

Investor Insight: John Barr

Needham Funds' John Barr explains how and why he targets what he considers "hidden compounders," how he's learned to hold on to them even when they're less hidden, where he looks for downside protection, why he considers himself so lucky to do what he does, and what he thinks the market is missing in PDF Solutions, Nova, Aspen Aerogels and Vicor.

INVESTOR INSIGHT



John Barr
Needham Funds

Investment Focus: Seeks "hidden compounders" with the potential for greatness, but well before that potential becomes more readily recognized by the market.

Despite the name of the mutual fund he manages – the Needham Aggressive Growth Fund – John Barr calls on elements of value investing in describing his strategy: "We want to own companies that can be 5-10x their current size," he says, "but we also want a margin of safety, usually from a legacy business that generates cash, a strong balance sheet, and being willing to wait for an attractive entry price."

The formula seems to be working. Since Barr took the reins in 2010 his Needham fund has earned a net annualized 14.2%, vs. 10.7% for the Russell 2000 Growth Index. Targeting small caps poised to one day be much bigger, he's finding unrecognized upside today in specialty insulation, power-conversion devices, and in the semiconductor-manufacturing ecosystem.

Your strategy is focused on finding what you consider to be hidden compounders. Describe the typical company that draws your attention.

John Barr: A hidden compounder is usually a company that is investing in a new product or service that is funded by an already successful but probably mature legacy business. We believe the company can grow to 5-10x its current size, but it's not coming from nothing, where you have to bet that a heavy cash burn is years from now going to turn positive. What tends to be hidden about these companies is that because they're investing, the current financials may not look very attractive – the "quality" investor usually isn't interested and the "value" investor thinks the multiples are way too high.

We like to invest in companies led by founders, their families, or otherwise long-tenured managers who we've found to be more willing to accept the large upfront pain that is often necessary to produce long-term gain. I focus on "picks and shovels" types of businesses that serve industries with long-term secular tailwinds like semiconductor manufacturing, life sciences, data centers, cybersecurity and alternative energy.

I'm looking for high-growth companies, but I also care about investing with a margin of safety. To me that typically comes from the legacy business generating cash flow and from a strong balance sheet with valuable enough assets to support the valuation through what can be a long transition from hidden compounder to a quality compounder firing on all cylinders.

We also want attractive entry prices. We'll estimate what the company can earn in a few years, assign what we think is a reasonable multiple, and then discount the resulting share price back to the present at a rate of return we think is appropriate for the risk we're taking. If that number is below the current stock price, the margin of safety isn't there and we're prepared to patiently wait.

This may not sit well with many value investors, but we are not so concerned with paying the lowest price as long as we see a margin of safety. If one of our ideas really plays out the way we expect, whether we bought it at x or even 2x doesn't really matter after ten years. We care about the extra return, but care even more about avoiding big mistakes if things don't play out as well as we expect.

Describe the ideal lifecycle of one of your investments.

JB: Given our target universe, we work hard to get to know new companies. Sometimes they're still private and contemplating going public, but we also do work on almost every IPO. That doesn't mean we'll buy it on the initial offering, but we'll try to develop an early understanding of the company's industry and what it does. We also attend a lot of investor conferences – including those put on by Needham & Co. – to get to know new and small company management teams.

Once we've identified a hidden compounder, we typically build the position slowly. The early stage, which may last a year or more, is where things are most

likely to go off track. It's better to limit potential losses on our initial stake and add to that stake only as the fundamentals start to show promise. If that happens the company in our parlance graduates to the "transition" phase, at which point we may have a 1.5% to 2% position.

The transition is where the financials more fundamentally start to improve, revenue growth increases and margins expand. There's still quite a ways to go before margins and returns on capital are where we think they can be, but our conviction is increasing. In this phase we're likely to add to the position, maybe increasing it to 3% to 4% of the portfolio. This phase can play out fairly quickly, but more likely it is a multiyear period where the business is coming into its own.

We call the last stage the "quality compounder" phase. This is where competitive advantages and operational excellence are kicking in and are clearly evident in revenue growth, margin expansion, returns on capital and capital allocation. At this point the stock is no longer a secret and shows up on growth and quality screens as attractive. Many investors are paying attention and the hardest part as an owner of the stock is to hold on as sentiment turns heavily positive.

Isn't that a good time to sell and move on?

JB: Actually, no. In analyzing our results since I took over the Needham Aggressive Growth Fund in 2010, our returns have been higher in the second five years with a long-term position than in the first five. We've learned from experience that after living through a company's journey to becoming a quality compounder, you want to stick around at that point and let it compound. That doesn't mean you don't respond if the circumstances that got it to this point fundamentally change, but if that's not the case, we're very slow to sell because of valuation.

From a portfolio management perspective, we rarely add to positions once they've reached 5% of the portfolio, but we usually won't trim them until the position size grows organically to 10% or so.

I've found it very difficult once I sell something to ever buy it back. Selling incurs a tax liability, and to justify it by thinking I can always buy the stock back when it's 20-30% cheaper hasn't worked for me.

This approach has resulted in a top-heavy portfolio, with 40-45% of net assets in our top ten investments, and a longer tail of 50 to 70 stocks of promising companies that we're tracking at various stages in their growth and development. I've worked at venture capital-backed companies, invested in early-stage firms as an angel investor, and invested as a limited partner in venture funds. I've learned that as long as a company is making strategic progress, one shouldn't worry so much about its stock price along the way. The majority of returns come from a few of the best investments and not all of the long-tail investments are going to make it, so it's best to keep early-stage position sizes small, increase them as conviction grows, and hold on to them when they've proven themselves.

You've discussed current holding Super Micro Computer [SMCI] as a prototypical example of what interests you. Describe your history with it.

JB: We have known Super Micro since before its 2007 IPO at \$8 per share and I first bought it for the fund in 2009 when the stock was still trading around the IPO price. The company was co-founded in 1993 by Charles Liang – who still owns roughly 13% of the shares and is the Chairman and CEO – and is in the business of designing and manufacturing servers. The server market has always been dominated by a few very large players, but Super Micro was innovative, agile and willing to invest for the long term so we thought it could eventually carve out a nice position in a secular-growth market.

People are attracted to the rocket ship success stories, but it's rare that's the way it works out. Super Micro bumped along for years and weathered both an accounting controversy and since-discredited accusations that it was secretly connected to the Chinese government. Today it has



John Barr

In Their Shoes

Coming out of Harvard Business School John Barr originally wanted to find a job in venture capital, but instead spent nearly 15 years in a variety of sales, marketing and management roles at firms – both startups and those that were more established – that sold software to design semiconductors. Now a portfolio manager with Needham Funds targeting small firms with high long-term growth potential, he considers that early experience invaluable. "So much of what I do is focused on understanding entrepreneurs and the challenges they face in building their businesses," he says. "Having been in their position, I'd like to believe that gives me somewhat of a head start in doing that."

The lessons relevant to investing didn't stop with his time at technology companies, as Barr also spent a number of years as an equity research analyst, including at then-leading technology brokerage firm Robertson Stephens as the late-1990s Internet bubble inflated – and then subsequently as it popped, taking the storied firm down with it. "I think a lot as an investor about margin of safety," he says. "Let's say I've seen firsthand how important that is."

a very competitive line of servers for data centers, including those used to run large artificial intelligence models. We have stuck with the company through its very long transition phase and have been re-

warded for doing so. As of June 30 the stock was the fund's largest position and we think it has plenty of room to grow. Earnings are expected to grow 20% next year but the shares [at a recent price of nearly \$275] only trade at less than 17x estimated forward earnings.

Can you give some examples of companies where you're betting on their success with picks-and-shovels types of products or services in areas with long-term secular tailwinds?

JB: One good example that has contributed nicely over the past year is Clean Harbors [CLH]. The company has two main business lines, the first focuses on environmental services and hazardous waste disposal, and the second on the re-refining of recycled oil. Both businesses have tailwinds as environmental awareness grows and as the manufacturing base in the U.S. expands.

In U.S. waste disposal Clean Harbors is #1 in commercial hazardous waste incinerators and #2 in landfills, industries that are consolidating and where scale and expertise matter. The re-refined oil business is the largest in the U.S., now producing 16,000 barrels a day using recycled motor and cooking oils, and the resulting product matches the quality of virgin oil. To illustrate how we think about margin of safety, we bought most of our position between the first quarter of 2020 and late 2022. Over much of that time we believed the stock price reflected little more than the replacement value of the incinerator and landfill assets. The shares [now around \$167] have tripled since early 2020, but we think there's still potential upside as the company works to improve margins to be more in line with peers such as Waste Management and Republic Services.

While Clean Harbors has a market cap of over \$9 billion, Northern Technologies [NTIC] is a microcap hidden compounder we bought in the first quarter of this year. The company is run by the son of the founder and it has a solid legacy business selling a rust prevention chemical called Zerust into industrial end markets.

While we're intrigued with the growth opportunities for Zerust, we're particularly interested in the company's developing franchise in compostable biopolymers used to make eco-friendly cutlery, straws and bags. They're taking cash generated by Zerust to invest in biopolymers, and while the new business is still in the early innings, over time we believe it could be a substantial contributor to the growth in shareholder value.

ON COMPOUNDING:

Our returns over time have been higher in the second five years with a long-term position than in the first five.

We spoke six years ago [VII, February 28, 2017] about Oil-Dri Corp. [ODC], which we see is still a good-sized position for you. Describe how that has played out so far.

JB: The company has been in the hidden compounder category for some time now, but is starting to see its long-term business development spending pay off. Its core business has been the sale of sorbent materials used in industrial cleaning applications and cat litter, but when we last spoke we saw great potential in a next-generation cat litter product that was more absorbent and lighter weight. They were also investing in developing antibiotic-free animal health products – using sorbent materials in food additives to help absorb toxins in the guts of animals – but that effort was so small and speculative that I didn't mention it.

It's been a long time coming, but the two new initiatives have started to gain traction and the legacy businesses have continued to perform well. In Oil-Dri's latest reported quarter revenues increased 23% and operating earnings per share was nearly \$2. We think the company is on its way to earning as much as an annual \$10 per share, but we don't believe there are many investors looking at the stock. Were

the company to earn \$10 per share, there would likely be considerable upside to the stock, now trading in the low-\$60s. We added to the position after the latest earnings were announced.

You mentioned being slow to sell because of valuation. Describe what does cause you to sell.

JB: Since I've managed the fund its turn-over has generally been in the 10% range, so we aren't frequent sellers. The reason for a sale is usually that something fundamental has gone awry with our thesis: management changes, the strategy changes, the competitive situation changes, or the new product or service that we're focused on isn't working. I talked about how we build positions carefully over a long period – we obviously hope to recognize that something has gone wrong earlier rather than later.

As a recent example, in the first quarter of this year we sold our position in Q2 Holdings [QTWO], which supplies automation software to small banks. We originally invested in the IPO in 2014, and for a long time everything was working and the stock performed well. But after a boom period following the onset of the pandemic, growth started to slow and in retrospect we were late to recognize the shift in small banks' continued appetite to fund digital initiatives. We ended up selling for a lot less than where the stock traded a year before.

You describe PDF Solutions [PDFS] as one of your in-transition ideas. Explain your investment case for it today.

JB: I've known this company since the late 1990s and it's one that we took public when I was working for the investment bank Robertson Stephens in 2001. The name can throw people off, but PDF has become a leader in providing data analytics software used by semiconductor manufacturers to improve the efficiency and yield of their manufacturing processes. We've owned the stock for over ten years and have added to the position from time

to time when the market has given us the opportunity.

As is often the case for us, the company is still run by two of its founders, John Kibarian and Kimon Michaels, who between them own more than 10% of the stock and who – impressively to me – take very reasonable salaries and have almost never taken a bonus or stock grant. They’re owners just like we are and have over time sold very little of their stock.

Five or six years ago the company hit a wall when it lost contracts with big customers Samsung and Global Foundries. As a result management refashioned the busi-

ness to focus on selling subscriptions to its data analytics software, which also expanded the addressable market to include more of the semiconductor ecosystem, including fabless design companies, packaging companies and systems companies.

By and large the reboot has been successful and has translated into a series of significant new bookings that have driven increased revenue growth and gross-margin improvement. Revenue increased last year by nearly 35% to just under \$150 million, and gross margins over the past two years have improved from 58% to 68%. We think that’s a good start on

what’s possible, especially as the company capitalizes more fully on the growth in semiconductor manufacturing capacity in the U.S. As the transition continues, we believe gross margins can get into the mid-70s and EBITDA margins, which were less than 5% last year, may eventually get into the mid-20s.

How do you see that translating into equity returns from today’s price of \$32.50?

JB: In some cases my descriptions of upside may not be very granular. We think the company is very well positioned with not a lot of direct competition in a secularly growing market. Given its exposure to many points along the semiconductor-manufacturing value chain, it’s particularly well suited to bring more advanced data analytics and artificial intelligence to improving customer outcomes. We think revenues may grow to 5x the size they are today, and that we’ll see the margin expansion that comes with that kind of growth in a software business. If we’re right about all that, the stock will trade much higher.

From a hidden to a quality compounder, describe the upside you currently see in Nova Ltd. [NVMI].

JB: Nova is a highly specialized business that makes metrology equipment primarily used for taking precise measurements on semiconductors. These tools help ensure that semiconductors are produced correctly and are critical for quality assurance, meaning high volumes of production have no material variation.

The case here is not overly complicated. The company has high-quality products and has successfully grown organically and through acquisition to broaden its capabilities and deepen its customer relationships. This year, for example, it has seen incremental growth from new products in optical, materials and chemical metrology. It too should be a big beneficiary of the buildout of semiconductor manufacturing capacity, which is not just a United States phenomenon, by the way. Europe is short such capacity, as are coun-

INVESTMENT SNAPSHOT

PDF Solutions

(Nasdaq: PDFS)

Business: Provider of analytics software used by semiconductor and electronics manufacturers in an effort to improve the yield and quality of their production processes.

Share Information (@9/29/23):

Price	32.40
52-Week Range	21.36 – 48.02
Dividend Yield	0.0%
Market Cap	\$1.24 billion

Financials (TTM):

Revenue	\$162.7 million
Operating Profit Margin	2.3%
Net Profit Margin	5.6%

Valuation Metrics

(@9/29/23):

	PDFS	S&P 500
P/E (TTM)	139.1	20.0
Forward P/E (Est.)	43.3	19.9

Largest Institutional Owners

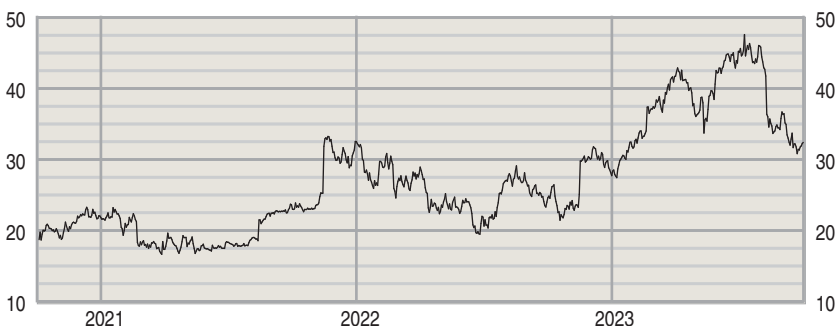
(@6/30/23 or latest filing):

Company	% Owned
BlackRock	12.3%
Avantest Corp	8.7%
Invesco	8.1%
Vanguard Group	6.8%
Snyder Capital	3.1%

Short Interest (as of 9/15/23):

Shares Short/Float	0.9%
--------------------	------

PDFS PRICE HISTORY



THE BOTTOM LINE

The company has successfully refashioned its business to focus on selling subscriptions to its data analytics software and on expanding its addressable market to include more of the semiconductor ecosystem, says John Barr. He believes its revenues can ultimately grow to 5x their current level, resulting in significant potential upside for equity holders.

Sources: Company reports, other publicly available information

tries including Japan, Taiwan and China. Not only is capacity growing, but the complexity of the process is also significantly higher, demanding more and better measurement capabilities like those Nova provides.

Unlike many companies you've spoken about, Nova isn't run by a founder and seems to have had more CEO turnover than is usually the case for you. Has that been an issue?

JB: You're right to ask about CEO turnover, it often is an issue. But the company

is now on its third chief executive over our 13-year holding period and I'm happy to report it hasn't missed a beat. It's also kind of surprising that all three of those CEOs have come out of the business side rather than technology side of the company. We will look very carefully at every top management change, but so far those transitions for Nova have worked very well.

How are you looking at valuation with the shares now trading at around \$112.50?

JB: This has graduated to the quality compounder stage, with revenues particularly

over the past three years rising rapidly – from \$225 million to \$570 million – and we believe they could be on the way to \$1 billion. Net income over the past three years quadrupled, from \$35 million in 2019 to \$140 million last year.

I mentioned earlier that we estimate earnings a few years out, assign an appropriate multiple, and then discount that future price back to the present at a rate of return commensurate with the risk we're assuming. When we do this with Nova we use a lower discount rate than we do for Northern Technologies, for example, but if we use 15% the resulting share price is still above the current price. If we can compound our returns from this price at 15%, we're going to be fine.

What's still hidden about the prospects for portfolio holding Aspen Aerogels [ASPN].

JB: We met management in 2011 in the company's first attempt to go public. It eventually went public at \$11 per share in 2014 and we first invested in 2015 and 2016 at between \$4 and \$7 per share. Its legacy business supplies specialty aerogel insulation that is primarily used in oil and gas-related infrastructure. Hold up an 8 1/2 x 11 sheet of its aerogel and you can put a blowtorch on one side of it and your hand on the other and you won't feel any heat. It protects just as well from cold. Aspen was initially seeded by NASA to work on spacesuits, but the first real commercialization came from the energy industry.

This is another case where despite investing heavily in sales and marketing it was difficult for the company to gain traction, in no small part because energy markets were terrible as it was ramping up for growth. In late 2018 the stock got as low as \$2 per share, and since it was already underfollowed nobody cared. Starting in 2019, though, management began talking on conference calls about the application of the company's technology to protect lithium-ion batteries from overheating and catching fire. By early 2021 it announced big customer wins with electric-vehicle manufacturers, including General Motors and Toyota. All our research is telling us

INVESTMENT SNAPSHOT

Nova

(Nasdaq: NVMI)

Business: Manufacture and sale of precision measurement equipment used to improve the quality control and consistency of a variety of sophisticated manufacturing processes.

Share Information (@9/29/23):

Price	112.44
52-Week Range	67.40 – 131.51
Dividend Yield	0.0%
Market Cap	\$3.22 billion

Financials (TTM):

Revenue	\$550.0 million
Operating Profit Margin	26.0%
Net Profit Margin	24.7%

Valuation Metrics

(@9/29/23):

	NVMI	S&P 500
P/E (TTM)	26.4	20.0
Forward P/E (Est.)	24.6	19.9

Largest Institutional Owners

(@6/30/23 or latest filing):

Company	% Owned
Wasatch Advisors	12.4%
Fidelity Mgmt & Research	7.9%
Menora Mivtachim Pensions	4.9%
Adage Capital	4.5%
Harel Insurance Inv	4.1%

Short Interest (as of 9/15/23):

Shares Short/Float	2.6%
--------------------	------

NVMI PRICE HISTORY



THE BOTTOM LINE

The company has high-quality products and has grown organically and through acquisition to broaden its capabilities and deepen its customer relationships in a secularly growing semiconductor-manufacturing market, says John Barr. If it meets his estimates for a few years out, shareholder returns over that period would compound at about 15% annually.

Sources: Company reports, other publicly available information

the technology is both unique and effective in this application.

The stock went through the roof to over \$60 in November 2021. As you can imagine I didn't sell, and the sentiment on the stock turned quickly as the market corrected more broadly and as it became clear that the company didn't have the balance sheet to build the plant capacity it needed to meet the coming EV-related demand. Raising capital proved quite difficult, and in March 2023 the company ended up doing a secondary offering of stock priced at \$9.50 per share. That didn't raise enough, so in June it announced it was stopping

construction on a new plant in Georgia and instead planned to outsource production of the energy-related insulation products and to re-fit its existing Rhode Island plant to produce the insulation for electric vehicles. As a shareholder all of this hasn't been pretty to watch, but we think the company now has a viable plan and the resources to more fully tap the growth opportunity in EVs.

From today's \$7.50 share price, is this another idea with fairly open-ended upside?

JB: The company generated \$180 million

in sales in 2022 and we think the opportunity in electric vehicles could ultimately drive revenue to beyond \$1 billion, at which point the business should also be earning attractive margins and generating significant cash flow. It's early in the process so we still consider this to be in the hidden compounder phase, and a lot of things have to go right for it to deliver on its promise. We added to our position in the second quarter, but as of June 30 it was a roughly 150-basis-point position. It's been a challenging ride so far, but if we're right we believe the payoff on the battery-insulation business should be well worth the wait.

Maybe a bit lower down on the speculative scale, explain what you find interesting in Vicor [VICR].

JB: This is an excellent example of a company that is willing to invest more heavily upfront in product development and manufacturing capacity than most, probably due to the fact that founder and CEO Patrizio Vinciarelli still controls about 80% of the voting power due to a dual-class share structure. Our basic thesis is that this upfront investment that can depress earnings for some time has today positioned the company for a significant growth run that the market hasn't yet bought into.

Vicor makes power-conversion devices used to reduce power usage in applications such as AI processors, electric vehicles and data centers. For example, its devices were used in earlier generation Nvidia systems – which helped fuel a dramatic rise in Vicor's stock price – but then the company missed a product cycle and lost that business to a competitor that now supplies the latest Nvidia H100 systems.

What we think helps remedy that is that the company has a new manufacturing plant that we expect to start producing next-generation devices some time next quarter, after a year delay. We believe these next-gen devices will be a step up on the competition and are particularly well-suited for data centers supporting AI applications, including those using Nvidia systems. We believe these new products

INVESTMENT SNAPSHOT

Aspen Aerogels

(NYSE: ASPN)

Business: Producer of aerogel insulation products used primarily in oil and gas-related infrastructure and to protect lithium-ion batteries from overheating and catching fire.

Share Information (@9/29/23):

Price	8.60
52-Week Range	5.32 – 14.44
Dividend Yield	0.0%
Market Cap	\$603.8 million

Financials (TTM):

Revenue	\$190.1 million
Operating Profit Margin	(-38.9%)
Net Profit Margin	(-37.6%)

Valuation Metrics

(@9/29/23):

	ASPN	S&P 500
P/E (TTM)	n/a	20.0
Forward P/E (Est.)	n/a	19.9

Largest Institutional Owners

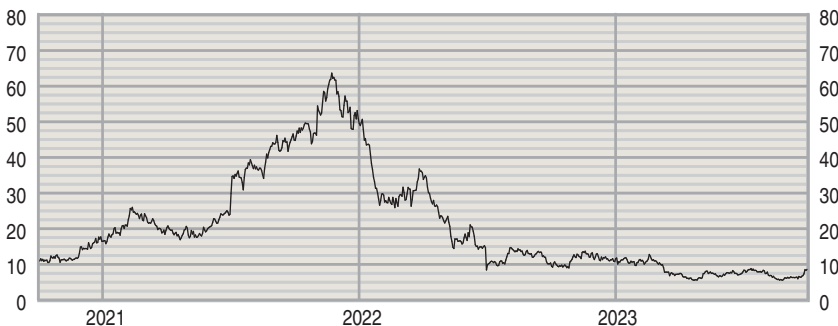
(@6/30/23 or latest filing):

Company	% Owned
Spring Creek Capital	22.5%
BlackRock	5.5%
Vanguard Group	4.9%
Oaktop Capital	4.5%
Kaiser Family Foundation	4.5%

Short Interest (as of 9/15/23):

Shares Short/Float	8.0%
--------------------	------

ASPN PRICE HISTORY



THE BOTTOM LINE

It's been a "challenging ride" for shareholders so far, but John Barr believes the company is well-positioned to capitalize on its opportunity to supply insulation materials used in electric vehicles. He thinks annual firm revenues could reach \$1 billion, accompanied by margin and cash flow levels that would prompt significant share price upside, he says.

Sources: Company reports, other publicly available information

can drive annual revenues toward \$1 billion, from \$400 million last year.

How do you see that translating into share upside from today's nearly \$59 price?

JB: At \$1 billion in annual revenue, we estimate that Vicor could earn close to \$10 per share. That wouldn't be on most investors' radar, which is why the stock trades where it does. The range of potential outcomes is pretty wide, and the timing – as we've described with a number of ideas – is hard to forecast. But if this company does earn \$10 per share, the stock would

very likely trade at a significant premium to \$59.

We take it the answer will be no, but do dual-class share structures bother you?

JB: They can, but not in this particular case. Mr. Vinciarelli, the founder, only meets with investors once a year and the company doesn't emphasize investor relations. But we believe he has a track record of playing successfully for the long term and we're comfortable investing in the company as long as we believe that remains the case.

The short interest here at 14% of the float is relatively high. What's the key aspect to the bear case?

JB: The most prominent bear-case angle we hear is that the company lost the Nvidia business and is going to have a very difficult time winning it back. There's a particular expert out there making that case in the expert networks. Quite simply, we think he's wrong.

Describe what you'd characterize as a recent mistake and any lessons you may have drawn from it.

JB: We haven't entirely sold out of our position in it, but I would call our investment in Vacasa [VCSA] a clear mistake. This is a company I got to know when it was still private and I was very impressed with its founder, Eric Breon, and his well-funded vision to build a vacation home property management business that leveraged data to help owners of such homes optimize the return on their properties, while also building scale in local markets to handle on-site maintenance and management for those owners.

In retrospect, things started to go wrong when private equity got involved prior to the company going public. I've often seen private equity investors push for growth that exceeds the company's ability to manage it, which was the case here. Another negative indication was the founder stepping down, and another was the next CEO choosing a long-distance commute over moving to Vacasa's Portland, Oregon headquarters. I haven't totally given up on the business model and there's a new CEO in place who I think will do a much better job, but the company is clearly off the track of becoming a quality compounder. There's likely more value here than reflected in the current stock price [of 45 cents, prior to a reverse stock split planned in early October], but my original aspirations for the company are long gone.

You've been investing for some time – is it fair to say it's holding your interest as much as ever?

INVESTMENT SNAPSHOT

Vicor

(Nasdaq: VICR)

Business: Develops, manufactures and sells power-conversion devices used to more effectively and efficiently manage power usage within large networked environments.

Share Information (@9/29/23):

Price	58.89
52-Week Range	38.71 – 98.38
Dividend Yield	0.0%
Market Cap	\$2.61 billion

Financials (TTM)

Revenue	\$413.2 million
Operating Profit Margin	11.1%
Net Profit Margin	9.2%

Valuation Metrics

(@9/29/23):

	VICR	S&P 500
P/E (TTM)	69.3	20.0
Forward P/E (Est.)	55.3	19.9

Largest Institutional Owners

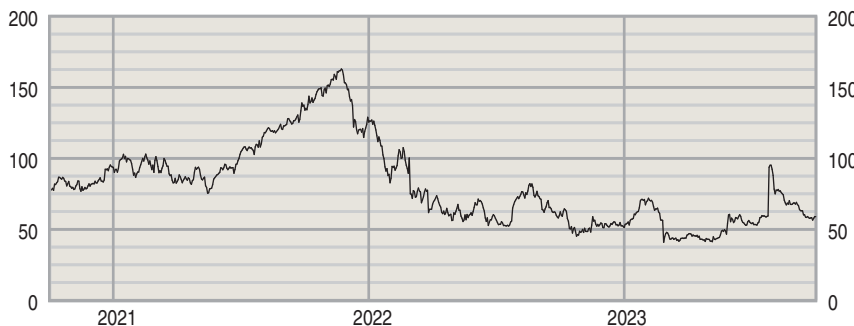
(@6/30/23 or latest filing):

Company	% Owned
BlackRock	5.6%
Vanguard Group	5.0%
Brown Capital	4.7%
Wellington Mgmt	3.7%
Capital Research & Mgmt	1.9%

Short Interest (as of 9/15/23):

Shares Short/Float	14.3%
--------------------	-------

VICR PRICE HISTORY



THE BOTTOM LINE

Despite its penchant for investing in product development and manufacturing capacity, the company can miss a product cycle that significantly impacts expected performance, says John Barr. As it remedies the latest such instance and taps into AI-related product demand, he believes annual revenues can increase 2.5x, much to shareholders' benefit.

Sources: Company reports, other publicly available information

JB: Very much so! If you read the headlines, everything sounds so bad. But I spend my time thinking about so much that's good around us: entrepreneurs building companies that provide valuable products and services to society, that provide livelihoods for their employees, that bring vibrancy to their communities, and that create wealth for themselves, their stakeholders, and even people like me and my fellow fund shareholders who are along for the ride. There's a far more optimistic future ahead when viewed through that lens. I consider myself very lucky to spend my time doing what I do. [VII](#)

Definitions and Disclosures

This reprinted article is a licensed excerpt from the original Value Investor Insight September 2023 issue, which may be found at valueinvestorinsight.com (subscription only). The contents of this article have not been materially altered in any way, except to add these Definitions and Disclosures to make the reprint consistent with applicable regulatory standards.

The information presented is not intended as personalized investment advice and does not constitute a recommendation to buy or sell a particular security or other investments. This message is not an offer of the Needham Growth Fund, the Needham Aggressive Growth Fund, or the Needham Small Cap Growth Fund (each a “Fund” and collectively, the “Funds”). Shares are sold only through the currently effective prospectus. Please read the prospectus carefully and consider the investment objectives, risks, and charges and expenses of the Fund carefully before you invest. The prospectus contains this and other information about the Fund. Current month-end performance and a copy of the prospectus are available at www.needhamfunds.com or by contacting the Fund’s transfer agent, U.S. Bancorp Fund Services, LLC at 1-800-625-7071. Investment returns and principal value will fluctuate, and when redeemed, shares may be worth more or less than their original cost. Past performance does not guarantee future results and current performance may be higher or lower than these results. Total return figures include reinvestment of all dividends and capital gains. Needham & Company, LLC, member FINRA/SIPC, is the distributor of The Needham Funds, Inc.

All three of the Needham Funds have substantial exposure to small and micro capitalized companies. Funds holding smaller capitalized companies are subject to greater price fluctuation than those of larger companies. All of the Needham Funds are permitted to engage in short sales, options, futures, and leveraged trading strategies. The Funds’ use of short sales, options, futures strategies, and leverage may result in significant capital loss.

Portfolio holdings are subject to change and may be long or short. The Needham Aggressive Growth Fund’s ownership as a percentage of net assets in the stated securities as of June 30, 2023: SMCI: 8.41%, CLH: 1.96%, NTIC: 0.78%, ODC: 2.04%, QTWO: 0.00%, PDFS: 7.55%, 005930-KR (Samsung): 0.00%, GFS: 0.00%, NVMI: 3.42%, ASPN: 1.53%, GM: 0.00%, TM: 0.00%, VICR: 3.95%, NVDA: 0.00%, and VCSA: 0.32%.

Portfolio holdings are subject to change and may be long or short. The Needham Growth Fund’s ownership as a percentage of net assets in the stated securities as of June 30, 2023: SMCI: 9.33%, CLH: 1.39%, NTIC: 0.00%, ODC: 0.00%, QTWO: 0.00%, PDFS: 8.99%, 005930-KR (Samsung): 0.00%, GFS: 0.00%, NVMI: 3.73%, ASPN: 2.23%, GM: 0.00%, TM: 0.00%, VICR: 3.35%, NVDA: 0.00%, and VCSA: 0.10%.