Emerging Markets

The significance of the pharmaceutical industry's main markets (the USA, Europe and Japan) remains undiminished in the short and medium term. There seems little doubt, however, that in time emerging markets (countries whose economies have started to grow but have yet to reach a mature stage of development and/or where there is significant potential for economic or political instability) will come to play a key role in shaping the industry's future fortune.[22]

Early signals already demonstrate how important these markets are likely to be as opportunities for future growth, the source of continued and increased demands around access to medicines and accompanying political risk, and the scene of intense competition. This competition is taking place in markets where highly competitive, domestically domiciled, generic manufacturers already have a strong hold. It will also take the form of intellectual competition, as many emerging market governments are actively nurturing their own R&D capabilities, and of efficiencies in manufacturing costs.

Emerging markets that offer promising growth prospects, such as China, India, Mexico and Brazil, differ significantly from developing and least developed countries,[23] which offer limited or no commercial opportunities. It is these poorer countries – particularly those in Sub-Saharan Africa – which have been the focus of many demands on the industry, and they tend to be where companies undertake many access and donations programmes. The challenge emerging markets pose is not the same one of lack of commercial opportunity.

Rather it is how to balance – within a single market – the commercial opportunities offered by a growing consumer base and the ongoing access needs of the poor majority. Across the developing world (and including developing countries and emerging markets – where the incomes of the poor can be extremely low) the access equation that is prevalent in industrialised markets – whereby a relatively small percentage of the overall population does not have access to medicines – is reversed. Meeting these access needs is and should be primarily a challenge to governments – both of the countries themselves and also multilateral and bilateral donors – but history has demonstrated that the industry too will be held to account to do all it can to address unmet need.

Five years ago the incremental sales in this industry were largely generated in the USA. In 2001 the absolute increase in sales was US$47.5 billion, with around US$28 billion coming from the USA, US$14 billion from Europe and less than US$3 billion from the emerging markets.[24] In 2005, over 30% of incremental sales came from emerging markets. In 2006, though Medicare Part D had swung the pendulum back to the USA, the combination of economic growth (9% and 8% for India and China respectively in 2006), changing demographics, the limits to payer capacity in OECD countries and changing disease profiles combined to offer significant growth prospects that only the most blinkered observer could ignore. And for reasons the previous section outlines, many investors feel more confident about future growth calculations based on volume rather than price increases.

The Resurgence of the East

The Asia–Pacific pharmaceuticals market generated total revenues of $102.7 billion in 2006, representing a CAGR of 4.7% for the five-year period spanning 2002–2006. This regional picture hides a telling finding. While the Japanese market (which today accounts for over 60% of the regional market total) grew by 2%, China (accounting for 12% of the total) grew by a whopping 17%.[25] China is predicted to become the seventh biggest pharmaceuticals market in the world by 2010, with annual sales of $37 billion.[26] India comes in behind China with an average CAGR between 2006 and 2011 predicted at 7.3%.[27] By contrast, the Japanese pharmaceutical market is predicted to increase by only about 2% per year, though the market will continue to represent 56% of regional sales.[28]

Changing Disease Burdens

One characteristic of this growth-led demand is a – perhaps surprising – change to the disease burden, with a sharp increase in what are often wrongly characterised as 'diseases of the affluent'. In many people's minds developing countries are still associated with infectious diseases, and in particular HIV/AIDS, malaria and TB. These diseases do indeed continue to pose enormous challenges, but they are not the only problem. As a result of urbanisation, more sedentary lifestyles, better transportation, more pollution, less physically demanding work, changing diets and an increase in smoking, the picture is changing rapidly.

'Despite all the predictions of growth in emerging markets, we are not yet sure whether it's hope or reality. The price points are still problematic.'
Pharma Executive

Even in poorer communities, diabetes, cardio-vascular disease and cancer are increasing at alarming rates. Figure 7 shows the global market share of leading diseases.

Worldwide, cardiovascular disease (CVD) is the single largest cause of death and is responsible for one in three deaths. The assumption that CVD is largely a disease of wealthy men is outdated: it is the single largest cause of death among women worldwide (causing 18 times more deaths than breast cancer) and 80% of the 17 million annual deaths caused by heart disease occur in low and middle-income countries. Nor is it only a disease of the elderly. Children are at increasing risk, for example, through tobacco smoking (active and passive), being overweight or obese and lack of physical activity.

And more than one-third of these deaths occur in middle-aged adults: globally, cardiovascular diseases account for as many deaths in young and middle-aged adults as HIV/AIDS.[29]

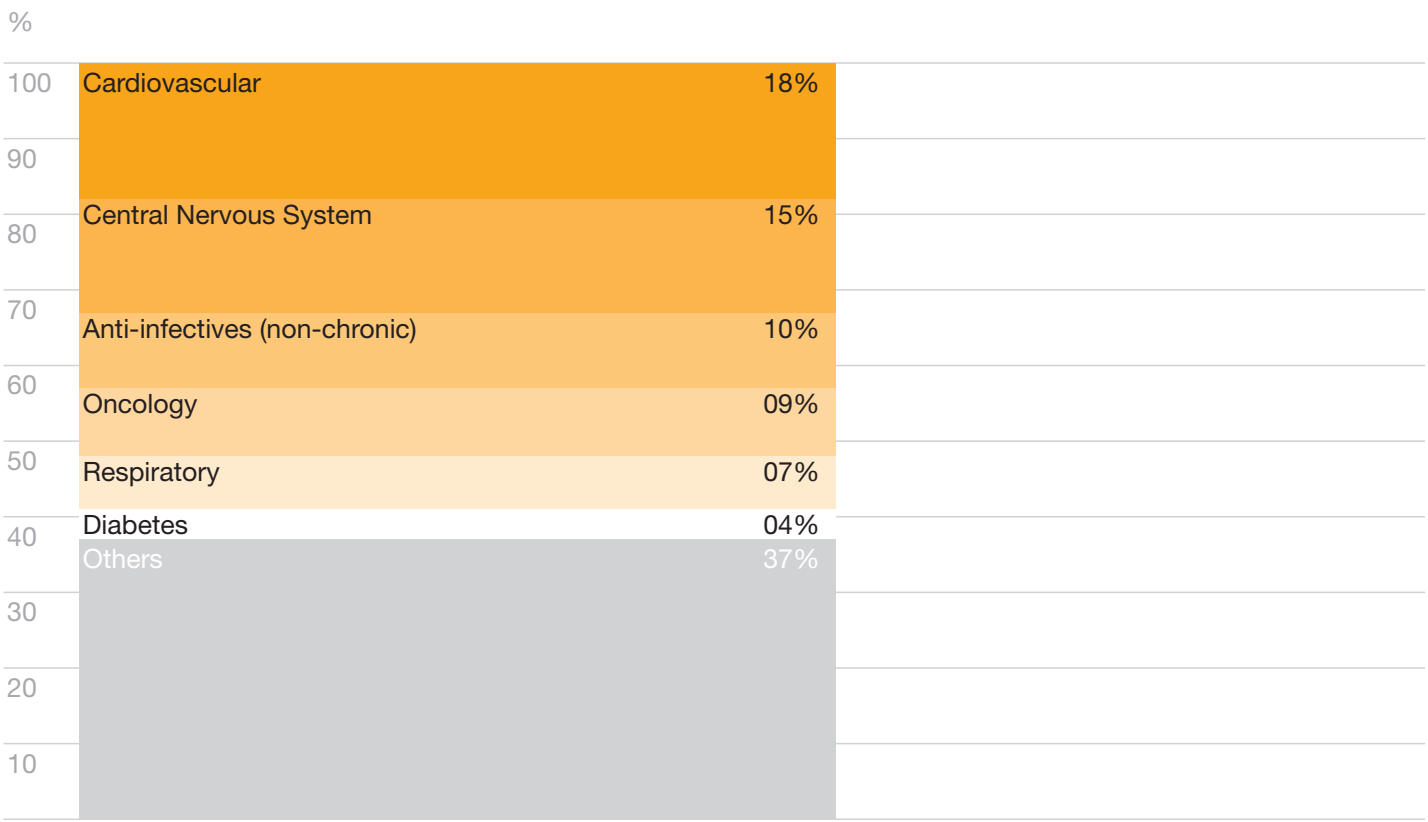
Likewise, and surprisingly, over half the world's cases of obesity are found in China and India. Diabetes, to which obesity can give rise, is set to increase from 194 million to 333 million people by 2025. Its complications include heart disease, stroke, blindness and renal failure.[30] These trends offer significant market potential to the pharmaceutical industry, reflecting as they do a match with today's top-selling therapeutic areas (see Table 2 on page 22). Forward-looking companies are already mapping the spread of diseases and market potential arising from the spread of malaria or TB into mainstream markets as a result of increases in travel, and some companies' R&D portfolios already reflect these changes.

From Potential to Reality

Despite these changes, however, emerging markets show – at best – partially realised potential. And the reasons are not difficult to gauge. First, even the wealthier emerging markets are dwarfed by their industrialised country equivalents. Significant volume growth is likely to be provided over time from the 150 million middle class Indians and the 100 million Chinese consumers who are already stretching their financial muscles, but their ability to pay prices equivalent to their western counterparts is extremely limited. Per capita health expenditure in India today is US$82 and in China US$278, compared with US$2,500–3,000 in Western Europe and US$5,900 in the USA. Though these composite figures mask the high health spend of large numbers of people, the transition challenge is very real.[31]

Figure 7
Global Market Share of Leading Diseases

Source: Adapted from Lehman Pharma Pipelines 2006



At the same time many companies are wary of the barriers to entry posed by weak intellectual property laws (or poor evidence of effective enforcement of such laws), non-transparent regulatory structures, and poor or non-existent registration systems.

Second, these markets are highly fragmented with the burden of pharmaceutical spend in emerging markets, developing countries and least developed countries falling to individuals as out-of-pocket expenditure. Widespread poverty is the greatest obstacle for many. Even where people can afford to pay, limited government involvement as a payer and the health insurance market tends to be limited, meaning that the price discounts that can follow from bulk purchasing arrangements are not captured by the consumer. According to the World Health Organisation, though the private sector tends to have more chronic disease medicines available than the public sector, prices are much higher and range from three to one hundred times the international reference price at country level. The situation is frequently caused as much by taxes, duties and mark-ups as the original manufacturer's price.

The role the industry plays in many emerging markets is judged against economic development and poverty reduction considerations as well as healthcare. Politically, both the Indian and Chinese governments are committed to supporting the development of their domestic industries while remaining compliant with trade-related aspects of intellectual property rights (TRIPS), but what that means in practice is subject to different and divergent interpretation.

Likewise, registration decisions may well be affected by future affordability. Emerging markets are also newly defining and offering areas in which to capture competitive advantage.

R&D

Recent studies by consultants and analysts alike are urging global pharmaceutical companies to seek cost efficiencies by undertaking more R&D in India and China. A recent study, for example, calculates that clinical trials conducted in India cost up to a third less than those in the USA or Europe, and points out that the country also boasts a large pool of well-educated, English-speaking personnel, relatively smooth administrative procedures for the approval of clinical trials and fast patient recruitment times. It highlights China's competitive advantage in biological research and manufacturing capacity.[33] Many large pharmaceutical companies have already taken considerable note of the opportunities to invest in India and China witnessed by recent, substantial investments there.

The competitive advantage of operating in these countries is not, however, necessarily best captured by global pharmaceutical companies. Both countries also have significant generic industries, eager to take advantage of recent patent expiries in the USA and Europe to consolidate their presence in those markets. The manufacturing efficiencies of these firms have been a source of interest to multinational pharmaceutical companies for some time, and have not been easily understood.

Access to Medicines and Political Risk

A final reason for considering the importance of emerging markets is for the political risks that extreme inequality poses. The combination of unmet medical need and chaotic, opaque private markets poses an ongoing challenge to the pharmaceutical industry as it consolidates its presence in these growing markets. A key challenge to the industry going forward will be to manage successfully expectations about the most appropriate role for it in providing access to medicines. The industry has historically taken the position that issues of access are governments' problem and not its responsibility to solve. However, efforts by individual companies and industry associations to date have failed to quell demands and a number of significant policy challenges remain discernable. If anything, it is likely that these demands will grow rather than diminish.

Current and Future Challenges – Least Developed Country Needs

The manner in which the industry responds to the ongoing needs of poor people in least developed countries is likely to have repercussions on its licence to operate, not just in these markets, but also in emerging markets where large numbers of people are very poor. Despite impressive efforts to meet need through public-private partnerships (PPPs) and individual company initiatives involving governments, industry and civil society, there is still a huge gap between provision and medical need.

'The top selling therapeutic areas of the pharmaceutical industry match the diseases causing death and morbidity in a growing number of emerging economies.'
Global Health Expert

Case Study: India [32]

India forcefully illustrates the dilemma facing pharmaceutical companies in emerging markets.

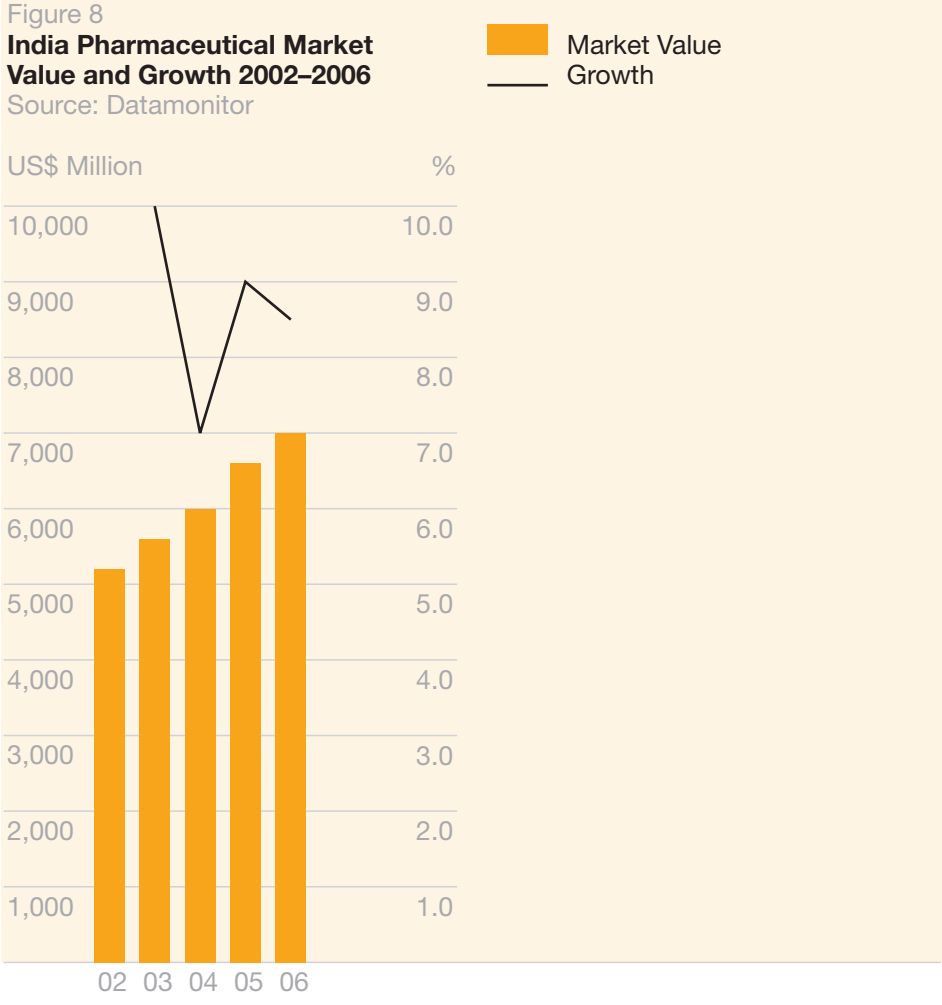
Underlying Market Fundamentals . . .

Market value is growing (Figure 8). Stable macroeconomic performance is predicted to result in gradually increased per capita expenditure on healthcare and pharmaceuticals. Though there is no consensus about the precise size and purchasing power of the middle class, by some calculations 50 million Indians – presenting a market only a fifth smaller than the UK – can afford to buy western medicines. Life expectancy is increasing: by 2025, an estimated 189 million Indians will be 60 or older. The growth of chronic diseases and rising healthcare expectations will boost the demand for cardiovascular, neurological, metabolic and cancer drugs. The majority of healthcare services in India are provided by the private sector. In 2002 fee-charging private companies accounted for around 82% of overall healthcare expenditure, with various levels of government covering the remaining 18%.

. . . Juxtaposed Against Terrible Poverty

In the same country, however, approximately 300 million people live on less than a dollar a day, more than 50% of all children are malnourished, and 90% of the elderly have either no state pension or lack families to take care of them. Although public spending on healthcare is predicted to rise, the prospect of large and sustained increases is low and no one is predicting the sort of massive budget increases that would be needed to make serious inroads to address unmet medical need. Where the government does provide healthcare it is largely the responsibility of individual states. Most health expenditure thus falls to individuals, of which 75% of the total is spent on drugs, in both rural and urban areas. The industry is therefore faced with the challenge of managing commercial prospects and enormous unmet medical need. Though it is unfair to ask the industry to assume government responsibility for healthcare provision its actions are judged, in part, by their contribution to increasing access to medicines.

Figure 8
India Pharmaceutical Market Value and Growth 2002–2006
Source: Datamonitor



‘What are the ethics of trials using people who are unlikely to benefit from any successful treatment?’
External Expert

Though precise figures are notoriously difficult to come by, the WHO estimates that antiretroviral therapies (ARVs) now reach an unprecedented 1.5 million people in low and middle-income countries, but out of a total of 37 million. This is up from only around 240,000 in 2001.[34]

More than 90 million TB patients were reported to the WHO between 1980 and 2005; 26.5 million patients undertook directly observed treatment short course (DOTS) programmes between 1995 and 2005, and 10.8 million new smear-positive cases were registered for treatment by DOTS programmes over the same period.[35] And existing treatments and therapies are insufficient to tackle extensively drug resistant TB. In the case of malaria, although 3.2 billion people live in areas at risk of malaria transmission, and 350–500 million clinical malaria episodes occur annually, in most malaria-affected countries of Africa, Asia and South America, less than one-fifth of households have access to insecticide-treated nets.[36]

And this situation means that pressure on both government and industry is unlikely to ease. Recent access challenges to the industry – around intellectual property and international trade, 'bio-piracy', research into neglected diseases, and price and access – have not gone away. At the time of writing this report three high-profile challenges were ongoing in India, the Philippines and Thailand. In April 2007 the UK government launched its Medical Transparency Alliance (MeTA) project calling for greater transparency in working practices on the part of those involved in the registration, distribution, procurement and sales of medicines in developing countries. More salutary perhaps is the evidence that more things are being added to this list. Demands for action on chronic diseases – in middle income countries as well as in least developed countries – are increasing in frequency.

Questions are being asked about good clinical practice in the application of quality protocols in undertaking trials in these challenging environments and the ethics of undertaking clinical trials among patients who may not benefit from any successful treatment. And most recently there have been rumblings – an echo of the mid-1980s – of concerns about marketing ethics to which the International Federation of Pharmaceutical Manufacturers has responded with a revised marketing code.

Table 3
Top Ten Disease Burdens of Low Income Countries[37]
Based on projected DALYs

Source: Report author's calculations based on WHO data

	2005	2015	2030
Central nervous system	1	1	2
Respiratory infections	2	8	6
Perinatal conditions	3	4	5
Cardiovascular diseases	4	3	3
HIV/AIDS	5	2	1
Diarrhoeal diseases	6	7	9
Childhood-cluster diseases	7	11	12
Sensory organ diseases	8	6	4
Malaria	9	9	10
Chronic respiratory diseases	10	5	7
Cancers	13	10	8

Emerging Markets: Scope for Action

Participants in *Pharma Futures* acknowledged the importance of adopting a strategic approach to the emerging markets. Pharmaceutical representatives were somewhat surprised at the extent of the interest expressed by mainstream investors in the Working Group, as it is not common from this constituency. The following challenges were discussed by the group and ratified as requiring management response.

Challenge 7
To Respond Appropriately to Demands for More Equitable and Extensive Access to Medicines

Participants in *Pharma Futures* discussed the importance of strategically positioning the industry in the emerging markets to ensure future licence to operate. As emerging markets become more commercially interesting they pose a two-pronged challenge to the industry, which requires a significantly different management skill set from those needed in industrialised markets. The first prong requires industry to develop a pricing policy that captures not only the premium markets but permits an extension of volume sales to a wider customer base. And this must be achieved while simultaneously preventing negative impacts – such as reference pricing or inappropriate parallel trade – in established markets. The second prong is to respond to demand for access to medicines in these markets (and in countries that are less commercially promising) in such a way as to defend the industry's commercial interests while at the same time persuading key decision-makers that the response is sufficient to overcome mistrust, minimise criticism and extend licence to operate. Developing strategies to position the company for the future will need to encompass responses to chronic diseases, which might include involvement in prevention programmes as well as seeking markets.

The challenges posed by emerging markets, developing countries and least developed countries will be different, but some issues will overlap all three and all are likely to require government and industry to work together with other stakeholders to facilitate the broadest possible access to medicines. And all will be undertaken against a background of inequality and chronic poverty in which these challenges are further compounded by an often lukewarm government commitment to public health relative to other priorities.

The industry also needs to understand how continued demand for access to medicines in the poorest countries will have a bearing on emerging markets and vice versa. For example, the industry could review whether least developed country markets, which offer no commercial opportunity, are suffering the consequences of TRIPS compliance on the part of countries that formerly supplied them with low priced generics, and, if so, what an appropriate strategy to address this would be. Recent disputes over intellectual property recognition underpin a societal concern to ensure that developing country TRIPS compliance does not come at the expense of placing medicine prices beyond the level affordable by many people. A similar principle applies to medicines for neglected diseases and drug formulations that are applicable and usable in developing countries; the current patent scheme does not reward industry sufficiently to direct R&D resources to this much-needed effort. Civil society critics argue that the impoverished within the developing world have had to accept TRIPS and TRIPS Plus with no healthcare benefits accruing to them.

Emerging Markets: What Investors Want to Know

Investors in the *Pharma Futures* project expressed interest in seeing the industry adopt a strategic approach to emerging markets and developing countries. In particular they were interested to understand the overall strategy to deal with the complexities of markets in which there is a segment of the population which cannot afford to pay for medicines at all, a segment who can afford them, but who cannot pay developed world margins, and a third segment who can pay full market prices.

Investors in *Pharma Futures* identified the issue of access to medicines in the developing world as a reputation risk and, in parallel, as a potential risk to licence to trade and to the opportunities emerging markets present in future.

Making the problem go away is important to investors, but how this is achieved is also vital. Serving these markets in a differentiated way, being well established and having strong governmental relations are likely to be critical to future success.

The pharmaceutical industry is in the business of partnerships. Typically, relationships are built over decades – particularly where the payers are public. Relationships formed today are likely to bear fruit over 10–20 years. Long-term investors want to see companies investing in these new markets and are prepared to accept that such investments may negatively affect the profit and loss in the short term.

Pension Fund Afterword

As pension funds concerned to secure long-term value of our healthcare portfolios, ABP, OPERS and USS identified the following areas as being of significant interest in the future.

Leadership

More demanding consumers, the growing importance of emerging markets, a conservative FDA and powerful managed healthcare bodies all mean that pharmaceutical business models will need to be more networked and collaborative than they have been in the past. The pace of evolution from monolithic, centralised organisations towards more flexible partnership-orientated ways of working will need to accelerate. This poses huge challenges to management attitudes and leadership approaches in the industry. Senior management will need to be sensitive to the needs and expectations of very diverse stakeholders, within their organisations as well as outside them. Their responses to these pressures will need to be finely balanced in order to regain and maintain the trust of these stakeholders without losing sight of shareholders' interests. The talent and quality of the top management team, succession planning to refresh and adapt them, and their incentive structures will be a key focus for investors in this new environment.

Communication

A key challenge which emanated from *Pharma Futures I* and is prevalent throughout this current report is the need for improved communication channels and systems between the investment community and the pharmaceutical sector. More structured, regular and comprehensive communication will enhance investors' understanding of the ways in which pharmaceutical executives perceive and are addressing the key value drivers for the sector and the current challenges, risks and opportunities they face.

In turn, improved communication will help pharmaceutical executives to identify the scope, quality and timeliness of information required by investors to permit them to assess the long-term prospects of pharmaceutical companies with confidence. A more fluid two-way communication is therefore needed to improve levels of trust, understanding and a greater alignment of interests between investors and pharmaceutical executives.

Trust and Reputation Management

The debate about trust in the pharmaceutical industry tends to concentrate on the expectations of societal stakeholders – governments, patients, payers and doctors. However, investors too work on the basis of trust. Trust underpins the discretion they are granted to invest in the assets of others. To comply with their obligations, and to make more informed decisions, investors seek information from pharmaceutical executives that provides them with a range of variables and sufficiently predictable behaviour to permit them to monitor the status of the asset over time. Trust breaks down when expectations are not adequately aligned and reputation damage ensues. Investors are therefore interested to ensure that pharmaceutical management pursues an approach to reputation management that is built on rebuilding relationships with core stakeholders in increasingly networked, collaborative business models in order to take advantage of the market opportunities they face.

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High-income countries include: Andorra, Aruba, Australia, Austria, Bahamas, Bahrain, Belgium, Bermuda, Brunei Darussalam, Canada, Cayman Islands, Channel Islands, Cyprus, Denmark, Faeroe Islands, Finland, France, French Polynesia, Germany, Greece, Greenland, Guam, Iceland, Ireland, Israel, Italy, Japan, Kuwait, Liechtenstein, Luxembourg, Monaco, Netherlands, Netherlands Antilles, New Caledonia, New Zealand, Northern Mariana Islands, Norway, Portugal, Qatar, Republic of Korea, San Marino, Singapore, Slovenia, Spain, Sweden, Switzerland, United Arab Emirates, United Kingdom, United States of America, and United States Virgin Islands.

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Appendix 2
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These individuals took part in this project in their personal capacity and organisational affiliations are shown for identification purposes only.

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Appendix 3
Funding and Governance

Pharma Futures was convened by pension funds Algemeen Burgerlijk Pensioenfonds (ABP, the Netherlands), the Ohio Public Employees Retirement System (OPERS, USA) and the Universities Superannuation Scheme (USS, UK). The project was paid for by sponsors and participating pharmaceutical companies.

The project was directed by Sophia Tickell.
The project contracted SustainAbility to undertake project management, research and facilitation.

Appendix 4
Project Process

The original aims of *Pharma Futures* (developed by members of the Working Group) were:

—to identify early markers of the structural changes likely to result in positive or negative effects on the competitive standing of the healthcare industry in general and the pharmaceutical industry in particular

—to identify end points in which society and shareholder expectations are better aligned, thereby ensuring long-term shareholder value

—to develop new means of engagement to enable investors to incorporate long-term and extra-financial considerations into research and decision-making processes.

The project centred around two two-day workshops in October 2006 and March 2007, which brought together the core Working Group of industry executives and investors. These workshops were informed by interviews with the Working Group and a significant number of senior external experts and commentators on the industry. The process was enhanced by ongoing desk and primary research.

The project was undertaken on the basis of the 'Chatham House' rule whereby 'Participants are free to use the information received, but neither the identity nor the affiliation of the speaker may be revealed; nor may it be mentioned that the information was received at such a meeting or gathering.'

The first workshop examined the core value drivers of the industry: research and development (R&D), sales, general and administration (SG&A) – primarily sales and marketing – top-line revenue and trust. Discussions focused on current approaches to managing these value drivers and whether a greater emphasis on the delivery of long-term value over short-term results would lead to change. It acknowledged the considerable challenges facing executives attempting to balance investor demand to maintain high quarterly returns with the needs of an industry which requires long lead times to make strategic investments.

In the second workshop pharmaceutical management and investors examined the interplay between market forces and societal expectations (including those of payers, patients, regulators and so on) and how the management of these factors would determine value creation. Specific attention was paid to what the group considered to be the most significant challenges in the future operating environment: the management of R&D, the changing payer landscape and the growth of emerging markets. The Working Group decided that other contentious issues – such as marketing or intellectual property enforcement – are likely to be shaped and informed by the degree of success in managing these three core value drivers. Consequently they were not discussed as themes in their own right.

Appendix 5
Glossary

Biosimulation
The use of computer software to simulate drug behaviour in patient tissue, cells and organs.

Pharmacoeconomic
The attempt to use clinical and therapeutic data to determine appropriate levels of reimbursement.

Pharmacogenomic
The study of likely reactions to a drug given the patient's inherited genetic make-up.

Phase I Clinical Trials
Initial studies to determine the metabolism and pharmacologic actions of drugs in humans and the side-effects associated with increasing doses, and to gain early evidence of effectiveness; may include healthy participants and/or patients.

Phase II Clinical Trials
Controlled clinical studies conducted to evaluate the effectiveness of the drug for a particular indication in patients with the disease or condition under study and to determine the common short-term side-effects and risks.

Phase III Clinical Trials
Expanded controlled and uncontrolled trials after preliminary evidence suggesting effectiveness of the drug has been obtained; they are intended to gather additional information to evaluate the overall benefit–risk relationship of the drug and provide an adequate basis for physician labelling.

Phase IV Clinical Trials
Post-marketing studies to delineate additional information including the drug's risks, benefits and optimal use.

Source: National Institutes for Health, US government

Appendix 6
Acronyms

ABP	Algemeen Burgerlijk Pensioenfonds
ARV	Antiretrovirals
BLA	Biologics License Application
BRIC	Brazil, Russia, India and China
CAGR	Compound Annual Growth Rate
CEO	Chief Executive Officer
CNS	Central Nervous System
CROs	Clinical Research Organisations
CVD	Cardiovascular Disease
DALY	Disability Adjusted Life Years
DDCs	Drug Delivery Companies
DOTS	Directly Observed Treatment, Short course
EIU	Economist Intelligence Unit
EMEA	European Agency for the Evaluation of Medicinal Products
EPS	Earnings Per Share
FDA	Food and Drug Administration (US)
GDP	Gross Domestic Product
HHS	US Department of Health & Human Services
HMO	Health Management Organisation
IPO	Initial Public Offering
IPR	Intellectual Property Rights
MeTA	Medical Transparency Alliance
MMA	Medicare Modernisation Act
NCDs	Non-Communicable Diseases
NCE	New Chemical Entity
NGOs	Non-Government Organisations
NICE	National Institute of Clinical Excellence
NME	New Molecular Entity
NPV	Net Present Value
OECD	Organisation for Economic Cooperation and Development
OPERS	Ohio Public Employees Retirement System
PI, PII, PIII	Phases I, II, III of clinical trials
PAG	Patient Advocacy Group
POS	Point of Service Organisations
PPAR	Peroxisome Proliferator-Activated Receptors
PPO	Preferred Provider Organisations
PPP	Public Private Partnerships
R&D	Research and Development
S, G & A	Sales, General and Administration
TB	Tuberculosis
TRIPS	Trade-Related Aspects of Intellectual Property Rights
USS	Universities Superannuation Scheme
WHO	World Health Organisation

SustainAbility

Established in 1987, SustainAbility is a values-driven organisation with a clear purpose – to help business contribute to a world that future generations want to inherit. We advise clients on the risks and opportunities associated with corporate responsibility and sustainable development. Working at the interface between market forces and societal expectations, we seek solutions to social and environmental challenges that deliver long-term value.

SustainAbility provides consultancy services to a growing portfolio of multinational businesses. We work with beacon companies whose influence extends across industry, as well as focusing on six key sectors whose strategies we believe will have the most profound impact on the sustainability agenda. In addition to healthcare, these are chemicals, energy, finance & capital markets, food & beverage and knowledge economy.

Algemeen Burgerlijk Pensioenfonds (ABP)

The pension fund for employers and employees in service of the Dutch government and the educational sector. With an invested capital of €200 billion, ABP is the second largest pension fund in the world. It is ABP's objective to be in a position to guarantee for its fund participants an adequate pension at all times at the lowest possible premiums. ABP Investments aims to meet these objectives by achieving the highest possible return on invested capital, while taking well-considered risks.

For the purpose of achieving the highest possible return at low costs and acceptable risks, ABP Investments invests on its own as much as possible. Given that ABP is a pension fund, the investment managers of ABP can operate with a longer time horizon than commercial operators. This offers potential opportunities to achieve extra return. Because of the size of the capital with which it operates ABP Investments plays a leading role in the financial world.

The Ohio Public Employees Retirement System (OPERS)

With assets of $77.6 billion, serving more than 930,000 members and involving 3,200 public employers in Ohio, OPERS is the 14th largest retirement system in the USA. OPERS membership includes:

—380,000 active members, currently working in public employment and contributing to their retirement;

—347,000 inactive members who maintain retirement accounts from past public employment;

—206,000 retirees and beneficiaries receiving monthly pension and/or health benefits.

With over 200,000 retirees and beneficiaries and $1billion in annual healthcare expenditures, OPERS is considered one of the largest non-federal health plan sponsors in Ohio and the USA and has taken an active leadership role to help secure affordable healthcare coverage for the future.

Universities Superannuation Scheme Ltd (USS)

The corporate trustee of one of the largest private sector pension funds in the UK with approximately 238,000 members and assets at 31 March 2007 of around £30 billion. It was established in 1974 to administer the principal pension scheme for academic and senior administrative staff in UK universities and other higher education and research institutions.

The Fund has made a commitment to long-term, responsible and active shareownership, an approach which is recognised as one that greatly increases the likelihood of long-term value creation and therefore to be in the interests of pension fund beneficiaries.

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