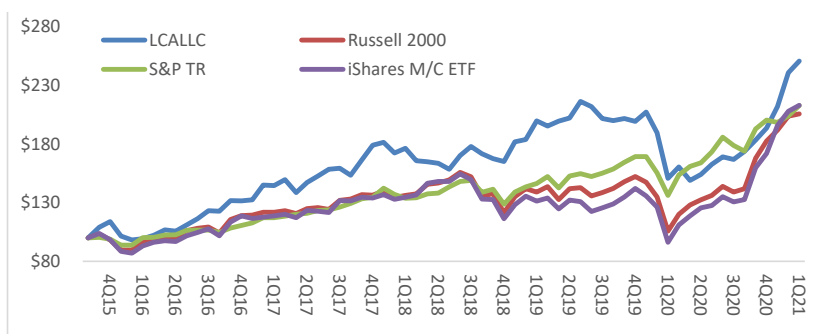


Dear Friends:

For the 1Q21 quarter, cumulative returns on accounts managed by Long Cast Advisers improved 30%, net of applicable fees, ahead of the baseline (S&P Total Return index, iShares MicroCap ETF and the Russell 2000 index). Individual account returns ranged from 23% to 38%. Since inception in November 2015 through quarter end 1Q21, LCA returned a cumulative 151% net of fees, or 18% CAGR. *Past performance is no guarantee of future results.*

Because our portfolio is comprised of just a handful of typically small “off the beaten path” businesses that we tend to own for long periods, it is expected that returns will vary considerably from the major indices. *As a reminder, LCA does not invest in companies exposed to the hydrocarbon or defense industries, a small effort to align capital growth, business ownership and personal ethics.*

	Long Cast	R2000	IWC	S&P TR
2015 (2-mos)	14%	-2%	-2%	-1%
2016	15%	21%	21%	12%
2017	36%	15%	13%	22%
2018	-8%	-11%	-13%	-4%
2019	21%	25%	22%	31%
1Q20	-24%	-31%	-32%	-20%
2Q20	2%	25%	31%	21%
3Q20	8%	5%	4%	9%
4Q20	16%	31%	32%	12%
2020	-3%	20%	21%	18%
1Q21	30%	13%	24%	6%
Cumulative chg	151%	106%	113%	113%
CAGR	18%	14%	15%	15%
LTM	66%	95%	122%	56%



I’ve had questions about the investment restrictions considering three likely macro-issues on the horizon: An increase in oil’s value as a store of energy due to post-COVID economic activity; an increase in oil’s value as a store of currency due to inflationary pressures; and growth in defense spending due to recent trends of increased nationalism. The short answer is, those are sandboxes for other investors. There are ample ways to invest in an inflationary environment without hydrocarbons (I discuss one below) and ample alternatives for investors who want exposure to these industries.

## PERFORMANCE / PORTFOLIO HOLDINGS

Small caps were (briefly) back in vogue in the first quarter so it’s hard to say whether our outperformance reflects deep research and diligent stock picking or randomness of market behavior. I think the companies we own are small, cheap and growing (or have the opportunity with the right nurturing to achieve those goals) and when / if the market will look favorably on them is completely out of our hands. 1Q21 was a period when it looked very favorably, especially for long term holdings **SIFY** and **QRHC** and the more newly purchased **CCRN**, which were the most significant contributors to returns in the quarter. There were no significant detractors.

We reduced our stake in SIFY at attractive prices but continue to own meaningful shares. It is rumored that [Blackstone is interested in acquiring a minority stake at a ~\\$1B valuation](#), which gets to ~\$6 / share.

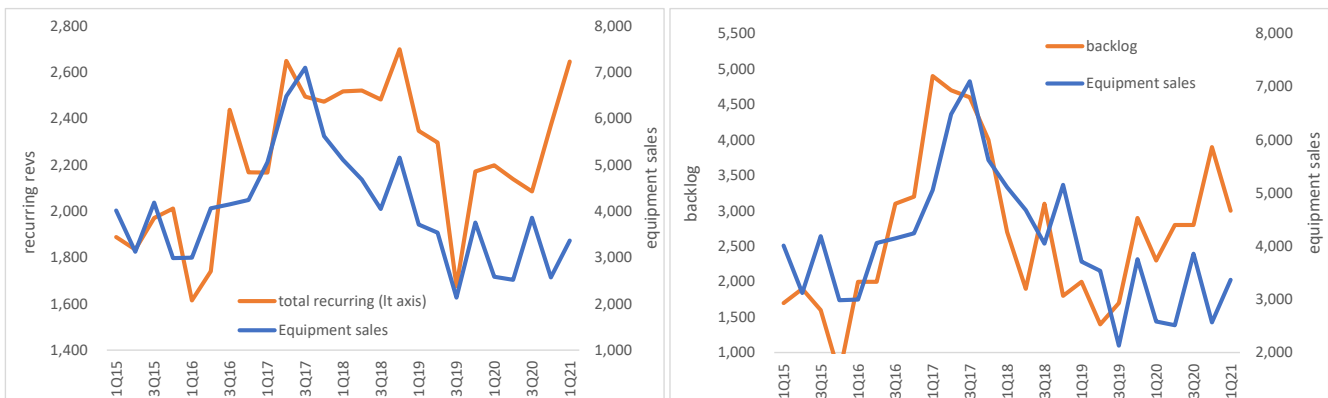
Short of a Blackstone stake, splitting up the company would offer another path to value realization. The Board has already approved a plan to demerge. This would remove the shadow of the larger legacy Network business, which comps to Tata Communications at 6x-8x EBITDA multiple, from the faster growing Data Center and IT businesses, which comp to companies with reasonable market multiples of +15x EBITDA. The Data Center segment owns 10 data centers around major cities in India and has grown EBITDA +80% CAGR over the last two years. *At prevailing acquisition multiples on a trailing basis, the data center business alone is worth +\$3 / share.*

QRHC and CCRN remain in our top-five holdings, along with **INS**, **PESI** and **DAIO**, the latter of which we've been aggressively adding to. It maintains its initial attraction was as an essential service in an overlooked niche with possibility that it converts into a "platform". I'm motivated to add to it by indications of a potential upswing that hasn't yet been priced into the stock.

DAIO is a \$30M EV manufacturer of automated programming machines that batch program microchips. Given the pervasiveness of chips in manufactured products, these machines are "modern shop tools". They cost ~\$250k to ~\$750k per unit. Chips programmed on their machines end up in everything from e-cigs to medical devices to IoT connected appliances. DAIO's high end machines (the "PSV family") have a throughput of ~2,000 chips / hour – comparable to competitors Dediprog, Xeltek and BPM to name a few – and overall the company has an installed base of ~340 units. Ostensibly, run around the clock (impossible, but just for the sake of this hypothetical), their machines could program more than 5B chips year, which is less than 1% of the total chips produced every year.

DAIO's largest end market is automobiles. The strategy to pursue a dominant position in autos was implemented by the current CEO when he joined the company in 2012, recognizing that the number of chips per car and the amount of information programmed in each chip was likely to grow. At the very least, the much publicized "chipagedon" validates his thinking. (I've appended at the end of this report commentary from other suppliers in the space (chip makers and distributors) to try to offer some better understanding around "chipagedon" and its impact on the business).

A PSV unit is a "capital sale". Once in place, these units generate aftermarket sales through software licenses, trays to hold different chips and services, et al. One can observe (left chart) significant growth in the recurring revenues, which infers utilization of units in place. Utilization tends to grow ahead of unit sales. Backlog trends (right chart) supports the view of pent up demand, which would be a significant event since unit sales "moves the needle" on profitability.



Longer term, since 2018, the company has been investing in a security component of their business (“SentriX”), which would enable the machines to “embed” into each chip a unique identifier into its “root” programming. Among other things, this “embedded security” would enable manufacturers who use those chips to reduce counterfeiting and provide a better security foundation for IOT products.

The SentriX investment adds \$500k-\$1M / quarter in incremental R&D expenses and to date there has been no return on this investment. Back out this spend and the company would be profitable. (Back out all R&D and this is trading at 6x trailing EBITDA).

Initially, DAIO had a partner on SentriX but that ended in FY2020. Management is iterating its go to market strategy and has pivoted from selling SentriX specific machines to converting existing machines to the SentriX model, expecting to charge on a per chip basis. They’ve already done this for one client. One can imagine how this could increase the recurring revenue component of existing units in place.

The idea of “embedded security” and “root of trust” programming has long permeated electrical engineering journals but has been slow to percolate into consumer products. Will this change? Here’s what the CEO said on the last call:

*“... security is where the market is going for the microcontroller industry. It's not a distinct category. It's not something out there that's different than what we do. If you look at all of the major semiconductor product line announcements for microcontroller families, they all have a security component. So to be ahead in security is to be ahead where the 30 billion unit microcontroller market is going. And so that's just a strategic play that we have to have.”*

He was right about autos and I think he’ll be right about this as well. At present the company is an inexpensive cyclical equipment manufacturer with a near term cyclical tailwind. If SentriX works, it is a wildly inexpensive security platform with high margin recurring licensing income. I think those are attractive dynamics for long term patient investors.

You likely notice we’ve been purchasing S & W Seed (**SANW**), a producer and manufacturer of agricultural seeds. At current price of \$3.90 and with 34M diluted shares and \$50M in debt, SANW has an enterprise value of ~\$180M. Against trailing 12-month sales, this infers a 2x EV / sales multiple which is in the mid point of the 1x-3x range typically seen in the industry space.

My interest in the company was piqued b/c I was looking for something that would work as a potential commodity hedge against inflation, and agriculture tends to do that. Digging in, I saw two broad attributes that make this company compelling.

First, agriculture unfolds over a time frame that is utterly foreign to Wall Street – 6 to 8 year development cycles, limited by growing seasons – and that makes the company largely uninvestable to anybody but the most patient investor. It’s perfect for us! Second, the company is coming towards the end of a product development cycle with three new products to be released in the next 24 months. These will be the first new product launches since the company altered its strategy about six years ago.

By way of backstory, back in 2015, SANW was pretty close to a pure play on alfalfa seeds and Saudi Arabia was its second largest market. Then, in the midst of a drought, the Saudi monarchy decided to no longer grow domestic alfalfa.

The company had a large shareholder, noted small cap value investor Michael Price, who owned a ~10% stake in the company and he brought on the Board Mark Wong, an agriculture industry veteran who had previously built, grown and sold companies in the industry and in his retirement, ran his own ag business “for fun”. The company was already in the process of a slow pivot to diversifying its products and end markets when Price asked Wong to take over, which he did, in June 2017, with the understanding that the pivot would take several years and require a significant capital commitment from Price.

We are now four years in. Price, through various stock offerings and capital raises, now owns ~50% of the company. The share count has nearly doubled to 34M diluted shares but revenues are roughly where they were in FY2017 and to the outside observer of financial statements it would seem like nothing has changed but the destruction of capital.

What has in fact changed is a significant investment to diversify to “secondary crops” such as grain and forage sorghum, sunflower, pasture seed, stevia and alfalfa with key markets in the US and Australia. The diversification was enabled through various acquisitions including of two distressed businesses, Chromatin out of US bankruptcy, which delivered a sorghum portfolio, and Pasture Genetics, Australia’s third largest pasture seed company, while Australia was in the midst of a drought. Both were acquired at roughly 1x trailing sales.

One further consequential change to the company was that it previously operated under a distribution agreement to sell its alfalfa seeds through the Pioneer brand, which is owned by Corteva. In 2019, Corteva wanted to bring this brand back in house and agreed to pay SANW \$70M to exit the distribution agreement, essentially pulling forward the remaining term to one year. The implied valuation on the sale of this product was 3x revenues. Buying at 1x and selling at 3x might be a theme of the way CEO Wong runs his business.

To date, there is little on the income statement to show for all this diversification. However, backing out Pioneer, the remaining “core” business grew revs 54% in FY20 (year end June 2020) and 27% YTD this year without even hitting the peak season (winter and spring in the northern hemisphere). The key is that most of the major investment is done. If the products find a market, there is significant room for rewards.

The three products expected to commercialize in the next two years are all non-GMO by US standards (which to be fair has pretty weak GMO standards) and include a low lignin alfalfa that is easily digestible to dairy cows (and therefore potentially able to lower methane waste), an [herbicide resistant sorghum](#) and most compelling a [dhurrin free sorghum using technology licensed from Purdue University](#). When one considers land use, water use and potential carbon offsets related specifically to forage crops, there is a lot of potential for this company to be where the puck is going, realizing that in this industry, the puck and the company move very slow.

If any of these product launches work, this business becomes something completely different than what it appears to be today and what it has been in the past. Ultimately, the goal is to create a company that can dominate secondary crops the way the big four (BASF, Corteva, Monsanto and Syngenta) dominate the primary crops (corn, soy and cotton). Since it takes so long to develop a product, any success would be protected by a wide moat and would appeal to these larger companies for an acquisition. I'll add below a comment made by the company in its most recent shareholder letter:

It is important to understand that what we are creating here at S&W is unique in the industry for a company our size. We have created a powerful and diversified agricultural platform, with some of the industry's best operators at the helm. We have a broad portfolio, but equally important is our expansive operational base, from our production capabilities, to our R&D capabilities and our sales and marketing infrastructure in the U.S., Australia, and around the world. For a company our size, we believe what we have here is not being replicated with any other agricultural company in the world, which we believe creates a significant opportunity for us going forward.

Stocks in this space tend to trade at 1x-3x sales and we're currently buying it at the midpoint of this range *on a trailing basis and without the benefit of new product launches*. If they're successful – and this management team has a history of success – I think this easily fits into our threshold of three to five year doubles. In short, I see this as a small cheap bet on the potential for something becoming much bigger that would unfold over time.

#### **IN CONCLUSION: FIVE YEARS IN ...**

My father describes business in a nutshell as: "Find a problem and solve it." It's my belief, hope and effort that the problem I solve is offering investment exposure to corners of the market unavailable elsewhere, while generating returns different from alternatives. Five years in and cumulative 18% CAGR is respectable, though admittedly, not spectacular. At the very least it's a reminder – given that one of our largest holding heading into COVID (CTEK) is still down ~50% - that avoiding bad investments is just as important as finding good ones.

I've made no secret that I went into this business with significant experience analyzing companies but little in the way of professional portfolio management. Experience has always been my favorite teacher. Throughout, I've been conscientious about adding new clients and new capital, saying no to both at various times, to be sure I wasn't out over my skis.

In 1Q21 total AUM hit an all-time high. I am eager to continue to grow it, through returns and by expanding the community of interested and intelligent investors. If you know others that might be interested in joining, let's connect. I'm committed to building a durable, sustainable and thoughtful business based on a repeatable investment process and intelligent capital allocation. As always, I appreciate your entrusting me with your capital and the responsibility of being its steward. I look forward to continuing this conversation in the future.

Sincerely / Avi  
May 2021  
Brooklyn, NY

APPENDIX A: Snippets from recent transcripts of comments by suppliers of chips or electronics into the auto industry. *Note that ~90% of DAIO sales are international / non-US.*

**Borg Warner (5/5/21):**

This reduction to our prior market outlook reflects the ongoing impact of the semiconductor shortage on industry production. Looking at this by region, we're planning for North America to be up 17% to 20%. We see the largest incremental impact of the semiconductor shortage in North America with our market expectations down approximately 500 basis points from our initial assumptions ... we do expect the bigger impact from the semiconductor shortage issue to occur really in the second quarter and a little less so in the third quarter.

**Infineon (5/4/21):**

We are committed to supporting our customers in the best way possible and expect supply constraints to gradually ease in the second half of 2021, with the most of the ability to make up for lost volume now moving into 2022.

Apart from prolonged cyclical strength, the 2 main structural automotive trends, EV and ADAS [advanced driver assist], remain very robust. As discussed already in our last earnings call, the adoption of electric vehicle is on a strong trajectory overall, although, happening at different speeds in different regions.

The share of battery electric and plug-in hybrid vehicles of new car sales keeps increasing. Sales of battery electric and plug-in hybrid vehicles were up 147% in March quarter compared to last year. China and Europe continue to lead. The U.S. is so far a laggard in terms of EV penetration.

**ST Micro (4/29/21):**

There is clearly the need to replenish the inventories across all the automotive supply. And let's not forget that the semiconductor content inside the cars driven by electrification and digitalization is going up, but also it's driven by an increase of requirement of accessories inside the cars. So all these together has brought to the situation a very, very tight situation. And we saw that during Q1, this demand stayed extremely strong. We -- all the bookings that we have are, in this stage, above our current and planned manufacturing capacity. And the booking visibility that we have now is extended to 18 months. So what we are doing now is we are already talking with our customer about what is going to be the demand for fiscal year 2022.

**Visteon (4/29/21):**

Vehicle production in China in the first quarter of this year was robust and just under pre-pandemic levels, resulting in a 75% year-over-year growth. In the rest of the world, vehicle production was down in the Americas and Europe and modestly up in the rest of Asia, excluding China. If not for part supply shortages, first quarter vehicle production growth would have been positive for all regions, continuing the strong performance seen during the second half of last year. As a result, first quarter industry production growth was heavily weighted towards China which represents about 25% of the global market.

Although demand remains strong, we anticipate industry growth will continue to be muted in the second quarter, primarily due to supply chain shortages and especially semiconductors. The already-

tight semiconductor supply was further negatively impacted by the winter storm in Texas in February, and a fire at a silicon suppliers facility in Japan in March. *As a result, we believe semiconductor shortages will be more significant in the second quarter as compared to the first quarter before recovering in the second half of the year.* We anticipate that the supply situation will improve sufficiently in the second half of the year to allow for partial recovery of the lost production from the first half.

**NXP (4/27/21):**

“When we look at total current revenue levels compared to the prepandemic levels in 2019, we actually plan to ship nearly 20% more in the first half of 2021 versus the first half of 2019. And more specifically, in automotive, we plan to ship at least 20% more in the first half of 2021 versus the first half of 2019. And this is while IHS suggests a drop of 10% in car production over the very same period.

And now going forward, we see our overall revenue in the second half of 2021 being stronger than the first half of this year. And against these trends, we continue to have low channel and low on-hand inventory, which we do not anticipate rebuilding this year. Our customers are responding by placing long-dated, noncancelable and nonreturnable order requests and we are making long-term strategic supply commitments to our partners in order to assure future supply.

*“I can say that very explicitly for automotive, for industrial, but also for mobile, we do know and we do see that what we ship out is immediately being built into product and no inventory is being built in any place.”*

**Micron (3/31/21):**

“The DRAM market is in severe shortage and the NAND market is showing signs of stabilization in the near term.” (DAIO is bigger in NAND than DRAM).

“In auto, we delivered a second consecutive record revenue quarter as auto manufacturing recovers around the globe and as memory and storage content per vehicle continues to grow. We have more demand than we can supply, and we are working diligently with our customers to address their memory and storage needs.”

“Automotive experience, of course, big decline last year, but on a year-over-year basis, mid double-digit range growth in automotive number of units sold. So automotive is also driving greater content increase as well as unit increases. So overall, the industry is experiencing strong demand virtually across all end-market segments.”

**BorgWarner (3/30/21):**

“We see that the electrification is very profound and more profound than it has ever been. We've seen an acceleration in willingness of customers to really lean forward. We see an acceleration in requests for quotes and bookings. But it's tough to speculate on what the chip shortage will lead to or not in the next year.”

**Arrow (3/2/21):**

“We, like you, hear about shortages. I think the most noise is around automotive ... The customers we serve are buying complex parts, but they're used in multiple end use cases. And so we can smooth out some of those bumps for our customers.”

**Magna (2/19/21):**

“With respect to the semiconductor shortage, we see near-term disruptions to OEM production. However, at this point, any shortage is expected to be made up by the end of 2021.”

**Avnet (2/11/21):**

It's really -- it's not like -- in 2017, I get -- I compare this to '17. It's not like all MLCCs or all product. It's really -- even in the high-end MCU 32 bit, it's certain packet sizes, it's not all 32 bit. But we are just seeing a steady increase in lead times in MCUs. It has come into the 8 and 16-bit controllers, memories 16 to 18 weeks. Some DRAMs go on for 26 weeks, so it's really a daily, weekly -- and we publish it, by the way, on our website, and we push it out to our customers so they can feed and insert to their MRPs