Long Cast ADVISERS LLC

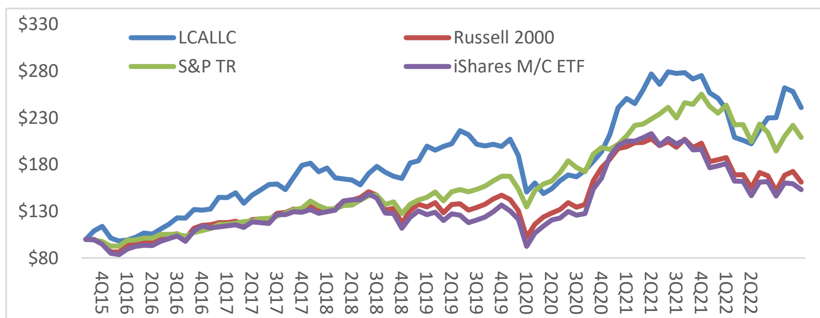
I sometimes tweet about our portfolio and the markets [@longcastadviser](https://twitter.com/longcastadviser)

Dear Friends & Clients:

Welcome to the growing numbers of friends, clients and followers interested in my take on small cap investing. I know there are more investor letters than there is money to allocate, so I appreciate your time and attention, which are limited resources.

For the 4Q22 quarter (ended Dec 31, 2022), cumulative net returns improved 5%. Full year 2022 returns were down 12%. Since inception in November 2015 through year end 2022, LCA has returned a cumulative 141% net of fees, or 13% CAGR. As a backdrop to returns, since inception we comfortably exceed two widely used representative indices for passive small company investing, the iShares MicroCap ETF and Russell 2000 Index, and at present, the S&P as well.

Net returns	Long Cast	R2000	IWC	S&P TR
2015 (2-mos)	14%	-5%	-5%	-2%
2016	15%	21%	21%	12%
2017	36%	15%	13%	22%
2018	-8%	-11%	-13%	-4%
2019	21%	25%	22%	31%
2020	-3%	20%	21%	18%
2021	42%	15%	19%	29%
1Q22	-13%	-8%	-8%	-5%
2Q22	-15%	-17%	-19%	-16%
3Q22	14%	-2%	0%	-5%
4Q22	5%	6%	5%	8%
2022	-12%	-20%	-22%	-18%
Cumulative chg	141%	61%	53%	109%
CAGR	13%	7%	6%	11%



Because our portfolio is concentrated on just a handful of typically small "off the beaten path" businesses, we can expect variance from and greater volatility than the indices. *Past performance is no guarantee of future results.* As a reminder, Long Cast Advisers does not invest in the hydrocarbons or aerospace / defense industries.

PORTFOLIO UPDATE

Top contributors in the quarter were CCRD, DAIO and RELL. QRHC and PESI were significant detractors. I pared some CCRN, QRHC and RELL at higher prices and in some cases bought back at lower prices, reflecting some effort to hew to a discipline around IRR's.

This type of trading is not an effort in "market timing", an endeavor I have no wish to engage in, but one of valuations. My simple parameter, for example, around CCRN is that I think it can support a ~$2B market capitalization so I'll buy when the market cap is around $1B (+/- 20% say) and sell when it's above that, a dynamic I'll try adhere to until my expectation changes on "how big it can be."

Broadly speaking, when I think about a potential investment, I consider four factors: The probability that a company will succeed, the size of the potential success, how long it may take to unfold and how my expectations on these three factors differ from the overall market. This heuristic, (which is far from groundbreaking), applies to net / nets, turnarounds, growth stocks, etc.

The easiest factor to address is how long it may take to unfold, and the underlying skill around that, like painting and parenting, requires *zero intelligence*, just patience. Simply being more patient than the market, which is about as difficult as being more patient than a four-year old[1], gives the advantage to anyone who can assess the other factors over a longer than six-month time horizon.

Two purchases in the quarter that adhere to this dynamic are Enovix (ENVX) and Research Solutions (RSSS).

ENVX is what I'll endearingly call a "shitco" meaning it's pre-revenue / pre-profit but with a massive addressable market, so if it succeeds, the potential reward offsets the risks. I think there's room in the portfolio for a few smaller investments like this, but if I am consistently wrong over time, I'll change course (SNES and SANW also fall into this category, and so far I've been wrong about those, but like ENVX, they are small positions with long time horizons).

ENVX makes lithium batteries using silicon instead of graphene as the anode. Silicon as an anode offers many benefits - faster charging, longer charge periods and longer battery life – but it has a major drawback in that it swells when it charges, and this causes battery degradation and mechanical failure.

A handful of companies are trying to solve this problem and this past November, I had an opportunity to meet with and tour the factories of ENVX and its neighbor and competitor Amprius (AMPX). Both companies are over-represented with folks from the semiconductor industry and both are trying to apply lessons from the chip industry with the hope of delivering Moore's law type progress to a space that has been eking out only modest annual gains.

AMPX is addressing the problem using a chemical solution called "carbon nano tubes" and equipment more typically found in semiconductor production. ENVX's is a mechanical solution; instead of rolling or winding the batteries, the company stacks the anode and the cathode (more info here),a different architecture that changes the direction of force, resolves the swelling issue and also improves safety. However, it requires completely custom designed equipment for production.

I've talked with folks who hired third party engineers to test the battery, and was relayed positive feedback. However, ENVX is having a hard time designing, procuring and implementing the custom equipment to manufacture the batteries at scale, which, needless to say, is essential to converting this from a science project to a business. As a result of the equipment issues, the company is behind on the initial plan it "sold to the street" when it raised money in a PIPE and SPAC, and this is why it sold off in Nov (when I initially bought shares) and in Jan (when I added to the still small position).

The company's "special presentation" from 1/3/23 is the most comprehensive update on what they've done wrong to date, what they're doing to get it right and when they expect this all to unfold. The compelling aspect here besides the potential addressable market is the company's Executive Chairman, TJ Rodgers, and more specifically his foot, which is pretty far up the asses of the executives and management team at ENVX. On the company tour in Nov., I told him that as a shareholder, I appreciated that he had his foot up management's asses and he responded "on a scale of 1-to-10 in

[1] I'll admit, in the thick of a tantrum, it's not the easiest thing in the world but this is a keen reminder to not conflate patience with stubbornness, about which so much more can be written vis a vis investing & parenting, but not today.

terms of how far up their asses my foot is, today it's a four." Recent changes in management provides some evidence that greater depths have been achieved.

Rodger's foot has done wonders at prior companies where he's owned shares and served on the Board, notably at Cypress Semiconductor, which he founded, and later SunPower and Enphase. The situation at ENVX is a bit different than those other companies, because battery chemistry is complicated and the industry is littered with failed tech that worked in a lab but not at scale. My impression - and the reason for our investment - is that if the problems are limited to a manufacturing one, then they are solvable and the company's new timeline laid out in the 1/3/23 presentation is within our three-to-five-year horizon.

This brings me back to what I mentioned earlier re: the probability of success and the potential size for that success, which warrants a small position in ENVX despite it being pre-revenue. I don't think it takes much to imagine that the size of the battery market is quite large and that a better technology with a widely available input could take some significant share. The key factor here is the probability of success, and it got me thinking about what inputs tilt the scales in our favor.

Particularly with smaller companies, I put management at the top of the list. I look for experience and prior history. I look for an ability to articulate and implement a reasonable plan that doesn't change every quarter and compare it to how well they've done it in the past. I look to see if the CEO works with the same people from job to job or if they need to recreate a new management everywhere they go b/c no one actually wants to work with them, (a lesson learned from my investment in IVTY). In the case of ENVX, Rodgers is known to be difficult, yet many executives have joined him from prior jobs, which I think speaks to their faith in his abilities to get this right. And I haven't even touched on management's more obvious role in driving the P&L, balancing the levers of investments in sales, R&D and overhead etc., which impacts growth and margins, and working capital, which drives cash flow.

At a close number two on my list of factors is the balance sheet. Cash provides the patience required to grow a business, the lack of it infers future dilution and debt can be a dead-end street. In my nearly dozen years on the sell side, I never really thought about the balance sheet and only the rare client ever asked about it b/c equity investors tend to focus on growth and margins. But as a manager of OPM, it's a no brainer.

The dynamics of "what I look for" described above fits ENVX, which has cash to achieve its near term hurdles, also applies to our newer investment in RSSS, which has about $10M cash and operates at roughly breakeven as it invests in growth.

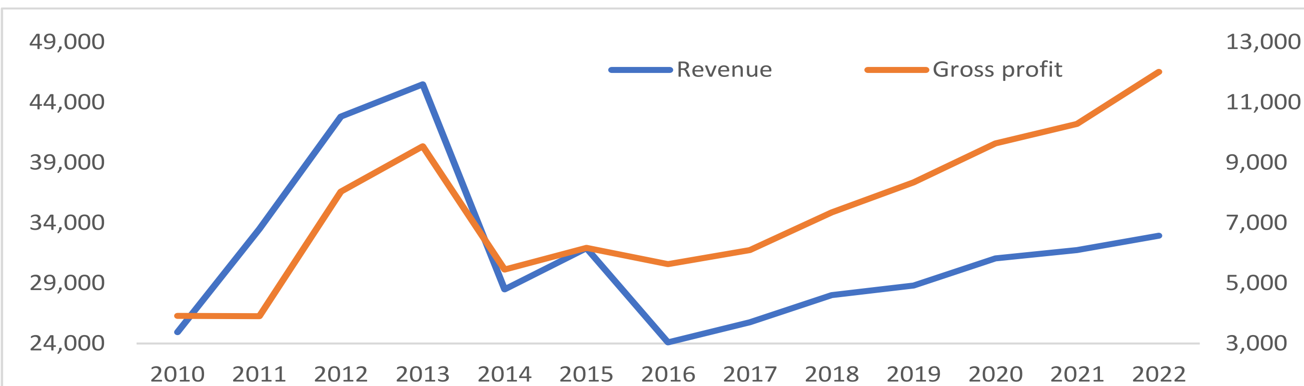
We've owned a small position simply on the change in management to a team I've invested with in the past (new CEO and CFO as of October 2021, which conforms with the company's F2Q22 period), and I've grown the position as my comfort with their efforts have increased.

RSSS has historically been in the article sourcing business and if you go back far enough, to when it was called Derycz Scientific (named for the founder, Peter Derycz), the company was built around finding, copying and mailing research articles paired with a printing business that provided glossy-ied article reprints for marketing purposes. Over the years it morphed into an online marketplace for transacting pdf’s of articles and more recently into a subscription platform for sourcing and managing articles all online.

Why does this business exist? Think about music for a second, and listening to pirated copies vs legal licensed music. Large companies in the R&D or intellectual property business need access to research articles both for the purpose of discovery and also for citations. It creates risk for them to not pay for rights to these articles, so they access them using companies like RSSS, which essentially bulk break publishing catalogs in order to sell or rent rights to individual articles needed by their clients.

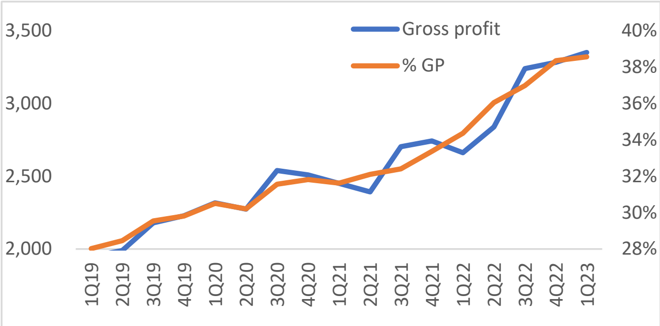
RSSS CEO Roy Olivier and CFO Bill Nurthen had previously run ARIS, whose core business was “bulk breaking” parts catalogs for automotive and power sports dealers, and they built an entire business around this. Though this is a different industry, the machinations are not dissimilar. (We owned ARIS at ~$3.50 / share and it sold in 2017 for $7.10 cash and I wrote a lot about it on my blog.)

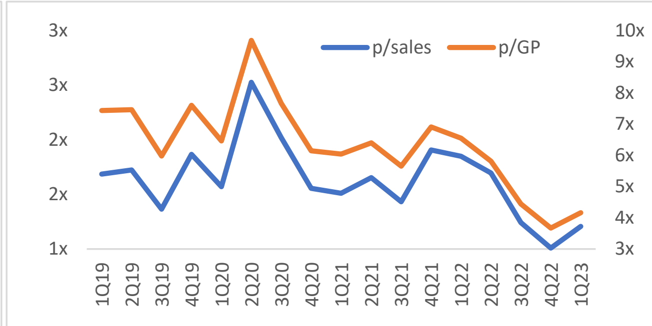
RSSS has long made money selling individual articles – a lumpy lower margin business – and has been transitioning from a per article revenue business to one that provides access to the catalog on a subscription basis, a bit of a self-cannibalization that trades revenue for gross profit. One can observe gross profit growing faster than revenues as this strategy has unfolded.



I believe the company deserves a higher multiple for their success in implementing the plan, which started under the prior CEO and continues at a faster pace under new management, who I think are more capable and experienced. Yet, since the mgmt. change, the market has discounted the valuation despite observed acceleration of growth in gross profit and margins.

I feel comfortable disagreeing with the market here on the discount. But it begs the question, who is selling and what am I missing? A bit more history. The company IPO’d in Jan ’09 through the founder’s brother in law’s investment co “Bristol Investment Fund”. At the time, those two owned 66% of the company. Their ownership has dwindled over the years to 36% in ’16 and 22% at FY22 and in the intervening years, a “who’s who” of small cap funds (Samjo, 12 West and currently Cove Street) have cycled in and out of the stock. I think a combination of continued BIL selling plus prior owner impatience might explain the availability of shares to purchase, driving down multiples despite recent growth. Macroeconomic conditions, which have weighed on all SaaS related multiples, also contributes no doubt to the recent discount.





Changes in the industry might also contribute to multiple compression, but I feel equally comfortable disagreeing here. There is a trend in the industry towards "open access", a movement pushing for the end of paywalls for scientific research articles conducted with state or federal funding, which sounds ominous for this business (link has 8 minute video that does a very good putting all this into context, albeit focused on the academic and not commercial space). But if you watch the video note at 5:45 it talks about the need for "new tools for mining research" and at 6:20 "the slow movement of scientific cultural practices … scientists are conservative in changing practices."

If you think open access will destroy this business overnight, don't buy the stock. If you think there will be a slow rate of destruction, and possibly none at all in the near term, there's a case to be made for owning this.

More widely, I think there's a compelling case for the potential transition not just from an article seller to a subscription platform, but from a subscription platform that supplies articles to one that helps manage and mine them in an open access world. This is the "optionality" on a potentially bigger outcome, and where I think the new management offers compelling value. As an anecdote, a friend works in an industry that requires access to these types of articles and warned about open access, then agreed with the importance of having a management platform in an open access world. Obviously, a single comment like this isn't foundational, but it gets to the point that the world isn't black and white; the blurred areas is where markets can be made.

RSSS has announced its intention to pursue some smaller acquisitions and I think in a few years they likely sell to PE, as ARIS did. In the most recent quarter (F1Q23 for the period ended 9/30/22) the company reported its highest quarterly EBITDA in the company's history. While they won't do that every quarter, I expect them to build on this base, b/c that's what better management does.

One other thing better management does is implement a long term incentive plan that's aligned with shareholders, which is what this management team did in August '22, via a vesting schedule that starts at prices 50% above the current price.

20% at a 30-day VWAP of $3.00 per share;
20% at a 30-day VWAP of $3.75 per share;
20% at a 30-day VWAP of $4.50 per share;
20% at a 30-day VWAP of $5.25 per share; and
20% at a 30-day VWAP of $6.00 per share.

As I said, we've owned a small position primarily on my experience with management. Having observed the company over the last year and watched it skillfully adapt and upgrade, I've gained more comfort in their ability to address the threats and opportunities ahead and have increased our position. I'm continuing to learn more about the business and will attend some industry conferences in 1H23, whence I'll offer additional updates.

BRIEF BUSINESS UPDATE

Over the last two months I've had the opportunity to participate in two podcasts, the Yet Another Value Blog podcast with the Andrew Walker, whom I've had the pleasure of getting to know through a client, and with Bobby Kraft, who runs the Planet MicroCap Podcast. I pitched CoreCard on the former and Research Solutions on the latter.

Since starting Long Cast Advisers in 2017, I've leaned most heavily into the investigative and analytical side of the work, with focused effort on growing my competence in portfolio management. Now, with a seven-year track record and greater comfort with Portfolio Management, I want to be more effortful on the entrepreneurial side of developing my business. These podcasts are part of this effort and the responses have been a little overwhelming.

In order to limit the administrative burden and stay focused on research and investing, I aim to add only a few clients per year, with an emphasis on those that are aligned with my patient and idiosyncratic investing. I know it takes a long time to build a relationship. It's my desire to lay the ground work so that people I connect with today can become clients over the next few years and hopefully develop a relationship that lasts a lifetime. I'm happy to connect, even at the risk of doing it … slowly.

IN CONCLUSION: ON FINANCIAL FRAUD

> "A public financial market provides the same service to liars that it provides to honest business – it converts stories into cash." – *Lying for Money*, by Dan Davies

Shortly after the SBF / FTX issues widely surfaced I wondered if the financial services industry were *over-represented* with schemers and frauds. No doubt every industry has them, I just wondered if ours had a higher concentration.

My gut answer was yes, but when I started to go about testing it, I ran into a wall. Defining, calculating and comparing "authentic" and "illegitimate" participants in any industry is hard enough for regulatory agencies and impossible for me. Layer on that the effort of contrasting between industries, etc., it was certainly not a good use of my time. And then as the news cycle moved passed FTX, it dawned on me that on the scale of frauds, financial services hardly holds a candle to politics or religion.

But it led me to Dan Davies' "Lying for Money", a fabulous read in the non-fiction space. The litany of frauds discussed in the book were entertaining (Salad Oil, Poyais, Boston Ladies Deposit Co, Bre-X, etc) but his discussion of abstractions around fraud really aroused my attention.

As Davies offers time and again, wherever there is trust, there is vulnerability to fraud. Concurrently, a control system designed to completely eliminate fraud would be too onerous and unwieldy to use. As a result, we have to accept some amount of societal fraud, but paired with a healthy dose of skepticism and appropriate due diligence, risk can be lowered.

It all begs the question, why isn't there more due diligence and skepticism? How is it that folks like SBF, Elizabeth Holmes, Bernie Madoff, etc. can blow hot air up the asses of *experienced* investors and end up with institutional credibility and unlimited capital despite lying *the entire time*?

I think I found the answer ambling through the Edward Hopper exhibit at the Whitney museum, (which I highly recommend). Hopper lived amidst the glitz and glamour of pre- and post-war NYC, during a time of tremendous development and growth, but neither his eye nor easel were interested in the rising brightness and buildings of the burgeoning city. Rather, he focused on the regular, the mundane and the solitary, and it all struck me as an apt analogy for investing, at least the way I think about it. It's anti exciting. It's anti glitz. It's anti-"I LOVE THIS FOUNDER … I'm a 10 out of 10" as a bunch of Sequoia partners reportedly gushed over SBF while he played video games.

I dare not suggest that a careful person can avoid fraud b/c even the most cautious is susceptible. But business exists where there are needs to be filled. Where that need is instant gratification, easy money, immortality or "YOLO", I assure you, there is no lack of people selling services or products available for purchase to fill this need, no matter how empty, spurious or questionable is the offer.

But where that need is the slow and patient compounding of capital, then an investor can focus on research based probabilities, and if they keep asking questions both to industry participants and also to themselves regarding their own biases and impressions, a better and more educated sense of reality might prevail. That becomes an objective and independent variable upon which one can assess an appropriate valuation.

As always, I appreciate your entrusting me with your capital and the responsibility of being its steward. If you would be so kind as to forward this letter to friends or institutions who might be looking for an investment manager with experience and a track record on the smaller end of the market cap spectrum, I would be grateful for the effort. I look forward to continuing this conversation into the future.

Sincerely / Avram
Brooklyn, NY
January 2023