

Healthcare and Biotech Sector Prognosis: Positive

2021

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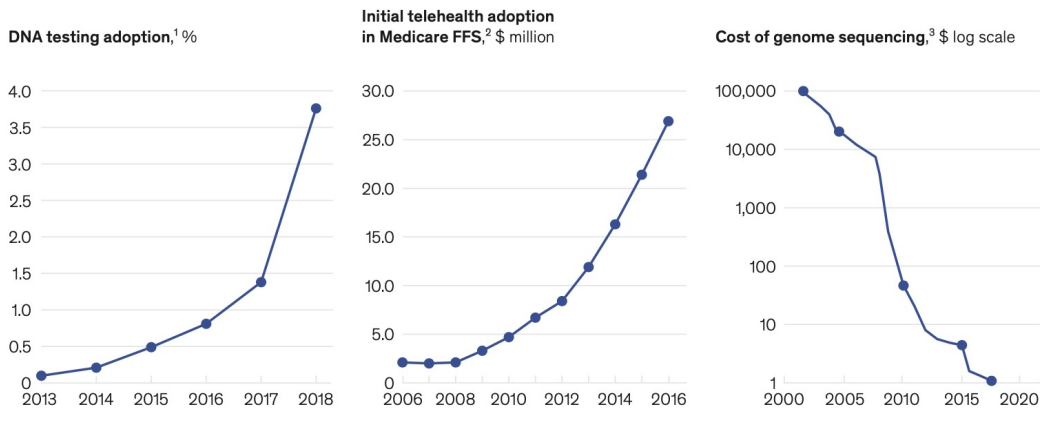
Introduction: Healthcare as a Long-Term Strategy

As investors seek to preserve and grow their capital, we believe the healthcare and biotech sectors represent an opportunity for long-term growth, bolstered by increasing innovation across multiple subsectors and areas for increases in efficiency. While healthcare has long been an attractive sector, the COVID 19 pandemic has accelerated a number of initiatives and introduced even greater volatility into the space.

The healthcare sector is among the most dynamic and innovative segments of the US and global economies. Given the diversity among healthcare subsectors and leaps in innovation, healthcare—and particularly biotech—may represent a compelling investment opportunity that can provide investors differentiated performance across market cycles. These dynamics are especially well suited for hedge funds, which can create significant alpha through informed positions on healthcare’s binary regulatory framework and other structural factors.

Increasing Innovation

The Exponential Nature of Innovation



FFS, fee-for-service.
¹ Consumer adoption of major testing companies (Ancestry.com and 23andme) within the US, assuming one test per person.
² Based on Medicare physician fee schedule claims for distant site telehealth visits per 1,000 FFS Part B beneficiaries. Although the data shown here is only a small fraction of Medicare's budget (approximately \$770 billion for 2019), it illustrates the increased utilization of telehealth services.
³ Based on National Human Genome Research Institute data.
 Source: Medicare Payment Advisory Committee, *Report to the Congress: Medicare Payment Policy*, March 2018; National Human Genome Research Institute, DNA sequencing costs: Data, April 25, 2018; Regalado A, "2017 was the year consumer DNA testing blew up," *MIT Technology Review*, February 12, 2018

Source: McKinsey & Company

As the healthcare sector continues to integrate increasing amounts of information and communication technologies, new applications and increased efficiencies will further drive the sector’s innovation—and opportunities for investment. Add to this decreasing costs, and the healthcare sector stands to benefit from a virtuous cycle of increasing and accessible innovation, with the possibility of exponential growth for some time to come.

The pace of innovation in therapeutic treatments has continued to move at an unprecedented speed. The US Food and Drug Administration now approves over double the number of novel therapies it did a decade ago, with some of these therapies potentially opening up new areas of treatment in completely different research areas. Perhaps the most well-known example of this is the RNA technology used in both Moderna’s and Pfizer’s COVID vaccine, which could lay the foundation for true breakthroughs in cancer research. The pace and significance of innovation is continuing to build a self-sustaining, positive-reinforcing cycle of progress and growth.

However, the innovation does not stop at therapeutics. McKinsey & Company identified eight other areas where technology could have a significant influence on healthcare and biotech. These innovations touch on how consumers access healthcare, who provides healthcare, and what healthcare outcomes are achieved.

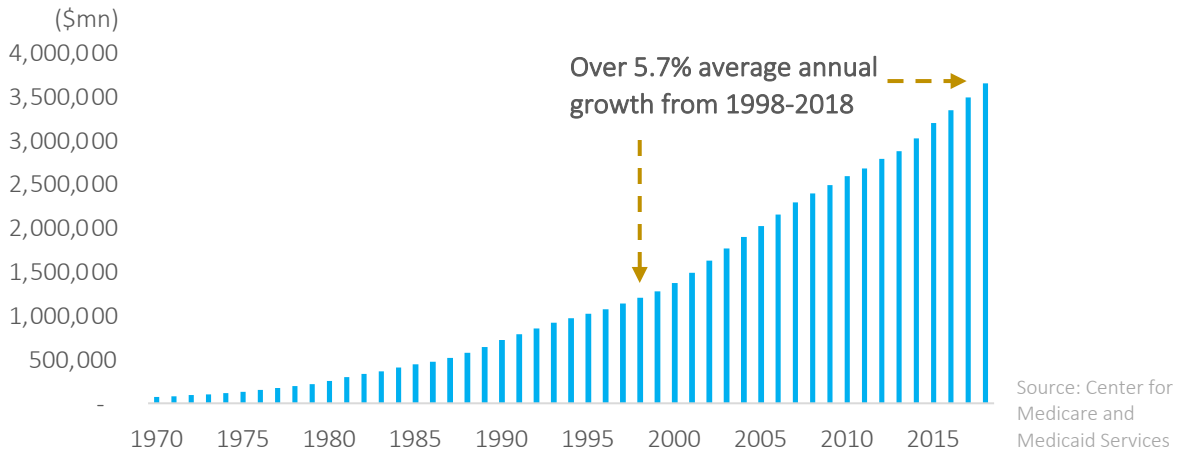
Other Areas of Innovation within Healthcare

Connected/ Cognitive Devices Small devices that track patient health, can alert medical professionals and deliver autonomous care	Electroceuticals Implantable devices that can alter the neurological system’s impulses and treat a number of diseases	Targeted & Personalized Medicine Novel drug therapies that use a patient’s own cells or deliver targeted genetic material and treatment
Robotics Next-generation robots could enable minimally invasive approaches and ease the physical burden of surgeries, as well as perform tasks in the ER	3D Printing Technology that can produce customized, 3D structures with biological and industrial materials, creating organ replacements and personalized prosthetics	Big Data & Analytics Platforms that store, transmit, and analyze continuously expanding medical data sets can be used to identify patients who are candidates for highly targeted therapies.
Artificial Intelligence Technologies that convert analytical insights into cognitive engagement solutions can enhance diagnosis, improve predictive interventions, and optimize clinical productivity	Blockchain This decentralized digital ledger technology could enable more secure transactions, more confidential patient data sharing, and more democratized data access	

Source: McKinsey & Company

Long-Term Outlook: A Growing Economic Juggernaut

The Simple Story of U.S. Healthcare Spending: Growth



The long-term story of the U.S. healthcare sector is at once simple and deeply complex. First, the simple part: growth. The healthcare sector has seen long-term growth in an impressive number of areas: absolute spending, percentage increase of spending, percentage of GDP, percentage weighting in the S&P 500, numbers of new biomedical firms, and FDA approvals for new treatments. While political discourse can rattle healthcare markets from time to time, deep secular trends like an aging population and increasing technological sophistication will facilitate expanding markets and treatment methods.

The world's aging population, coupled with its rising middle class population—particularly within emerging markets—will continue to fuel global healthcare spending growth. Furthermore, as the baby boomer generation in developed markets move into their 70s and 80s, there will be ever-growing demand for traditional medical services.

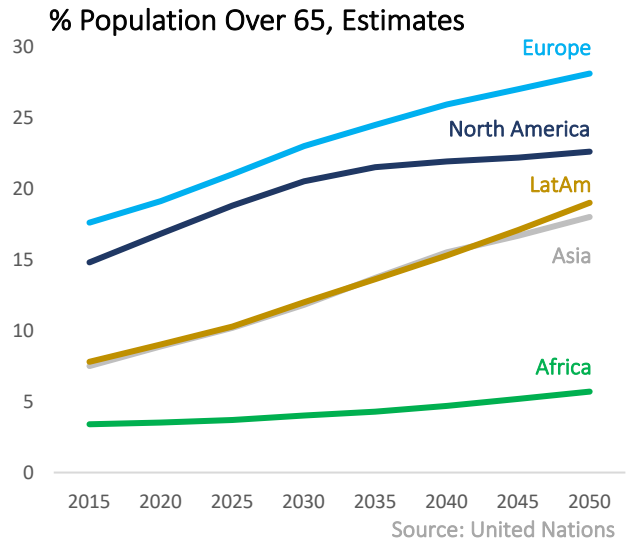
Megatrends like the growing role of technology—alongside updated regulations—will open new markets by allowing providers to give care to more people remotely and across jurisdictions. Add to this the growing number of biotech firms and novel devices, and there should continue to be a great amount of healthcare innovation that is ripe for investment. This innovation will increase the efficiency, quality and types of care available.

Finally, the COVID pandemic brought a newly critical eye to the administrative bloat of the healthcare sector, spurring greater and better access to care through modernization and waste reduction.

Themes of Long-Term Healthcare Growth

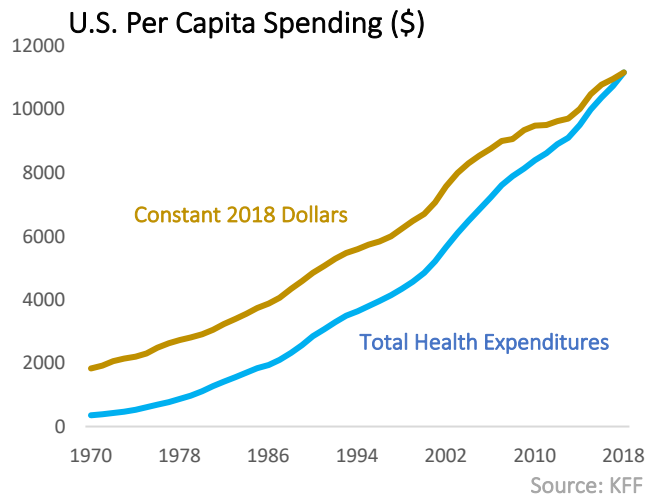
Aging Population

- In 2018, about 16% of Americans were over the age of 65, and this number is expected to increase to 22% by 2050
- The world population is also aging, and the over-65 population is forecast to increase from 9% currently to 16% in 2050
- People over 65 tend to use much more healthcare services than other demographics



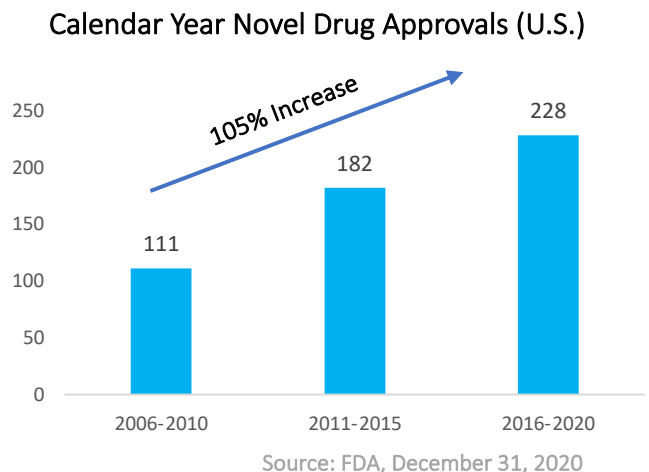
Greater Spending

- Overall U.S. healthcare spending increased by over 50% from 2008-2018, with per capita spending increasing 41%
- A growing middle class in lower-income countries is expanding global access to—and spending on—healthcare services, creating massive new markets



Technology / Innovation

- Rapid innovation and scientific breakthroughs are creating new therapies, drugs and devices at a quickening pace
- Spurred by the pandemic, new approaches to treatment and healthcare administration—like telemedicine and electronic records, respectively—are bringing efficiency and savings



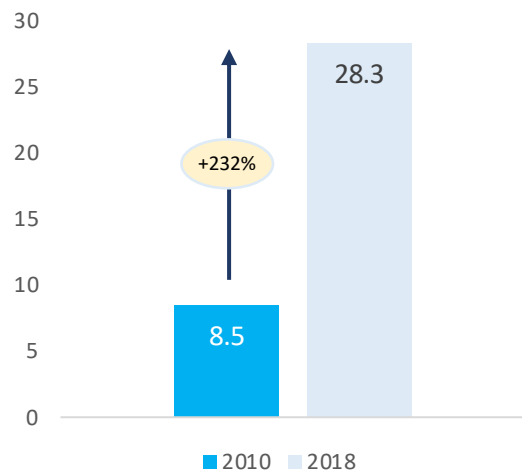
Spotlight on Biotech

Biotech has experienced massive inflows of investment that have propelled innovation and growth in the sector. Even before the onset of the COVID crisis, performance of biotech has been impressive, despite its vulnerability to significant short-term volatility in mid/small-cap biotech companies. Further, the lower P/E multiples (often less than 2x) of biotech firms further underscores the opportunity in this innovative sector.

Biotech’s innovation and performance have come amid longer-term trends of rising valuations, growing M&A activity and broad growth. In addition, steadily rising rates of FDA approvals mean that there is a growing and thriving pool for potential investments in the sector.

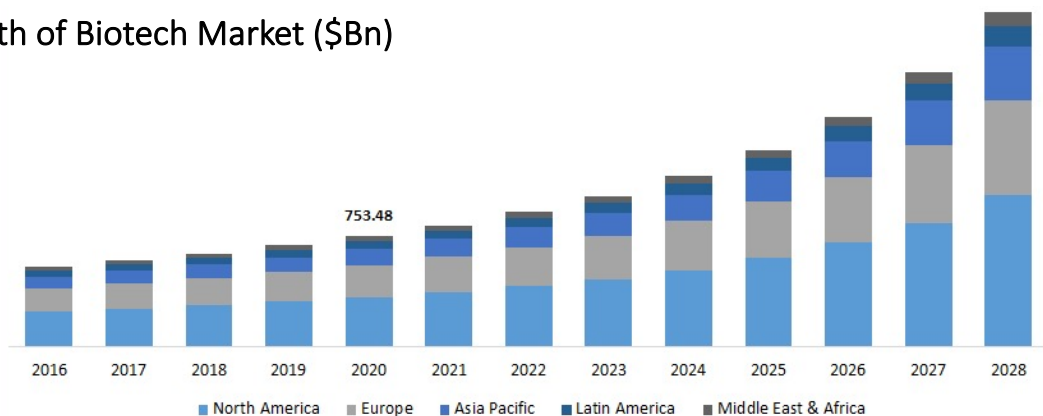
Biotech’s current global market size is about \$753 billion and is expected to see a 15.83% compound annual growth rate (CAGR) through 2028, growing to \$2.44 trillion.¹ The market is diversifying, and in 2018 there were almost five times as many biotech firms valued from \$500 million to \$1 billion versus 2008. There is a wide dispersion between these firms in size, positioning and focus, which offers opportunities to add value: both long and short. Finally, the regulatory nature of biotech—with its yes-or-no trials—also presents a high-octane investment opportunity for hedge funds looking for winners and losers.

Investments Fuel Pharmaceutical & Biotech Innovation (\$B)



Source: McKinsey & Company

Growth of Biotech Market (\$Bn)



¹Grand View Research

Source: Polaris Market Research Analysis

Reducing Inefficiencies Creates Even Greater Opportunity

“Substantial wastes and inefficiencies in healthcare...could be costing the U.S. \$1 trillion...These gaps, failings and their corresponding enormities are an entrepreneur’s and investor’s dream.”

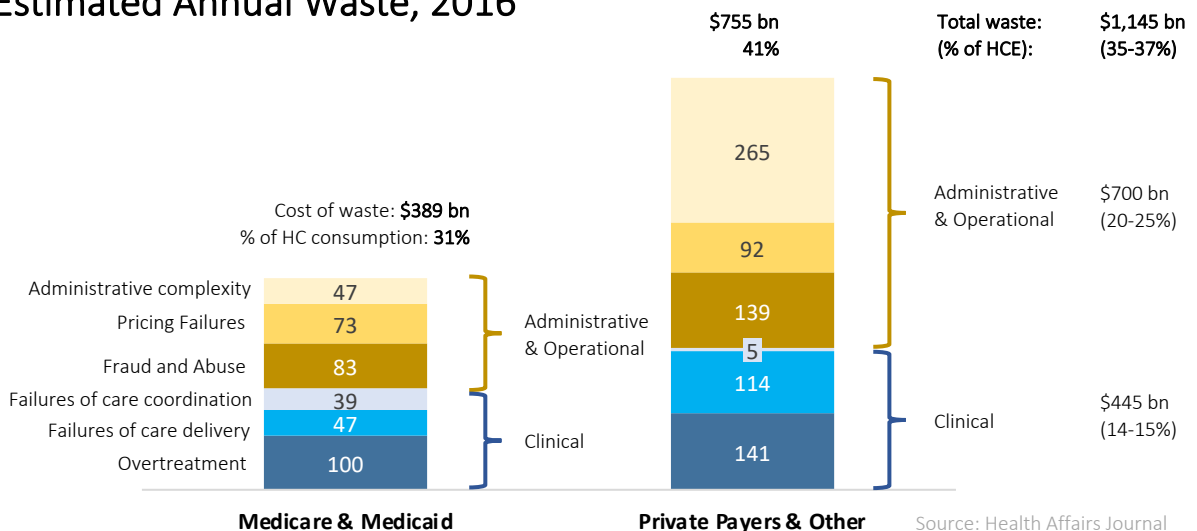
- Jeff Greenstein, Pres. of YIS Capital

In addition to the massive increases in innovation, and partly as an outgrowth of it, the healthcare industry also stands to benefit from a focus on its current inefficiencies. The battle against COVID proved to be a stress test for the U.S. healthcare sector: exposing its inequities, weaknesses and waste. As healthcare companies look forward, investors will have gained insights into the many areas where they can improve quality while reducing costs.

This has accelerated innovation in the healthcare sector, which can play particularly well to the strengths of hedge funds—creating long and short plays as fund managers identify the innovators they see as likely to succeed, as well as those likely to falter, or fail. Further, many areas that are ripe for disruption are not technically complicated. There is over \$700 billion in waste within administrative and operational activities alone.

Investors with a focus on efficiency, in addition to fundamental medical research, should push growth in the healthcare sector moving forward.

Estimated Annual Waste, 2016



Healthcare and Biotech Sector Prognosis: Positive

Healthcare has been benefitting from a virtuous cycle of increasing innovation and investment, and this cycle shows no signs of slowing. Some healthcare experts believe that this innovation will result in exponential growth and substantial advancements in numerous areas. In addition to this innovation, the identification of vast inefficiencies will help chart the path for new, more efficient companies and processes to disrupt and improve current systems. Deep, long-term trends will also continue to benefit healthcare companies into the future, with aging populations and increasing spending pushing care to new heights.

Further, the diversification across healthcare can create multi-faceted, uncorrelated returns in the short term, as some areas of the sector have very different growth drivers than others (e.g. therapeutics developers vs prosthetics manufacturers). This phenomenon came to the forefront during the early days of the COVID crisis, when certain parts of the healthcare sector were hit hard, while others actually experienced growth.

We believe biotech presents an especially compelling opportunity, as its own increasing rate of innovation—and growing regulatory efficiency—continues to fuel growth of the sector worldwide. The biotech market may be especially interesting for hedge funds, with a wide dispersion between firms, downside protection paired with relatively low pricing, and a regulatory structure that starkly results in winners and losers.

The healthcare and biotech sectors are likely well-positioned to provide investor portfolios with long-term growth and diversification well into the future—driven by ever-increasing rates of innovation, significant opportunity for improved efficiency and support from underlying growth trends. This combination of factors makes the case for substantial investment in the healthcare and biotech space – participation in both the long and short side via hedge funds creates the potential for even more meaningful long-term rewards.

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