Analysis: Investable Trends of Global Healthcare

Healthcare is one of the highest profile sectors of many investment portfolios—from the defensive, dividend-producing pharmaceuticals to the high tech biogens. In the U.S., the introduction of Obama Care has had wide reaching repercussions; in the UK the recent National Health Service (NHS) strikes have underscored the on-going debate over the viability of the public health service; while in emerging markets a rising middle class has introduced western problems, such as obesity and diabetes.

August 2016
Here analysts from Newton and The Boston Company Asset Management (TBCAM)\(^1\) single out just a few of the trends driving profitability and earnings within the sector.

Equity funds across the European industry allocate a healthy amount to the sector, particularly those with an income focus. In the UK there is an average healthcare allocation of 8.25% among funds in the IA UK All Companies sector; an average of 9.15% in the IA UK Equity Income sector and an average allocation of 12.61% from those listed in the IA Global Equity sector.

Despite the fact healthcare and pharmaceuticals have often been deemed defensive in nature, and as such avoided by some growth investors, over 10-years to the end of February 2016, the MSCI World Healthcare sector and MSCI World Pharmaceuticals sector have outperformed the broader MSCI World Index by a significant amount. The healthcare sector returned around 130% in US dollar terms over the 10-years while the pharmaceutical sector has seen some 120% of growth; the MSCI World Index returned less than 60% over the same time frame.

MSCI World v MSCI Europe Health Care Index v MSCI USA healthcare index: Five year returns to 20 May 2016

<table>
<thead>
<tr>
<th>Security</th>
<th>Currency</th>
<th>Price Change</th>
<th>Total Return</th>
<th>Difference</th>
<th>Annual Eq</th>
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<tbody>
<tr>
<td>1) MXWO Index</td>
<td>USD</td>
<td>23.34%</td>
<td>40.46%</td>
<td>-72.41%</td>
<td>7.15%</td>
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<tr>
<td>2) MXUS0HC Index</td>
<td>USD</td>
<td>94.68%</td>
<td>112.87%</td>
<td>16.61%</td>
<td></td>
</tr>
<tr>
<td>3) MXEU0HC Index</td>
<td>USD</td>
<td>33.68%</td>
<td>55.29%</td>
<td>-57.57%</td>
<td>9.36%</td>
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Stephen Rowntree, global healthcare analyst at Newton, says: “For six of the past nine years healthcare has been among the top five performing industry sectors globally.” Meanwhile, US-based George Saffaye, senior portfolio strategist at TBCAM, says: “Innovation and the Affordable Care Act in the US are providing potential drivers to the healthcare sector. Some valuations are rich but if companies have strong pipelines their earnings growth can support those higher valuations.”

**Market highlights**

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<th>MSCI Europe Health Care Index</th>
<th>MSCI USA Health Care Index</th>
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<tr>
<td>P/E</td>
<td>26x</td>
<td>20.6x</td>
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<tr>
<td>Dividend yield</td>
<td>3.45%</td>
<td>1.64%</td>
</tr>
<tr>
<td>Market cap</td>
<td>€982.5bn</td>
<td>$2.76 trillion</td>
</tr>
<tr>
<td>Price/book</td>
<td>4</td>
<td>1.72</td>
</tr>
<tr>
<td>EBITDA</td>
<td>14.66</td>
<td>17.81</td>
</tr>
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</table>

Source: Bloomberg, 20 May 2016.

Rob Marshall-Lee, investment leader of Newton’s Emerging and Asian equity team, points out the sector is also a significant consideration in these markets: “Healthcare expenditure in many emerging markets is starting from a very low level. As the middle class populations in some of these countries continue to grow so too should the numbers of people able to afford healthcare. State provision of healthcare is also very low compared with many developed countries, so it will be a priority for people as they start to have disposable income to take care of their healthcare provision.”

**Private-sector growth opportunity in healthcare**

![Private-sector growth opportunity in healthcare chart]


More than 13% of the MSCI World Index is made up of healthcare companies, (as at 29 February 2016) making it the fourth-largest sector in the index. The sector is also one of the dominant parts of UK and European stock markets. This is in no small part due to the fact that some of the world’s largest pharmaceutical companies are domiciled in the UK and Europe. These include: UK-based multi-nationals Astrazeneca and GlaxoSmithKline, Swiss giants Novartis and Roche as well as French and German companies Sanofi, and Bayer. All were listed in the 2015 Forbes’ 2000 list of top global companies.
In the UK the healthcare sector is made up of 19 companies, 15 of which are in the FTSE 350; in the S&P 500 index healthcare is the third-largest sector, accounting for 14.7% of the index. Household names such as Johnson & Johnson sit alongside pharmaceutical giants Pfizer and Merck in the top 10 constituents by index weighting. But healthcare also goes beyond pharma and biotech to include companies within the healthcare supply chain, medical/healthcare equipment groups, outsourcing services, distributors, hospitals and even chemical companies.

**Politics & U.S. healthcare**

Returns on capital in the healthcare sector will likely be lower in the future than they have been in the recent past, regardless of the US election outcome in November, predicts Dale Dutile, portfolio manager at TBCAM.

While equity markets may pay more attention to corporate earnings than which political party holds power, the current US election campaign is taking place at a time when both political and market forces are reshaping the healthcare marketplace, says Dutile. “In the US, the cost of healthcare has reached a tipping point. Increasingly, cost is becoming a headwind to pharmaceutical companies as well as medical device companies and hospitals,” he adds.

Legislation initially promoted as being intended to control costs is having an ongoing impact on the economics of healthcare. Under the Affordable Care Act, the federal government has taken money from consumers and insurers to subsidise coverage for lower income patients. To partially offset the costs of covering millions of the previously uninsured, the government has been reducing the amounts by which it reimburses hospitals, forcing them to pay closer attention to costs. A popular way in which hospitals seek cost savings is by negotiating prices paid for pharmaceuticals downward, and cost-consciousness is increasingly pervasive. “Doctors and hospital administrators have a greater awareness now of what things cost and they’ve accepted that they need to take a more proactive role in trying to control healthcare inflation,” says Dutile.

Additionally, pressure on healthcare costs – and company earnings – is also coming from the private sector. Currently, around one third of US workers who are covered by employer-sponsored health plans have high deductibles, which may compel them to comparison shop before spending money on care, a relatively new phenomenon in the US, he notes.

Yet, despite election year rhetoric surrounding pharmaceutical companies and calls for price controls, Dutile still sees opportunity for investors in healthcare. He notes, though, that care must be paid to security selection and finding companies whose products create value.
Dutile says: “We believe two things create value in healthcare. The first is finding ways to do more with less. For example, many procedures used to involve invasive surgery and multi-day hospital stays, but now they can be done with minor incisions and patients going home the same day. That’s the type of innovation that creates value. The second is by developing really novel science that significantly advances the treatment of a disease.”

While US politics may remain parlous between now and the November election, investors should consider that significant portions of most pharmaceutical companies’ revenues come from outside the US. “A lot of companies are focused on emerging markets because they’re growing faster,” says Dutile. As countries in Latin American and Asia begin to see income growth, one of the first areas to receive increased spending is likely be healthcare. “In almost every country there’s a government-funded system and governments typically have reference prices for things. There’s a single decision maker and a single regulatory body that determines what price will be set for drugs. Their message to the pharmaceutical companies is if you want to pay, great. If you don’t, then you don’t play.”

**Emerging Markets healthcare growth**

![Emerging Markets healthcare growth chart](chart)


**Drug resistance**

Superbugs may kill someone every three seconds by 2050 and the financial cost of drug resistance to economies will add up to US$100 trillion (£70 trillion) by the mid-point of the century unless something is done, according to the global Review on Antimicrobial Resistance released in May. In fact since the review was started in mid-2014 more than a million people have died from infections resistant to drugs, the report reads.

Yet only two new classes of antibiotics have been brought to the market in the past three decades. In addition to a recommendation that world leaders establish a US$2bn innovation fund for early stage research, the May 2016 global review has also suggested paying companies US$1bn for every new antibiotic discovered.

The word ‘superbug’ is synonymous with panic headlines in the press.

The term is parlance for antibiotic-resistant bacteria such as e-coli or MRSA (methicillin-resistant staphylococcus aureus); any species of bacteria can notionally be deemed a superbug once it becomes resistant to two or more antibiotics.

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2. BBC news: ‘Superbugs will kill every three seconds’ May 19, 2016.
4. BBC news: ‘Superbugs will kill every three seconds’ May 19, 2016.
Deaths attributable to antimicrobial resistance every year by 2050

<table>
<thead>
<tr>
<th>Region</th>
<th>Deaths Attributable to AMR in 2050</th>
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<tbody>
<tr>
<td>North America</td>
<td>317,000</td>
</tr>
<tr>
<td>Asia</td>
<td>4,730,000</td>
</tr>
<tr>
<td>Latin America</td>
<td>392,000</td>
</tr>
<tr>
<td>Africa</td>
<td>4,150,000</td>
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<tr>
<td>Europe</td>
<td>390,000</td>
</tr>
<tr>
<td>Oceania</td>
<td>22,000</td>
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Newton’s Rowntree says: “If you took the current thesis at face value we would be heading towards doom fairly soon. But while it is a problem that bugs are becoming resistant to current treatments, this is prompting researchers to look at innovative ways to address the situation.”

“Companies are now doing more work on the new types of antibiotics after a period of relatively little activity. Many companies stopped funding research in this area because the drugs became less profitable to produce after patents expired and prices gradually declined.”

Rowntree says this previous lack of R&D in the antibiotic sphere is what led to the same types of drugs being used for so long and ultimately exacerbated the current problem of resistance.

However, he believes the threat of superbugs has provided the tipping point necessary to drive research into finding the next new wave of treatments and a more effective antibiotic could have real practical and commercial value. “Some of the best research is conducted when searching for a solution to a pressing problem. We have only got to this stage because of the huge benefits antibiotics have already delivered. I have no doubt the incentive is present for companies to innovate further,” Rowntree concludes.

Did you know?

Bacteria can reproduce in as little as 20 minutes.

Some 50% of antibiotics are reportedly prescribed inappropriately, which can speed up the process of bacteria developing resistance.

Source: BBC.co.uk: ‘Human vs superbug: Too late to turn the tide?’, accessed September 2015.
Nanotechnology

Another innovation in healthcare is in treatment challenges. Here nanotechnology holds the potential to revolutionise the sector, delivering more accurate and effective treatment than ever before.

Already the application of nanotechnology – science, engineering and technology constructed at the molecular scale – has extended to use in drugs, internal medicine delivery and specially engineered healthcare equipment. Now, scientists are working to refine the development of so-called nanobots – robot devices smaller than a virus – which can circulate in the bloodstream and help cure illness.

At the start of 2015, scientists at the University of California announced a breakthrough when they successfully tested the first self-propelled nanobot inside a mouse. This technology is said to have huge potential advantages for treating peptic ulcers, other stomach-related illnesses and even potentially fatal conditions such as cancer, where it could provide much more targeted treatments.

Number of published patents including the words ‘gold’ and ‘nanoparticles’

Advances in nanotechnology have brought gold’s role in medicine to the fore as researchers try to identify ways to build it into diagnostic devices and treatments.

Newton global healthcare analyst, Emily Fletcher, says: “The application of more sophisticated nanotech-based solutions in healthcare is relatively new and untested and global healthcare regulators are understandably cautious. They would need to be fully convinced of their safety through extensive trials before approving the use of nanobots. That said, there is a real incentive to develop more sophisticated and cost-effective solutions in this area and the healthcare benefits could potentially be huge.”

According to Fletcher, more basic nanotech solutions are already widely used. These include the application of nanoparticle technology in medicines to improve their absorption and make them easier to administer and the use of special coatings on healthcare equipment.

From an economic standpoint, nanotechnology and nanomedicine are becoming big business, with wide scale public and private sector research and development in markets such as the U.S., Europe and Japan. The 2016 US Federal Budget alone provides more than US$1.5bn for the National Nanotechnology Initiative (NNI), supporting the U.S. government’s innovation strategy. The cumulative NNI investment since year 2001, including the 2016 request, now totals more than US$22bn with much of this directed towards the development of healthcare solutions.

5. The Economist: ‘Medical robotics on the nanoscale.’ 07 August 2015.
The future potential for the application of nanotechnology may ultimately unlock the secrets of the human brain, playing a role in the treatment of chronic conditions such as Alzheimer’s disease. Currently, the so-called blood/brain barrier prevents drugs present in the bloodstream from entering parts of the brain, often making treatment difficult. But it nanotechnology could play a useful role in helping transfer drugs across this barrier through new microscopic delivery systems.7

**Fighting dementia**

Dementia is one of the few illnesses where, until very recently, little to no progress had been made in over 100 years with respect to prevention, curing or even slowing its progression. Today, many drugs companies are active in this space.

The word dementia is an umbrella term and probably the most common and well-known type of dementia is Alzheimer’s disease, the sixth-leading cause of death in the US, according to the Alzheimer’s Association. There are more than 520,000 people in the UK with Alzheimer’s disease and 850,000 living with dementia.8

Following a flurry of activity in the mid-1990s, no new drugs have been approved to treat Alzheimer’s disease in more than 10 years.9 Those that do exist treat the symptoms patients experience rather than reverse the effects or repair damage to the brain caused by the disease.

Until recently drugs companies looking for a substance to slow down or reverse the onset of the disease have largely failed and over time some began to lose faith in the belief a lot of money has been spent in vain. Different firms have been targeting varying components of the disease, with some focusing on the premise that if a drug could break down the plaque attached to brain cells they could go some way to reversing the onset and/or symptoms. Other companies have looked at breaking down the ‘soluble’ or ‘free-floating’ plaque to prevent it from attaching to nerve cells in the first place.

Then a potential game-changer occurred, says Jenkin, pointing to a drugs trial by a large U.S. pharma that showed “potentially statistically significant results towards slowing the onset of the disease” in certain, early-stage Alzheimer’s patients.

After years of pharmaceutical firms treading water this encouraged other companies to revisit earlier trials and drugs they had previously abandoned.

Says Jenkin: “Another U.S.-listed company is currently testing a drug on ‘early-stage’ sufferers. This aims to pick away the protein plaque that has already been deposited and in early trials was shown to be the first potential Alzheimer’s drug ever to show beneficial results over time. Results from further trials are expected in early 2018.”

**Hospital partnerships**

A battle centred more on logistics is the everyday need for care – healthcare provision and access. To this end, in the UK the NHS has become a fairly sacrosanct institution. However, faced with an ageing population the UK, along with countries like Germany, South Africa and Japan, is examining the greater role private companies could play in healthcare provision. These public/private healthcare partnerships (PPP) may just lead to a broader influence of business in running institutions like hospitals and nursing homes.

According to a UK government report, Healthcare UK: PPP 2013, such partnerships can enable the delivery of efficient, cost-effective public services within modern facilities. They can offer innovative and entrepreneurial approaches to healthcare that benefit us as consumers as well as taxpayers.

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8. alzheimers.org.uk
With more than 22 years' experience and over 130 healthcare PPPs worth some £12bn, the UK is considered a world leader in this space but it is by no means the only one. Today countries around the world work with UK organisations to develop their own models of PPP including: Canada, Ireland, Portugal, Australia, Japan and Sweden.

Jim Lydotes, global infrastructure manager at TBCAM, says the UK's 'free' healthcare system means only a small percentage of the country's population has some form of private medical insurance. Yet healthcare demand is rising and such services do not have the capacity to meet it, Lydotes believes. “To deal with the overflow, the NHS is turning to the private sector, spending billions on services from private providers and setting aside billions more to spend on efforts to reduce waiting lists.”

Lydotes says PPPs can benefit all parties involved — patients, taxpayers, governments and investors. For example, as part of any hospital, high-tech equipment such as MRI machines must be purchased and each may cost anywhere from £500,000 to well over £1.5m. Meanwhile the price of an individual MRI scan can cost, on average around £483. This means to cover just the initial cost of purchasing a single £1.5m MRI machine, a private hospital would have to conduct nine scans a day, seven days a week for a full year (the average scan takes between 15 and 90 minutes).

Given such numbers, Lydotes says, a greater number of patients are required to add margin to the bottom line for private hospitals. This is why many are opening their doors to NHS patients and why the UK government doesn’t have to pay a private hospital any more than it would pay an NHS one for the same service. “It’s a win-win arrangement,” he adds.

Japan’s nursing homes are another area where public/private partnerships are on the rise. Japan, which is also witnessing a ballooning older demographic, has seen a sweeping cultural shift as people begin to embrace the concept of assisted living, says Lydotes. “Japan once required a family's oldest son to assume legal responsibility for his elderly parents, evidenced by the fact that the country had only one nursing home as recently as 1963. By 2007, the number of nursing homes surged to 7,582. Yet this dramatic growth has not been sufficient to meet demand, Lydotes says. According to the most recent tally, more than half a million — 520,000 — Japanese seniors were on waiting lists for nursing-home placement in the country, he notes. “The private sector may be prompted to find ways to increase efficiency and provide this care for less.”

Asia’s “first world” problems

Japan is not the only Asian nation experiencing healthcare challenges. While many other countries in Asia and across the developing world have younger populations on average, they do face other western challenges.

According to data from the World Health Organisation (WHO), in 2014, more than 1.9 billion adults (39% of the world’s population) 18 years and older, were overweight. Of these over 600 million (13% of the world’s population) were obese. Since 1980 the prevalence of obesity has more than doubled.

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11. Ehow.co.uk: “How much do MRI machines cost?”
Diabetes: a new emerging markets epidemic
Population (aged 20-79) with diabetes (%)

Across developing countries more than 115 million people reportedly suffer from obesity-related problems, according to estimates.\(^\text{17}\) In China in 2012, for example, the National Health and Planning Commission found some 30% of the population were overweight and that the rate had swollen by almost a third from a decade earlier. Nearly 10% of children aged six to 17 were overweight, the commission said; double the rate in 2002.\(^\text{18}\)

Expanding waistlines are said to be largely down to richer diets and more sedentary lifestyles. As emerging markets move up the curve of economic development, their populations can afford to transition from diets built on cereals and tubers (such as potatoes) to diets rich in meat, fat and sugar.

Global meat consumption
2005 vs. 2050 (in tonnes)


17. IBID.
In the words of Newton’s Rowntree: “As emerging markets adopt developed world lifestyles and aspirations – which include access to higher protein and carbohydrate diets – we’re clearly seeing an increase in the same characteristic diseases. Exacerbating this is a propensity among some populations to develop a more aggressive form of diseases, such as diabetes.”

The health implications of the obesity epidemic are far reaching. A November 2014 report from the McKinsey Global Institute estimated obesity is responsible for about 5% of worldwide deaths a year as a result of associated conditions such as cancer, diabetes, cardiovascular disease, hypertension and stroke. The same report estimated the global impact of obesity to be in the region of US$2 trillion annually, or 2.8% of global GDP — nearly equivalent to the global impact of smoking or of armed violence, war, and terrorism.

For low- and middle-income countries, especially, the increasing prevalence of obesity creates a challenge since it means they are faced with a “double burden” of disease, says Rowntree. While they continue to deal with the problems of infectious disease and under-nutrition, they are simultaneously experiencing a rapid upsurge in non-communicable diseases like obesity, particularly in urban populations. Hence, it is not uncommon to find under-nutrition and obesity existing side-by-side within the same country, the same community and even the same household, he notes.

The good news is that both obesity and diabetes are preventable and, for investors, this means a rich menu of companies actively engaged in combatting this 21st century epidemic. In the healthcare sector, for example, pharmaceutical companies and device makers are developing weight-loss drugs, diabetes therapies and appetite-suppressant implants.

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