A Positive Outlook for the Health Care Sector

This is an edited version of a February 16, 2021 Q&A with Baron Health Care Fund Portfolio Manager Neal Kaufman and Assistant Portfolio Manager Josh Riegelhaupt. To access the full recording, please dial (800) 633-8284, passcode #21990197.

Key Discussion Points

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Introduction

Baron Health Care Fund is managed by Neal Kaufman, who joined Baron in 2005 and has 20 years of research experience. Assistant Portfolio Manager Josh Riegelhaupt, who has a Ph.D. in Genetics and Molecular Biology from Rockefeller University, joined Baron in 2014 and has 11 years of research experience.

Since the Fund launched on April 30, 2018, it has achieved some impressive numbers. For 2020, the Fund gained 47.72%, outperforming the Russell 3000 Health Care Index's gain of 19.34% by over 2,800 basis points.

In 2019, the Fund was up 35.57%, outperforming its benchmark's gain of 22.11% by more than 1,300 basis points.

Baron Health Care Fund

What, in your view, were the drivers of the Fund's strong 2020 performance?

Neal Kaufman: Overall, our holdings performed well in an extremely challenging environment. We invest in what we think are best-in-class companies with large addressable markets, positive secular changes, competitive advantages, and great management teams. These attributes really shine in more uncertain environments like the one we are facing now. We have also avoided areas of the sector with growth challenges like generic drugs, drug distributors, drug retailers, and, for the most part, large cap pharmaceuticals.

Several of our holdings have also benefited to some degree during the pandemic through the sale of diagnostic tests, protective equipment or packaging components for COVID-19 therapeutics and vaccines.

Could you touch on some investment themes you are focused on?

Neal Kaufman: We are seeing opportunities throughout the sector, but I'll talk about two investment themes: genomics and medical technology.

Genomics We have a longstanding investment in **Illumina, Inc. (ILMN),** the market leader in DNA sequencing technology. Illumina sequencers were used to sequence the SARS-COV-2 virus and to develop the mRNA vaccines. Going forward, Illumina sequencers may be used to monitor for variants of the virus and to warn us against future pandemics or even bio-terrorist attacks.

Another exciting application for Illumina sequencers is liquid biopsy, or the use of a simple blood test to identify cancer DNA. Liquid biopsy is already being used to match cancer patients with the right drug and to monitor them

for cancer occurrence, and, in the near future, will likely be used to screen for early-stage cancer. This means that soon you may be able get a blood test during your annual physical that may be able to detect cancer before you have symptoms, allowing for early treatment. We think Illumina will be a major player itself in liquid biopsy through its September 2020 acquisition of GRAIL.

We also own **Guardant Health, Inc. (GH),** which has blood tests for cancer therapy selection and recurrence monitoring. Guardant is also in the process of adapting a blood test for colon cancer screening. Other genomic companies we own include **Adaptive Biotechnologies Corporation (ADPT), 10X Genomics, Inc. (TXG)**, and **Pacific Biosciences of California, Inc. (PACB) (PacBio)**.

At some point soon, we'll be talking about the expansion of the genomics theme to include proteomics. Where genomics is the reading of DNA, proteomics involves the analysis of proteins. We're seeing an explosion of activity in this field. We invested in one recent IPO of a proteomics company called **Seer, Inc. (SEER)** in December. We expect several additional proteomics company IPOs in the near future.

Medical technology We are also actively researching and investing in technology-enabled drug discovery and development. We believe the use of software and computation platforms to speed drug development has massive growth potential.

A good example is **Schrödinger, Inc. (SDGR),** which has a physics-based computational platform that can predict the binding affinity of a drug molecule with a high degree of accuracy. This platform enables scientists to discover novel molecules more rapidly at lower cost and with a higher likelihood of success.

Another example is **Veeva Systems Inc. (VEEV)**, a provider of cloud-based software that helps clients bring drugs to market faster and more efficiently.

Certara, Inc. (CERT), which had its IPO in December, offers bio-simulation software, which can reduce the size and cost of human trials, and in some cases, eliminate human trials completely.

And lastly, **AbCellera Biologics Inc. (ABCL)**, another recent IPO, has a drug discovery platform which searches and analyzes the database of natural immune system to find antibodies that can be developed as drugs. In partnership with Lilly, AbCellera applied its technology to identify an antibody candidate to treat COVID-19 within three weeks from the date of obtaining a sample blood sample from a convalescent patient.

Schrödinger has been a terrific performer since its IPO in early 2020. Could you expand on the thesis for that investment? What makes it a special company? And why do you think it can be so much bigger than it is today?

Josh Riegelhaupt: Schrödinger is named after the physicist Erwin Schrödinger, who had many contributions but is most famous for the Schrödinger wave equations, which describe the binding of atoms. Schrödinger (the company) spent two decades trying to model how atoms would interact with each other. Once you can model the interactions of atoms, you can start designing drugs. For instance, once Schrödinger can model a particular protein structure, either through crystallography or something called cryo electron microscopy, it can then design a drug to inhibit or activate it.

While some people think of Schrödinger as an AI data company doing drug design, it is actually a physics and math company doing drug design. This is an important distinction because Schrodinger has built a platform that essentially no one else can replicate without solving all the math and physics problems it worked on for 20 years.

The legacy business is software licenses to pharmaceutical companies. The early days were not easy as the software essentially would replace the entire medicinal chemistry department, which obviously was met with some resistance. But today, Schrödinger has licenses at virtually every pharmaceutical and numerous biotechs.

After Schrödinger built that business, it started offering licensed developed drugs in exchange for equity. Nimbus Therapeutics was the first collaboration, back in 2011. It now has over 20 collaborations generating

royalty streams from companies at varying states of maturity. In November 2020, Schrödinger reached a deal with Bristol Myers Squibb. Bristol Myers will pay Schrödinger $55 million upfront, and Schrödinger will be eligible for up to $2.7 billion in pre-clinical, development, regulatory and sales-based milestone payments. Schrödinger is also entitled to receive royalties on sales of each commercialized product. So that business is booming.

In the past five years, Schrödinger decided to start developing drugs itself. It now has four of these programs, with another two expected to be disclosed shortly. Two of them in particular seem very interesting. One is for a drug that targets a protein called HIF-2 alpha that could help to treat kidney cancer. It is a major cancer, with over 70,000 patients just in the U.S. It is also an aggressive disease and in need of new medications.

When we see these types of updates, it gives us confidence that Schrödinger is selecting good businesses. We've known the management for a long time, and we think they are thoughtful and just do a great job. We expect Schrödinger to be a really great company and investment for the Fund.

PacBio has been another great investment. What's the thesis behind that investment?

Neal Kaufman: PacBio, offers a differentiated, long-lead sequencing platform for genetic analysis. Their platform enables long strands of DNA to be read at a time, which can capture genomic variations that may be missed by short-read sequencers such as those sold by Illumina. Cost has historically been a barrier to adoption, but the company has been investing in improving its throughput and cost per sample. And to date, long-lead sequencing has been used primarily for niche applications, but we believe that as the cost of long-read sequencing approaches that of short-read sequencing, there will be an opportunity for PacBio to expand the applications for its platform, providing significant room for future growth.

The stock has been a strong performer since we first bought it in mid-2020 for a few reasons. First, investors are excited about the new CEO, who joined around the time we first invested. He is well-known in the investment community; we knew him when he was the CFO of Illumina. He's hired new senior management team and is expanding the sales force and investing in product development. Second, PacBio recently partnered with Invitae, a genetic testing company, to develop an ultra-high throughput sequencing instrument for clinical use. If this partnership is successful, PacBio will have an opportunity to significantly expand its TAM [total addressable market]. Third, SoftBank just invested $900 million in PacBio, which provides the company with the funding to make substantial investments in its future growth.

You recently added *BridgeBio Pharma, Inc. (BBIO) to the portfolio. Can you tell us a little about that investment?*

Josh Riegelhaupt: BridgeBio was founded by Neil Kumar in 2015 with the purpose of developing breakthrough medicines for genetic diseases. He felt there was a lot of inefficiency in the approach to genetic medicine. To try to improve efficiencies, he structured BridgeBio as a decentralized business with a centralized hub. The subsidiaries are all organized as VIEs (variable interest entities), meaning the parent company owns the assets but they're independently run, with their own CEO and management and incentive structures.

For example, **Eidos Therapeutics, Inc. (EIDX),** which was independently listed until BridgeBio bought it back recently, markets a product for a genetic disease called TTR amyloidosis in which a protein made in the liver forms into fibrous clumps and then is deposited into various organs and/or nerves, which can lead to permanent damage and organ malfunction.

In mid-2019, Pfizer launched a drug called tafamidis, which is branded as Vyndaqel, to treat TTR amyloidosis. It made $429 million in the fourth quarter treating just 8,500 patients. Pfizer says the market is about 100,000 in the U.S., but everyone expects the TAM to be much larger -- over $10 billion in peak sales.

That's just one example. BridgeBio is a $10 billion market cap company and has 20-plus programs, with a potential for another 20 over the next two years. So we like the optionality. We like the approach. We like Neil. And we think this will be an important position in the future.

Sector Outlook

What is your outlook for 2021 and beyond?

Neal Kaufman: While we're happy with the Fund's recent performance, we're even more excited about the future. We think health care will be an excellent place to invest in the coming years.

Starting with the near term, we think the outlook is positive. In 2020, the FDA put through the second highest number of new drugs in history with 53 new drug approvals. Biotech funding in 2020 was up 76% year-over-year to $88 billion, beating records by a large margin.

Medical device companies and health care services companies, which experienced a negative impact on their procedure lines during the pandemic, are likely to see a return to more normalized procedure volumes and revenue growth as the pandemic subsides and elective procedures ramp up. Capital markets activity is robust, with a flood of new companies coming public, some of which are in emerging areas such as synthetic biology.

On the health care policy side, we see mostly positive signs. The Biden administration is focused on strengthening the Affordable Care Act and expanding Medicare and Medicaid, which is a positive for many companies in the sector. The Biden administration has also proposed increased funding for COVID-19, and we expect increased support more broadly for scientific research.

We do recognize the potential for modestly higher corporate taxes, legislative or executive action on controlling drug prices, and the introduction of a public option in health insurance markets and are monitoring these issues.

Long term, we think this is the beginning of a transformational era for health care, with rapid advances in science and medical technology and new treatments and cures for diseases.

Could you expand a little on the types of transformations you are seeing?

Josh Riegelhaupt: First, we are witnessing the convergence of technology and health care. I think people are generally aware of how influential technological innovations are and will continue be on our lives but don't necessarily see that this is happening in health care as well.

If you think of the human body as a supercomputer, the question is which sector – technology or health care -- will create artificial intelligence [AI] first? We can already use computers to code onto DNA. This is simpler than it sounds because zeroes and ones are the basic code for computers and four base pairs – A, G, C, and T -- make up DNA. So you can take doublets of zeroes and ones -- zero zero, one one, zero one, or one zero -- and you now have four letters that correspond to A, G, C and T, making it possible to start coding onto DNA. Another advantage of DNA is that it's hearty. We have found DNA preserved in mammoth fossils from a million years ago, which means there is a lot of base material to work with.

Another major transformative shift we are seeing is in the material science field, which is using biologics to produce materials through the engineering of bacteria, fungi, and the like. There are a number of private companies that can produce materials, like films or plastic bags, that are biodegradable, or a bacterium that could be placed at plant bases to serve as a nitrogen fertilizer in lieu of dumping large amounts of nitrogen, which presents pollution issues.

More near term, we're in the third or fourth generation antibody engineering. We have already seen the renaissance in mRNA with the development of the COVID-19 vaccines.

I'll end with a classic line from show business: "It takes 20 years to make an overnight success." In some ways, the pandemic has brought to the fore what has been happening for years in biotech, but it's just now that people are starting to realize this industry can deliver in a big way.

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Investors should consider the investment objectives, risks, and charges and expenses of the investment carefully before investing. The prospectus and summary prospectuses contain this and other information about the Funds. You may obtain them from the Funds' distributor, Baron Capital, Inc., by calling 1-800-99BARON or visiting www.BaronFunds.com. Please read them carefully before investing.

Baron Health Care Fund's annualized returns for the Institutional Shares as of December 31, 2020: 1-year, 47.72%; Since Inception (4/30/2018), 27.43%. Annual expense ratio for the Institutional Shares as of December 31, 2019 was 2.39%, but the net annual expense ratio was 0.85% (net of the Adviser's fee waivers). The **Russell 3000 Health Care Index**'s annualized returns as of December 31, 2020: 1-year, 19.34%; Since Fund Inception (4/30/2018), 17.23%.

The performance data quoted represents past performance. Past performance is no guarantee of future results. The investment return and principal value of an investment will fluctuate; an investor's shares, when redeemed, may be worth more or less than their original cost. The Adviser reimburses certain Baron Fund expenses pursuant to a contract expiring on August 29, 2031, unless renewed for another 11-year term and the Fund's transfer agency expenses may be reduced by expense offsets from an unaffiliated transfer agent, without which performance would have been lower. Current performance may be lower or higher than the performance data quoted. For performance information current to the most recent month end, visit www.BaronFunds.com or call 1-800-99BARON.

Risks: In addition to general market conditions, the value of the Fund will be affected by investments in health care companies which are subject to a number of risks, including the adverse impact of legislative actions and government regulations. The Fund is non-diversified, which means it may have a greater percentage of its assets in a single issuer than a diversified fund. The Fund invests in small and medium sized companies whose securities may be thinly traded and more difficult to sell during market downturns.

The discussion of market trends is not intended as advice to any person regarding the advisability of investing in any particular security. The views expressed in this document reflect those of the respective writer. Some of our comments are based on management expectations and are considered "forward-looking statements." Actual future results, however, may prove to be different from our expectations. Our views are a reflection of our best judgment at the time and are subject to change at any time based on market and other conditions and Baron has no obligation to update them.

Portfolio holdings as a percentage of net assets as of December 31, 2020 for securities mentioned are as follows:

Illumina, Inc. – 1.5%; **Guardant Health, Inc.** – 1.6%; **Adaptive Biotechnologies Corporation** – 0.8%; **10X Genomics, Inc.** – 1.1%; **Pacific Biosciences of California, Inc.** – 3.2%; **Seer, Inc.** – 0.5%; **Schrodinger, Inc.** – 2.4%; **Veeva Systems Inc.** - 0.7%; **Certara, Inc.** – 0.3%; **AbCellera Biologics Inc.** – 0.2%; **BridgeBio Pharma, Inc.** – 2.6%.

Top 10 holdings as of December 31, 2020

Holding	% Assets
UnitedHealth Group Incorporated	7.7
Humana Inc.	5.2
Acceleron Pharma Inc.	3.7
Abbott Laboratories	3.5
Thermo Fisher Scientific Inc.	3.5
Vertex Pharmaceuticals Incorporated	3.2
Pacific Biosciences of California, Inc.	3.2
Arrowhead Pharmaceuticals, Inc.	2.9

BridgeBio Pharma, Inc.	2.6
argenx SE	2.6
Total	38.1

Portfolio holdings are subject to change. Current and future portfolio holdings are subject to risk.

The **Russell 3000® Health Care Index** is an unmanaged index representative of companies involved in medical services or health care in the Russell 3000 Index, which is comprised of the 3,000 largest U.S. companies as determined by total market capitalization. Russell Investment Group is the source and owner of the trademarks, service marks and copyrights related to the Russell Indexes. Russell is a trademark of Russell Investment Group. Index and Fund returns reflect the reinvestment of dividends and other earnings, which positively impact performance results. The index performance is not fund performance; one cannot invest directly into an index.

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