# Checking the Pulse

A DEEP DIVE ON
HEALTHCARE SPECIALIST FUNDS

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Jefferies

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In our lifetime, HIV infection has gone from death sentence to manageable disease.

In our lifetime, the mortality rate for most childhood cancers has been halved, and the survival rate for some of the most common childhood cancers nears 90%.

And in our lifetime, we've prolonged life expectancy by nearly a third, adding almost 20 years of life for some groups.

So perhaps it is no surprise that the fastest growing sector of the U.S. economy – both in terms of GDP spend and new jobs – is no longer manufacturing or retail. For the first time, these two growth engines of the 20th century have been surpassed by healthcare – a broad, diverse and complex sector that continues to expand on the back of multiple tailwinds and shifts in innovation.[1] There are many drivers for this, but ultimately, it is evidence that health systems are improving access to and delivery of the goods and services that enhance outcomes across the globe.

As an investible universe, healthcare has long been rife with both considerable opportunity and frustration. Some of the sector's outcomes are ground in highly binary events: drugs either work or they don't – new therapies are more efficacious than existing ones, or they aren't. As such, some corners of the industry have witnessed some of the strongest performance and steepest drawdowns in the decade since the Global Financial Crisis.

This has happened as alternative investment allocators have increased their focus on specialist, sector or niche funds – putting healthcare specialists in the spotlight. A review of Jefferies Capital Intelligence data reveals that for the first time in recent years, sector-based mandates now account for more than 40% of all open Equity focused searches for 2017-2018 – of which healthcare is a material percentage.[2]

> Healthcare has become too large a sector for many allocators to ignore – and given the industry's complexity, potential volatility, and technical nature, many report seeking exposure via active management. **Checking the Pulse: A Deep Dive on Healthcare Specialist Funds** explores the backdrop for these investments and digs into the broad and diverse levers that can drive conversion of interest into allocation.

We conducted deep dive interviews with and research of nearly 70 firms with active healthcare specialist allocations. It is not meant to be an exhaustive catalogue; rather, we wanted to gain a better understanding of what moved diverse allocators' interest…to activity. Healthcare isn't immune to headline risks, but it remains one of the most diverse and rapidly evolving sectors – and one we believe will continue to draw considerable attention and interest in the coming years.

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[1] "Heath Care Just Became the U.S.'s Largest Employer," *The Atlantic*. January 9, 2018

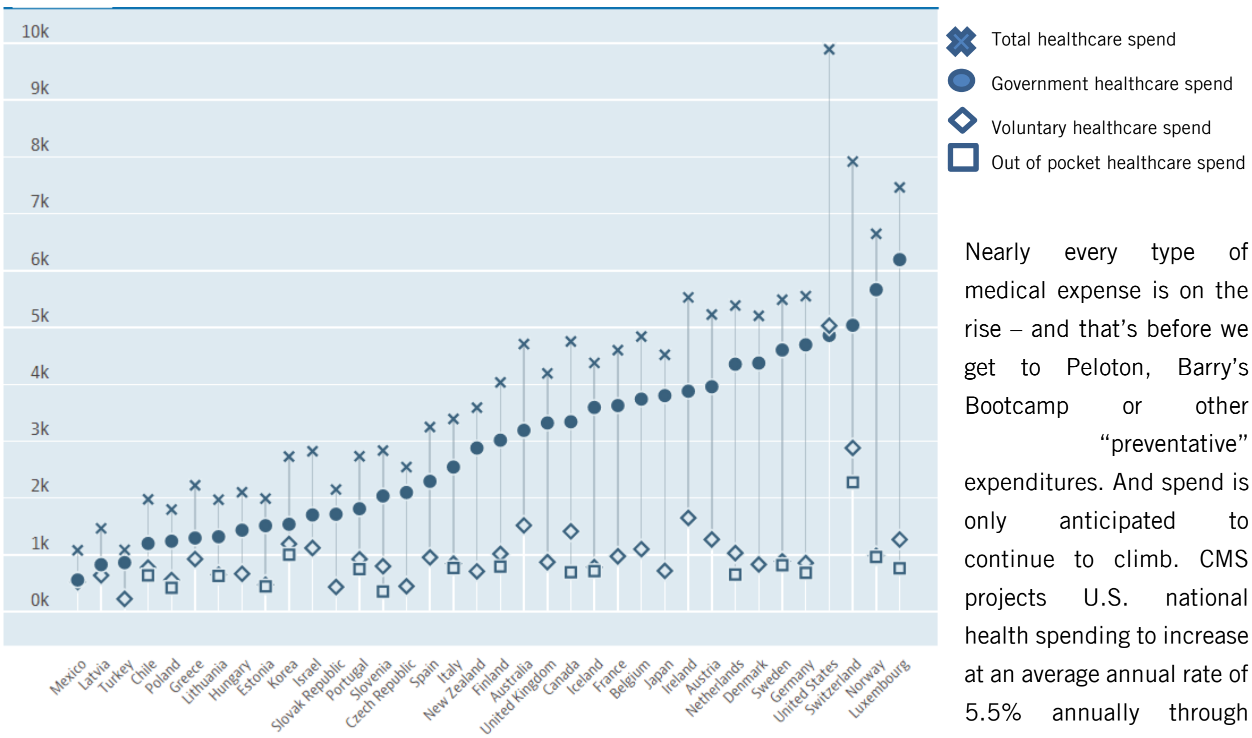
[2] Jefferies Capital Intelligence

## Across the Universe:
## Secular Trends, Capital Markets Activity and Recent Performance in Healthcare

Let's start at the broadest level. In the past half century, statistics measuring length of life, quality of life, and (although to a less degree in some places) equality to access of care have all improved. In 2018, life expectancies remain near all-time highs – and in most cases, continue to climb. Demographic trends across the globe are constructive on continued investment in and innovation for improving health outcomes for citizens – particularly as many countries wrestle with large and aging populations. And it's not just the extension in years of life, but improving the quality of those years, and access to both that are in focus.

In the U.S. – home to the world's biggest healthcare industry - healthcare represented more than $3.5 trillion of spend in 2016, nearly 18% of G.D.P., an all-time high.[3] In 2016, the Centers for Medicare & Medicaid (CMS) reported year over year growth for each of the following: Medicare spending, Medicaid spending, private health insurance spending, out of pocket spending, hospital expenditures, physician and clinical service expenditures, and prescription drugs.

Chart 1. Health Spending by Country (Total, Government, Voluntary in USD/per capita 2016)




*Source: OECD (2018), Health Expenditure and Financing: Health Expenditure Indicators[1]*

Nearly every type of medical expense is on the rise – and that's before we get to Peloton, Barry's Bootcamp or other "preventative" expenditures. And spend is only anticipated to continue to climb. CMS projects U.S. national health spending to increase at an average annual rate of 5.5% annually through 2026, reaching $5.7 trillion and nearing 20% of GDP by 2026.[4] The U.S. Bureau of Labor Statistics projects the health care and social assistance sector will add 4 million additional jobs by

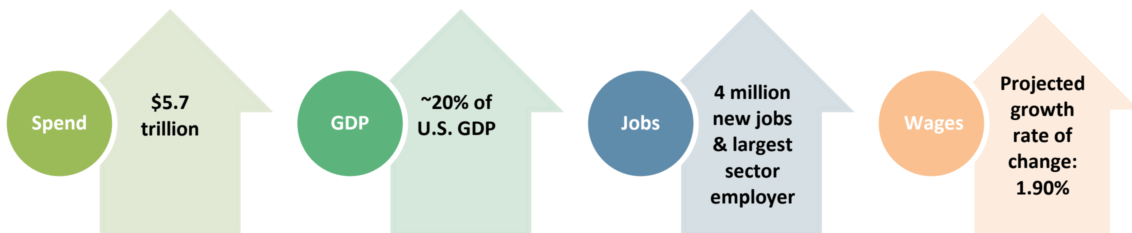
[3] The Centers for Medicare & Medicaid Services: https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nhe-fact-sheet.html. By comparison, it is 9% of GDP across OECD countries, on average.

[4] The Centers for Medicare & Medicaid Services: https://www.cms.gov/research-statistics-data-and-systems/statistics-trends-and-reports/nationalhealthexpenddata/nhe-fact-sheet.html

2026 – one-third of all new jobs, and accounting for the largest employment by sector. Wage and salary rates also have the greatest projected rate of change at 1.9%.[5]

Populations are growing, citizens are living longer, we are more focused on improving the *quality* of these years, and decreasing any inequalities to the access or outcomes of our health system. At the broadest level, demographic trends are underpinning this anticipated and enduring sector expansion. As one allocator remarked, "I like healthcare because if you cure cancer, it doesn't matter what other macro headwinds are. Consumers will want access to your product." Just as the economy in the 1970s was defined by manufacturing (GE, Ford), the 80s and 90s witnessed the rise of finance (Salomon Brothers, era of bank consolidation), and the 2000s and 2010s have been driven by technology (Google, Apple), perhaps the next decade will be remembered as when healthcare became truly ascendant.

### Health Dashboard: Topline U.S. Healthcare Projections Through 2026

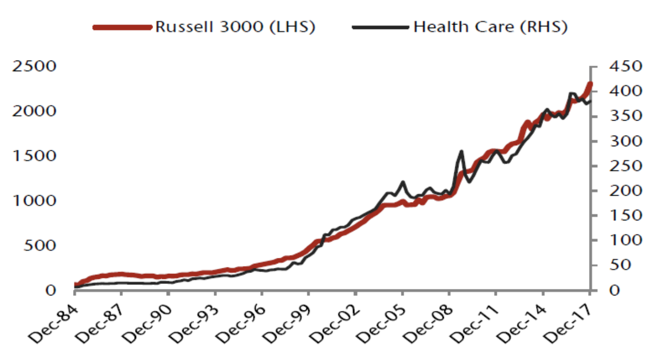



*Source: Bureau of Labor Statistics, Centers for Medicare & Medicaid*

But secular trends don't always necessarily create an attractive investment universe on their own – especially for a sector as complex and diverse as healthcare. Growth may be uneven, driven by binary outcomes, or at risk of regulatory, political or other headline risks. Many other factors, including individual company performance, intrasector correlation, or potential forward capital markets activity also comes into play.

If we turn to potential capital markets activity, as many Jefferies analysts have reported, the current environment mixes large cap companies flush with cash, many of whom must grow via acquisition, with potential benefits of future tax repatriation, and an explosion of smaller, more innovative firms working to bring new drugs, devices or therapies to market.

### Chart 3: Cash Levels Near Record in Health Care




Jefferies Healthcare Analyst Mike Yee points out that five of the largest healthcare firms (AMGN, GILD, CELG, BIIB, VRTX) have more than $80 billion in cash held outside the U.S., and could be used to fuel further M&A in the event of repatriation.[6] And in January, our Jefferies healthcare team noted, "Consistent with our positive underlying sector thesis in biotech…2018 should continue to be a robust year for deal activity driven by companies' need for top-line growth and to fill in revenue gaps, additional firepower available due to tax reform, continued evaluation of strategic alternatives

[5] Bureau of Labor Statistics. *Employment Projections 2016-2026.* November24, 2017. Available at: https://www.bls.gov/news.release/pdf/ecopro.pdf

[6] US Equity Strategy. JEF's SMID-Cap Strategy – the Trend of Strong M&A in Biotech Should Remain. March 19, 2018

and cost efficiencies, and managing drug/product life cycles."[7] 2018 has already witnessed year-to-date record breaking healthcare M&A activity, reaching $275 billion by May 1st.[8] And as some have pointed out, potential healthcare deals may be less likely to raise national security concerns, which have torpedoed others this year.

From a global perspective, even non-profits are getting in on the action. Nonprofits – while not investible, can give a sense of broader sector trends – and they are seeking opportunities abroad to help offset stagnant or weak growth at home. "The hospital industry has been slower to globalize than many other U.S. sectors…[but] now, more are seeking cross-border deals for the first time, while others are expanding their overseas reach."[9] The ability of various healthcare subsectors to capitalize on global growth, or pursue cross-border opportunities into markets with chronic diseases or aging populations could help shape the industry's next decade.

Given the diversity of the sector itself and the range of potential capital markets activity, a range of views on the sector make sense. Some are long term bullish, others are more cautious in the short term. But overall, engagement in the space remains heightened. As one allocator we spoke to for this piece remarked, "Do I want to own a railroad or a company with a bunch of potential drugs in the pipeline? Definitely the latter." And when allocators want exposure to healthcare, a few factors point them towards active management.

**Performance**

Over the last decade, the S&P 500 Healthcare Select Total Return Index delivered an average annualized return of 12.07%, second to only Consumer Discretionary's 14.16% (S&P Consumer Discretionary Select Sector Index Total Return).[10] XLV and IBB – the largest and most liquid generalist healthcare and biotech indices, respectively – have returned an average annual return of 11.95% and 15.82% in the last 10 years. Chart 4 reveals healthcare returns across both large and small caps (Russell 1000 and 2000) have outperformed. Of course, passive index investing is only one way to access healthcare exposure, and it may not precisely meet the LP's portfolio objectives.

Chart 4. Healthcare Returns Across Large and Small Cap in Russell 1000 and 2000 (2007 – March 14, 2018)

| | Large Caps | | | | | Small Caps | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Health Care | | Biotech | | | Health Care | | Biotech | |
| **Year** | **R1000** | **Return** | **Contribution** | **Return** | **Contribution** | **R2000** | **Return** | **Contribution** | **Return** | **Contribution** |
| 2007 | 5.8 | 7.5 | 0.9 | -4.8 | -0.1 | -1.6 | 13.5 | 1.6 | 14.7 | 0.5 |
| 2008 | -37.6 | -23.4 | -2.6 | 12.2 | 0.1 | -33.8 | -28.0 | -3.9 | -25.7 | -0.9 |
| 2009 | 28.4 | 22.8 | 2.5 | -0.6 | -0.1 | 27.2 | 23.9 | 3.3 | 39.4 | 1.7 |
| 2010 | 16.1 | 5.4 | 0.7 | 4.9 | 0.1 | 26.9 | 18.7 | 2.4 | 16.5 | 0.5 |
| 2011 | 1.5 | 11.4 | 1.2 | 20.3 | 0.3 | -4.2 | 3.6 | 0.4 | 7.0 | 0.2 |
| 2012 | 16.4 | 19.6 | 2.2 | 43.7 | 0.6 | 16.3 | 18.5 | 2.4 | 23.1 | 1.0 |
| 2013 | 33.1 | 42.1 | 5.0 | 71.5 | 1.3 | 38.8 | 51.8 | 6.5 | 71.4 | 2.5 |
| 2014 | 13.2 | 25.4 | 3.3 | 32.7 | 0.8 | 4.9 | 19.2 | 2.8 | 35.7 | 1.6 |
| 2015 | 0.9 | 7.2 | 0.9 | 8.2 | 0.2 | -4.4 | 8.0 | 1.1 | 12.5 | 0.6 |
| 2016 | 12.1 | -2.6 | -0.5 | -13.1 | -0.6 | 21.3 | -7.4 | -1.9 | -19.4 | -1.8 |
| 2017 | 21.7 | 22.2 | 3.1 | 19.6 | 0.6 | 14.6 | 35.6 | 4.6 | 54.5 | 2.5 |
| **YTD** | **3.3** | **4.3** | **0.5** | **8.1** | **0.2** | **3.4** | **12.3** | **1.9** | **14.4** | **0.9** |
| **Cumulative** | **149.1** | **236.8** | **18.3** | **432.6** | **3.5** | **134.6** | **307.0** | **22.9** | **579.2** | **9.3** |

Note: Data as of March 14, 2018.
Source: FactSet; FTSE Russell; Jefferies

7 M&A Expert Advisory Call: Key Takeaways. Michael Yee, Andrew Tsai, Kelechi Chikere, Ph.D. & Arshad Haider. Jefferies. January 23, 2018

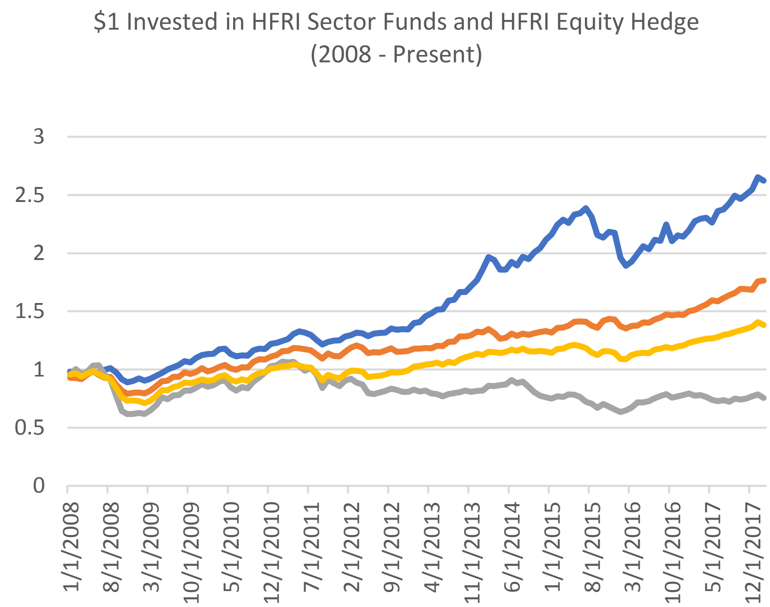
8 "A Frenzy of Dealmaking in Pharma Points to Cost Pressure." *The Financial Times*. April 25th, 2018

9 Melanie Evans, "U.S. Hospital Firms, Hungry to Expand, Look to China." *The Wall Street Journal*, April 22, 2018

10 S&P: U.S. Equity – Sector and Industry. Accessed on 4/11/2018.

For those who pursued healthcare exposure via alternative specialists over the last decade, we chart their performance via the HFRI Healthcare Index versus Technology or Energy specialist performance. Both Healthcare and Technology Indices outperform the HFRI Equity Hedge Index, while Energy underperformed.

Chart 5. Healthcare, Technology, and Energy Hedge Fund Specialist Returns 2008 – January 2018




*Source: HFRI*

But as we will walk through next, outperformance is only one of the drivers for healthcare specialist allocations. Whether seeking a hedge against retiree longevity, uncorrelated returns, or a complement to other portfolio characteristics – diverse portfolio objectives create a very broad set of drivers for allocators to move from interest to activity.

*Given sector diversity and allocators' portfolio objectives - what converts interest into activity is extremely tailored and specific to each manager and LP.*

Given the heightened interest in specialist funds, sector growth projections over the next decade, potential capital markets activity and anecdotal information about some of the challenges in moving from interest to allocation – we conducted a deep dive around the attitudes, appetite and drivers shaping allocator/healthcare specialist relationships.

## Healthcare Specialists: The Allocators' Views

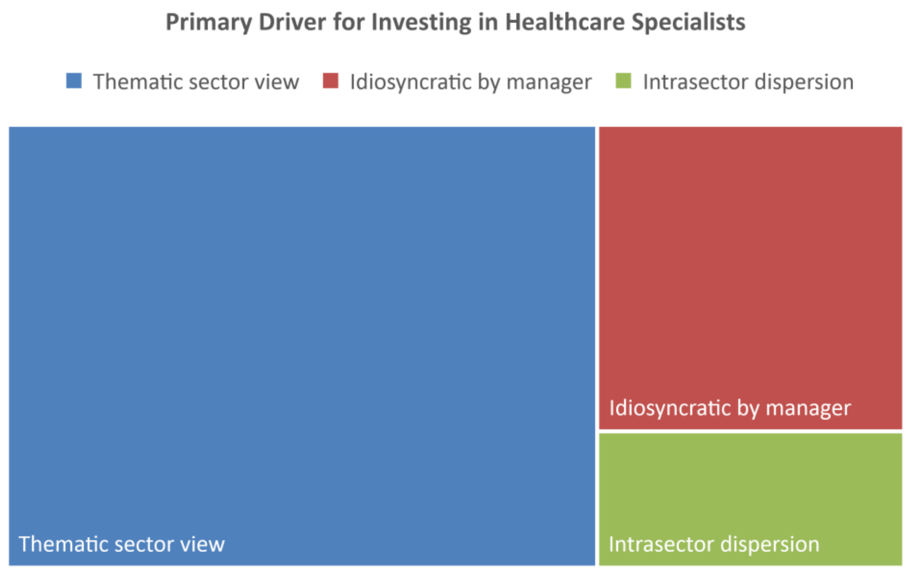
In the first quarter of 2018, the Jefferies Capital Intelligence team conducted nearly 70 deep dive interviews with and research of allocators with active investments in healthcare specialists. Our findings revealed that the drivers to, and outlook for specialists and the healthcare sector itself vary widely. It is clear there are more dimensions and levers to align between healthcare specialists and potential LPs than some other strategies. But certain patterns emerge – and can be instructive for both groups working to build lasting partnerships.

### *Why: Curing Cancer or Hedging Retiree Longevity*

It's an oversimplification to think everyone allocating to healthcare specialists is long term bullish on the sector. Secular trends matter, but actually putting money to work in the space is a result of multiple levers aligning between LP and manager.

*Thematic views on healthcare*

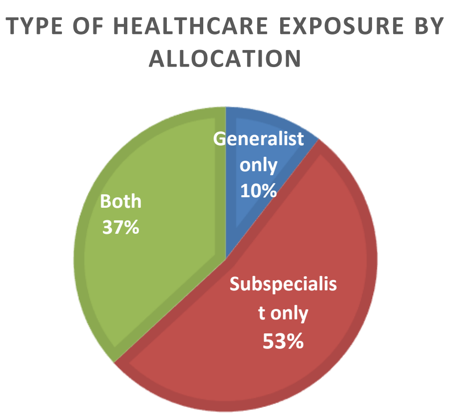
*Demographics*
*Diversification*
*Inefficient sector*
*Intrasector dispersion*
*Lack of correlation*
*Longevity hedge*
*Opportunity for growth*
*Secular fundamentals*
*Collapsing cost of technology*
*Regional growth*




Healthcare is a diverse sector, spanning: equipment, suppliers, services, distributors, facilities, delivery, technology, biotech, pharma, and devices. Its specialist funds aren't much different. From diversified funds that span the globe to highly targeted subspecialties, some think healthcare is evolving as TMT funds have – with ever increasing niches or subspecialization. Just as technology firms morphed into diversified versus specialized and subsequently into software, hardware, semis, cloud, internet, A.I., blockchain, etc., healthcare is beginning to get more targeted and specialized.

At the broadest level, more than two-thirds of our participants' allocations are on the back of positive thematic opinions on healthcare as a sector: that it offers strong fundamentals for long term growth, that the collapsing cost of technology will create considerable opportunity for innovation and discovery, that it delivers the right type of diversification for a portfolio. Slightly less than one-quarter of healthcare sector allocations are driven primarily by an idiosyncratic pitch by the manager (typically that it is more niche or unique than other specialist funds), and just over 10% are primarily driven by intrasector dispersion.

With regards to specific allocations, one-third of our participants have *both* generalist *and* subspecialist (often biotech or therapeutics) exposure. Our interviewees reported an average of three current healthcare sector allocations, and nearly all had at least two active allocations. More than half or participants choose to focus on subspecialists only for their allocations. Only 10% of the time did allocators report having only generalist exposure. And about one third of the time, LPs have both generalist and subspecialty exposure in their portfolio. This may be partially explained by the perceived ability to access generalist healthcare exposure more cheaply via passive products, and the higher hurdle for risk/return profile than potential other products.




Where allocators are more active in subspecialties – whether therapeutics, devices, royalties, etc. – there is typically a highly specific driver or combination of variables at play triggering the allocation, in addition to a top down long term bullish view on the sector as a whole or a specific corner of the industry.

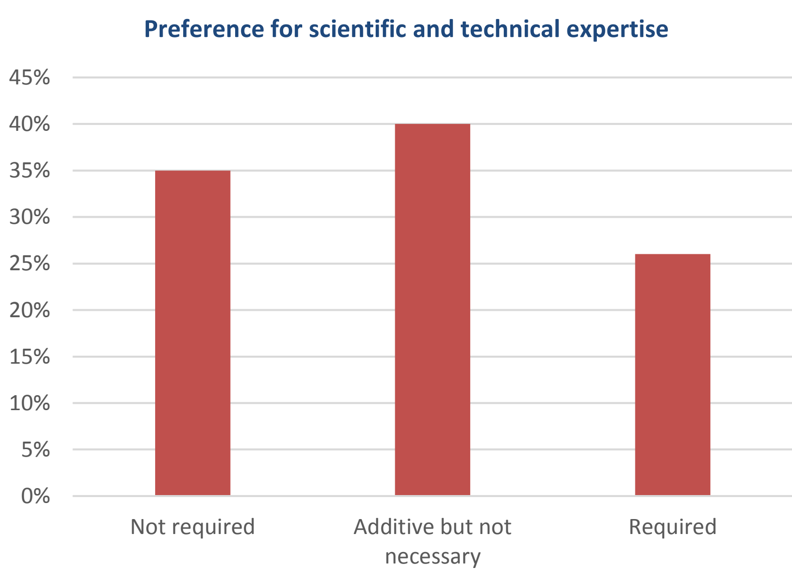
The majority of healthcare specialist allocators have a broader sector view, but it remains critically important for managers to understand what *type* of healthcare exposure the allocator seeks, why, and what type may already be in their portfolio. A number of participants remarked "We view healthcare as different than TMT because…" or "The house sees healthcare as different from energy because…" Healthcare is widely seen as a different animal than many other strategies and sectors, and these differences make it even more important for managers to be able to well articulate their value proposition and competitive advantage from others in their sector *and* vis-à-vis other sector specialists.

### *Who: MD, PM, PhD, CPA?*

Given these allocators prefer healthcare specialists to gain sector exposure, we were curious as to whether they would also focused on having additional scientific or technical expertise in house as well. If sector specialization is seen as a performance differentiator, we wondered if *scientific* expertise was viewed similarly.

From explicitly avoiding anyone who might fall "too in love with the science," to requiring decision makers have an advanced medical or scientific degree – the types of advanced scientific expertise allocators seek varies. It also was *not* correlated with whether an allocator preferred generalists or highly technical subspecialties. Slightly less than one-fifth of the time do allocators want someone with scientific expertise in the decision making seat. About a third of the time, allocators reported having no preference or expectation for scientific or medical expertise in house at all. It couldn't hurt…but it also wouldn't necessarily move the needle from interest to allocation.

But the largest group (~40%) highlighted they preferred a "deep bench" at the higher levels of the fund that possess some form of technical expertise, but that they really want to see this knowledge balanced with a professional risk taker. In most cases, they expected senior decision makers to exhibit both investment and advanced scientific or technical expertise, but want the *ultimate* decision maker to have more risk/investment management experience.




Sometimes, this "deep bench" is expressed across multiple investments – investing, for example, in one fund that may be a "Ph.D. farm," alongside another where senior decision makers have only investment experience.

*Because of potential sector volatility, many are focused on ensuring anyone who falls too "deeply in love with the science," is balanced by experienced investors and risk takers.*

### *How Much: Is Capacity an Issue?*

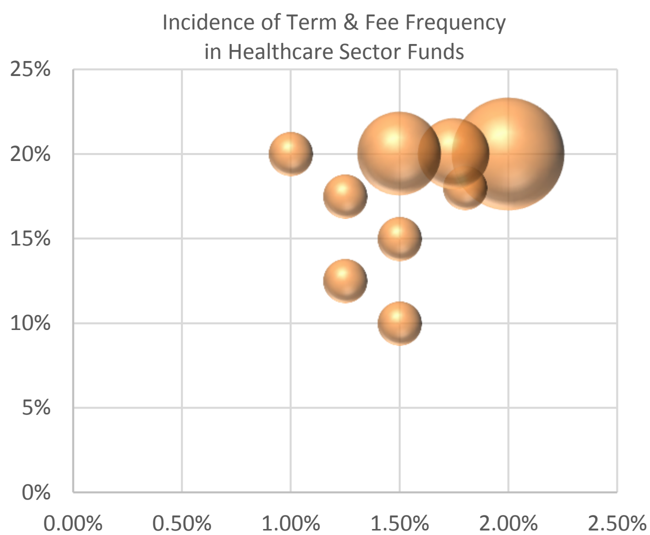
One of the most common concerns for healthcare specialists centered on fund sizing. More than two-thirds report having an upper bound of AuM they were comfortable with a manager overseeing. Nearly 10% of those we spoke with reported redeeming because a manager had gotten too large and they were concerned with mission creep. For those who are highly focused on firm size, typically that range falls between $1 – 2 billion, depending on subspecialty focus, leverage employed or growth and diversification plans.

There was a general question as to whether the long/short healthcare opportunity set is more limited than other sectors (healthcare is currently the 4th biggest sector by market cap, but with many firms vulnerable to binary outcomes, which could impact potential opportunity sets, depending on an allocator's risk profile). But a number of allocators – particularly those who are long term bullish the sector – feel that capacity limitations may relax over time. As one allocator said, "If I am looking for mostly long biased exposure – I should be able to expect sector, and consequently – fund growth as subspecialties grow and evolve. I have no issues with AuM capacity concerns."

Another reported being ready for the rise of the "Healthcare platform" fund, solely focused on teams of subspecialties across the sector as specialization continues to increase. For the majority of allocators, they expect managers to be able to articulate clear, concise plans around firm growth, deployment of leverage, any potential capacity limitations, and capital return plans. This becomes particularly important where allocators are pursuing outsized returns explicitly, as such performance can create organic capacity issues more rapidly than planned for.

### *Terms, Fees & Liquidity*

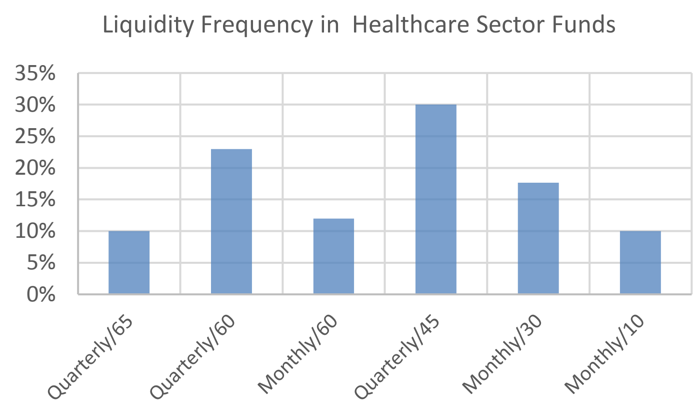
Several allocators indicated their healthcare sector funds had higher than average headline fees – but that in many cases, they were able to lower their overall fee profile by locking up capital or participating in founders' share classes. Two and twenty remains the most common headline fee structure, but below that, managers are following broader industry trends and diversifying management fees, incentive fees, hurdle rates, crystallization periods, and liquidity. We also examined the term and fee structures for over 30 healthcare funds – the most common management and incentive fee structures are reflected here.




A number of allocators also reported that even if headline fees were higher for some of their healthcare managers, net returns were sufficiently high as to allay any concerns about heightened fees.

There is somewhat more commonality around some dimensions of liquidity – nearly two-thirds of managers have a one year soft-lock. But diversity returns around redemption terms. Quarterly liquidity is the most common, split across 45- and 60- day notice periods. Monthly liquidity is somewhat less common, with either 30- or 60- day notice periods. This makes sense, as a number of allocators reported their general long term sector bullishness, and as such, had longer investment windows.

It is also worth noting that for those who participate in co-investments, many report their overall fee profile declining on the back of lower fees and solid performance. But several allocators indicated they are somewhat more reluctant to pursue co-invests as they "aren't part of our core competency."




Alignment is not a euphemism for "lower fees;" both allocators and managers remarked that term and fee discussions are either highly collaborative, or reflect a transparent and fair mutual compensation profile encompassing many dimensions.

Where private participation is an option, regardless of whether it impacts overall liquidity, allocators opt-in about two-thirds of the time.

What is clear is that even among funds that cover a single sector, the permutations of terms, fees, and liquidity profiles - whether founders' share classes, hurdle rates, crystallization periods, variation in management or incentive fees – are nearly endless.

### *Levers of Alignment: Correct, Accurate, or Precise*

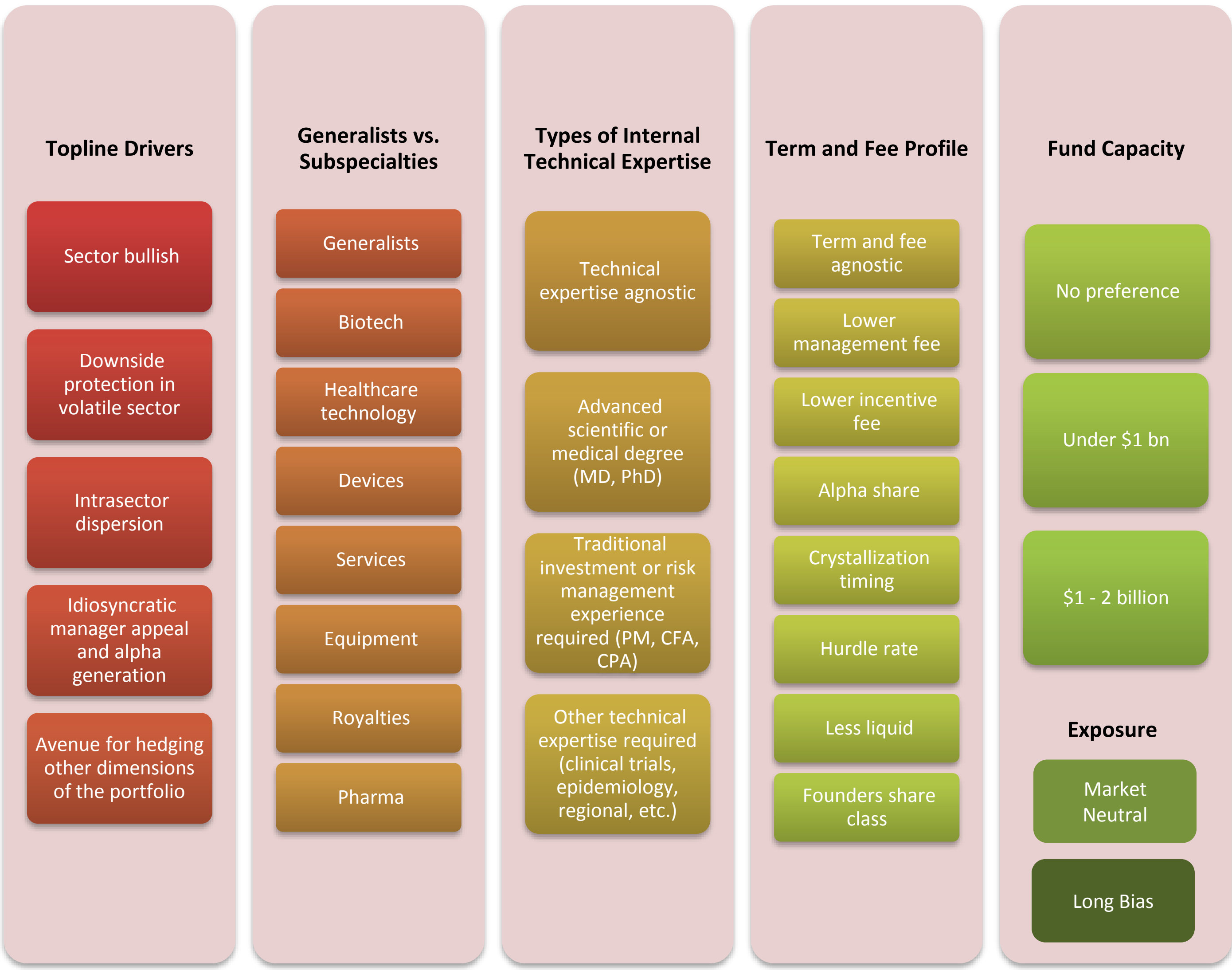
Given healthcare's evolution and projected forward growth, the sector has become too large for many allocators to ignore in their portfolios. One allocator conducted an internal review across their managers and felt the 3% of names they had was far too low versus current percent of GDP – and that those names weren't even performing particularly well – prompting them to seek healthcare specialists.

Some seek exposure via passive or index products, but many report the sector's volatility, complexity and technical nature prompts them to seek exposure via active management. But *also* in part because of the complexity and diversity of the sector, there seem to be even more levers that must align for interest to convert into allocations. For healthcare specialist managers, appetite and interest in their products doesn't always easily translate into hard allocations.

Allocators and managers alike need to be more precise in seeking and pitching products to fit in a portfolio. We counted at least 30 different levers of alignment that allocators raised as important to them when considering healthcare specialists. The levers weren't the same across the board, and the permutations of importance are nearly endless.

But considering the potential combinations across terms, fees, subspecialties, capacity limits, exposure or additional scientific expertise can help shape how managers think about where precisely, their fund may sit in an allocators broader portfolio.

*Levers of Alignment for Healthcare Specialist Funds*




## How Jefferies Can Help

The Jefferies Capital Intelligence team can help healthcare specialists more precisely understand the competitive landscape, and identify emerging themes and trends that could impact a manager's ability to raise, retain and grow their capital base. We are able to leverage the broad expertise of the Jefferies Healthcare franchise across investment banking, capital markets and trading to more holistically understand the sector, and help managers understand where they sit vis a vis competitors, and in relation to the broader landscape.

In an era of too much information, understanding where a manager sits in the healthcare specialist landscape can save time and better inform their conversations with potential and longstanding LPs. When nearly 40% of open Equity searches are for specialist, sector or niche funds – spending time to understand what has converted past interest into activity, particularly given the complex nature of the space and specific drivers of allocation, can facilitate more effective targeting and engagement of potential investors.

We welcome your questions and look forward to engaging with you.

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