Global Healthcare Deals Quarterly 2Q 2012

Stronger M&A trend in emerging markets;

Brazil is fertile ground for mobile health technology

Highlights

In this newsletter, we feature an investment idea centred on rapidly evolving channels for care delivery in one of the hottest healthcare M&A markets in the world:

- Commercialise mobile healthcare technology in Brazil

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Executive summary:

Welcome to the second quarter 2012 edition of our Global Healthcare Deals Quarterly newsletter.

The overall global mergers and acquisitions market remained sluggish during the second quarter as macroeconomic factors continued to cool the deal flow. But healthcare has bright spots. The value of healthcare deals strengthened during the second quarter, implying larger deals are getting done and reversing a recent trend. Our analysis of Dealogic data finds global healthcare M&A value was up 4% during the first half of 2012 compared with the second half of 2011, despite an 11% drop in the number of deals.

Notable market developments include the rapid pace of deals in China during the first half of 2012, compressing the market share gap between Asia and Europe, with each now making up just over 20% of the global healthcare M&A market. In addition, Brazilian deals have set a record pace during the first half of 2012. Reflecting the brisk pace of activity in these two nations, we find emerging markets' share as a percentage of total healthcare M&A deal value has risen to 31%, the second-highest level on record.

While the macro environment is likely to continue to influence the global healthcare M&A market, the United States (US) will see its own influences. The US Supreme Court decision in June to uphold primary elements of the Patient Protection and Affordable Care Act health reform law may have lifted an overhang for US healthcare services investors, implying an uptick in M&A deal flow during the second half of 2012.

This quarterly edition also focuses on the deal environment in Brazil. We introduce a mobile healthcare (mHealth) investment idea that dials into the increase in chronic disease incidence, ubiquity of mobile phone technology, and inadequacy of healthcare infrastructure in developing markets such as Brazil.

Welcome

Welcome to the 2Q 2012 edition of the Global Healthcare Deals Quarterly

PwC's Global Healthcare Deals Quarterly newsletter provides perspectives on recent trends and expected developments in the global healthcare M&A market, including insights into emerging investment opportunities for strategic and financial investors. Our 2Q 2012 edition focuses on investments in the evolving global hospital sector.

Dr. David Levy
Global Leader, Healthcare
New York; +1 (646) 471 1070
david.l.levy@us.pwc.com

Dr. Ronald Ling
Asia Healthcare Leader and China Healthcare Leader
Singapore; +65 6236 4021
ronald.jw.ling@sg.pwc.com

Dr. Simon Samaha
Europe, MENA, and India Healthcare
Amsterdam; +1 646 471 1614
simon.samaha@us.pwc.com

Shelley Gnall
Director, Global Healthcare M&A
New York; +1 (646) 471 3146
shelley.a.gnall@us.pwc.com

Brian Williams
Director, Global Clients Program, Healthcare
Indianapolis; +1 (317) 504 0082
brian.s.williams@us.pwc.com

Universal themes drive healthcare markets globally. Although individual health systems have unique challenges and characteristics, each is searching for the best way to finance and deliver healthcare with the right balance of quality, cost, and access. These shared priorities lead to faster, better, and cheaper solutions that transcend borders and cultures. In a word, healthcare is becoming more globalised.

In the M&A marketplace, we see these same trends driving attractive growth opportunities in the coming years.

PwC is a network of firms in 158 countries. By leveraging the expertise of our more than 10,000 health policy, pharmaceutical and life sciences, payer, and provider health professionals, PwC is a leading healthcare professional services firm.

In addition, our deals network of 9,500 experienced professionals includes the leading global transaction services business and the largest international middle market corporate finance business. We advise corporate management teams, private equity funds, and the public sector, with a proven track record in healthcare mid-market transactions. We help clients minimise their risks, progress with the right deals, and capture value at the deal table and after the deal closes.

"Patient-physician communication is evolving rapidly, creating new channels for care delivery that could impact all healthcare stakeholders — physicians, hospitals, device and drug companies, and payers. Leaders will embrace emerging mHealth technologies to shift their businesses towards a consumer model based on convenience, cost, and outcomes. We think investors looking to participate in this emerging trend will be well served by acquiring and commercialising these technologies in fertile markets such as Brazil."

Dr. David Levy

PwC Global Leader, Healthcare

Healthcare deal value strengthens as global M&A remains soft for first half of 2012

Global M&A trends

The global deals environment remained soft throughout the first half of 2012. Our analysis of Dealogic midmarket mergers and acquisitions (M&A) data finds the following happened in the period:

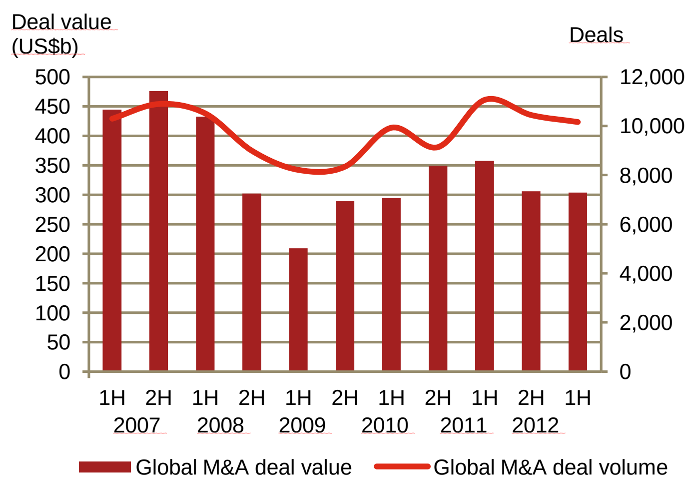
- Total global midmarket M&A disclosed deal value fell 15% while the number of deals declined 8%, as compared with the same period in 2011. See Chart 1.
- The global healthcare deal trend is consistent with other sectors', though total deal value showed a marked 21% decline while the number of deals decelerated more modestly (-5%) over the 2011 period. See Chart 2.
- The recent trend towards smaller deal size may be moderating in the healthcare sector, with disclosed deal value increasing 4% from the second half of 2011 despite an 11% drop in the number of deals. See Chart 2.

Many factors have sustained weakness in M&A trends. They include uncertainty around the Eurozone debt crisis, a stalled global economic recovery, persistent weakness in the labour markets, disappointing economic growth in the BRIC nations (Brazil, Russia, India, and China) during the first half of 2012, and ongoing instability in the Middle East. Healthcare-specific factors include a lack of visibility on the implementation of health reform measures in two of the world's largest healthcare M&A markets, the United States and United Kingdom.

In the United States, however, a June 2012 Supreme Court decision to uphold primary elements of the Patient Protection and Affordable Care Act (PPACA) health reform law may have lifted an overhang, particularly for US healthcare services investors. The ruling may imply an uptick in M&A deal flow during the second half of 2012.

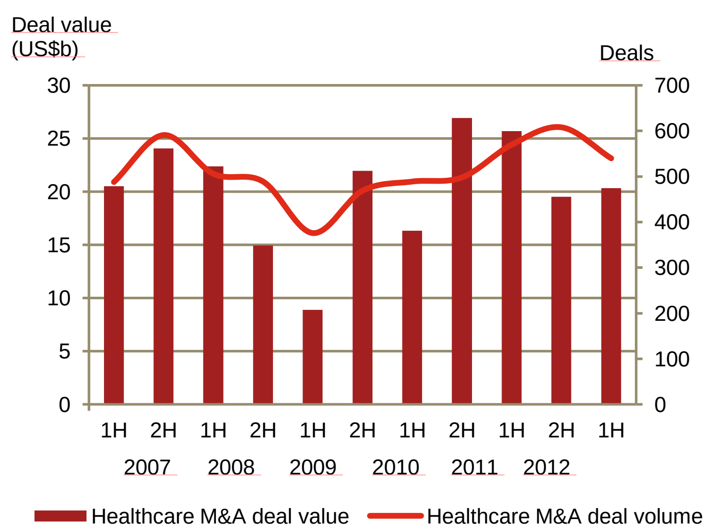
Our analysis includes M&A with a disclosed value from US$50 million to US$750 million, unless otherwise noted, and excludes acquisition of assets, repurchases, spin-offs, and split-offs.

Chart 1: Total M&A remained soft



Source: Dealogic

Chart 2: Healthcare M&A value increased



Source: Dealogic

Healthcare deal value strengthens as global M&A remains soft for first half of 2012

Sequential M&A trends

In recent years, global market volatility has rendered quarter-over-quarter analysis less meaningful. With that caveat in mind, an analysis of sequential trend from the first quarter of 2012 to the second quarter reveals the following:

- Total global M&A disclosed deal value across all sectors grew 32% in the year's second quarter — and rose 59% in healthcare.
- Meanwhile, M&A volume fell 6% overall and 13% in healthcare, implying an increase in average deal size despite a slowdown in overall deal activity.
- Other sectors besides healthcare seeing the strongest sequential growth in deal value included professional services and mining.
- Only one sector, finance, experienced a second quarter 2012 sequential decline in both deal value and volume.

Industry ranking by 2Q 2012 M&A deal value

Target industry group	2Q 2012		1Q 2012		Value % change	Volume % change
	Deal value (US$m)	No.	Deal value (US$m)	No.		
Computers and electronics	17,974	766	14,656	787	23%	-3%
Mining	13,198	92	8,272	90	60%	2%
Oil and gas	12,853	120	10,907	122	18%	-2%
Healthcare	**12,488**	**252**	**7,844**	**288**	**59%**	**-13%**
Finance	10,993	349	12,857	384	-14%	-9%
Professional services	9,194	729	4,628	814	99%	-10%
Telecommunications	9,135	148	7,051	137	30%	8%
Utility and energy	9,122	142	7,661	137	19%	4%
Real estate/ property	8,699	153	6,503	161	34%	-5%
Construction/ building	8,605	281	5,697	352	51%	-20%
Total	**172,600**	**4,911**	**131,045**	**5,250**	32%	-6%

Source: Dealogic

Regional healthcare trends

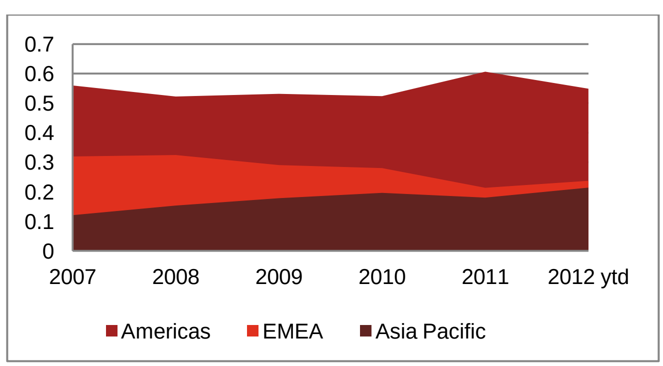
"The stand-out trend in the first half of 2012 is the growth in M&A activity in China. With over a billion people now covered by its public health insurance system, China represents a massive market for the pharma sector. It is currently a highly fragmented market, and most of the M&A that we are now seeing represents domestic consolidation. I anticipate that this process of local consolidation will continue for some time before we start to see material levels of inbound M&A."

Neal Ransome,
Leader,
PwC European Healthcare Corporate Finance

Our analysis of regional healthcare M&A trends finds the following:

- An uptick in China targets and simultaneous decline in European deals have resulted in closing the market share gap between the two regions. Each now makes up just over 20% of the global healthcare M&A market. See Chart 3.
- The most frequent target destination for healthcare M&A remains the United States, with 45% share of total disclosed deal value (as much as the next 10 most frequent target destinations combined).
- China has moved up the ranking to become the second most frequent healthcare M&A target nation.
- A record pace of deal activity during the first half of 2012 moved Brazil up to the third-highest healthcare M&A market in the world.

Chart 3: Market share gap closes as Asia healthcare M&A outpaces EMEA



Source: Dealogic

Healthcare deal value strengthens as global M&A remains soft for first half of 2012

Healthcare M&A ranking by target nation								
	January – June 2012				2011			
Target nation	Rank	Deal value (US$m)	No.	% share	Rank	Deal value (US$m)	No.	% share
United States	1	9,208	244	45	1	25,582	527	57
China	2	2,565	31	13	2	3,783	56	8
Brazil	3	1,014	19	5	20	273	18	1
Canada	4	936	12	5	7	1,110	37	2
United Kingdom	5	874	24	4	3	1,9444	47	4
Australia	6	830	7	4	4	1,683	18	4
Turkey	7	750	4	4	21	270	7	1
Israel	8	681	9	3	16	412	6	1
France	9	523	8	3	5	1,329	58	3
Spain	10	471	10	2	17	404	34	1
Total		**20,333**	**540**	**100**		**45,214**	**1178**	**100**

Source: Dealogic

Emerging markets

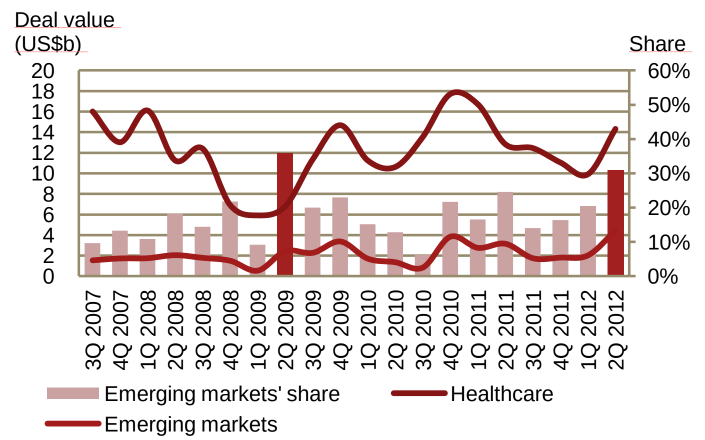
We find deals in higher-growth emerging markets making up a large proportion of global healthcare M&A as transformational deals remain soft in the mature markets in the midst of a sluggish global economy.

For our analysis of emerging market M&A trends, we expand our definition of "middle market" to include deals with disclosed values ranging from US$10 million to US$750 million.

Observations include the following:

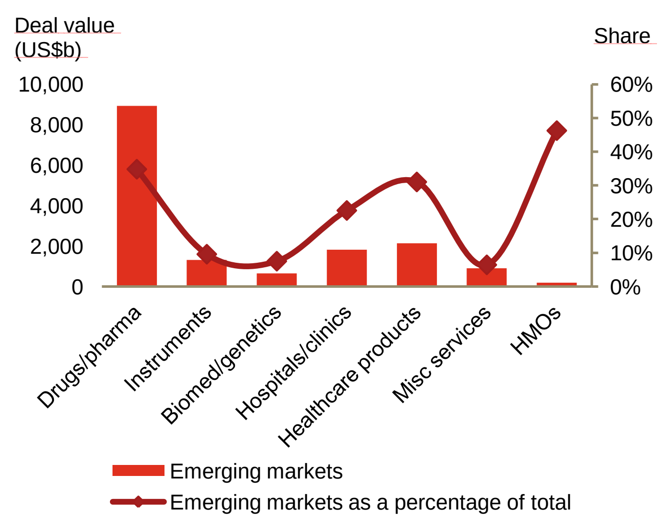
- As compared with volatile global M&A markets for healthcare, deal value in emerging markets has grown with relative consistency over the past 20 quarters, reaching US$4.4 billion in the second quarter this year.
- Emerging markets' share as a percentage of total healthcare M&A deal value has risen consistently over the past year. It grew to 31% in the second quarter of 2012, its highest level since the second quarter of 2009 and the second-highest level on record. See Chart 4.
- Emerging market targets make up a disproportionately large share of total healthcare M&A targets in the health maintenance organisation (HMO) and drug/pharmaceutical sectors. See Chart 5.
- Strong M&A activity in China and Brazil, the two most frequent healthcare M&A emerging market target nations, expanded their share of the global healthcare M&A market by nearly eight percentage points to 21% during the first six months of 2012 as compared to the same period in 2011.
- During the first six months of 2012, the majority of healthcare targets in China were acquired domestically, consistent with historical trend, while the majority of Brazilian targets were acquired through inbound cross border transactions.

Chart 4: Emerging markets' share of healthcare M&A is rising



Source: Dealogic

Chart 5: Emerging markets' targets as a percentage of total healthcare M&A, 2011 - June 2012



Source: Dealogic

Healthcare deal value strengthens as global M&A remains soft for first half of 2012

Healthcare M&A ranking by emerging market target nation				
Target nation	**1H 2012**		**1H 2011**	
	Deal value (US$m)	% share	Deal value (US$m)	% share
China	3,287	16%	3,099	12%
Brazil	1,040	5%	347	1%
Subtotal	4,327	**21%**	3,446	**13%**
Total Healthcare	20,333	**100%**	25,687	**100%**

Source: Dealogic

Domestic and inbound mix, 1H 2012				
Target nation	**Deal value (US$m)**		**Deal number**	
	Percent Domestic	Percent Inbound	Percent Domestic	Percent Inbound
China	96%	4%	83%	17%
Brazil	11%	89%	43%	57%

Source: Dealogic

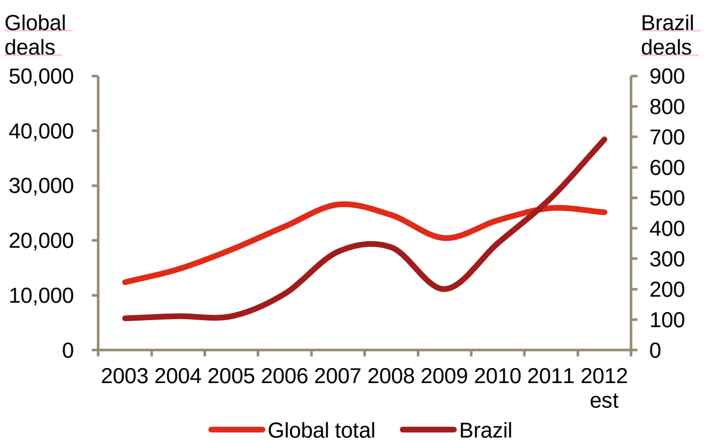
Focus on Brazil

Brazil blisters record in 2012 for M&A

Breaking with sluggish global market trends, Brazilian M&A has set a record pace during 2012. The 433 deals completed through June 2012 are up 55% over the same period last year, according to Dealogic.

Changes in antitrust regulation effective in May 2012 may have contributed to an accelerated pace of larger deals during the first half of the year. However, for midmarket M&A, our analysis finds the divergence has been a sustained trend in recent years. We find Brazilian midmarket deal value on pace to grow 38% in 2012 versus a 3% decline for global midmarket M&A if trends through the first half of the year are sustained. Within the healthcare sector, the number of midmarket deal completions during the first half of 2012 nearly doubled the number completed during the first half of 2011, driving Brazil to the third most frequent healthcare M&A target nation in the world.

Chart 6: Global versus Brazilian midmarket M&A deals



Source: Dealogic

Recent healthcare deal trends

Some of the factors attracting investment to Brazil's healthcare sector are consistent with those in many emerging markets and include the rising purchasing power of a growing middle class; the expanding health insurance coverage; and the increasing incidence of chronic diseases such as diabetes and hypertension.

However, midmarket M&A deal activity in Brazil's healthcare sector differs from global trends in several significant ways:

- Cross-border deal flow is much higher in Brazil than the global average, owing in large part to favourable growth trends amid a stable macroeconomic backdrop. The main drivers of foreign investment detailed in a recent PwC report, "Doing Deals in Brazil"[1], include a successful public-private commitment to long-term growth, in addition to political stability, a diversified economy, fiscal discipline, strong international reserves, and improved macroeconomic policy. Inflation rates have stabilised, nearing the targeted 4.5%. Labour force trends are favourable, with unemployment a low 6%,[2] urban unemployment at a historical low of 4.7%[3], and wages rising.

- The mix of deals with financial sponsors (i.e. private equity) is lower across all sectors in Brazil than the global average. However, several factors support a near-term acceleration in this trend: (1) in April 2012, Brazil's development bank announced it will make roughly US$500 million in Brazilian private equity and venture capital investments, with a focus on information technology, by 2014; (2) the lowered benchmark rate incrementally incentivises private equity investment over government bonds; and (3) Brazilian buyout funds have raised US$14 billion over the past 10 years and have an estimated $7 billion available in uncommitted capital for investment, according to Preqin.[4]

- Perhaps the highest-profile financial sponsor transaction of recent years is the purchase and subsequent IPO and private placement exit of Brazil's largest health insurer by a large, US-based private equity fund.

- Average disclosed healthcare deal value is smaller in Brazil reflecting the highly fragmented nature of Brazil's healthcare delivery system. Consolidation of private sector healthcare providers, from hospitals to diagnostic labs and imaging centres, is a key driver of recent deal activity as local strategic buyers move to roll up the fragmented yet rapidly growing and profitable service sectors. However, a constitutional restriction on foreign investment in healthcare providers limits hospital and clinic M&A activity largely to domestic acquirers. Brazilian for-profit healthcare company Rede D'Or has been among the most active in hospital M&A activity recently.

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[1] PwC: "Doing Deals in Brazil", 2011.
[2] CIA, The CIA World Factbook: https://www.cia.gov/library/publications/the-world-factbook/fields/2129.html, accessed 12 June 2012.
[3] Ibid
[4] Preqin: "Private Equity Fund Managers Based in Brazil", http://www.preqin.com/blog/101/5150/private-equity-managers-brazil, accessed 12 June 2012.

Focus on Brazil

Brazil blisters record in 2012 for M&A

- Pharmaceutical acquisitions make up a far larger mix of deal flow in Brazil than in other healthcare M&A sectors of the world. Factors attracting investment include Brazil's rapid pace of growth (28% CAGR) of the generic pharmaceuticals sector, the potential to expand a US$8 billion drug market by introducing patented medications to the 120-million — and rapidly growing — middle-class segment[5], and a lack of foreign capital restrictions on investment in the sector. Large multinational pharmaceutical companies in Belgium, Germany, Japan, and the United States have all acquired Brazilian pharmaceutical manufacturers in recent months to help expand market penetration.

- In the medical device sector, multinational corporations are increasingly seeking to establish a manufacturing presence in Brazil to capitalize on government incentives for local production, including a 25% price premium in bidding processes. A Swedish medical device manufacturer's June 2012 purchase of a linear accelerator company is the most recent M&A example.

Midmarket M&A summary
Jan 2010 - June 2012
Disclosed deal value US$10 million to $750 million

	Healthcare		All industries	
	Brazil	Global average	Brazil	Global average
Percent cross border	58%	25%	45%	25%
Percent financial sponsor related	6%	23%	10%	13%
Median disclosed deal size (US$m)	$87	$130	$154	$129
Mix by healthcare subsector				
Drugs/pharmaceuticals	64%	34%		
Healthcare instruments	15%	18%		
Hospitals/clinics	13%	10%		
HMOs	5%	1%		
Medical/analytical systems	3%	4%		
Biomed/genetics		11%		
Healthcare products		9%		
Miscellaneous services		7%		
Outpatient care/home care		4%		
Nursing homes		2%		
Practise management		1%		

Source: Dealogic

[5] McKinsey: "Capturing the Brazilian pharma opportunity", March 2012.

Focus on Brazil

Inadequate healthcare infrastructure demands a cost-efficient fix

Healthcare in Brazil is delivered through a decentralised government program and supplemented by private insurance plans. The public sector's Unified Health System (SUS) is funded through tax revenues, providing primary care services with no charge at the point of service to all Brazilian residents. Within the highly fragmented private sector, more than 1,500 managed care organisations and other payers cover roughly 42 million lives. The private insurance penetration rate of 22% varies widely by region, with the highest uptake in southern and southeastern regions.

	Total Spending	Population	Payers	
Public (SUS)	US$39 billion (46%)	149 million (78%)	National, state and municipal government (SUS)	
Private	US$45 billion (54%)	42 million (22%)	20%	Individuals
			80%	Health Plans
				Group Practice / HMOs
				Insurance Companies
				Medical Cooperatives
				Direct Contractors

Sources: The Brazilian Institute of Geography and Statistics (2009), PwC Analysis

With public sector funds making up less than half of the Brazilian healthcare economy, yet covering nearly 80% of the population, it's not surprising that a wide disparity in quality of care characterises the Brazilian system.

Inadequacies in Brazil's current healthcare infrastructure imply challenges to meeting rising demand in the coming years. According to the Economist Intelligence Unit, there are just 1.3 physicians per 1,000 population in Brazil, largely in line with China but well below the more mature markets of Europe and the United States. Similarly, Brazil's average number of hospital beds per 1,000 population falls short of the more mature markets; and total hospital beds have actually declined by 5% annually from 2005 through 2010, doing little to close the gap.

Chart 7: Comparison of doctors per 1,000 population shows Brazil lagging

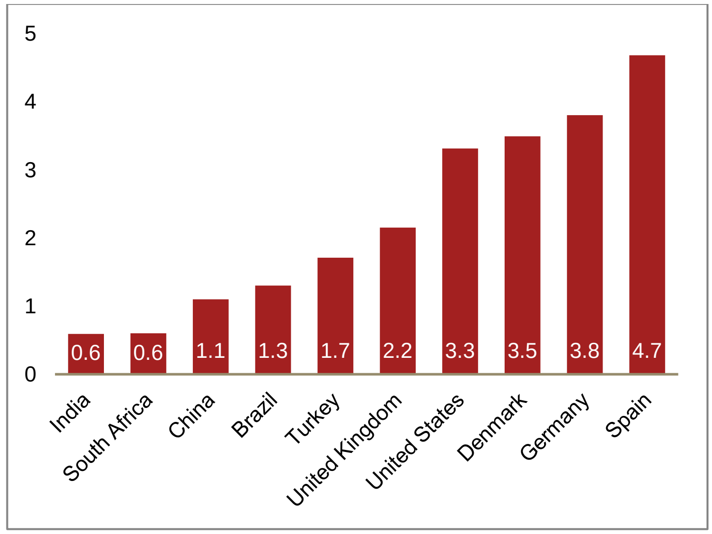
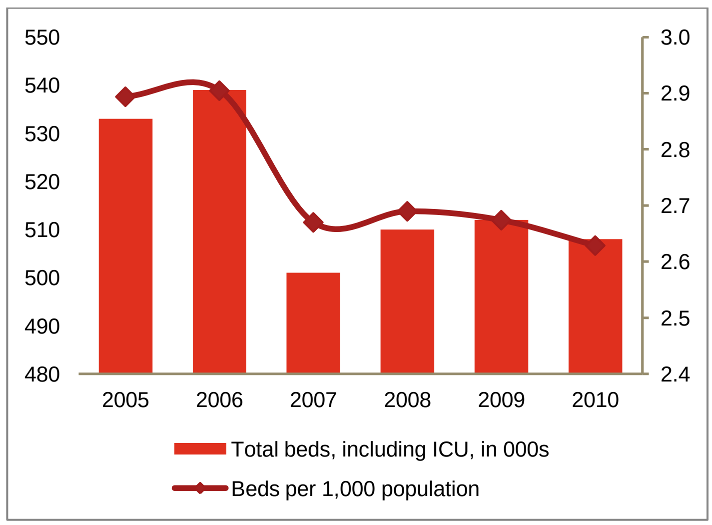


Chart 8: Brazil's hospital beds have declined by 5% since 2005



Sources: Economist Intelligence Unit, 2012; DATASUS (Brazilian Ministry of Health data)

Meanwhile, costs of care continue to rise. According to Brazil's National Health Insurance Agency (ANS), health plan premiums have increased an average of 9% annually from 2004 through 2011. As a result, employers are focusing on new ways to reduce the cost of employee health benefits.

Against this backdrop, we believe technologies that can improve both quality and access while reducing overall healthcare spending are well-positioned for broad market adoption in countries such as Brazil. Disruptive mHealth services could be a part of the solution.

Investment idea: Commercialise mobile healthcare technology in Brazil

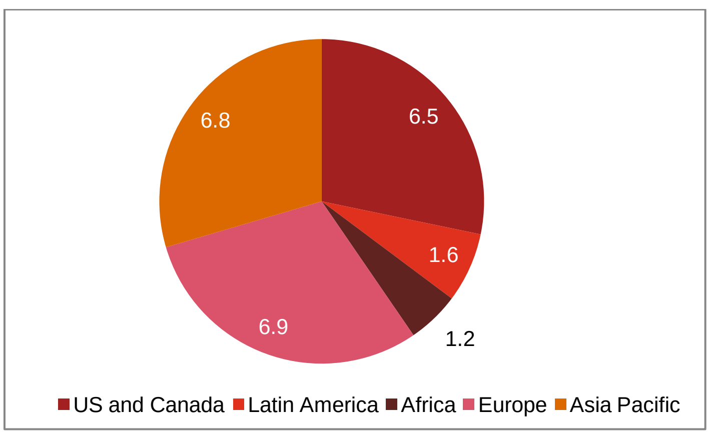
By using existing and pervasive global mobile phone network infrastructures, emerging mHealth technologies[6] offer opportunities to address one of the most pressing global challenges: making healthcare more accessible, faster, better, and cheaper.

We find emerging markets such as Brazil fertile ground for commercialising early stage disruptive mHealth technologies. Contributing factors range from the underlying demographic trends to the ubiquity of mobile phone technology and the inadequacy of Brazil's healthcare infrastructure.

A look at the potential market opportunity

With most technologies still in early development, the nascent mHealth market has yet to be defined, making accurate forecasting impossible. However, what is clear is that the fundamental nature of patient-physician communication is rapidly evolving in the face of technological innovation, with massive room for improvement in efficiencies and cost. At PwC, we estimate the potential for worldwide mHealth revenues to expand from US$4.5 billion in 2013 to US$23 billion by 2017, representing a 50% compound annual growth rate. Our projections estimate the mHealth opportunity in Latin America at roughly US$2 billion by 2017[7].

Chart 9: Projected mHealth market opportunity by region (US$ millions), 2017



Sources: The GSM Association (GSMA) and PwC analysis

[6] We define mHealth as the provision of healthcare or health-related information through the use of mobile devices including mobile phones and specialized devices such as patient monitors.
[7] GSMA and PwC: "Touching Lives through Mobile Health", February 2012. The GSM Association (GSMA) represents the interests of mobile operators worldwide.

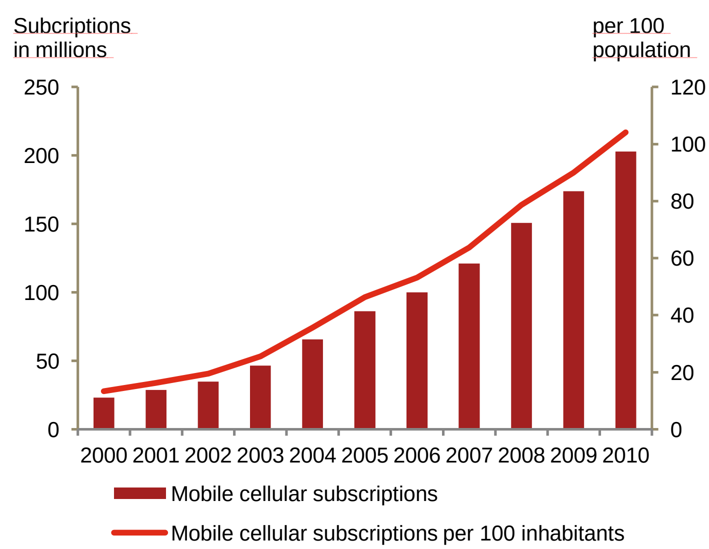
The bottom line: mHealth is a small market today, but emerging technologies have the power to disrupt healthcare delivery systems worldwide, presenting a unique growth opportunity for strategic investors.

Brazil looks like fertile ground for mHealth adoption

A recent Economist Intelligence Unit study commissioned by PwC titled "Emerging mHealth: Paths for growth"[8] explores the potential of mHealth in developed and developing countries. In summary, the report forecasts emerging markets will be the trailblazers in mHealth adoption. The study found patients in emerging markets are more likely to use mHealth applications or services than those in developed countries; doctors are more likely to offer these services; and payers more likely to cover the costs. Drivers include the paucity of existing healthcare services in the underfunded public systems of emerging market countries like Brazil, as the rising middle class demands higher-quality care, and the fewer entrenched interests to impede adoption of new, cost-effective approaches.

Against this backdrop, the ubiquity of wireless technology in Brazil (where mobile phone subscriptions now outnumber people, as shown in Chart 10) presents a compelling infrastructure to transform healthcare delivery through cost-effective, emerging mHealth technologies.

Chart 10: In Brazil, mobile phone subscriptions exceeded one per capita in 2010



Source: International Telecommunication Union

[8] The Economist Intelligence Unit: "Emerging mHealth: Paths for growth", commissioned by PwC, June 2012.

Investment idea: Commercialise mobile healthcare technology in Brazil

Cost reduction is the key driving force for early adoption in the private sector

Multi-national corporations are beginning to break ground and test new mHealth business models in Brazil. The early adopters to date have been payers and employers, two groups with much to gain from scalable technologies that reduce healthcare treatment costs for large segments of the population. In recent months, we've seen mHealth solutions in Brazil applied to:

- Virtual visit pilots aimed at reducing a company's medical transportation costs for remotely stationed employees
- Development of scalable chronic disease management tools to reduce employer and health plan costs for high-risk populations
- Wellness services to lower employers' healthcare costs while improving workforce productivity and employee satisfaction

Brazil's National Health Agency (ANS) has recently approved regulations including financial incentives for HMOs and healthcare providers offering health promotion and prevention programs which could speed up adoption of mHealth technologies aimed at wellness and chronic disease management.

Sampling of technologies that could gain traction in Brazil

We view four emerging technologies as well-positioned to gain traction in emerging markets such as Brazil, each with a varying timeline to widespread adoption.

- **Improving access:** Some of the mHealth tools getting the fastest, earliest adoption offer basic administration functions such as finding a doctor or hospital; scheduling an appointment; and answering questions about diseases, drugs, and treatments, all of which can help improve access to existing healthcare infrastructure. An example of technology gaining early traction in the United States allows patients to find nearby doctors and book appointments and to view physician profiles, access user reviews, and accepted insurance plans. The technology is available via smartphone applications or a Web-based interface. The service is free for patients, and doctors pay a US$250 monthly fee.

- **Virtual visits:** A more transformational mHealth technology offers Web-based platforms that allow interactions between patients and providers in real time using technology accessed from smartphones, personal computers, or kiosks in high-traffic areas. Patients submit routine clinical data and in return receive e-consultations and e-prescriptions and can access their own e-health records and lab results.

  Remote interactions between patients and providers have been shown to be equally as effective as face-to-face consultations for routine primary care and chronic disease management, according to the medical literature. Remote consultations are not currently covered under Brazil's SUS (universal public health insurance) or private sector insurance plans, presenting a near-term barrier to widespread adoption.

  However, the financial benefits of low-cost remote monitoring support an eventual expansion of coverage. For example, a study of congestive heart failure patients showed remote monitoring reduced hospital re-admissions and cut associated medical costs by more than half (from US$1.3 million to US$500,000)[9]. Insurers are likely to reassess coverage of such services given the reductions in costs.

- **Mobile diabetes management:** A variety of applications on the market today leverage mobile technology to collect and transmit clinical data such as blood glucose readings; they also provide reminders, alerts, and coaching to help patients monitor and manage diabetes. Again, public and private sector payers in Brazil do not yet cover the cost of these new devices. But not surprisingly, a mobile diabetes app is being piloted in Brazil.

  The cost savings potential is significant: According to the International Diabetes Federation, Brazil has the largest diabetic population (7.6 million) in Latin America and ranks fifth in the world. The World Health Organization has estimated the economic burden associated with Brazil's diabetes prevalence exceeds US$20 billion annually.

  While comprehensive analysis of the financial benefits of mobile diabetes management tools is not yet available, manufacturer studies have shown patients are able to meaningfully lower A1c (glycated hemoglobin, the gold standard measure of diabetes control), sharply reducing costly hospital visits and having long-term beneficial effects on the risk of heart, kidney, and eye disease[10].

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[9] New England Healthcare Institute (NEHI), "Getting to Value: Eleven Chronic Disease Technologies to Watch", June 2012.

[10] Mobihealthnews: "Sprint, Ideal Life Offer Wireless Biometric Kiosks", October 2011.

Investment idea: Commercialise mobile healthcare technology in Brazil

- **Mobile cardiovascular tools:** Some mobile cardiovascular devices with varying levels of functionality are available on the market, though many more are still in development stage, and face the longest timeline to widespread adoption. These technologies, however, present among the highest cost savings potential worldwide. These tools monitor and transmit vital signs ranging from blood pressure and cardiac rhythm to sleep patterns by using smartphone applications or stand-alone devices with Internet access. Controlled blood pressure has been associated with a greater than 35% reduction in stroke incidence and more than 50% percent reduction in heart failure, according to manufacturer studies[11].

  Similarly, mobile electrocardiogram (ECG) tools improve cardiac event detection and reduce hospitalisations. The cost savings opportunity is significant in Brazil, where cardiovascular disease mortality remains high; a quarter of Brazilian men and one in six Brazilian women aged 20 or older suffer high blood pressure, rising to half of men and more than half of women 60 or older, according to The Lancet[12].

Key investor considerations

Despite progress on many fronts, foreign investors continue to face challenges when investing in Brazil. Factors including Brazil's uniquely complex tax and labour regulatory environment, informal bookkeeping, and inadequate documentation of significant related-party transactions (i.e. family costs); infrastructure shortcomings; weakness in law and order; and corruption are detailed in PwC's "Doing Deals in Brazil"[13].

A failure to adequately appreciate the nuances and complexities of the local Brazilian business environment can result in abandoned bids, delayed time to closure, or compromised deal value following closure. However, thorough due diligence can help uncover and avoid a number of the more common deal pitfalls in Brazil.

Below we describe in more detail factors of relevance to a broad range of foreign investors considering entry into Brazil.

Currency volatility is still a factor, so hedge

Brazil has a long history of high inflation and high currency exchange rate volatility. The Brazilian real (BRL) was introduced in 1994 as part of the Plano Real, a substantial monetary reform package introduced following three decades of rampant inflation. At the time of its introduction, one BRL was equivalent to one US dollar (USD). Since its introduction, the exchange rate has been managed by Brazil's Central Bank with varying degrees of control.

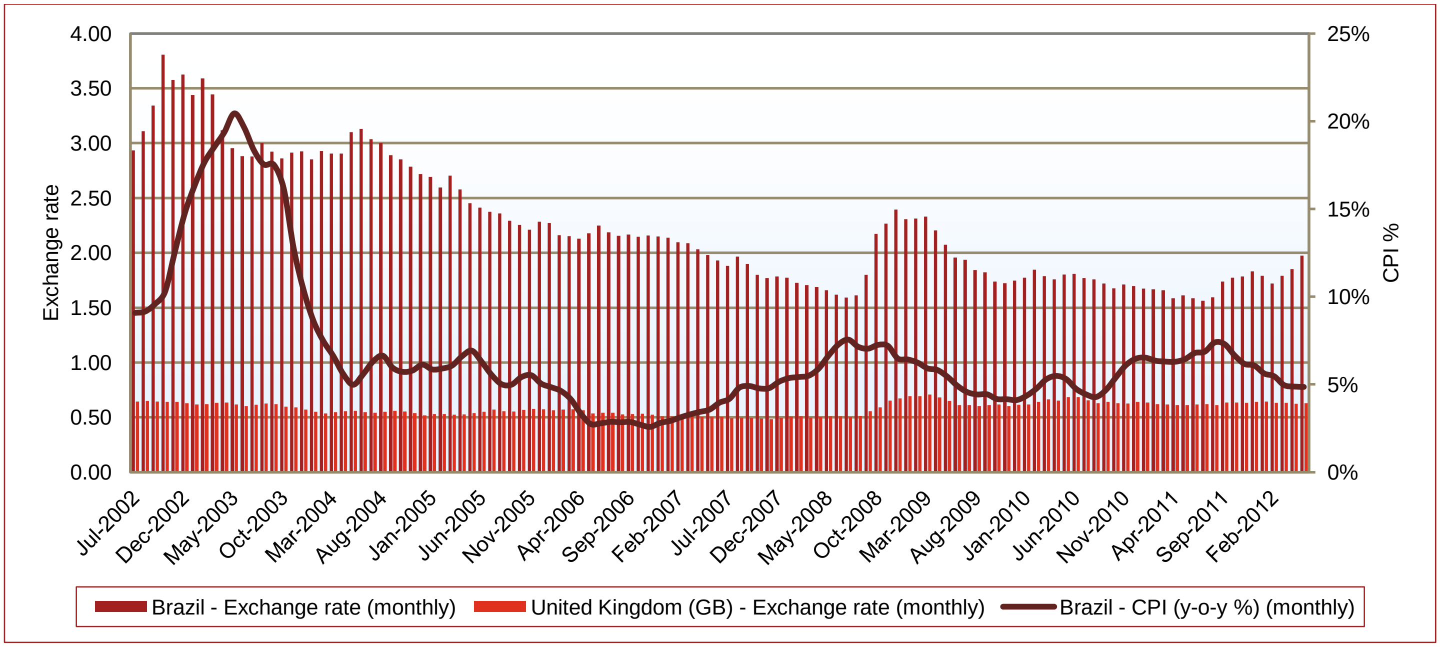
In May 2012, the exchange rate weakened to 1.97 BRL to 1.00 USD. But inflation has been held to manageable levels within the target range of 4.5% +/- 2pp during recent months.

BRL exchange rate volatility is evident in Chart 11, especially when compared with British pound/USD exchange rate trends of the past decade. An inflation rate (CPI) overlay demonstrates both the volatility and the high historical rates of inflation that have impacted the value of the BRL.

[11] NEHI, "Getting to Value: Eleven Chronic Disease Technologies to Watch", June 2012.
[12] The Lancet: "The Lancet Series on Brazil", 9 May 2011. Retrieved from http://www.medicalnewstoday.com/releases/224626.php, accessed 28 June 2012.
[13] PwC, "Doing Deals in Brazil", 2011

Investment idea: Commercialise mobile healthcare technology in Brazil

Chart 11: BRL exchange and interest rate volatility



Source: Capital IQ

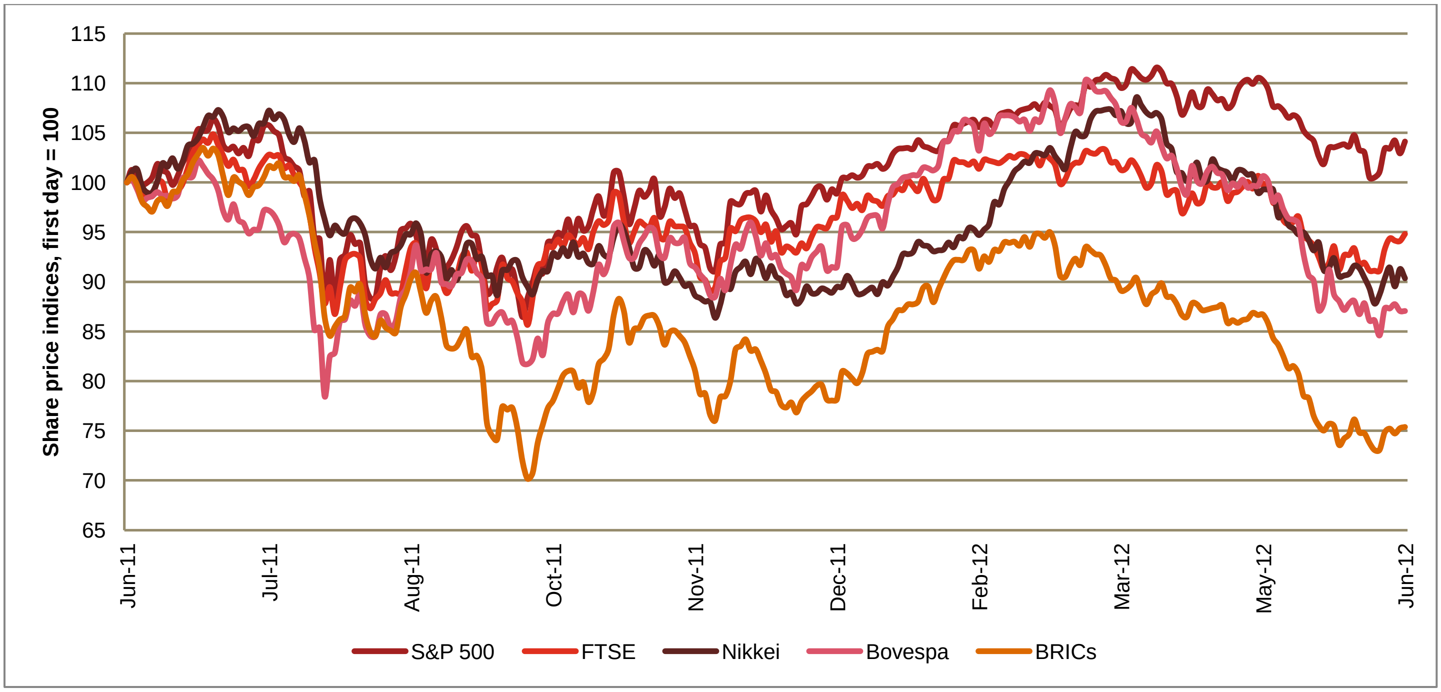
Extended deal execution times in Brazil, which may be exacerbated by recent changes in antitrust regulation, underscore the need to hedge currency exposure. Although liquid, sophisticated derivative contracts are in short supply in Brazil, lower relative exchange rate volatility in recent years implies investors can reasonably undertake simple hedging practices such as going long the BRL exchange traded fund (ETF).

Investment idea: Commercialise mobile healthcare technology in Brazil

Capital markets have come a long way, but cash is still king

Amidst recent global market volatilitsy and a historical level of economic uncertainty, Brazil's benchmark equity index Bovespa has significantly outperformed emerging market peers. It has outperformed the broader BRICs index (inclusive of Brazil) by nearly 12 percentage points over the last 12 months (through June 12), as shown in Chart 12.

Chart 12: Indexed share price performance of major global indices, last 12 months



Sources: Capital IQ, Thomson One

Furthermore, six percentage points of the decline reflect a sharp 37% pullback in shares of energy giant Petrobras, which makes up 16% of the index. After adjusting for Petrobras, the Brazilian equity index has performed largely in line with some of the more mature market indices, which have ranged from +4% (S&P 500) to -10% (Nikkei) over the past 12 months.

Viewed another way, Petrobras' outsized influence on Bovespa's performance illuminates a continued weakness of Brazil's equity market: Core holdings are concentrated, with the 10 largest making up more than 55% of total net assets. The limited number of Brazilian listings has historically driven many seeking Brazilian exposure to EWZ, now the world's third-largest country-specific ETF.

However, there have been signs of recent improvement. Brazil saw more than 30 new initial public offering issues during 2010 and 2011, feeding the demand among foreign investors for Brazilian equities that has grown since its long-term foreign currency sovereign debt was upgraded to investment grade in 2008. This achievement removed barriers for a wide universe of international investors, including the US pension funds. The recent success of many new IPOs has helped increase the capital markets' sentiment and credibility in Brazil. In turn, liquidity and confidence have improved for domestic and foreign investors alike, and will be key drivers behind future initial and secondary/follow-on offerings in the coming months and quarters.

Debt markets, however, remain challenging. Brazil's 40% commercial bank prime lending rate ranks among the highest in the world (topped only by the Democratic Republic of Congo, Madagascar, and Zimbabwe)7. Brazil's history of high inflation and high nominal interest rates has left its credit markets with a concentration of short-term loans and debt instruments, and the derivatives markets have served primarily to hedge the fluctuations in these short-term interest rates.

As a result, deals sourced locally are typically financed with a majority of equity. But recent developments imply a moderately improving outlook that supports an incremental uptick in debt financing. Brazil's central bank has undertaken the most aggressive interest-rate cuts among the Group of 20 industrialised nations, lowering the benchmark rate, known as Selic, 4.5 percentage points in the past 12 months to 8%.

Changes in antitrust regulation are in effect

In May 2012, Brazil increased the minimum revenue thresholds to trigger antitrust review to 750 million reais (from 400 million reais), or roughly US$360 million, for the larger company in a transaction; and to 75 million reais (from 30 million reais), or roughly US$36 million, for the smaller company. Although the raised thresholds should improve M&A market efficiency for smaller deals, the additional requirement that deals must be reported prior to closure could extend the timeline for larger deals.

Despite uncertainty ahead, Brazil is well-positioned

Looking ahead, global investors face a historically volatile and uncertain outlook. Global economic recovery has stalled, in part because of persistent labour market weakness in the United States, slow growth across European core markets with recession in the European periphery, uncertainty surrounding the Eurozone debt crisis, the risk of a collapse in China's property market, and ongoing instability in the Middle East and the resulting effect on the price of oil.

Few regions of the world are immune from the risks posed by the slowing global economy, including Brazil, with its reliance on commodity exports. However, Brazil's slower GDP growth in 2011 and first-quarter 2012 (2.7% and 0.2%, respectively) reflects in large part deliberate measures by the Brazilian government to control inflation.

To offset the effects of the global economic slowdown and deteriorating export prospects, Brazil's central bank has aggressively lowered interest rates by 400 basis points over the past 10 months, to a record low of 8.5% as of late May. Fortunately, stimulus measures have not affected its administration's priority efforts to achieve a 4.5% inflation rate (plus or minus two percentage points), as evidenced by the rate of inflation falling to a two-year low of 4.99% in May.

In addition, we note that Brazil is today a net creditor in the world economy, with reserves of US$352 billion and total external debt of US$301 billion. The structure of the balance of payments makes Brazil less vulnerable, although not immune, to a temporary disruption in world financial markets, as was seen in 2008[14].

Contact us

Marcelo Orlando, PwC Brazil, Healthcare leader,
marcelo.orlando@br.pwc.com

Dr. Carlos Suslik, PwC Brazil, Healthcare Consulting leader,
carlos.suslik@br.pwc.com

Alex Pierantoni, PwC Brazil, Corporate Finance Partner,
alexandre.pierantoni@br.pwc.com

Daniel Nascimbeni, PwC Brazil, Healthcare Corporate Finance Senior Manager,
daniel.nascimbeni@br.pwc.com

Mauricio Giusti, PwC Brazil, Technology, Communications, Entertainment & Media Industry (TICE) partner,
mauricio.guisti@br.pwc.com

Dan DiFilippo, PwC Global Technology, Communications, Entertainment & Media Industry (TICE) leader, dan.filippo@us.pwc.comis

Chris Wasden, PwC Global healthcare innovation leader,
christopher.wasden@us.pwc.com

[14] PwC, "Doing Deals in Brazil", 2011.

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Global Healthcare Group

Dr. David Levy, Global Leader, Healthcare
New York; +1 (646) 471 1070
david.l.levy@us.pwc.com

Dr. Ronald Ling, Asia Leader, Healthcare
Singapore; +65 6236 4021
ronald.jw.ling@sg.pwc.com

Dr. Simon Samaha
Europe, MENA, and India Healthcare
Amsterdam; +1 646 471 1614
simon.samaha@us.pwc.com

Shelley Gnall, Director, Global Healthcare M&A,
New York; +1 (646) 471 3146
shelley.a.gnall@us.pwc.com

Brian Williams, Director, Global Clients Program, Healthcare
Indianapolis; +1 (317) 504 0082
brian.s.williams@us.pwc.com

Global Deals Leadership

John Dwyer, Global Leader, Deals
London; +44 (20) 7213 1133
john.p.dwyer@uk.pwc.com

Chris Hemmings, Global Leader, Corporate Finance
London; +44 (20) 7804 5703
chris.hemmings@uk.pwc.com

Healthcare Country/Regional Leaders

Brazil

Marcelo Orlando
São Paulo; +55 (11) 3674 3875
marcelo.orlando@br.pwc.com

Hong Kong

David Eastlake
Hong Kong; +852 2289 2511
david.eastlake@hk.pwc.com

India

Dr. Rana Mehta
Delhi; +91 (124) 3306 006
rana.mehta@in.pwc.com

Middle East

Simon Leary
Dubai; +971 (56) 6820513
simon.leary@ae.pwc.com

Russia

Chris Monteleone
Moscow; +7 (495) 967-6117
chris.monteleone@ru.pwc.com

Spain

Dr. Ignacio Riesgo
Madrid; +34 915 684 166
ignacio.riesgo@es.pwc.com

United Kingdom

Janet Dawson
London; +44 (20) 721 35244
janet.r.dawson@uk.pwc.com

United States

Kelly Barnes
Dallas; +1 (214) 754 5172
kelly.a.barnes@us.pwc.com