EXECUTIVE INSIGHTS

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Hospital Strategies in Brazil

Recent change in Brazil's foreign investment law has opened up the hospital market, with two or three consolidators emerging early in the process. In this *Executive Insights*, L.E.K. Consulting shows how carefully considered strategies can benefit hospital businesses and potential investors, helping them adapt to structural realities in the local markets.

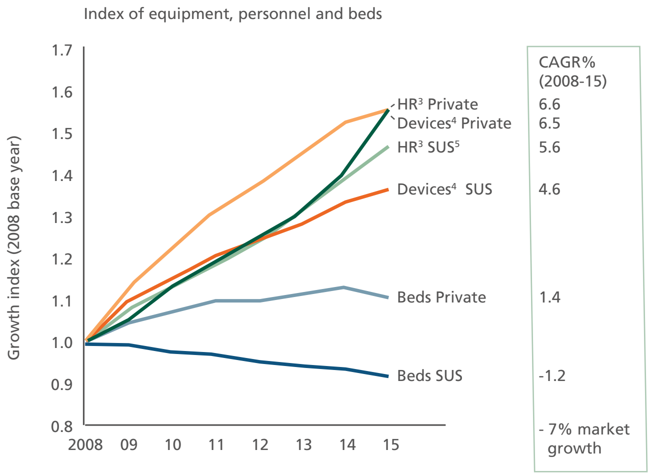
The Brazilian Hospital Market: A Unique Investment Opportunity

Around the world, healthcare markets exhibit common growth drivers that make them important target areas for investors. These growth drivers include an aging population with a greater need for healthcare services coupled with a necessary shift toward centralization, consolidation and more efficient technology to reduce costs. Providers and technology companies (mainly those producing pharmaceuticals and medical devices) continue to hold investors' interest. Brazil is no exception. In fact, the sector is of particular interest, given this year's regulatory landmark that opens the Brazilian hospital market to foreign investment.

This article focuses on the private healthcare market in Brazil. There are certainly opportunities in the public market. Important events have transpired in the public sector as well, including public-private partnerships such as the one between Phillips and Alliar, a local imaging diagnostics chain created with the state of Bahia. But in this article, we will focus on the private market, which in 2013 made up 52% of Brazilian health expenditures.

Prior to the recent currency devaluation, Brazil was the third-largest private health market in the world behind the United States and China, with approximately US $112 billion in health expenditure. Given the August 2015 exchange rates, we now estimate private expenditure at US $70 billion, ranking Brazil as the sixth-largest private health market in the world – and still among the world's fastest-growing markets for the past 10 years. Fueled by aging, obesity and the increasing presence of private payers (linked to increased formal employment), the private market expanded at double-digit rates.

Figure 1
Growth in Providers' Infrastructure[1] and Human Resources[2] Available to Non-public Payers[3]



Notes: [1]Physical (devices and beds) and human resources from public, private and philanthropic providers; [2]Human resources (HR) includes doctors, nurses, nurse technicians and nurse assistants; [3]Non-public payers are private health insurers and out-of-pocket payer; [4]Includes audiology, diagnostic imaging, infrastructure, odontology; [5]SUS (Sistema Unico de Saude) also known as Unified Health System

Source: CNES, Datasus, L.E.K. analysis

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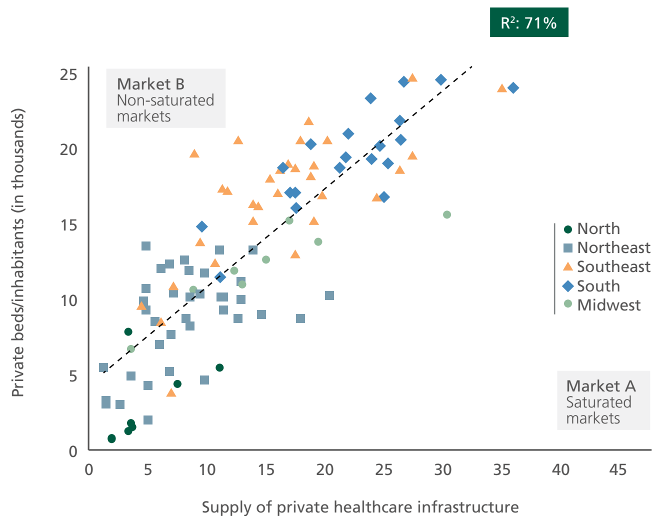
Figure 2
Estimated Private Healthcare Infrastructure Demand
Evaluation of 4 variables reveals a supply-and-demand balance



Source: ANS, CNES, IBGE, DATASUS, Atlas do Desenvolvimento Humano, L.E.K. analysis

The health market has been significantly more robust than the general economy in Brazil, as the health insurance and pharmaceutical markets show. Despite growth in these sectors, the hospital market has not seen similar growth and, in fact, has proven to be a bottleneck for the healthcare system, given the limited capital infusion. The typical hospital investment requires more capital than other health areas, and until January 2015 the market could count only on local investors to inject capital and materialize their strategies. Thus, comparing the growth of the infrastructure (e.g., devices, pharmaceuticals) with the number of hospital beds reveals that in Brazil both the private and the public systems lag behind market growth (see Figure 1).

With the January change in legislation, it is now clear that investors can effectively pursue their investment thesis in the Brazilian hospital market. Carlyle (with its investment in Rede D'Or), Amil (UnitedHealth, with its advances in vertical integration) and DNA Capital (the investment arm of the former Amil owner, Edson Bueno) seem to be the contenders to consolidate the market, seizing the opportunity in the core markets of São Paulo, Rio de Janeiro and others. There are also many other investment funds and hospitals in ongoing negotiations, and the general expectation within the sector is that positive change is coming.

Meaningful Variables

Population percentage > 60 years
- Proportion of elderly is linked to diseases and health issues
- P-value: 1.3 x 10-9

Public beds (negative sign):
- The amount of public beds is a consequence of local infrastructure and influences the need for private services
- P-value: 1.0 x 10-8

Per capita income (BRL, 2010)
- Average income per individual is strongly linked with people's access to private services
- P-value: 5.2 x 10-6

Death by car accidents
- Car crashes are a major source of death by accidents
- P-value: 5.1 x 10-3

Creating a Sound Investment Thesis Within a Diverse Market Structure

Despite regulatory change paving the way for increased foreign investment, investors and hospitals alike have generally not defined their investment thesis. The gap lies in the lack of well-articulated business strategies and strategy activation plans that will drive value for investors and raise required capital for hospitals.

Currently there are concerns about minimum size for investment, aggressive competition in the sector, hospital specialization, and corporate structures coming together in a confusing tangle, which will need to be unraveled before a solid investment thesis can be defined. In addition, investors will need succinct plans for maximizing value immediately post-deal.

Our fundamental belief is that the local market structure is the starting point to define the strategy for a hospital business and the potential need for investor participation. When this strategy is clear, investors will adapt their investment thesis to a specific market condition.

So to properly address market structure, we turn to the local markets – cities and health macro-regions – and ask three crucial questions:

1. **Is there space in the market for hospital infrastructure?** In determining the demand for services and community need, it is difficult to use comparative measures used in other parts of the world. For example, in 2014 the World Health Organization stated, "There is no global norm for the density of hospital beds in relation to total population." This reflects varying population dispersion and cultural patterns relating to access. For example, if Brazil used Argentina's benchmark, it would have to double the number of beds to overcome the gap; using Mexico's benchmark would generate an excess capacity of 100,000 beds.

To effectively define the need for infrastructure and predict returns, a model should be created comparing Brazil's different macro-regions to determine the local need for private beds. Interestingly, four variables explain 71% of the variance (see Figure 2). We also discovered that many markets in southeast Brazil are underserved by the private sector, with most regions showing demand for more than 15 beds per 10,000 inhabitants (see "Supply and Demand in the Brazilian Hospital Market" on page 7 for a summary of these findings). This identifies a gap in provision of services and a potential opportunity for investors.

2. **How much competition is in the market?** A classical measure of competitive level is a market concentration metric, called the Herfindahl-Hirschman Index (HHI). Using the HHI, the closer the metric is to 0, the more fragmented and competitive the market; the closer the metric is to 1, the more concentrated (and therefore less competitive) the market. For the purposes of strategy creation, unique differentiation provides a better opportunity to build an effective strategy, and therefore should be favored by hospitals and investors alike. So when HHI is closer to 1, incumbents are in a better situation to compete in unique ways.

We calculated the HHI across the different health macro-regions, plotted in Figure 3 against the balance of supply and demand as defined in question 1 above. Note that the use of macro-region instead of city will generally drive the index down, closer to 0.

The interpretation of Figure 3 is that there are four different market structures that hospital management should consider when crafting their strategy (see "Four Types of Hospital Market Structures" on page 5 for a brief explanation).

3. **What is the relative balance between hospitals and payers?** Health plans in Brazil can command significant market power at the local level because most of these plans are city-based in cooperatives and they can have high concentrations (e.g., reaching 70%-80% share of insured

Figure 3
Four Different Market Structures Carry Different Implications for the Definition of Strategy

Note: [1]0.12 represents the median number among all macro-regions
Source: ANS, NES, IBGE, DATASUS, Atlas do Desenvolvimento Humano, L.E.K. analysis

patients) in certain locations. In regions such as the South or the state of Minas Gerais, local physicians' cooperative Unimed can cover 70% or more of the insured population, creating uncertainty over demand and pricing, which makes the investment thesis weaker. Therefore, it is critical to understand how to develop a defined strategy in a payer-concentrated market.

The expectation is that the payer market will increase. Using current reimbursement models to predict future profitability is critical in strategic planning.

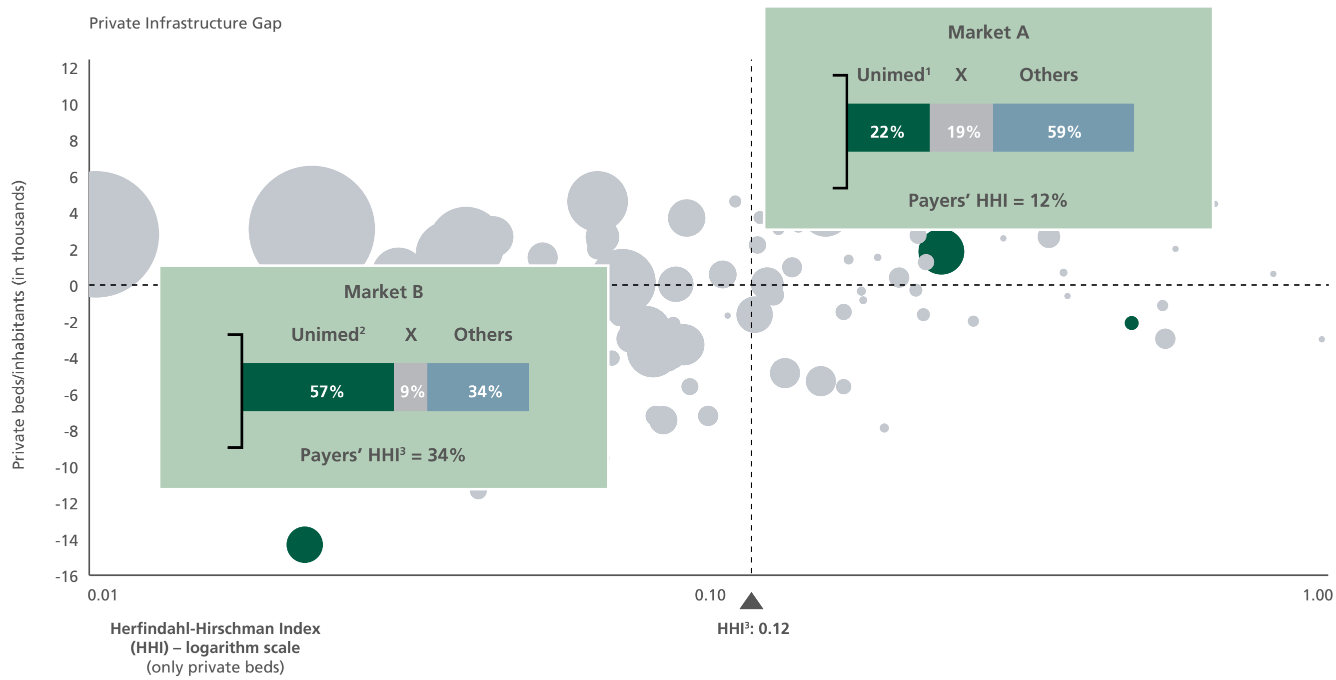
These areas defined by the above questions form the basis of discussion for defining a business strategy. They reveal that in certain situations, a financial investor may not always be the right partner for investment strategies. Other possible strategic options for a hospital looking to consolidate the markets include merging hospital operations to form a consolidated system, improving productivity, specializing in a service line (e.g. cardiac, orthopedics) and integrating with health plans (also known as health operators in the Brazilian market).

To further explain the potential opportunities, two very different markets are presented as studies in contrast: Market A in the Southeast and Market B in the Midwest (see Figures 2 and 4). Both markets contain a population of roughly two million inhabitants, but their supply-and-demand balances differ greatly. Market A lacks available beds and has a relatively concentrated market in the hands of local hospitals, though its private payers are not concentrated. Market B shows an overcapacity of available beds (given its much younger population for example); its payers are extremely concentrated, however, and competition is fierce with many local hospitals competing in the same geography.

For Market A, the business strategy most likely should involve accelerating the capacity build-up potentially through the addition of beds and a related construction strategy. Financial investors will perform due diligence that concentrates on issues such as site selection, population profile and payer relations.

In Market B, we identified the market price of a Caesarian section, for example, as 40% lower than the Brazilian Medical Association's recommended price. For Market A, the price ranges from 5% to

Figure 4
Market A and B Comparison



Note: [1]Based on the number of beneficiaries; [2]Includes all national Unimed units; [3]Median number among all macro regions
Source: ANS, CNES, IBGE, DATASUS, Atlas do Desenvolvimento Humano, L.E.K. analysis

10% lower. Clearly, the economics vary a great deal between the two markets.

The winning strategy in Market B should therefore include consolidation or perhaps specialization in a more concentrated service line. A potential strategy is to change the current market structure by consolidation. Investors are keenly interested in a thesis like this and will certainly ask questions in this respect as they approach hospital management or execute due diligence.

Winning Strategies: The Starting Point for Attracting the Right Investor

For a hospital chain to display itself successfully to a potential investor, it must present a clear strategy for creating value within its market in the form of growth and profits. Furthermore, it must explain why the strategy makes sense given the local market structure and why capital is needed to execute the strategy.

There are different types of financial investors that may have interest in the local strategy, such as private equity funds, institutional investors, equity markets or even angel investors. Other potential non-financial investors include equipment suppliers, health plans, other hospitals with strong balance sheets and physicians. An effective strategy will encourage interest from the right investment partner. Many investors with capital are constantly searching for good targets with a good strategy upon which they can build an investment portfolio. This is increasingly true in international markets.

Winning strategies create change in the market in favor of a defined goal: growth, profitability, balancing payer pressure or other objectives.

Four Types of Hospital Market Structure

As shown in Figure 3, Brazil's markets are diverse in terms of market concentration level and materially important supply-and-demand balances. Of course, defining a strategy requires a deeper analysis of each market. Still, Figure 3 suggests that defining a winning business strategy and investment thesis is a local endeavor. Here are the types of markets we identified:

Growth: These markets already have some level of concentration, which means that investors can search for a "platform" to invest in and grow. Capital makes a lot of sense, and speed is a must to occupy the space before other competing platforms do. A growth fund typically expects five to seven years' maturity for its investments. If the market has a payer concentration, a proper, explicit set of choices should be developed.

Growth and consolidation: Markets in this group offer a consolidation and growth route, and a reasonable payer structure offers the largest opportunities to invest. The markets are larger and contain areas such as São Paulo, Rio de Janeiro, Belo Horizonte and other metropolitan areas, most of them in the Southeast. Players in these markets face a dilemma: grow by increasing capacity of beds or consolidate (increase density in the market)? In fact, both are possible and will depend on the situation. Rede D'Or is already positioned in some of these markets and clearly prioritizes the merger route, which offers scale in purchasing, negotiations with health operators, branding and other advantages.

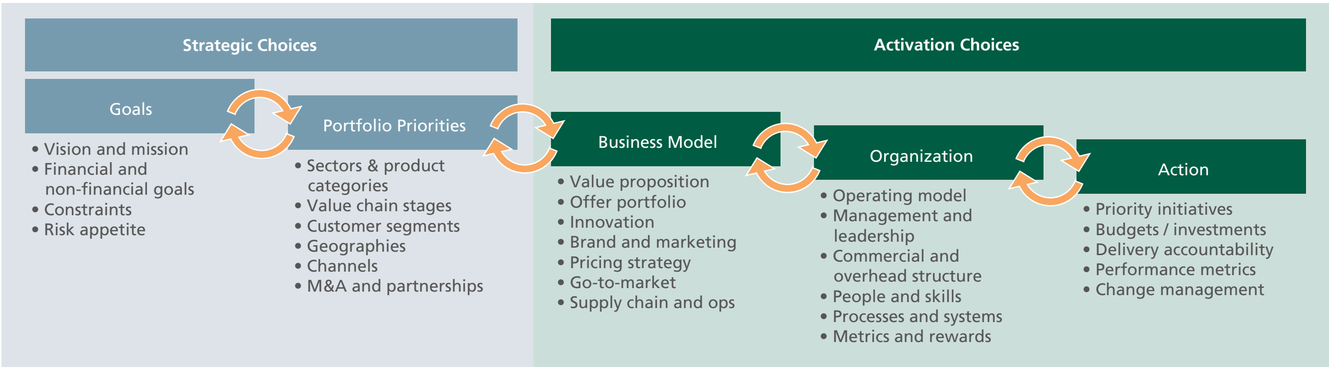
Fragmented red ocean: These are fragmented markets that already have excess beds and, potentially, low occupancy rates. The typical payer market tends to be dominated by the local Unimed. Strategies range from consolidation by merging to specialization and even to vertical integration with the health plans. A vertically integrated plan in this market may offer a unique proposition that could drive consolidation.

Crowded: Markets in this class are typically small, which allows for a dense strategy with a small-to-medium sized operation. A high level of concentration and excess capacity indicate probable difficulty in recovering an investment. Although the health operator structure is also meaningful, the strategy here is to keep the advantaged position and maintain relations with the health operators.

Figure 5

Strategy Activation

Successful business strategies require an integrated, consistent set of strategic and activation choices



A lack of clarity regarding investment thesis is the main reason some investors have not yet entered the hospital market. A solid investment thesis arises from the market structures and from the consistent strategy developed by hospital management. Hospitals should be concerned with the development of an effective growth strategy that takes into account the unique market issues and the potential trajectory for growth. Strategic clarity is imperative for investor interest.

To define your strategy, we suggest a three-step approach:

1. **Map your market structure and understand what drives value in your market.** Given the dispersion of market structures in Brazil and their impact on business strategy, it is clear that the starting point is to understand your market structure and what drives value in your local hospital market (see Figures 3 and 4). Determining the market structure will drive the next phase: selecting a strategy.

2. **Make clear choices that will allow you to drive the business forward.** With an understanding of how the market is structured, a hospital can refer to the strategy definition framework (see Figure 5). To achieve its defined goals, it must make explicit choices about where to play (portfolio priorities) and how to win (business model) in these markets. These choices reflect the geography, the product or therapy area to offer, the care model, and other choices.

3. **Develop a related strategy activation plan to initiate the win.** After developing a well-defined strategy, it is critical to then create an action plan to position and activate strategic initiatives. Figure 5 shows the activation choices that need to be defined for effective execution. Even the best strategies can fail if there are no activation plans in place to ensure successful execution of the strategy.

Final Recommendations

After discussions with hospitals, investors and industry observers, we can offer several recommendations for hospitals to seize the deregulation opportunity in Brazil:

- Learn how your market structure compares with other markets and what drives the need for change from a structural perspective

- Consider your possible choices in terms of where to play and how to win. Craft a clear strategy that incorporates elements of vertical integration, partnering and other relationships within the economic system

- Make explicit choices regarding your goals and which options will activate the strategies developed, thereby helping you achieve them

Supply and Demand in the Brazilian Hospital Market

The supply-and-demand analysis and the payer concentration reveal the following findings that are of note at a regional level (although city or sub-regional strategies are likely to be more relevant):

1. In 2015, there are 272,000 beds serving the private markets in Brazil.
2. Of the privately covered population, 60% are in markets that lack the supply to meet demand.
3. There is a wide dispersion of needs, from two beds per 10,000 inhabitants to six beds per 10,000 inhabitants.
4. Of the privately covered population, 54% are in Southeast markets with a lack of beds.
5. The privately covered population in the south of Brazil is mostly (86%) in areas with excess bed capacity. This area has the highest market concentration of health operators (mostly local Unimed). The situation is similar in the north.
6. The Northeast has limited health plan penetration and good prospects for growth, most likely to come from fragmented markets.

- Lead the strategic thinking and investors will follow. If you have a good asset but a poor understanding of market structure and an ineffective strategy that fails to show value creation directions, chances are that investors will question their participation in the process
- Decide on the proper type of investment – not necessarily equity alone, but perhaps debt and equity, suppliers' capital, or some other mix that fits your strategy
- Remember that most investment funds want the owners to remain as partners after they invest in order to enjoy the benefits of value creation and to secure continuity of the business. This means that the investment thesis belongs first to the investee

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