<sup>4</sup> Increased affordability is likely to be the single biggest driver of growth. More than 28 million households—nearly 20 percent of all rural households—should climb out of the deprived income class in the next decade. Health coverage through RSBY should enable rural patients to be treated for serious illnesses and with more expensive procedures. These markets could grow further if the shortage of medical staff is addressed.

Players will need to adapt their business models in response to these changes: for instance, in urban areas, they need to build customized models to serve the hospital segment and undertake targeted programs to drive compliance, whereas in rural areas, they need to create completely new business models, including

partnerships to increase access to modern treatments.

### The hospital channel becomes more influential, though retail remains important

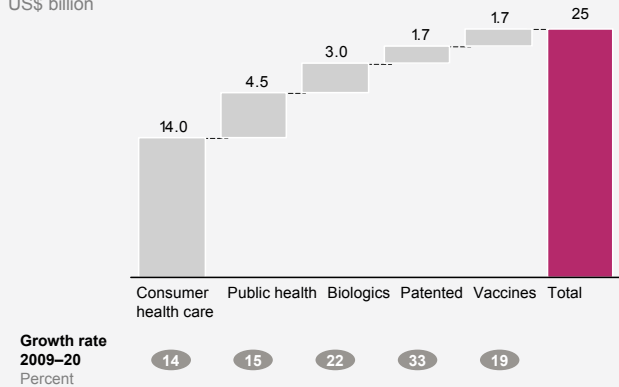
Retail accounts for up to 85 percent of today's market and should retain the largest share even as hospitals grow at well above 20 percent a year to reach an expected 25 to 30 percent share worth \$14 billion by 2020.

Hospitals are likely to become the first point of care, especially in metro and tier I markets. Because they issue such a large proportion of prescriptions for chronic ailments, they are likely to be increasingly instrumental in building product brands. Care delivery should evolve with the proliferation of special centers for eye operations, removing kidney and gallbladder stones, and other higher secondary procedures. Hospitals are likely to make the transition from focusing on the top line to worrying about profitability. Corporate hospitals are likely to drive the adoption of protocols for critical and life-saving procedures and treatments.

In response to these developments, pharma companies will need to scale up their sales forces, step up their activities, and change the way they engage with hospitals, going beyond contracting and negotiating to supporting them in shaping treatment protocols. Companies also need to expand their hospital portfolio beyond critical-care products and thrombolytics to products such as newer molecules for post-procedure cardiovascular care.

### Exhibit 5: Emerging opportunities reach scale

Estimated market size, 2020  
US\$ billion



### Non-traditional opportunities reach scale

As the market grows in size and diversity, several emerging opportunities should reach their full potential. The most promising five—patented products, consumer health care, biologics, vaccines, and public health—are currently worth \$5 billion and should grow to \$25 billion in the base case (Exhibit 5). They play a major role in the optimistic growth scenario too: more than half of the gap that separates it from the base case is predicated on growth at much higher than expected rates in these five areas.

#### Patented products

An assessment of the global pipeline indicates that patented products are likely to be launched in four main therapies: metabolics, neuropsychiatry, oncology, and anti-infectives. Rising affordability should be the primary driver for growth, but uncertainty over the likely number of launches in India makes it difficult to estimate the likely size of the segment in ten years' time. If a healthy pace of launches is maintained—namely 25 percent of all global launches—patented products could reach \$1.7 billion



by 2020, or as much as \$3.2 billion in an optimistic growth scenario. Although the segment would account for less than 5 percent of the market, revenues would be concentrated on a few brands, making them attractive for successful players.

To capture the potential, players need to excel on four fronts: local pricing, taking a cue from models such as Iressa in China, which was offered free to patients who achieved a certain level of compliance in the first six months of usage; intensive engagement with doctors at a national and regional level, at times through local trials; partnership with payors, including health economics studies; and direct engagement with patients.

### Consumer health care

With a market size estimated at above \$3 billion, consumer health care consists of two segments. The first is Rx to OTC, meaning brands that have been built through the prescription route but then moved on to self-medication use, such as Crocin and Volini. The second segment comprises OTC brands marketed directly to consumers, such as Eno and Pudina Hara, as well as the emerging category of condition-specific nutritional products such as Glucerna and Slim-Fast. We expect the consumer healthcare segment to grow at 14 to 16 percent a year to become a \$14 to \$18 billion market by 2020.

Would-be leaders in this market face three imperatives. They must innovate constantly on the back of consumer insights, using research to understand and formulate products instead of indiscriminately launching “me too” products and extensions; they must enhance their channel management and merchandising capabilities; and they must accept lower margins to scale up their brands dramatically.

### Biologics

The biologics market is worth in excess of \$300 million and is growing at more than 30 percent a year. It could be worth \$3 billion by 2020, or much more if companies took bold steps to build physician education and confidence.

Therapies for the treatment of diabetes (insulin), oncology (EPO and monoclonal antibodies or mABs), autoimmune diseases, and cardiovascular dominate the segment, and simple biologics like insulin and EPO command shares of more than 80 percent. Affordability and access limit the market to metro and tier I areas. Complex biologics such as mABs could account for up to 40 percent of the market by 2020 in the base case.

As elsewhere, affordability is expected to drive growth. Reducing prices and creating a transparent pricing system that benchmarks local prices against reference markets could dramatically increase the size of the market. Another helpful step would be to build physicians’ confidence in biologics, perhaps by establishing efficacy through local trials.

### Vaccines

Despite the high burden of deaths from preventable diseases, the vaccine market is significantly underpenetrated, at just 2 percent. Its current value of \$250 million, two-thirds of it in the private segment, could grow to \$1.7 billion by 2020. In the optimistic scenario, active shaping by companies could boost growth in both private and public segments to take the market to \$3.5 billion.

Growth is likely to be driven by four main actions: producing locally or forming supply partnerships like that of GlaxoSmithKline with Bio-Manguinhos in Brazil for the HiB vaccine; conducting



studies on the economic impact of vaccination and establishing safety and performance standards; extending coverage beyond paediatricians to general practitioners, consulting physicians, and gynaecologists; and enhancing supply-chain reliability and reducing costs.

### Public health

Direct government purchases from pharmaceutical companies are worth nearly \$1 billion, a value that could grow to \$4.5 billion by 2020, or \$6 billion in the optimistic scenario.

The largest segment in public health is state hospitals, which account for around 45 percent of government purchases. However, this segment is hard to access because of its low price levels and fragmented procurement processes. At the other extreme, central government hospitals account for just \$30 million of spending, but are concentrated, accessible, and more strategic in nature. Standards of care are high, comparable to those in the largest corporate hospitals. This segment's importance lies not in its size but in the access it affords to key opinion leaders

through sponsored research and efforts to design treatment protocols.

Aspiring winners in this market must choose which segments to play in. Focusing on states with more centralized buying can help. Enterprise selling capabilities are likely to be important, particularly for government institutions. For high-value specialty and super-specialty products, health economics studies should help to engage institutions.

### Implications for players

To make the most of these proliferating opportunities over the next decade, pharma companies should modify their business models and take part in multiple arenas. Most major multinationals have already set bold aspirations for their India business, invested in their local organization, and adopted a local model that involves ramping up their sales force and launching branded generics. Meanwhile, leading local players have invested in market creation, developed differentiated

business models, and maintained the momentum of new product launches.

All these are steps in the right direction, but as competition intensifies and the market evolves, much more needs to be done. Below we highlight the most critical tasks.

### Rediscover the essence of marketing

Launch marketing and brand planning based on prescriber shifts and competitor strategies remain important, but three other areas need attention.

First, as new launch possibilities dwindle, building big brands will be vital for profitable growth. As many as half of late-launch successes have been launched as brand extensions.<sup>5</sup> To instill a culture and mindset of building large brands, companies will need to actively manage the portfolio, set high aspirations, and build competitive differentiation.

Second, capabilities in disease management and market creation will be crucial. Companies will need to work with doctors to shape therapy and undertake direct-to-consumer activation in a way that complements their efforts. An example is the collaborations that orthopaedic implant companies are entering into with key opinion leaders and other physicians to increase awareness of joint replacements and reduce fear of surgery.

Third, companies must sharpen their customer focus, moving away from a standardized approach to provide more customized messages. Marketing teams need to understand and engage distinct segments of physicians, pharmacists, and patients instead of using a one-size-fits-all approach.

None of these capabilities are new to the industry, but leaders will need to

ensure they are institutionalized instead of relying on the senior management capacity that was adequate when the market was smaller and simpler.

### Adopt new salesforce practices

To sustain high growth, companies will need to adopt innovative salesforce coverage models. Our research indicates that representatives are getting crowded out of doctors' chambers, especially in metro and tier I cities. In addition, therapy and brand choices are increasingly being determined by hospital purchasing committees, payors, pharmacists, and other influencers. Selling efforts must change to reflect these new dynamics.

Traditional management approaches, such as doctor segmentation and targeting based on prescribing patterns, are geared to capture incremental share and are not suitable for driving market growth. Companies will need to shift their focus to key differentiators that will help them achieve salesforce excellence.

The first of these is enhanced performance management and dialogues. For instance, instead of focusing on the previous month or quarter, the top team should develop a forward-looking view of performance and drive interventions accordingly.

The second differentiator is a sharper focus on people. National and regional sales heads should identify where talent can make the biggest difference.

The third differentiator is a readiness to challenge entrenched views about what is possible. One example is the view that newly deployed sales reps need two to three years to become fully productive; in fact, with the right expectations and support they can ramp up in as little as 12 to 18 months.

Top teams need to change the nature of their engagement with the sales force too, getting more involved, going beyond data and templates, and focusing on softer aspects to transform the sales organization's mindsets, habits, and culture.

### Refocus on commercial operations

Profitability should remain a major focus for leading companies. Margins are likely to come under additional pressure because of business-building investments in new opportunities, coupled with heightened competition and the rising cost of talent. In response, companies will need to boost the productivity of their marketing and sales operations, especially in salesforce, promotional, and supply-chain spending.

Salesforce productivity can be improved through differentiated models, better performance management, and capability building. When it comes to promotional spending, clear linkages need to be created between target segments, marketing spend allocation, and expected returns. Companies should also work on creating an efficient supply chain that enables them to reach previously inaccessible markets. Even partial improvements in processes can increase margins by a percentage point, not including the benefit from the reduction in lost sales.

### Adapt to proliferating opportunities

Companies have three main options for strengthening their organizations.

First, import talent and skills from other industries. Developing from within

### Exhibit 6: Importing talent

New marketing areas	New skills required	Likely sources of talent
Consumer health care	<ul style="list-style-type: none"> <li>Direct-to-patient promotion (e.g., TV and print media ads)</li> <li>Tapping non-pharmacy channels (e.g., retail)</li> </ul>	<ul style="list-style-type: none"> <li>FMCG companies</li> </ul>
Market shaping and awareness	<ul style="list-style-type: none"> <li>Running programs and campaigns at scale</li> <li>Organizing events for patients and doctors</li> </ul>	<ul style="list-style-type: none"> <li>Event management firms</li> </ul>
Rural and tier II markets	<ul style="list-style-type: none"> <li>Ability to cultivate untapped markets</li> <li>Selling large volumes at low cost</li> <li>Managing supply chain in difficult-to-access region</li> </ul>	<ul style="list-style-type: none"> <li>FMCG companies, cellphone companies</li> </ul>
Rural health awareness	<ul style="list-style-type: none"> <li>Communicate and build knowledge in relatively undereducated regions</li> <li>Build trust</li> </ul>	<ul style="list-style-type: none"> <li>NGOs, teachers</li> </ul>
Hospitals and insurers	<ul style="list-style-type: none"> <li>Making bulk sales</li> <li>Cultivating relationships with key people</li> </ul>	<ul style="list-style-type: none"> <li>Bank and insurance salespeople, business process outsourcing experts</li> </ul>

will not supply the sheer numbers required, let alone new thinking and skills. Brand managers in fast-moving consumer goods (FMCG) companies are experienced at building and managing big brands in high-growth markets, for instance. Other potential sources of talent are illustrated in Exhibit 6.

Second, place multiple bets and create a portfolio of opportunities. Go beyond reviewing near-term financial metrics and place equal emphasis on input measures and non-financial outcomes. Over the past five years, some cautious players have lost ground: early entrants in hospitals that failed to invest in their product portfolio and commercial capabilities ended up ceding their first-mover advantage, for example. Other companies that delayed switching their large brands from prescription to OTC saw competing brands surge ahead.

Third, focus the top team's attention on the long-term health of the business. What are the major trends we need to exploit? Is our company taking enough bets in promising areas? What are the risks? Is our organization building the right capabilities?

### Collaborate within and beyond the industry

Enhancing access and shaping markets will require substantial investments. Partnerships can help to spread risks and enable rapid scale-up. We envisage three main types.

First, pharma companies could partner with one another to shape the market, co-investing to launch, for instance, an independent joint venture to enhance access in rural areas. Although such ventures are almost unknown in India, they are starting to be discussed.

Second, companies could partner with other healthcare stakeholders to enhance access: with payors to provide coverage for costly life-saving therapies; with device companies to expand into tier II markets using common supply-chain infrastructure and information; with hospital chains to establish treatment protocols and drive local clinical trials; and with diagnostics companies to enhance disease awareness and diagnosis rates.

Third, as the government becomes more open to working with the private sector, players could enter public-private partnerships (PPPs).<sup>6</sup> Partnerships could be formed, for instance, to launch telemedicine programs such as the HMRI program, execute insurance schemes such as the Aarogyasri program in Andhra Pradesh, and establish treatment protocols in tertiary and quaternary government hospitals.



India's pharmaceuticals market has grown in confidence and moved onto an accelerated growth path. The question is whether it can achieve its full potential. Backed by solid fundamentals, the market is giving rise to a multitude of business opportunities. By pursuing the right ambitions, making appropriate investments, and adopting the actions outlined above, companies should be able to underpin future growth and help take Indian pharma into the global top rank.

## Notes

1 We define upper income households as those with annual incomes above \$11,000 and middle income households as those with annual incomes between \$4,500 and \$11,000 at 2001 prices.

2 In 2007, per capita spending on pharmaceuticals was US\$1.8 in rural markets and \$15.6 in urban markets.

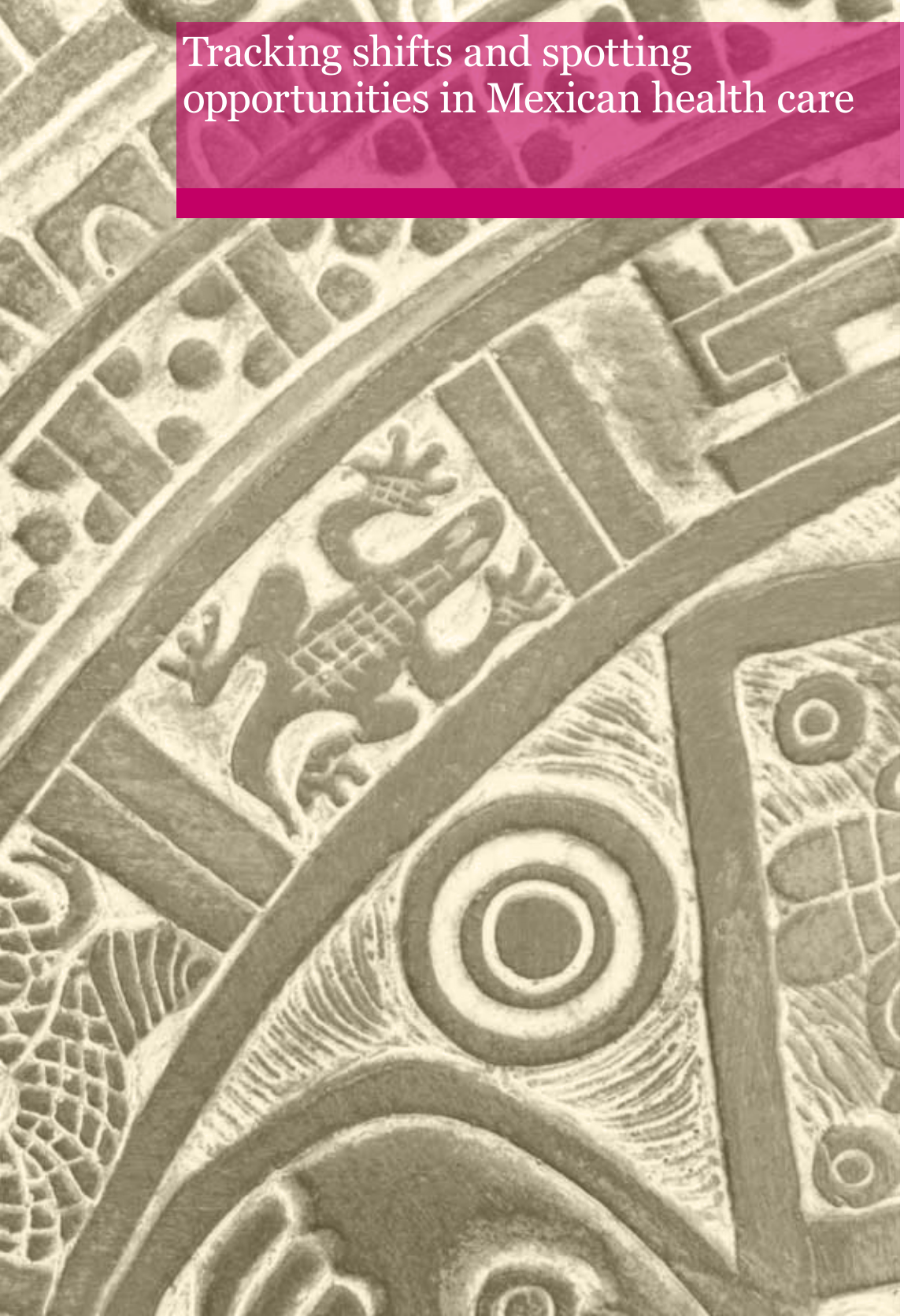
3 *India Pharma 2015: Unlocking the potential of the Indian pharmaceutical market*, McKinsey & Company, 2007, page 54.

4 Tier II markets provide critical support to access for rural markets by acting as sales headquarters, supply-chain stocking points, and centers for primary and secondary care.

5 We define "late launches" as brand launches that are not among the first five launches in a molecule or molecule combination.

6 For more on PPPs, see "Public-private partnerships: An untapped strategic lever," pp. 28–35.

Tracking shifts and spotting opportunities in Mexican health care



**Mexico's health care has improved thanks to recent public initiatives, but rising costs, capacity constraints, and growing disparities pose new challenges. To keep pace with these shifts, pharma companies need to raise their capabilities to global standard and preserve the flexibility to update their plans as often as every quarter.**

**Julio Dreszer, Pablo Ordorica, Lisa Ramon, Safa Sadeghpour, and Jorge Torres**

Health care in Mexico is at an inflection point. Recent advances in public policy have helped bring noticeable improvements in health indicators, but the system is under pressure. In this article, we first look at recent developments in health care in Mexico, focusing on shifts that are particularly significant to the pharmaceutical industry. Next, we explore the pressures the industry faces, including capacity constraints, increasing costs, and growing disparities, and outline some of the policy options. Finally, we consider the implications of these changes for pharmaceutical companies operating in Mexico.

### **Recent developments**

Mexico is one of the richest countries in Latin America. In 2011, the World Bank estimated its GDP per capita at just over \$15,000, and economic growth at 4.6 percent. The country's healthcare priorities are typical of fast-growing developing economies. In general, the nation's health has improved noticeably over recent years thanks to preventive medicine and a variety of public sector programs, including the creation in 2003 of Seguro Popular, a national low-cost health insurance program. Other initiatives have focused on improving the quality and availability of drugs.

Mexico has also become more sophisticated at controlling healthcare costs. For example, centralized price negotiation and reverse auctions have made public drug spending more effective.

### **The challenges ahead**

Although public policies have succeeded in improving health in Mexico, new pressures have arisen that alter the challenges the system faces.

#### **Capacity constraints**

Demographic changes and other factors are putting increasing pressure on the Mexican healthcare system. Mexico lacks the resources and capabilities to address these shifts.

The population is aging rapidly and witnessing an increase in ailments more common in developed countries. For example, increased obesity is leading diabetes to expand at three times the rate of population growth.<sup>1</sup> Cancer and cardiovascular diseases are also on the rise.

In addition, Mexico has only a third to a half as many specialists as its OECD peers. Gustavo Nigenda of the National Institute of Public Health noted Mexico trains "too few specialists for its epidemiological profile."<sup>2</sup>

In addition, primary care practitioners say they would like more opportunities for continuing education on newly prevalent diseases. Physical infrastructure is also lacking: Mexico has only 16 hospital beds per 10,000 people compared with 41 in Argentina and 24 in Brazil.<sup>3</sup>

Increasing the number of specialists and hospital beds is expensive and likely to take at least five to ten years. However, there are several short-term low-cost options that could offer quick relief:

- Define protocols for managing common diseases for non-specialists who lack the resources or language skills to access international guidelines. Institutions such as the Instituto Nacional de Salud Publica could publish domestic guidelines annually.
- Promote continuing education opportunities for primary care physicians.
- Regularly assess access to and quality of health care across cities, systems, and providers (for instance, the percentage of type 2 diabetes patients on metformin).
- Train a cadre of non-physician health professionals—similar to nurse practitioners in the US—in specific disease areas to address the need for more specialized care.
- Expand preventive efforts such as patient education on obesity and diabetes through programs such as PrevenIMSS.

To help prevent any perception among physicians that these efforts represent increased oversight or detract from their authority, the government could frame the goal as to provide physicians with better resources and help them improve the care they offer their patients.

### Cost pressures

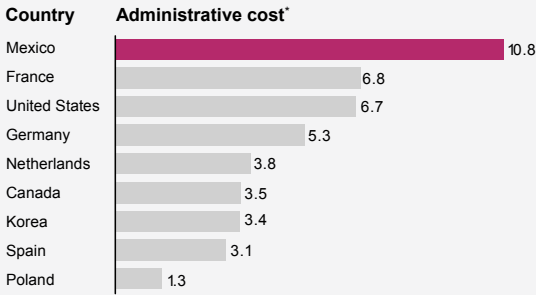
While Mexico has been effective at keeping the public cost of drugs down, the increased prevalence of diseases common in developed countries has placed enormous pressure on the national healthcare budget. Today more than half of public healthcare funds are spent on non-communicable diseases, with about 20 percent on diabetes alone. In addition, national finances are declining because of the aging population and rising unemployment. In 2009, the Mexican national social security system, IMSS, ran \$2.9 billion in the red. The Ministry of Health has warned that unless obesity rates slow, public health costs will double by 2017.<sup>4</sup> Such a situation would lead to greater rationing of care and ultimately to a deterioration in public health.

The share of administrative costs in total health expenditure is three times higher in Mexico than in Canada, Spain, and South Korea (Exhibit 1). Mexico has begun to tackle the problem by establishing task forces to look at ways to consolidate the systems. But while integration would enable more effective oversight and reduce costs, it is proving slow to implement.

A number of intermediate options could produce immediate benefits and set the stage for future integration. Each system could separate the payor and provider functions while retaining their current ownership structures. The payors could then institutionalize processes to lower provider costs, as they do in the US and Europe. Payors could, for instance, fix payments for individual conditions to create incentives for providers to reduce their inherent costs. To reduce the unnecessary use of healthcare services, the various systems could also utilize demand-management mechanisms such as tiering medications (where, for



**Exhibit 1: Admin costs of national healthcare systems**  
2009



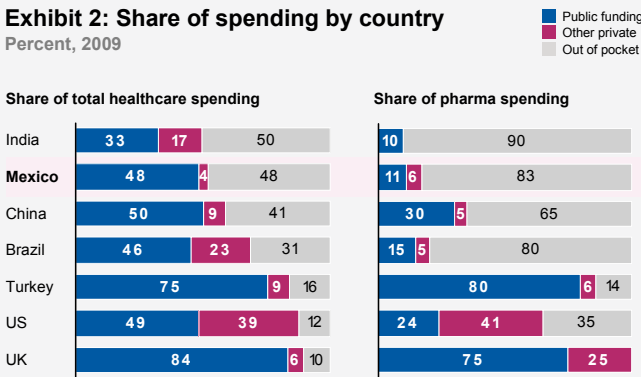
\* Administrative cost divided by total cost, percent  
Source: OECD Health Data 2011

systems to create a uniform cost-reducing approach for setting payments for individual diseases, rather as it convenes the various systems today into a national council to evaluate drugs for approval.

**Disparities**

Another challenge is presented by the disparities that have developed in the Mexican healthcare system. Low-income groups are penalized because of the relatively high proportion of medical expenses that individuals in Mexico have to pay. For example, out-of-pocket expenses account for a little more than 50 percent of total expenditures in Mexico, compared to just 12 percent in the United States. Similarly, out-of-pocket expenses on drugs account for 83 percent of total drug expenditures in Mexico, compared with 65 percent in China and 35 percent in the United States (Exhibit 2).

**Exhibit 2: Share of spending by country**  
Percent, 2009



Source: World Bank, OECD Health Data, 2001; WHO National Health Accounts, 2009

instance, generics have the lowest co-pays and branded products the highest).

The government could set the stage for integration by developing a compelling case and creating political momentum. It could also create a financial oversight authority to mediate payments between payors and providers within a single system or across systems, helping to encourage the separation of payors and providers. The government could also work with the

spends almost nine times as much per capita as the Seguro Popular. There are major geographical differences too: rich states such the Federal District have about six times more specialists and three times more hospital beds than poorer states such as Chiapas.<sup>5</sup>

To address these disparities, the government could consider developing initiatives for specific geographic settings. In urban areas, the integration of health



systems could bring faster efficiency improvements because of the higher density of services. In low-density rural areas, the focus should be on programs that can be launched quickly and have a proven track record, such as mobile health platforms. The government could also offer targeted incentives to support patients in low-density areas, such as higher public payments and subsidized transport for patients requiring hospital care. To alleviate out-of-pocket expenditures, private health insurance could be encouraged too, especially for middle-income urban segments.

Public health programs could reduce the need for trained physicians by specifying days of the month when entire villages receive coverage from non-physician healthcare workers on specific diseases, such as diabetes testing. Broad-based rural education should address prevalent diseases, particularly those affecting children, young people, and the elderly.

### Implications for pharmaceutical companies

Top-performing companies will begin by getting the basics right. As they prepare to launch programs linked to the shifts we have identified, they will implement capability and organizational improvements throughout their organization, as well as ensuring that relationships are maintained with all levels of government and key private and public stakeholders.

Successful companies will also sharpen their core functions to respond to the increased use of generics, provider consolidation, and cost pressures. They will aspire to bring their local capabilities to global standards rather than trudging on with practices that are “good enough” for a developing market. This will involve understanding the nuances and likely evolution of specific channels such as public programs and mass retail. These companies will take advantage of the global and regional expertise of their parent organizations but preserve sufficient autonomy to adapt the model

for Mexico, updating their plans every quarter if necessary to follow the changes.

Beyond these broad strategies, we have identified several specific efforts that can help pharmaceutical companies keep pace with the shifting environment:

- **Public reforms.** Bolster local R&D efforts—such as drug co-development with the government and better use of local clinical trials—to help establish solid relationships with regulators and other authorities and familiarize physicians with a company's products. Seek opportunities to work with the government to understand the likely evolution of reforms and drive change.
- **Capacity constraints.** Expand marketing and sales strategies to address the growing importance of non-specialists such as primary care physicians and non-physician healthcare practitioners. Consider working with the government to develop disease guidelines, continuing medical education programs, or other outreach efforts.
- **Cost pressures.** Aspire to best-in-class stakeholder management in Mexico, with well-defined approaches to pharmacoeconomy, price negotiations, and reverse auctions.

- **Disparities.** Pursue growth opportunities associated with programs to narrow the healthcare gaps between regions, income levels, and care programs. Ensure participation in any expansion of the coverage of drugs and diseases by Seguro Popular.



Mexico is developing rapidly, boasting solid economic growth and one of Latin America's highest GDPs per capita. But economic success is also changing the healthcare environment. New challenges are arising just as policy reforms deliver clear improvements to national health indicators. Nimble pharmaceutical companies will track and understand these shifts, mitigating any risks that develop and quickly identifying any opportunities.

## Notes

- 1 Federacion Mexicana de Diabetes, INEGI.
- 2 Reforma, 2010.
- 3 WHO.
- 4 Milenio, 2010.
- 5 Mexican Ministry of Health, 2010.

This is a revised version of an article first published in *Perspectives on Healthcare in Latin America*, McKinsey & Company, 2011.

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The authors of these articles represent a cross-section of McKinsey's global Pharmaceutical Practice. We welcome your thoughts and reactions to the ideas presented here.

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