



PERSPECTIVE

# A Prescription for Innovation

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The word “innovation” is typically associated with technology, but innovation comes in many forms and across many industries. Franklin Templeton Emerging Markets Equity’s Krzysztof Musialik sees innovation taking place within the health care and pharmaceuticals industries in emerging markets—even driving change in developed markets.

We are very excited about the prospects for the pharmaceutical industry within emerging markets, particularly smaller companies. The sector looks very promising to us due to three primary drivers.

## Demographics

Populations are aging not only in many developed economies, but also some emerging ones, too. Given the advancements in medicine we’ve seen over the past few decades, we are seeing demographic shifts that began in the developed markets starting to spread to the emerging markets as well—where some countries are now facing greater numbers of elderly citizens. Amid these demographic shifts within the large pharmaceutical markets (China in particular), an aging population acts as a structural demand driver. It is obvious that the older people become, the more demand there is for medicine and medical care.

## Environmental and Lifestyle Changes

As longevity has increased, so has the incidence of cancer and diabetes epidemics in emerging markets. Rapid economic development has resulted in enormous deterioration of the environment, with air pollution being probably the most severe consequence. Air pollution is suspected to be driving cancer incidence rates up in many emerging markets such as China, where the prevalence of this disease has increased exponentially.

Cancer has been the leading cause of death in China since 2010, with lung cancer the most common. The country has seen an estimated 4.3 million new cancer cases per year (or almost 12,000 new cancer diagnoses each day).<sup>1</sup>

Economic success has also changed lifestyles in many emerging markets—and not necessarily for the better. Unhealthy lifestyles—including a lack of physical activity and increased consumption of processed foods—have contributed to an increase in obesity, which is the main cause of diabetes. Once considered a disease of the affluent developed markets of Europe and North America, the incidence of diabetes and oncological diseases in emerging markets is expected to grow by 20% or more by 2030.<sup>2</sup> Of course, these are not positive events—but ones that must be dealt with—and fortunately today, there are better treatments and improved outcomes than in the past.

## Innovation

The breakneck pace of innovation in the pharmaceutical space in emerging markets is perhaps the most surprising driver we see for growth in these types of companies. We think innovation is happening due to several factors.

- Return of expats from the “West” back to China/Taiwan.
- Somewhat more lenient ethical requirements in terms of clinical trials, especially important now in the era of genomics revolution. For example, China is progressing fast with trials in genomics.
- Many emerging markets have a systematic goal of moving up the value chain, from low-cost manufacturing of cheap goods to innovative market-leading industries. Governments in countries such as China, South Korea and Taiwan have been sponsoring innovation initiatives.

These trends have not gone unnoticed. Large pharmaceutical companies located in developed economies have been closely watching the growth of Asian pharmaceutical players. In recent years, many of them have struck partnerships with emerging-market pharmaceutical companies.

For example, Johnson & Johnson licensed-out a novel molecule from a Chinese company in the field of CAR-T Therapy.

CAR-T Therapy is a type of treatment in which a patient’s white blood cells (T cells, a type of immune system cell) are taken and then modified to add a special receptor (a chimeric antigen receptor, or CAR) in the gene that binds to certain proteins on the patient’s cancer cells and injected back into the patient for cancer treatment. So far, there are only two such therapies, both offered by large biotech companies from developed markets with a cost of treatment of US\$500,000, that have been approved in the last year. Companies in emerging markets have jumped into the CAR-T Therapy race, with the number of clinical trials in China surpassing the number of such trials in the United States.

Another interesting example of innovation in emerging markets which has not gone unnoticed by companies in developed markets is in the area of gene-editing technology. A South Korean biotech company recently struck a partnership with a US-based agrochemical and biotech giant to use a CRISPR technology platform to develop agricultural products.

The technology that is the subject of the deal (CRISPR) will have many applications across global sectors, from the food industry to pharmaceuticals. CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeats, which is a gene-editing technology. Gene-editing technologies, like CRISPR, offer agriculture researchers significant advantages over existing plant breeding and biotechnology methods due to their versatility and efficiency, and will theoretically allow farmers to grow more using less.

As increasing prosperity drives demand for health care and healthier lifestyles, emerging markets are becoming sources of significant growth for the pharmaceutical industry and a center for innovation within the industry itself. We believe this area offers exciting potential for investors, one that will be a significant driver of advancement in society in both emerging and developed markets alike in the decades ahead. We think health care and pharmaceuticals in emerging markets are just entering the early stages of development.

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## **What Are the Risks?**

**All investments involve risks, including the possible loss of principal.** Investments in foreign securities involve special risks including currency fluctuations, economic instability and political developments. Investments in emerging markets, of which frontier markets are a subset, involve heightened risks related to the same factors, in addition to those associated with these markets' smaller size, lesser liquidity and lack of established legal, political, business and social frameworks to support securities markets. Because these frameworks are typically even less developed in frontier markets, as well as various factors including the increased potential for extreme price volatility, illiquidity, trade barriers and exchange controls, the risks associated with emerging markets are magnified in frontier markets. Stock prices fluctuate, sometimes rapidly and dramatically, due to factors affecting individual companies, particular industries or sectors, or general market conditions.

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[1.](#) Source: Cancer Statistics in China 2015, *CA: A Journal for Clinicians*.

[2.](#) Source: American Diabetes Association, *Diabetes Care*, "Global Prevalence of Diabetes: Estimates for the year 2000 and projections for 2030" There is no assurance that any estimate, forecast or projection will be realized.