PRIVATE MARKET INSIGHTS

UNDER THE MICROSCOPE: COVID-19 AND THE US HEALTH CARE SECTOR

Key Takeaways

- **Health care investments have been resilient during and after prior downturns and we expect this to remain true in the wake of COVID-19.**
- **COVID-19 is expected to accelerate trends in multiple health care sub-sectors, including virtual care adoption, value-based care model proliferation, and the onshoring of pharmaceutical contract manufacturing.**
- **The crisis has also catalyzed ongoing paradigm shifts in health care provision in the areas of clinical trial virtualization and the Social Determinants of Health, creating interesting investment opportunities.**

To say that the health care sector has been in the spotlight recently would be an understatement. The COVID-19 pandemic has placed health care systems across the globe under acute strain as governments and providers alike scramble to cope with changing care protocols, capacity and equipment shortages, and an uncertain financial picture. To compound matters, the sector is not just facing the direct impact of COVID-19, but also the secondary impact of the economic downturn triggered by the pandemic.

For investors with exposure to US health care, the pandemic has likely raised several questions. Most importantly, how will COVID-19 affect the sector looking forward? Which sub-sectors have an attractive investment outlook? And how do I best access these opportunities?

THE HUMAN IMPACT OF COVID-19

It is important to acknowledge that any pressure investors are facing is rendered inconsequential by the human toll exacted by the pandemic. Loved ones have been lost, record numbers of Americans are unemployed, and many have consequently lost their health insurance coverage at a crucial time. These concerns are the highest priorities, and we at HarbourVest hope that many of the trends that are emerging across the health sector will ultimately help to raise the quality of patient care in the post-COVID environment.

THE HISTORICAL RESILIENCE OF US HEALTH CARE

Before we examine the direct investment impact of the virus, let's take a step back and look at the big picture. Fundamentally, health care remains a large, growing market, accounting for just under 20% of US GDP. [1]

Sector growth over the last few decades has been driven by a combination of rising costs, demographic changes and a corresponding increase in chronic diseases, accompanied by the recent expansion of insurance coverage following the passage of the Affordable Care Act (ACA).[2] These factors have helped drive up health spending at a rate exceeding GDP by about 2.5 percentage points since 1970.[3]

This growth in demand is reflected in the historical performance of private equity health care investments. History is not necessarily indicative of the future, but track records can prove instructive – particularly as the fundamental drivers of health care performance remain largely unchanged.

We analyzed the historical performance of private health care investments using a proprietary dataset of US buyout deals completed from Q4 2006 to Q4 2019 comprising nearly 3,000 unique companies. The results illustrate how resilient the sector has been relative to other private equity sectors (see Chart 1).

Track records can prove instructive – particularly as the fundamental drivers of health care performance remain largely unchanged.

As Chart 1 shows, compared to other sectors, private equity health care generated stronger gross time-weighted returns with lower levels of risk (measured by standard and downside deviations, worst-quarter return), which was reflected in a better overall risk-adjusted return (measured by the Sortino ratio).

> CHART 1: US health care sector has performed consistently well across cycles

Analysis of performance of health care sector, Q4 2006 to Q4 2019

	Time-Weighted Returns	Standard Deviation	Worst Quarter*	Downside Deviation	Sortino Ratio**
Gross annualized returns from US buyout deals, sector-level comparison					
Consumer	12.2%	15.2%	-22.1%	6.6%	1.84
Financials	14.9%	19.3%	-26.6%	8.8%	1.72
Health Care	19.0%	10.6%	-8.6%	3.3%	5.41
Industrials	17.7%	11.9%	-7.7%	3.4%	4.98
Information Technology	20.3%	16.5%	-23.2%	7.0%	2.80

Source: HarbourVest.

All return data from Q4 2006 to Q4 2019, in USD. As of December 31, 2019. *Lowest quarterly return recorded during the period. **For more information on the Sortino ratio please visit: http://pages.harbourvest.com/rs/509-TRI-465/images/Explainers_Sortino_Ratio.pdf. Gross time-weighted returns data were calculated with investment-level data from a HarbourVest proprietary dataset. These returns do not reflect the management fees, carried interest, and other expenses borne by investors in the HarbourVest managed funds / accounts, which will reduce returns.

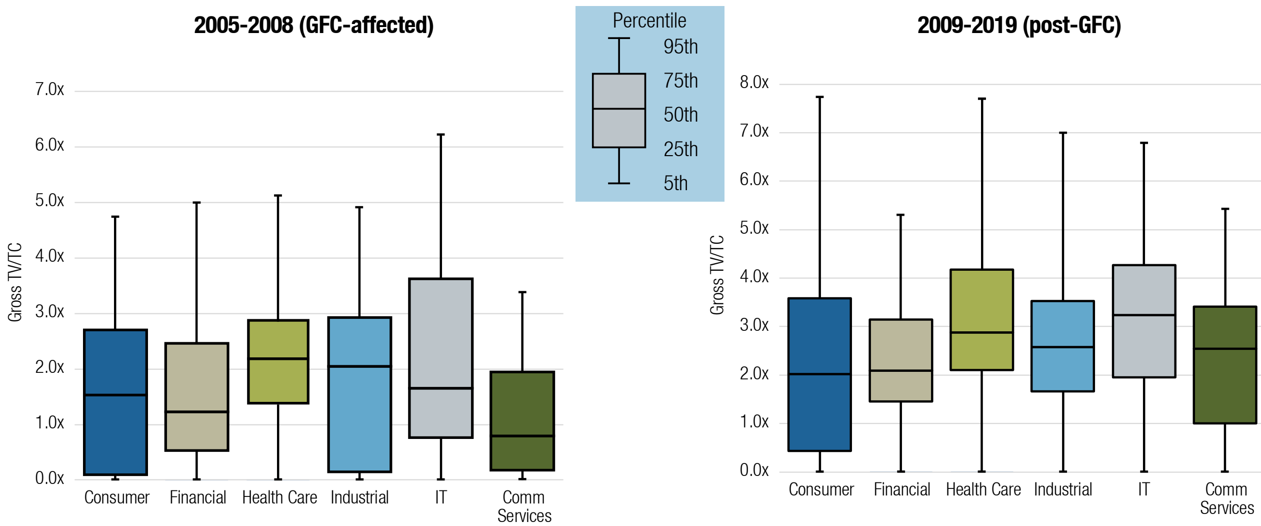
[1] Statista, as of April 2020 (https://www.statista.com/statistics/184968/us-health-expenditure-as-percent-of-gdp-since-1960/).

[2] In terms of costs, average combined worker and employer contributions for family coverage increased 54% from 2009 to 2019. Source: Kaiser Family Foundation, 2019 Employer Health Benefits Survey

[3] Leonard Schaeffer, presentation to American Healthcare Congress, Center of Medicare and Medicaid Services

> CHART 2: Health care investments have produced strong returns in both weak and strong environments

Gross realized and partially realized US buyout deal returns by sector at different percentile levels



	Consumer	Financial	Health Care	Industrial	IT	Comm Services	Consumer	Financial	Health Care	Industrial	IT	Comm Services
Average TV/TC	2.08x	1.71x	**2.32x**	2.25x	2.01x	1.55x	2.28x	2.85x	**3.14x**	2.60x	3.16x	2.55x

Source: HarbourVest. All returns are in USD and presented gross of fees and carried interest. Includes all realized or partially realized US buyout deals made by HarbourVest and in HarbourVest-monitored accounts during the specified periods. As of December 31, 2019. Sample size: 604 deals (2005-2008), 844 deals (2009-2019). Deal considered partially realized if realized value was greater than 60% of total value or realized value exceeded total cost. TV/TC = Total Value-to-Total Cost Multiple. Comm = Communications.

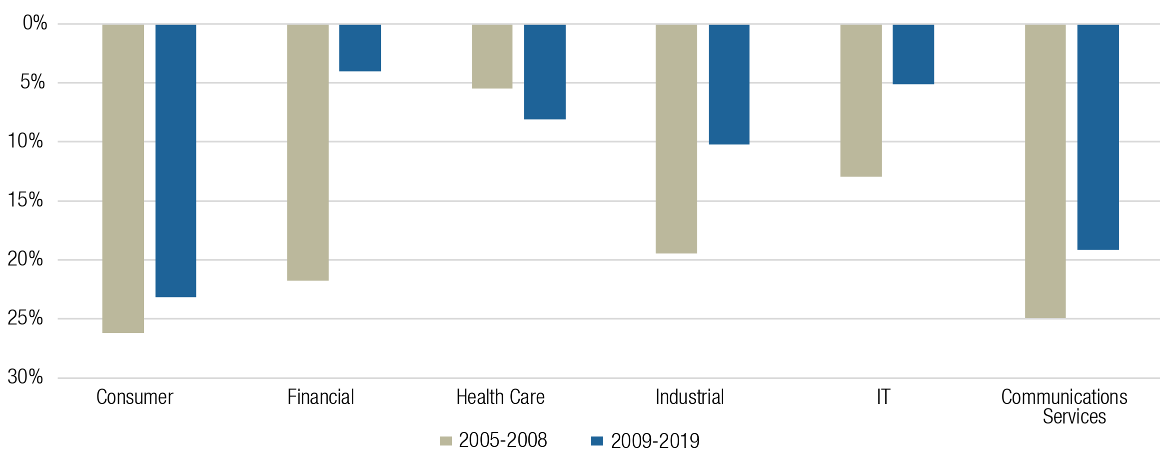
More importantly in the current economic context, health care appears to have performed better than other sectors through the investment period most affected by the Great Financial Crisis (GFC) (see Chart 2). Looking at investment-level returns for deals made between 2005 and 2008, the health care sector produced the highest return multiple (2.32x) with lower return dispersion (as measured by the interquartile range, represented by the boxes in Chart 2).

The lower-risk characteristics of health care investments are highlighted by the loss ratios during these two periods (see Chart 3). The sector experienced the lowest loss ratios in the GFC-affected period and remained among the strongest sectors in the years after the crisis.

Though the challenges of the current crisis are unique and distinct from those of the GFC, we believe health care should remain resilient through the current economic dislocation.

> CHART 3: Private equity health care investments resilient in a downturn

Loss ratios for realized and partially realized US buyout deals during GFC-affected and post-GFC periods



Source: HarbourVest. All returns are in USD and presented gross of fees and carried interest. Includes all realized or partially realized US buyout deals made by HarbourVest and in HarbourVest-monitored accounts during the specified periods. As of December 31, 2019. Loss ratio is defined as the percentage of capital realized or held below cost, net of any realized and unrealized value, over total invested capital. Deal considered partially realized if realized value was greater than 60% of total value or realized value exceeded total cost.

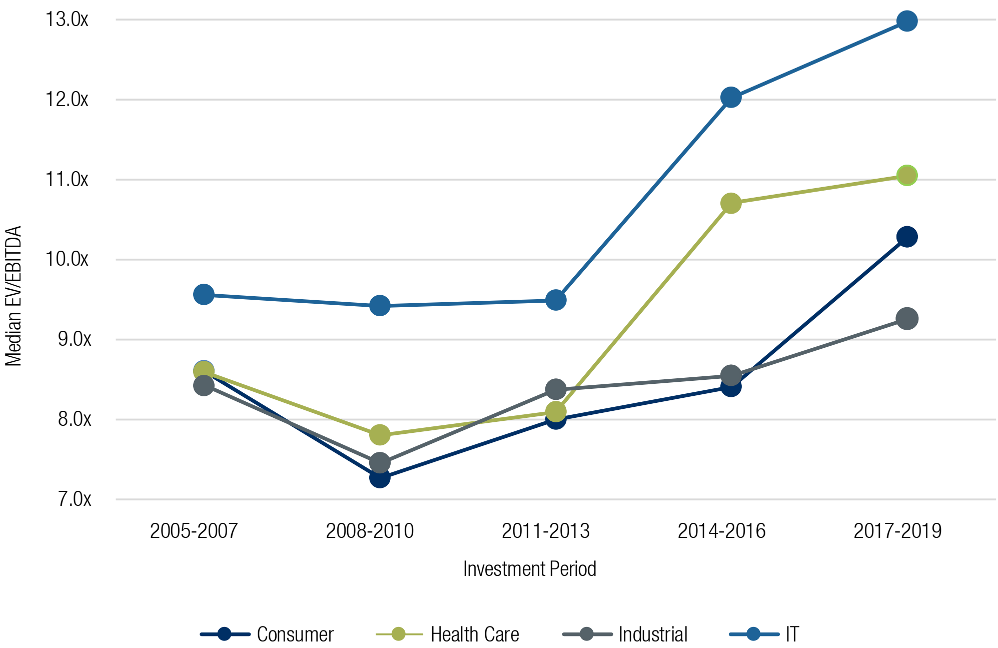
HEALTH CARE INVESTMENT RISKS AFTER COVID-19

While the direct health-related impact of the pandemic is expected to gradually dissipate, the economic damage may be evident for far longer. In the shorter term, acute care hospitals and site-based providers will likely remain under pressure while the pandemic persists. Looking further out, we see two main risks for investors in the health care sector:

- On the demand side, **lingering unemployment** could be a headwind for all major players in the health care ecosystem. Shifts in the enrollment mix towards lower reimbursement payors (i.e., Medicaid) may be a net negative for providers. Furthermore, with patients now responsible for a greater share of health care costs than a decade ago, more may be unable to pay their medical expenses. Recessions can also more broadly engender a cautious approach to spending.
- On the investment side, **relatively high purchase-price multiples** could potentially limit returns. Health care's strong recent performance has unsurprisingly driven greater competition for assets in the sector (see Chart 4). This may understandably raise concerns that investment upside could be limited. However, commitments to private market funds made today will likely be invested over the next couple of years at least, and health care multiples may fall back in the wake of the pandemic. Irrespective of this, it is important to remember that returns from private investments are a function of both the entry and exit environments, and it is impossible to precisely forecast the economic situation in which these investments are expected to be realized.

> CHART 4: Multiples for US health care buyout transactions have risen in recent years

Entry multiple trends by sector, US buyouts, 2005 to 2019



Source: HarbourVest. As of September 30, 2019. Entry multiple data sourced from HarbourVest investments and data collected by HarbourVest as part of due diligence on US buyout deals. Dataset includes 1,114 deals with investment dates between Q1 2005 and Q3 2019.

HEALTH CARE INVESTMENT OPPORTUNITIES AFTER COVID-19

Despite these risks, our view is that the industry is broadly benefiting from secular tailwinds that are expected to continue to drive growth. Indeed, we see many health care sub-sectors with compelling investment opportunities.

For example, the **rise of telehealth** will continue. We expect COVID-19 to accelerate existing growth trends. However, penetration rates are highly likely to fall back after the pandemic and virtual care will remain secondary to in-person care.

Telehealth offerings are currently more akin to virtual urgent care clinics, and are often disconnected from the patient's primary care provider and electronic medical records. Post-pandemic, we expect virtual care to be better integrated into care models in a way that blurs the distinction between the physical and virtual experience. This will take time, as full integration is costly, and few providers have the resources and ability to roll it out at scale. However, continued improvements in remote patient monitoring technologies should support this process by boosting the data made available to providers and thereby enhancing the quality of at-home care. The big question in terms of overall provider revenue is how virtual care will be billed as part of updated payment models.

Another major investment theme is likely to be the continued **proliferation of risk-bearing provider models and accelerated provider-payor consolidation**. The current liquidity squeeze on providers is likely to lead to valuation discounts – potentially in the region of 30% to 40%. This may create new opportunities for horizonal and vertical integration in a fragmented industry, and there is significant private market dry powder available for such investment. This process could drive cost savings in terms of care provision and the physical sites of care, and facilitate the implementation of outcomes-based payment models that transition risk from payor to provider.

A joint venture recently announced between a large US insurance provider and a private equity firm may be a sign of things to come. The venture will develop and operate senior-focused primary care centers with value-based, rather than service-based, fee structures. Wider adoption of this model will depend on the returns made on these initial investments and the time required to realize those returns. The strong recent IPO for risk-bearing primary care provider Oak Street Health suggests robust public investor appetite for these value-based care models.

We also see interesting opportunities for **US- and Europe-based pharmaceutical contract manufacturing and contract research organizations**. Increasing supply chain disruption and historical quality control issues in Asia had already elevated the risk of offshoring and kick-started a shift towards domestic contractors. The pandemic is likely to accelerate these onshoring trends.

POTENTIAL HEALTH CARE PARADIGM SHIFTS DUE TO COVID-19

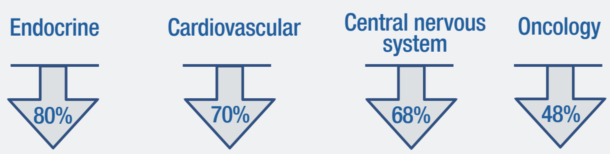
In addition to these major trends, there are a couple of less obvious but no less important paradigm shifts being catalyzed by COVID-19.

Shift 1: Clinical trial virtualization

Prior to the pandemic, clinical trials had gradually become longer, more expensive, and ultimately less successful. COVID-19 has only exacerbated these issues, primarily due to site closures, as hospitals close off facilities to focus resources and services on the pandemic. Declining patient enrollment is also a factor.

Sharp decline in global patient enrollment in clinical studies

Year-on-year decline in clinical trial enrollment, by therapeutic area, in March 2020



Source: Medidata data from Outsourcing-Pharma.com, May 5, 2020, https://www.outsourcing-pharma.com/Article/2020/05/05/Medidata-shows-COVID 19-impact-on-clinical-trials

These delays are costly, resulting in lost revenue opportunities and higher costs. As such, we expect a significant reconfiguration of the way clinical trials are conducted to reduce their reliance on physical sites. Virtualization of trials will be a complex process, and likely to happen only gradually, but it should create a more efficient process and help mitigate future disruption risks.

We expect new patient enrollment strategies to emerge, likely using real-world clinical data to identify new potential trial candidates and at-home diagnostics to verify trial eligibility. Protocols will also need to be adapted to facilitate direct-to-patient support, as well as allowing for trials to be conducted either in-home (with automatic and self-reporting of trial data) or at alternative sites.

Regulators have already started to pave the way for wider adoption of virtualized trials, with the US Food and Drug Administration issuing guidance in March to support companies in evaluating alternative methods for conducting trials.

> **Social Determinants of Health**
> The conditions in which people are born, grow, live, work and age. These circumstances are shaped by the distribution of money, power and resources at global, national and local levels
>
> *World Health Organization*

Shift 2: Rising use of Social Determinants of Health

That social factors are a critical determinant of health is not a new insight, but the stark differences in the impact of the pandemic on different communities across the US has helped shine a spotlight on the importance of the Social Determinants of Health (SDoH).

Though modern medicine continues to make incredible advances in treating illnesses, medical care is still estimated to account for less than 20% of the modifiable contributors to health outcomes.[4] The rest is accounted for by SDoH.

US health insurance provider Humana recently highlighted the potential advantages of effectively incorporating SDoH into risk-adjustment models, including helping to identify care disparities and improve cost predictions.[5]

New and innovative SDoH data providers should continue to emerge in lockstep with improvements in, and new applications of, machine-learning technology. Demand for these services will be driven by risk-bearing organizations, particularly in the managed Medicaid and Medicare areas, seeking innovative ways to control growing health care spend. Attributing improved health outcomes and cost savings to SDoH initiatives will be the key challenge for software and services vendors as this new sub-sector emerges.

Putting SDoH into action: Sample business models

1. **Provider-focused model.** This approach looks to leverage SDoH data to help improve the targeting of local health care provision. This may include creating neighborhood hubs in areas of greatest need or helping direct mobile care teams and resources via real-time tracking data derived from remote monitoring solutions.
2. **Payor-focused model.** This business model focuses on providing advanced analytics, leveraging algorithms and machine learning to empower health care organizations to interpret SDoH metrics and uncover associated risks.

[4] Hood, C. M., K. P. Gennuso, G. R. Swain, and B. B. Catlin. 2016. County health rankings: Relationships between determinant factors and health outcomes. American Journal of Preventive Medicine 50(2):129-135.

[5] Health Payer Intelligence, April 23, 2020: https://healthpayerintelligence.com/news/humana-calls-for-social-determinants-of-health-in-risk-adjustment

ACCESSING HEALTH CARE OPPORTUNITIES
For advice on how to best access opportunities in the health care sector and information on building a private markets program please get in touch with your HarbourVest contact or email clientservice@harbourvest.com.

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