

# Global Healthcare

## The Search for Alpha – Investment Returns in a World in Flux

- **Introduction.** This report is intended for Family Offices, Private Wealth and Pension Fund Managers seeking a concise overview of the long-term growth, macro drivers and opportunities of the global healthcare industry.
- **The search for alpha.** Advisers confront a steep challenge to generate alpha. International markets have witnessed a relatively lower-growth economic outlook and often high sector performance correlations, coupled recently with a more inflationary outlook and rising bond yields. To maximise above-market returns with low market correlation – investment alpha – and to do so sustainably, investors cannot ignore opportunities provided in such a sector as global healthcare.
- **Identifying growth in an erratic world.** Finding such sectors and specific investments amidst macro-economic, geopolitical and electoral shocks is complex – witness volatility and hard-to-predict equity market reactions in 2016 to China concerns in 1Q, the UK Referendum on Membership of the EU in June and the US Presidential Election in November.
- **How global healthcare offers opportunity.** Global healthcare combines size, growth and relatively low sensitivity to broad GDP growth and political and economic shocks. This sector offers powerful, long-term growth drivers (population growth, aging, rising prevalence of chronic disease and product pricing power). New developments (genetic research, personalised medicine, digitisation) offer expanded market potential.
- **Where its performance is differentiated.** Performance, particularly for pure-play investments in the earlier stages of a product lifecycle, exhibits a low correlation with broad economic growth and financial markets. Investment typically offers a relatively binary outcome – very strong success, or failure within a time-frame of 2 to 6 years.
- **Capturing potentially significant returns.** Investing across a diversified portfolio of early-stage products from a proven source - identified by top-tier due diligence and led by internationally-recognised teams with a clear route to market or exit - can enable investors to capture at a portfolio level significantly above-market returns, even after allowing for failures, with low correlation. In addition, a key driver for many wealthier investors is that their investment can benefit society by enabling such innovation to happen.

### Industry Drivers Analysis

#### Global Healthcare

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## The Summary Investment Case

*“Health care is a growth industry that’s innovating while the world population is aging. It’s also an important export industry, giving emerging markets access to modern-day medicine and modern medical technology methods. Health care demand is fairly insensitive to economic cycles and other macro factors like the price of oil and the outlook for short term interest rate moves.” – Edward Yoon, Portfolio Manager, Fidelity Select Healthcare Portfolio*

Source: <http://www.forbes.com/sites/fidelity/2016/09/12/health-care-stocks-beyond-the-election/#63912415469d> accessed on 3 January 2017

**The track record.** The performance of Pharmaceuticals and Life Sciences is largely immune from the vagaries of political and governmental shifts to left or right, foreign exchange fluctuations, war and terrorism or continuing credit squeezes. Global healthcare spending has grown at a 5.9% compound annual growth rate over the past 20 years. Year-on-year growth continued even during the Financial Crisis period of 2008-2009 and during the recession of 2001-2002. Within this, spending on Medical Goods (including Pharma and MedTech) has outpaced broad healthcare spending by one percentage point per annum.

**Future outlook.** The core drivers of healthcare spending, including population growth and rising proportions of the elderly, Gross Domestic Product growth, increasing incidence of disease associated with lifestyle, rising provision of universal healthcare and rising pharmaceutical and medical technology prices, are expected to propel future healthcare spending at a 4% to 6% rate in coming years, with modest acceleration as the global economy improves. Within this, it is notable that spending on Pharmaceuticals and Medical Goods has outpaced broad healthcare by one percentage point per annum.

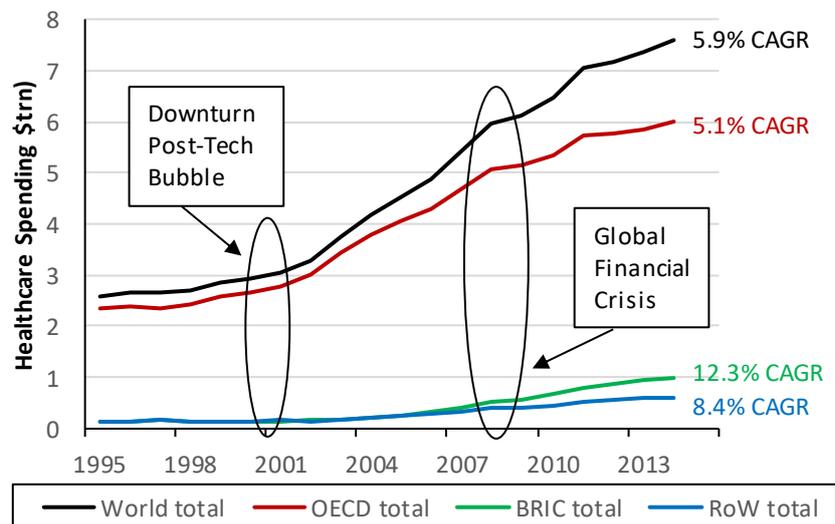
**Conclusion.** Global healthcare has enjoyed significant spending growth over the past 20 years, despite political, macro-economic and geopolitical shocks. The underlying demographic, economic and sector trends that have driven this growth are set to continue, or to accelerate, over the next 20 years. The sector thus appears set to remain one of the fastest-growing sectors of the economy, and one of few that have low correlation with broader GDP growth. Within this, Pharmaceuticals and Medical Technology are set to continue as higher-growth areas. Hence carefully-selected investments within those areas should constitute a core portfolio holding for High Net Worth investors.

## The Track Record for Global Healthcare Spending

**World healthcare spending has risen by a 5.9% CAGR since 1995.**

World healthcare spending has increased at a 5.9% Compound Annual Growth Rate (“CAGR”) since 1995 to reach \$7.6trn in 2014 (which is the latest data available), with the fastest growth being in the Brazil, Russia, India and China (“BRIC”) bloc of populous emerging markets (“EMs”). We note that whilst a slower rate of growth was seen following both the downturn after the technology bubble in 2001-2002 and the Global Financial Crisis in 2008-2009, healthcare spending neither flattened out nor reduced. This is shown in Chart 1 below.

**Chart 1: World Healthcare Spending**

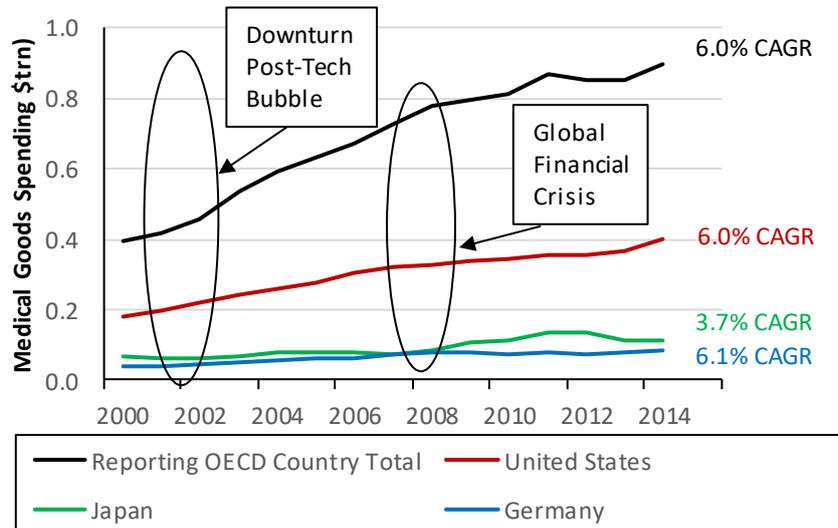


Source: World Health Organisation Global Health Expenditure Database

**Spending on Medical Goods in the OECD has risen at 6.0% CAGR since 2000.**

Within overall healthcare spending, we turn to look at spending on Medical Goods (which encompasses pharmaceuticals and other medicines, medical devices and other durable and non-durable goods). Chart 2 below illustrates that the total for OECD countries that report such spending has grown at a 6.0% CAGR from 2000 to 2014 (which is the latest data available) to a total of \$897bn, or 15% of total OECD countries’ healthcare spending of \$6,009bn. This 6.0% rate represents a 90bp faster rate of spending than by OECD countries in total on healthcare overall. This Medical Goods spending growth has been mainly driven by two of the largest three spending countries, being the United States and Germany.

**Chart 2: OECD Countries' Medical Goods Spending**



Source: OECD.stat Database

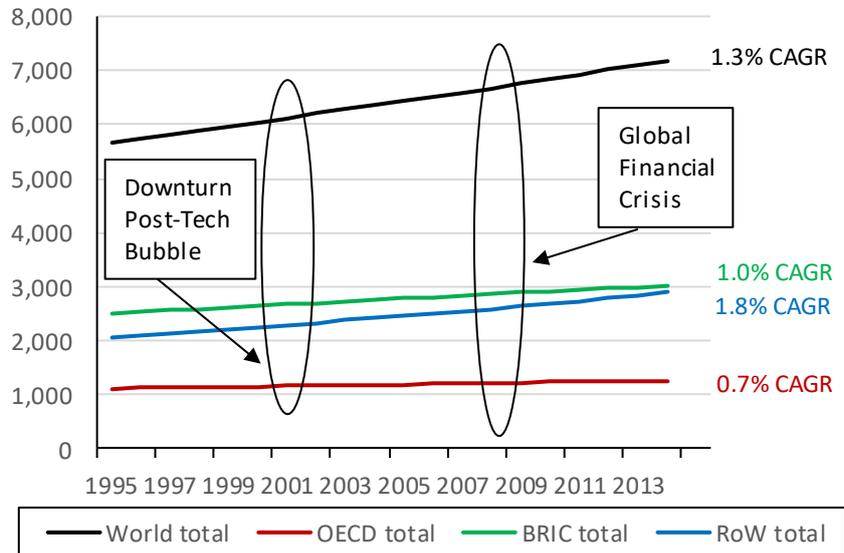
We conclude here that the reported data on overall healthcare spending and on Medical Goods spending appears to show only a slight impact, namely a deceleration in the growth rate, from major macro-economic events over the past 20 years. Next we consider the two core drivers of healthcare spending, population and average healthcare spend per capita.

## Population

**World population has risen at a 1.3% CAGR since 1995.**

The key factors here are population size and growth (as driven by birth rate and mean longevity). Chart 3 below shows that over a 19 -year period, the world population has grown at a 1.3% CAGR since 1995 to reach 7.2 billion at the end of 2014 (which is the latest data available), with that growth being predominantly driven by developing countries that are outside both the Organisation for Economic Co-Operation and Development ("OECD") and BRIC countries.

**Chart 3: World Population Growth**



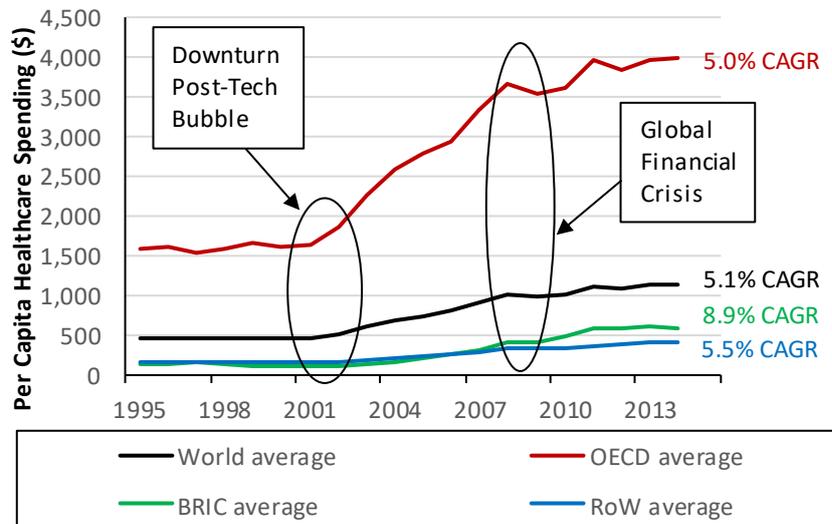
Source: World Health Organisation Global Health Expenditure Database

## Average Spend per Capita

**World average per-capita healthcare spending was \$1,141 in 2014, rising at a 5.1% CAGR since 1995.**

If the overall healthcare spending data is combined with population data so as to examine per-capita spending, the world average in 2014 was \$1,141 per capita (which has increased at a 5.1% CAGR over the prior 19 years). Within this, average OECD country spending is at \$4,004 (and has grown at a 5.0% CAGR), the BRIC bloc average spending is \$584 (and has grown at an 8.9% CAGR) and the Rest of the World’s average spending is \$399 (and has grown at a 5.5% CAGR). This is illustrated in Chart 4 below.

**Chart 4: Average Healthcare Spending per Capita in \$**



Source: World Health Organisation Global Health Expenditure Database

## Future Outlook

Global spending on healthcare is expected to increase at a 4% to 6% CAGR in coming years, with the near-term being at the lower end of that range as Developed Markets (“DMs”) see a more slow but gradually accelerating recovery. Spending on Pharma and MedTech is anticipated to continue to grow at a rate circa 2 percentage points higher.

The Economist Intelligence Unit expects a 4.3% CAGR in US Dollar terms for overall healthcare spending and 6.7% for Pharma spending in the 2015-2019 period, which partly reflects the strength of the US Dollar since 2014.

The key drivers of future spending are the global, macro-level trends that follow:

- (1) Demographics, including population growth, change in age distribution and change in the prevalence of chronic and communicable diseases.
- (2) Economics, and specifically the resources available to finance the provision of healthcare, including the value of national economic production and growth (measured, for example, by Gross Domestic Product (“GDP”).
- (3) Cost of healthcare goods and services, including the aggregate cost of research and development (“R&D”) for the corporate and public sectors and the productivity of that R&D in terms of new therapies and medical devices that are commercially launched per year.
- (4) Other factors, including regulatory, insurance, legal and secular shifts in healthcare provision. the cost of and change in regulatory requirements for new products to be approved for commercial sale, the cost of insurance and legal settlements arising from patient treatment, secular shifts from volume-based to value-based healthcare provision and shifts from episodic interventions to continuous health management, digitisation and connectivity of healthcare.

*“If the next 50 years follow the trajectory of the past 50, then by 2062 the United Kingdom could be spending nearly one-fifth of its entire wealth on the NHS, and employ around one in eight (12.5 per cent) of the working population” – John Appleby, Chief Economist, The King’s Fund*

Source: Appleby, John – Spending on Health and Social Care Over the Next 50 Years, The King’s Fund, London, 2013

### Demographics

The world population is expected to increase at a 1.0% CAGR in the next 15 years, based on current fertility, live birth and mortality rates, according to the United Nations Department of Economic and Social Affairs’ July 2015 forecast (which is the most recent available).

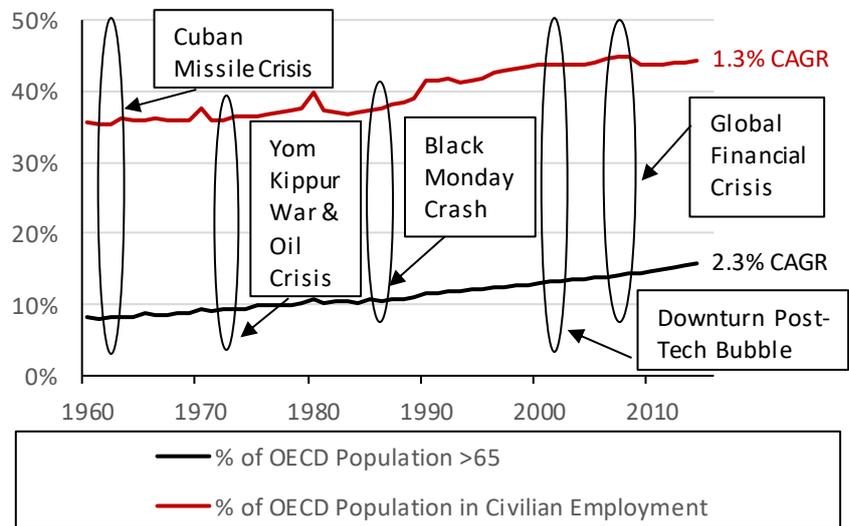
**World population growth is anticipated to be 1% p.a.**

Population aging is expected to be material. The median age of the world population is expected to increase from 29.5 years in 2015 to 31.6 years in 2030 (per the United Nations World Population Prospects database).

**OECD 65-year and older population has increased by more than twice the rate of the general population since 1960.**

Within the OECD, growth of the 65-year and older population continues to outpace that of the total population and of the labour force. Since 1960, total OECD population has increased at a 0.9% CAGR to 2014 (which is the latest data available), but within this, the 65-year-old and over population has increased at a 2.1% CAGR, which exceeds both the total population and the labour force CAGR (of 1.3%). Once again, these demographic trends have exhibited relatively little change around the period of major macro-economic shocks (save for unsurprising changes in the size of the labour force). This is shown in Chart 5 below.

**Chart 5: Demographic Change Within OECD Countries**

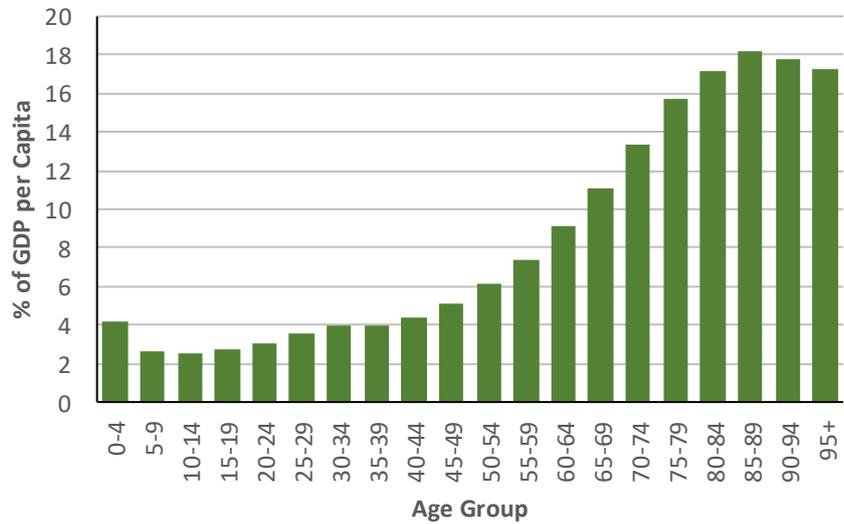


Source: World Health Organisation Global Health Expenditure Database

**On average, 65-year and older age groups consume over triple the healthcare cost of younger age groups.**

The 65-year-old and over age groups consume a significantly higher share of healthcare spending. An OECD study of 20 OECD countries in 2013 showed that the age groups below 65 averaged per capita healthcare spending of 4.5% of GDP per capita, whereas the 65-year-old and over age groups averaged 15.8%, or over three times greater. This is illustrated in Chart 6 below.

**Chart 6: Public Healthcare Spending by Age Group in 20 OECD Countries**



Source: Public spending on health and long-term care: a new set of projections, OECD, June 2013

**World economic growth is set to accelerate gradually from 2016 onwards.**

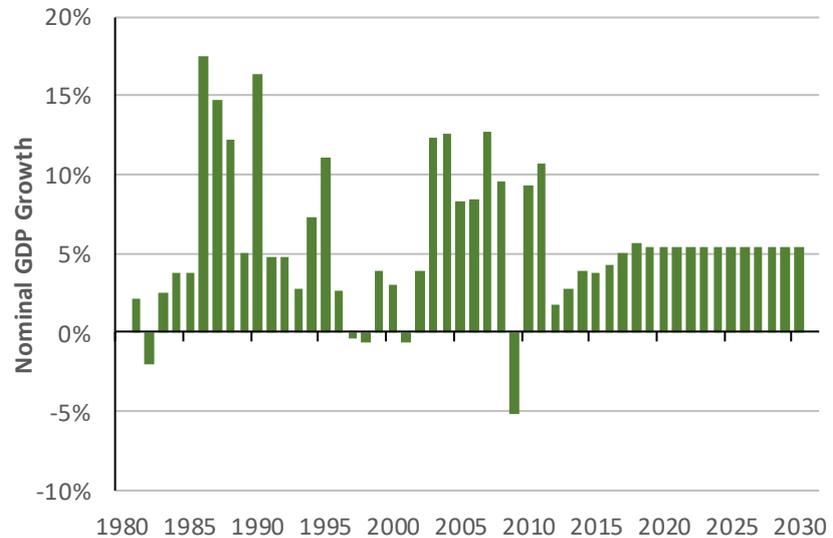
**Economics**

World Real GDP growth (i.e. excluding the impact of price inflation) is expected to be 2.9% in 2016, 3.3% in 2017 and 3.6% in 2018, according to the OECD<sup>1</sup>. The OECD expects long-term World Real GDP growth to reflect a CAGR of 3.3% from 2015 to 2030. Price inflation is forecasted by the OECD to be 1.4% in 2016, 1.7% in 2017 and 2.1% in 2018.

Hence, using the OECD’s forecasts, World Nominal GDP growth, after inflation, is set to run at 4.3% per annum in 2016, 5.0% in 2017 and 5.7% in 2018. If one takes a 2.1% assumption for price inflation beyond that, then long-term growth in nominal terms is set to be 5.4% from 2015 to 2030.

<sup>1</sup> OECD Global Economic Outlook, November 2016, Chapter 1, <http://www.oecd.org/eco/outlook/general-assessment-of-the-macroeconomic-situation-oecd-economic-outlook-november-2016.pdf> accessed on 5 January 2017

**Chart 7: World Nominal Gross Domestic Product Growth in \$ Terms**



Source: OECD Global Economic Outlook November 2016,

**Medical technology and price inflation accounts for a large proportion of spending growth.**

### Cost of Healthcare Goods and Services

A number of studies in the US<sup>2</sup> have calculated that medical technology (i.e. new medicines and new surgical methods) has accounted for between 27% and 49% of all growth in US healthcare spending in recent decades. Medical price inflation, separately from new price points for new therapies, is a significant second factor here.

*“The quantity and the quality of the new medicines coming through in several different areas is incredibly exciting,” “When the human genome was mapped 15 years ago, it prompted a huge wave of investment in health and biotech and that is now beginning to pay off.” – David Pinniger, Portfolio Manager, Polar Capital*

Source: <http://www.iii.co.uk/articles/223398/which-biotechs-are-fund-managers-buying> accessed on 3 January 2017

Long-running trends are anticipated to continue without significantly abating in coming years, including average Research and Development (“R&D”) costs per drug or device to be launched onto the global market, which is partly driven by more stringent regulatory requirements for trials, increasing digitisation and personalisation of therapies.

<sup>2</sup> Smith, Newhouse and Freeland, “Income, Insurance and Technology: Why Does Health Spending Outpace Economic Growth?”, Health Affairs, Vol. 28, No.5, 2009, and Cutler, “Technology, Health Costs and the NIH”, a Paper prepared for the National Institutes of Health Roundtable on the Economics of Biomedical Research, 1995.

**Three significant other drivers of healthcare spending.****Other Factors**

Some further elements here are:

- (A) The cost of and change in regulatory requirements for new products to be approved for commercial sale;
- (B) The cost of insurance and legal settlements arising from patient treatment; and
- (C) Secular shifts from private to universal healthcare provision in EMs, volume-based to value-based healthcare provision in DMs, from episodic interventions to continuous health management, and from relatively unlinked and paper-based systems to digitisation and connectivity of healthcare.

In sum, these other factors are considered to be significant factors driving increases in healthcare spending, although less so than demographic, economic and medical technological factors.

**Conclusion**

Global healthcare spending has enjoyed strong, above-GDP growth over recent decades, with relatively low sensitivity to economic, political or geopolitical shocks. The major drivers behind these critical features appear likely to exhibit considerable longevity – global economic growth, demographic change, emerging market development, the cost of and pricing for medical technology.

High Net Worth investors are frequently cash-rich and deal-poor. In many ways, healthcare offers an attractive play on several major investment themes for the future world economy, with the added benefit of relatively lower sensitivity to shock events in the meantime. For these reasons, we believe that it merits serious consideration by Family Offices, Private Wealth Managers and Pension Fund Managers.

*“You could come to the conclusion that health care has to go up,” he said, “and you want to invest in something that’s going up.” – Samuel Isaly, Portfolio Manager, Eaton Vance Worldwide Health Sciences Fund*

Source: <http://www.nytimes.com/2013/04/07/business/mutfund/health-care-mutual-funds-with-new-faces-at-the-helm.html> accessed on 3 January 2017

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