

October 1, 2021

I use round figures to save time and they don't include fees. See the administrator's statement for precise numbers.

This was the slowest quarter since I started investing back in 2018.

The only big event was the Chinese market collapse. However, I don't expect contagion to western economies from the Evergrande bankruptcy - or even a collapse of the Chinese real estate bubble - because these investments are isolated from the west. Western companies with a large presence in China will be hurt. And this could ripple over to some small countries like Thailand, which itself has a real estate bubble with many Chinese owners. Even still, the world impact seems small. The main tail risk is Chinese manufacturing coming to a halt - which would be a big deal - but I don't see why it would barring political instability. Thus, I'm not paying too much attention to China.

I read many investing/business books this quarter. My favorite was **Shoe Dog**, Nike's story.

1. Results from July 1st - September 30th, 2021¹

SP500 +.5% Fund +11%

We're currently 200% long and 125% short. Short exposure is up from last quarter because I found new great shorts and don't want to close winning shorts at least until January in order to delay taxes.

Beta increased this quarter as volatility on bad companies came down, not because I changed much.

¹ Results of the legacy account; and by long/short. I put less liquid investments into the fund account since I know the old one will liquidate soon. They take up more margin so the fund has less gross leverage. Despite the outperformance of the legacy account, I believe the fund's account is superior when ignoring tax consequences.

Risk Analysis

	SPY	IJR	VT	U***7733
Ending VAMI	1,005.77	970.84	986.76	1,110.67
Max Drawdown	5.00%	7.98%	5.03%	4.97%
Peak-To-Valley	09/02/21 - 09/30/21	07/01/21 - 07/19/21	09/03/21 - 09/30/21	08/16/21 - 08/30/21
Recovery	Ongoing	Ongoing	Ongoing	22 Days
Sharpe Ratio	0.26	-0.51	-0.42	2.74
Sortino Ratio	0.34	-0.75	-0.56	3.94
Standard Deviation	0.68%	1,21%	0.69%	0.96%
Downside Deviation	0.51%	0.81%	0.52%	0.67%
Correlation	0.29	0.17	0.23	
β:	0.41	0.13	0.32	
a:	0.41	0.44	0.44	
Mean Return	0.01%	-0.04%	-0.02%	0.16%
Positive Periods	37 (56.06%)	29 (43.94%)	36 (54.55%)	39 (59.09%)
Negative Periods	29 (43.94%)	37 (56.06%)	30 (45.45%)	27 (40.91%)

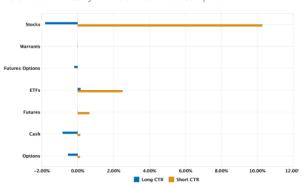
Value Added Monthly Index (VAMI)







L & S Performance By Financial Instrument Comparison



This report is generated by Interactive Brokers. It uses gross returns.

Militia uses the S&P 500 as a benchmark because it shows the fund's correlation and volatility relative to risk assets, not because you should gauge our performance to the S&P 500 quarter to quarter - we are not positively correlated, after all.

I like having less net long exposure right now. Banks are forecasting S&P 500 forward earnings of 200, compared to 145 in 2019. It doesn't make sense that normalized earnings will be up 30% in 2 years, especially right after covid. Yet the market is priced as if that forecast is plainly true. If they turn out to be right I expect to lose a little, whereas if they're wrong I expect to win a medium amount. I think it's at best a coin flip for them. I might press this bet in October, *especially right before the Fed begins tapering*. While I'm not a macro investor, this seems like two decent catalysts which coincidentally are happening at the same time - and I'll always chase the lowest hanging fruit for any type of investing.

Long:

We're down 2% on the long side.

The biggest loser was Energy Transfer (ET), which I mentioned in the Q1 letter. I quit part of the position at \$10.5, and then bought it back at \$9. I plan on holding most of the position long term since I think this is worth \$15+. We lost .75%.

The biggest winner was American National (ANAT), which I mentioned in my last letter. The buyout

rumor was true and we won 1.5%. I'm still hopeful that the Moody family will sell National Western Life (NWLI) in the next several years. Plus it's cheap enough anyway despite the headwinds and problems.

Short:

We're up 13% on the short side.

2. Crypto Cash Burn Back of the Envelope Math

This is my loose estimate on the annual cash burn of crypto, totalling \$200+ billion/year while bitcoin is \$50,000:

330k new BTC/year = \$16.5 billion when btc \$50k

8 million new ETH/year = \$24 billion when eth is $$3k^2$

The fee to send BTC on average = \$10, there's 300k per day. \$1 billion

The fee to send ETH = \$5, 1 million per day. \$2 billion

Total for these = \$43.5 billion. That's 2/3rds of the crypto's total market cap, so total for crypto is \$65 billion.

1h 2021 Coinbase (COIN) made \$3.6 billion in revenue. Robinhood (HOOD) did \$870 million in revenue, 2/3rds of which was crypto. Together annually that's \$7.2 billion coin + \$1.1 billion HOOD = \$8.3 billion. This is US only, and I guess this was 20% of the world's pie. If that's right, there's \$41 billion/year in exchange fees.

A few billion for each smart contracts and NFTs. Another few billion for market maker profits.

Taxes are the biggest item. I guessed that 75% of people lose their money which goes to 25% who win. At 20% taxes I figured that's probably the single biggest expense, over \$100 billion/year. This is so high because bitcoin's volatility and the leverage involved creates big winners and big losers - and the losers don't get a tax break.

For comparison, there's \$200 billion worth of new gold mined per year, not including other costs or other metals.

Before doing this math and comparing crypto to gold I was neutral. While I'm skeptical of today's price, I still thought bitcoin could reasonably go up many times from here. Now that seems a lot less likely because that puts cash burn to \$1 trillion+ per year, which just doesn't seem sustainable for long. If bitcoin doesn't fall by then I will do a big short through tax season given the big forced outflow. And if crypto makes another couple hundred percent move up from here, I will aggressively short once momentum fades.

² A counterpoint is that ETH has a deflationary feature, which can be argued either way. That doesn't change the final answer either way too much. This is the only push back I've gotten from crypto bulls.

3. Leveraged Investing Strategy

A few investors have asked me good questions like, "Why bother with large caps like Netflix?" or "Why mix in questionable companies for short term trades - shouldn't you just focus on finding fundamentally cheap investments?" They're right: If I was running 100% long only, I would focus only on buying companies with the cheapest valuation. However, when you're investing with 300% gross leverage you must worry a lot about volatility. And the best way to lower volatility is to increase true diversification with different types of companies, market caps, countries, etc. When I bet long on a few grey area companies I'm protecting myself during a market melt up, for example. Or I can opportunistically pair a mediocre, but highly correlated long with a terrible short. Etc.

The table below isn't as intimidating as it looks. It shows the expected return of a 300% long only strategy that rebalances daily³. Put simply,

1. Leverage morphs returns in counterintuitive ways since you rebalance as you win and lose.

and

2. As volatility increases - as you move from left to right on the table - expected return drops.

Notice that the light grey cells have a higher return than you might expect, while the dark grey ones have a lower return:

³ A common misconception, even among smart investors I respect, is that 3x leveraged daily rebalancing ETFs have negative expected value because of the daily rebalance. This isn't true a lot of the time. In a low volatility environment, where markets are trending up or down, the daily rebalance in fact *increases* the expected value. Their error comes in using the average market return of 10%/year. But the reality is there are more trending up/down years than average ones. Also, these ETFs get killed in higher interest rate environments: if the index goes sideways for a few years the losses become enormous while paying 2.5x margin interest if it's 5%/year.

Estimated Fund Return Over One Year When the Fund Objective is to Seek Daily Investment Results, Before Fund Fees and Expenses and Leverage Costs, that Correspond to Three Times (3x) the Daily Performance of an Index.

One Year Index Performance	Three Times (3x)	Index Volatility												
	Index Performance	0%	5%	10%	15%	20%	25%	30%	35%	40%	45%	50%	55%	60%
-60%	-180%	-93.6%	-93.6%	-93.8%	-94.0%	-94.3%	-94.7%	-95.1%	-95.6%	-96.0%	-96.5%	-97.0%	-97.4%	-97.8%
-55%	-165%	-90.9%	-91.0%	-91.2%	-91.5%	-91.9%	-92.4%	-93.0%	-93.7%	-94.4%	-95.0%	-95.7%	-96.3%	-96.9%
-50%	-150%	-87.5%	-87.6%	-87.9%	-88.3%	-88.9%	-89.6%	-90.5%	-91.3%	-92.3%	-93.2%	-94.1%	-95.0%	-95.8%
-45%	-135%	-83.4%	-83.5%	-83.9%	-84.4%	-85.2%	-86.2%	-87.3%	-88.5%	-89.7%	-90.9%	-92.1%	-93.3%	-94.3%
-40%	-120%	-78.4%	-78.6%	-79.0%	-79.8%	-80.8%	-82.1%	-83.5%	-85.0%	-86.6%	-88.2%	-89.8%	-91.3%	-92.7%
-35%	-105%	-72.5%	-72.7%	-73.3%	-74.3%	-75.6%	-77.2%	-79.0%	-81.0%	-83.0%	-85.0%	-87.0%	-88.9%	-90.7%
-30%	-90%	-65.7%	-66.0%	-66.7%	-67.9%	-69.6%	-71.6%	-73.8%	-76.2%	-78.8%	-81.3%	-83.8%	-86.2%	-88.4%
-25%	-75%	-57.8%	-58.1%	-59.1%	-60.6%	-62.6%	-65.0%	-67.8%	-70.8%	-73.9%	-77.0%	-80.1%	-83.0%	-85.7%
-20%	-60%	-48.8%	-49.2%	-50.3%	-52.1%	-54.6%	-57.6%	-60.9%	-64.5%	-68.3%	-72.1%	-75.8%	-79.3%	-82.6%
-15%	-45%	-38.6%	-39.0%	-40.4%	-42.6%	-45.5%	-49.1%	-53.1%	-57.5%	-62.0%	-66.5%	-71.0%	-75.2%	-79.1%
-10%	-30%	-27.1%	-27.6%	-29.3%	-31.9%	-35.3%	-39.6%	-44.3%	-49.5%	-54.9%	-60.3%	-65.6%	-70.6%	-75.2%
-5%	-15%	-14.3%	-14.9%	-16.8%	-19.9%	-24.0%	-28.9%	-34.5%	-40.6%	-46.9%	-53.3%	-59.5%	-65.4%	-70.9%
0%	0%	0.0%	-0.7%	-3.0%	-6.5%	-11.3%	-17.1%	-23.7%	-30.8%	-38.1%	-45.5%	-52.8%	-59.6%	-66.0%
5%	15%	15.8%	14.9%	12.3%	8.2%	2.7%	-4.0%	-11.6%	-19.8%	-28.4%	-36.9%	-45.3%	-53.3%	-60.7%
10%	30%	33.1%	32.1%	29.2%	24.4%	18.0%	10.3%	1.6%	-7.8%	-17.6%	-27.5%	-37.1%	-46.3%	-54.8%
15%	45%	52.1%	51.0%	47.6%	42.2%	34.9%	26.1%	16.1%	5.3%	-5.9%	-17.2%	-28.2%	-38.6%	-48.4%
20%	60%	72.8%	71.5%	67.7%	61.5%	53.3%	43.3%	31.9%	19.7%	6.9%	-5.9%	-18.4%	-30.3%	-41.3%
25%	75%	95.3%	93.9%	89.5%	82.6%	73.2%	61.9%	49.1%	35.2%	20.9%	6.4%	-7.7%	-21.2%	-33.7%
30%	90%	119.7%	118.1%	113.2%	105.4%	94.9%	82.1%	67.7%	52.1%	35.9%	19.7%	3.8%	-11.3%	-25.4%
35%	105%	146.0%	144.2%	138.8%	130.0%	118.2%	104.0%	87.8%	70.4%	52.2%	34.0%	16.2%	-0.7%	-16.4%
40%	120%	174.4%	172.3%	166.3%	156.5%	143.4%	127.5%	109.5%	90.0%	69.8%	49.5%	29.6%	10.7%	-6.8%
45%	135%	204.9%	202.6%	195.9%	185.0%	170.4%	152.7%	132.7%	111.1%	88.6%	66.1%	44.0%	23.0%	3.5%
50%	150%	237.5%	235.0%	227.5%	215.5%	199.3%	179.8%	157.6%	133.7%	108.8%	83.8%	59.4%	36.2%	14.6%
55%	165%	272.4%	269.6%	261.4%	248.1%	230.3%	208.7%	184.3%	157.9%	130.4%	102.8%	75.9%	50.3%	26.5%
60%	180%	309.6%	306.5%	297.5%	282.9%	263.3%	239.6%	212.7%	183.6%	153.5%	123.1%	93.5%	65.3%	39.1%

This is a *very* rough proxy for how leverage impacts the returns of my portfolio. One big difference is that I'm only 100% net long. Another is that I don't rebalance every day on the way down, but only after 10%+ drawdowns. This means the dark grey cells above aren't nearly as punishing for what I do. But still, the general idea is true: if you mix too much leverage with too much volatility you've set yourself up to fail from the outset. You simply cannot win. And yet I know people who want to be professional investors that mix high leverage with heavy concentration.

Notice that leverage increasingly magnifies the edge as the edge gets bigger, while mediocrity gets punished severely. This is why I feel strongly about maintaining a large edge with a small fund when running with such high gross leverage. If I run a larger fund in a few years I would not run with nearly as much leverage. This is also why leveraged funds with a questionable edge should be avoided.

4. Inflation

I have a few bets on inflation⁴. I'm risking a few percent over a couple years if it doesn't come and we'll win perhaps 10% if it does - and far more if it's big inflation. My thesis is simple: The market still prices inflation as if it's very unlikely. While I'm not super confident the recent spike in prices will continue, I am pretty sure that the odds are great. Too many large variables changed last year for anyone to really know. I believe this opportunity exists because everyone that had been betting for inflation is out of business, while funds generating "alpha" by making leveraged bets against inflation are complacent. Hilariously, almost nobody knows how to bet on inflation, a sign that the market is offsides.

⁴ I linked this <u>Milton Friedman video</u> on Twitter last year. "What produces inflation is too much government spending and too much government creation of money, and nothing else." I think that view is too black and white, but I do think that's in fact a key variable.

I like a basket of ideas for various outcomes. The Fed could keep rates low and ignore inflation, which causes inflation to accelerate. Or the Fed could raise rates, which causes inflation to decelerate. A few specific ideas:

- 1. Short eurodollar futures/options for '23 and '24. A bet on short term rates going up.
- 2. Shorting long dated government bonds via TLT. A bet on long term rates going up.
- 3. Long commodities like Black Stone Minerals (BSM) or Russia (RSX). A bet on inflation.
- 4. Long companies with long term fixed rate debt who can raise prices. Also a bet on inflation.

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As always, thanks for investing with me,

David Orr

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