January 31, 2020

Friends and Fellow Investors:

For January and year-to-date 2020 the fund was down 10.2% net of all fees and expenses. By way of comparison, the S&P 500 was down less than one-tenth of a percent while the Russell 2000 was down 3.2%. Since inception on June 1, 2011 the fund is up 38.1% net while the S&P 500 is up 187.4% and the Russell 2000 is up 114.6%. Since inception the fund has compounded at 3.8% net annually vs 13.0% for the S&P 500 and 9.2% for the Russell 2000. (The S&P and Russell performances are based on their "Total Returns" indices which include reinvested dividends. The fund's performance results are approximate; investors will receive exact figures from the outside administrator within a week or two. Please note that individual partners' returns will vary in accordance with their high-water marks.)

Despite our significantly reduced (in December) Tesla short position, that stock hurt us *again* this month as it was up *another* 56% in January, and roughly half of this month's negative performance was due to a major hit we took on January 2021 TSLA \$690 calls that I'd shorted in the \$17s back in 2018 when the stock was in the low \$300s. Coming into this month they comprised just under 5% of the fund and were priced at \$14, and when the stock rocketed in early January I stopped them out at \$25 to \$35 (they finished the month at \$108!), and the bulk of this month's damage was done. Now our *only* TSLA short position is straight equity that currently comprises around 5% of the fund.

I continually ask myself what I've learned from this disastrous Tesla experience, and how I'd handle it differently in the future. Let me first say that before I opened this fund I made many avoidable mistakes in the stock market; in fact, it was learning from a long litany of "the usual investing mistake suspects" (if you've been in the markets long enough, you've undoubtedly learned from many of them yourself), that gave me the confidence to open this fund in 2011. That said, Tesla, unlike any other company I've ever seen, checks every box for a desirable short position: a fundamentally terrible business in a capital intensive, massively competitive industry with a bubble-stock valuation and a pathologically lying CEO committing (and so far getting away with) a multitude of fraud in plain daylight. In other words, you give me 1000 TSLAs and for 999 of them a short position will work fantastically.

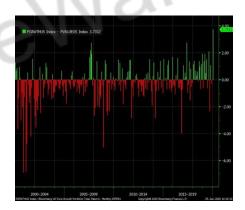
Stanphyl is a concentrated fund (that's why I won't handle more than 10% of any outside investor's portfolio, although approximately 80% of my money is in the fund) that will sometimes run as much as 1/3 of the portfolio in a single equity position. When I see something that I believe would work 999 times out of 1000 I don't size the position as if it has, say, "a 70% probability of working." Instead I size it as if it not working would be the equivalent of getting hit by "a stock market meteor" (which admittedly has lower odds than getting hit by a real meteor). You give me 1000 companies with the profile of Tesla to short and together we'll have the largest and most successful fund in the history of investing, but unfortunately (or perhaps "fortunately") there aren't 1000 short candidates with the profile of Tesla—in fact, there aren't even two. From a practical standpoint then, Tesla's "rarity" means it's extremely unlikely we'd ever again size a short position in a similar manner (our normal size for a short position is 2% to

5%)—not because "this one didn't work," but because we'll likely never again see a company as crazy as Tesla. As for Tesla, I'll now leave it as a 5% position unless I learn before the market does (legally, of course!) that the feds finally slapped a pair of cuffs on Musk. Prior to stumbling across this company I had a long record of exceptional outperformance, and I want that record back.

In that vein, as you may recall from last month's letter, in late December I took the fund back to its roots to focus primarily on finding deep-value microcap/nanocap long positions and (as I won't alter our definition of "value" to suit a worldwide asset bubble) holding more cash if necessary. I covered our non-Tesla equity shorts for as long as the Fed is printing money; when the money-printing stops we'll short other stocks again, but as I wrote last month, right now that's like playing poker against a guy with a chipmaking machine on his lap—he can call every bet a short-seller makes and I don't want to "play against the house."

That said, it sure smells as if the coronavirus is a lot more dangerous—both to people and the world's economy—than China (or the WHO) is admitting, so this week with Nasdaq blithely less than 2% from its all-time high I shorted some QQQ purely as a hedge against our long exposure (not as a "directional market bet"); once it's clear the virus is under control I'll cover it.

An additional headwind for the fund this month/decade is the fact that we're essentially a value fund, and in January "value stocks" suffered their worst month relative to "growth stocks" in at least 20 years:



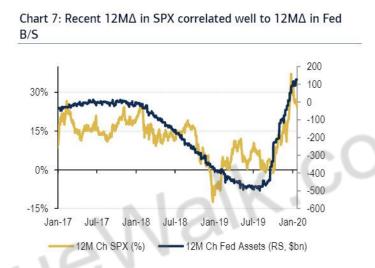
(Chart courtesy of @LJKawa)

In fact, "value" has severely underperformed "growth" for this entire bull market:



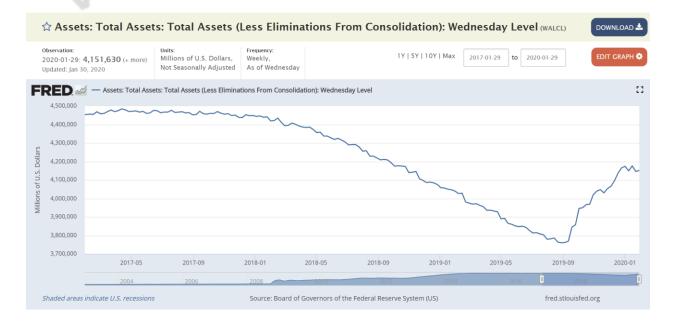
Yet I have zero doubt that investor interest will revert back to "value" as it always has, and I hope you'll stick with Stanphyl as I do my best to rebuild the fund's prior reputation for performance excellence; if not, I completely understand—your patience has been exemplary. But for those of you who decide to stay, onward and upward!

Meanwhile, as noted last month, if you have any doubt whatsoever that this stock market is being driven *entirely* by renewed Fed money-printing, have a look at how closely changes in the Fed's balance sheet correspond to changes in the price of the S&P 500:

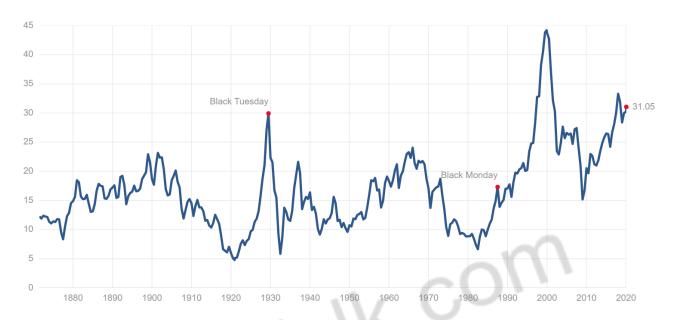


Source: Bloomberg, BofA Global Research

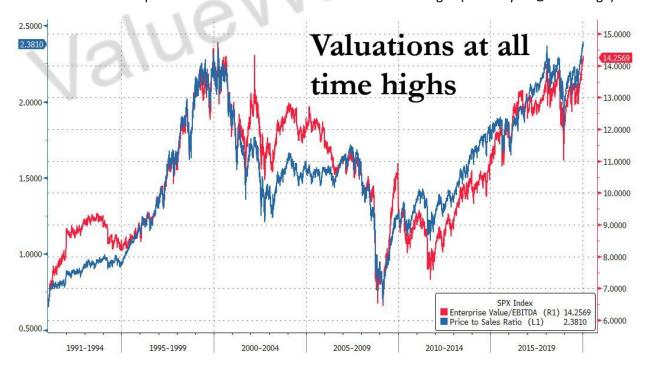
...as that balance sheet rapidly gains back nearly everything removed via "quantitative tightening":



And if you have any doubt that the Fed has blown yet *another* stock bubble (its third in 20 years), Shiller's CAPE ratio has risen above 30 only three times in history, and (courtesy of <u>multpl.com</u>) this is one of them:

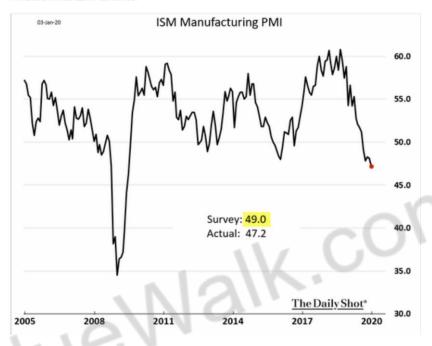


...while the S&P 500's price-to-sales and EV-to-EBITDA are at all-time highs (courtesy of @zerohedge):



Meanwhile, a clear economic dichotomy has developed, with awful manufacturing data...

1. The ISM Manufacturing PMI showed US factory activity shrinking further in December. The index was well below market expectations, registering the worst levels in a decade.



...terrible Cass Freight Index data...

V ~	December 2019	Year-over- year change	2-year stacked change	Month-to-month change
Cass Freight Index - Shipments	1.052	-7.9%	-8.6%	-6.4%
Cass Freight Index - Expenditures	2.723	-6.2%	3.2%	-3.1%
Truckload Linehaul Index	135.50	-3.3%	3.3%	-1.9%
Intermodal Price Index	148.12	.7%	9.1%	.6%

An awful Chicago PMI...

Chicago manufacturing activity slumps in January to weakest reading since late 2015

Published: Jan 31, 2020 10:06 a.m. ET

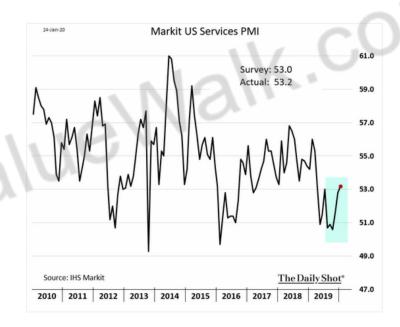


Aa ₹

Chicago PMI falls to 42.9, well below consensus

...and terrible intermodal rail traffic.

But services data is still decent:



And now for the fund's positions...

We continue to own Aviat Networks, Inc. (ticker: AVNW), a designer and manufacturer of point-to-point microwave systems for telecom companies (here's a great Seeking Alpha article describing the company), which in January appointed a new CEO (with the interim CEO remaining as CFO/COO), and the accompanying press release made it quite clear (based on his experience) that he was been brought in to dress up the company and get it sold. Also in January, Aviat reiterated its full-year guidance, promising significant improvement in both operating income and gross margin, although warning that due to a vendor's production issue some of the revenue expected in the quarter ending this past December will instead arrive later this year. Aviat has over \$400 million of U.S. NOLs, \$8 million of U.S. tax credit

carryforwards, \$212 million of foreign NOLs and \$2 million of foreign tax credit carryforwards; thus its income will be tax-free for many years so GAAP EBITDA less capex essentially equals "earnings." Valuationwise, if we assume \$12 million in FY 2020 adjusted EBITDA (in-line with guidance) and remove \$1.7 million in stock comp and \$6.1 million in capex we get \$4.2 million in earnings multiplied by, say, 14 = approximately \$59 million; if we then add in approximately \$33 million of expected year-end net cash we get \$92 million, and if we divide that by 5.4 million shares we get an earnings-based valuation of around \$17/share. More importantly, if we look at Aviat as a buyout candidate its closest pure-play competitor Ceragon (CRNT) sells at an EV of approximately 0.6x revenue, which for AVNW (assuming \$230 million in 2020 revenue) would be 0.6 x \$230 million = \$138 million + \$33 million expected year-end net cash = \$171 million. If we value Aviat's \$400+ million in NOLs at a modest \$10 million (due to change-in-control diminution in their value), the company would be worth \$181 million divided by 5.4 million shares = over \$33/share.

We continue to own Communications Systems, Inc. (ticker: JCS), an IOT ("Internet of Things") and internet connectivity & services company (the company's multiple divisions are best explained by its investor presentation) which in October reported fantastic Q3 earnings of .19/share with a 42% gross margin and \$2.20/share in net cash. JCS is now making an annualized .68/share (based on the first nine months of the year, so as not to overemphasize one great quarter), however we should tax-adjust that to .48 as it's been minimizing taxes by utilizing its NOL carryforwards. A 14x multiple on that plus the cash plus a \$4.5 million valuation on \$15 million of NOLs would value the stock at around \$9.40/share. Additionally, the company is in contract to sell its headquarters building for \$10 million; if that closes it generates \$1/share in additional cash, making the stock worth \$10.40. (The company then plans to rent a smaller facility and save approximately \$200,000/year vs. the P&L impact of its current facility.)

We continue to own Westell Technologies Inc. (WSTL), which in November reported a horror-show of a quarter, with a 25% year-over-year revenue decline and a large GAAP loss driven only in part by a onetime inventory write-down. About the only good news from Westell was that it ended the quarter with \$21.7 million in cash and no debt, and as burn going forward should be "only" around \$1.2 million/quarter, the company still has at least 18 quarters of cash runway to return to break-even (it's projecting to do so in five), and obviously many more than that if it can cut the burn along the way. Following the report the CEO and several board members stepped up and bought stock in the open market (at least they're putting their money where their mouths are) and the company simultaneously posted a new investor presentation. We continue to own Westell because it's a \$30 million/year, 38% gross margin business with over \$1.25/share in cash that currently sells for a significantly negative enterprise value. Assuming 15.8 million shares, an acquisition price (by a cost-eliminating strategic buyer) of just 0.5x revenue would (on an EV basis) be around \$2.20/share. Preventing such an acquisition is that Westell suffers from a dual share class, with voting control held by moronic descendants of the founder who refuse to sell company despite the stock's horrible performance. However, I'm hopeful that someone will knock enough sense into their small brains to inspire them to salvage what's left here, and thus walk away with at least something from what they've squandered. If they do the stock should be at least a double from here, and

possibly more. In other words, it's too cheap for me to sell but the board is too incompetent for me to buy more.

New to the fund is a small position in Evolving Systems, Inc. (EVOL), a small telecom services marketing company that roughly breaks even with a 65% gross margin and sells for only around 0.4x revenue. This is the kind of company that would make a great buy for a strategic acquirer, as \$2.5 million a year in cost savings from eliminating the C-suite and price of being a standalone public company would mean that at \$2/share (a 130% premium to the current price) a buyer would only be paying around 10x pre-tax earnings and 1x revenue. We'll sit patiently with this one and see what happens.

As noted above, we remain short Tesla Inc. (TSLA), which I *still* consider to be the biggest single stock bubble in this whole bubble market. The core points of our Tesla short thesis are:

- Tesla has no "moat" of any kind; i.e., nothing meaningfully proprietary in terms of electric car technology, while existing automakers—unlike Tesla—have a decades-long "experience moat" of knowing how to mass-produce, distribute and service high-quality cars consistently and profitably, as well as the ability to subsidize losses on electric cars with profits from their conventional cars.
- 2) By mid-to-late 2020 Tesla and its awful balance sheet will return to losing money.
- 3) Tesla is now a "busted growth story"; Q4 revenue was roughly flat year-over-year while unit demand for its cars is only being maintained via continual price reductions and expiring tax incentives.
- 4) Elon Musk is a securities fraud-committing pathological liar.

In January Tesla reported \$105 million in earnings for the fourth quarter of 2019 (*entirely* from the sale of regulatory emissions credits, not from a self-sustaining auto business), which was down 25% from Q4 2018, while revenue was up just 2% and the full-year loss was \$862 million. If we compare the second half of 2019 to the second half of 2018, Tesla revenue *fell* 3% and net income fell 45%. Yet somewhere out there is a mass of idiots bidding this stock to the moon because they think it's a "hypergrowth" company! Liam Denning at Bloomberg does an excellent job of pondering that absurdity.

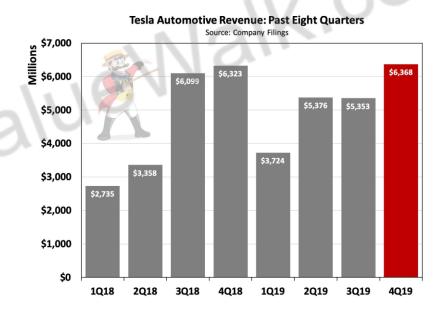
Additionally, Tesla's "earnings" are typically inflated by at least \$200 million per quarter due its massive ongoing warranty fraud, so in reality the company likely *lost* money in Q4; here's my Twitter thread explaining some of that and here's an excellent Seeking Alpha article explaining the rest. Meanwhile we'll have to see the 10-K in a few weeks to learn what *other* scammery Tesla pulled in the quarter; rest assured there was *plenty*.

Yet even with all that fraud, here (courtesy of my friend @Montana_Skeptic) is a great historical chart of Tesla's earnings track record despite billions of dollars in public subsidies:

Tesla GAAP Losses Since Going Public

	Loss (in Thousands)	EPS
2010	(154,328)	(3.04)
2011	(254,411)	(2.53)
2012	(396,213)	(3.69)
2013	(74,014)	(0.62)
2014	(294,040)	(2.36)
2015	(888,663)	(6.93)
2016	(674,914)	(4.68)
2017	(1,961,400)	(11.83)
2018	(976,091)	(5.72)
2019	(862,000)	(4.92)
total	(6,536,074)	

And courtesy of @TeslaCharts, here's a chart of Tesla's revenue "hypergrowth":



As for the nonsensical earnings conference call, this quote from Musk about when so-called "Autopilot" will be "feature complete" may have been the highlight:

"feature complete just means like it has some chance of going from your home to work let's say with no interventions. So, that's -- it doesn't mean the features are working well, but it means it has above zero chance. So I think that's looking like maybe it's going to be a couple of months from now."

That insane statement prefaces Fraud-Boy's desire to recognize approximately \$500 million of non-cash (it's already on the balance sheet) deferred revenue from its fraudulently named "Full Self-Driving" (the capabilities of which offer nothing of the kind), thereby turning a future money-losing quarter (likely Q2 2020) into one showing paper profits. Meanwhile, God only knows how many more people this monstrosity unleashed on public roads will kill.

For those of you looking for a resumption of growth from Tesla's upcoming Model Y when it launches in March, that car will both massively cannibalize sales of the Model 3 sedan *and* (later this year and in 2021) face superior competition from the much nicer electric <u>Audi Q4 e-tron</u>, <u>BMW iX3</u>, <u>Mercedes EQB</u>, <u>Volvo XC40</u> and <u>Volkswagen ID Crozz</u>, while less expensive and available now are the excellent new all-electric <u>Hyundai Kona</u> and <u>Kia Niro</u>, <u>extremely well reviewed</u> small crossovers with an EPA range of 258 miles for the Hyundai and 238 miles for the Kia, at prices of under \$30,000 inclusive of the \$7500 U.S. tax credit. Meanwhile, the Model 3 will have terrific direct "sedan competition" later this year from Volvo's <u>beautiful</u> new Polestar 2, the <u>BMW i4</u> and the premium version of <u>Volkswagen's ID.3</u>.

And if you think China is the secret to the resumption of Tesla's growth, let's put that market in perspective: prior to a recent 10% VAT exemption Tesla was selling around 30,000 Model 3s a year there, and "the story" is that avoiding the 15% tariff and 10% VAT, plus a \$3600 EV incentive that likely expires next year will allow it to sell a lot more. However, the rule of thumb for the elasticity of auto pricing is that every 1% price cut results in a sales increase of up to 2.4%. If we assume a 2.4x "elasticity multiplier," domestically produced Model 3s that are 33% cheaper would result in annual sales of just 54,000 (33% x 2.4 = 79% more than the previous 30,000), meaning Tesla's new Chinese factory would be a massive money-loser by running at just slightly more than 1/3 of its initial 150,000-unit annual capacity and 1/10th of the capacity it will have two years from now. This *guarantees* hugely missed growth targets and it is "growth" (or more accurately, the *fantasy* of growth) that drives Tesla's stock price. And here's a great overview of what a dogfight the Chinese EV market has become.

Meanwhile, sales of Tesla's highest-margin cars (the Models S&X) will be down by roughly 50% worldwide this year vs. their 2018 peak, thanks to cannibalization from the less expensive Model 3 and direct highend competition (especially in Europe and China) from the <u>Audi e-tron</u>, <u>Jaguar I-Pace</u>, <u>Mercedes EQC</u> and <u>Porsche Taycan</u>, with multiple additional electric Audis, Mercedes and Porsches to follow, many at starting prices considerably below those of the high-end Teslas. (See the links below for more details.)

And oh, the <u>joke of a "pickup truck"</u> Tesla introduced in November won't be any kind of "growth engine" either, especially as if it's ever built it will enter <u>a dogfight of a market</u>.

Meanwhile, Tesla has the most executive departures I've ever seen from *any* company; here's the astounding full list of escapees. These people aren't leaving because things are going great (or even passably) at Tesla; rather, they're likely leaving because Musk is either an outright crook or the world's biggest jerk to work for (or both). In January Aaron Greenspan of @PlainSite published a terrific treatise on the long history of Tesla fraud; please read it!

In May Consumer Reports completely eviscerated the safety of Tesla's so-called "Autopilot" system; in fact, Teslas have far more pro rata (i.e., relative to the number sold) deadly incidents than other comparable new luxury cars; here's a link to those that have been made public. Meanwhile Consumer Report's here's a link to those that have been made public. Meanwhile Consumer Report's enanual auto-reliability survey ranks Tesla 23rd out of 30 brands (and that's with many stockholder/owners undoubtedly underreporting their problems—the real number is almost certainly much worse), and the number of lawsuits of all types against the company continues to escalate—there area now over 800 including one proving blatant fraud by Musk in the SolarCity buyout (if you want to be really entertained, read his deposition!), an allegation that his car, and evidence that the company secretly rolled back battery performance without compensating owners.

So here is Tesla's competition in cars (note: these links are regularly updated)...

Porsche Taycan

Porsche Taycan Cross Turismo

Porsche Macan EV to get Taycan platform and tech

Audi e-tron: Electric Has Gone Audi

2020 Audi E-Tron Sportback debuts slick new roofline, a bit more range

AUDI E-TRON GT FIRST DRIVE: LOOK OUT, TESLA (available 2020)

Audi's Q4 e-tron previews entry-level EV for 2021

Audi e-tron compact hatch to lead brand's electrification plans

Audi TT set to morph into all-electric crossover

THE AWARD-WINNING ALL-ELECTRIC JAGUAR I-PACE

Jaguar Land Rover readies electric XJ and Range Rover

Mercedes EQC electric SUV available now in Europe & China and in 2021 in the U.S.

Mercedes EQV Electric Minivan Revealed – Available 2020

Mercedes EQB Small SUV to boost brand's electric line-up

Mercedes EQS will be built in addition to the S-Class on a new dedicated electric platform

Volvo Polestar 2 Arrives 2020

Volvo XC40 Recharge, a 408-HP Electric SUV comes in 2020

Volvo confirms electric version of next XC90

Volkswagen unveils the ID.3, its first 'electric car for the masses'

VW's EV crossover for U.S. will be called ID4

VW Group to launch 70 pure electric cars over the next decade

258-Mile Hyundai Kona electric is available now for under \$40,000

Genesis Electric Luxury SUV Coming in 2022

239-Mile Kia Niro EV is Available Now For Under \$40,000

Kia Soul (available mid-2019) EV's Range Jumps to 243 Miles

Kia Europe to have six pure electric models by 2022

All-Electric Ford Mustang Mach-E Delivers Power, Style and Freedom for New Generation

Electric Ford F-150 arrives in 2021

Ford to build two European EVs based on VW's MEB platform

GM to Revive Hummer Name on New Electric Pickup Model

Chevrolet Bolt Now Offers 259 Miles of Range

GM's Detroit-Hamtramck plant expected to build electric Escalade, Sierra

GM is transforming Cadillac into an electric brand

Nissan LEAF e+ with 226-mile range is available now

Nissan Ariya Electric SUV Concept Is Destined for Production

BMW 1 Series Electric Coming As Early As 2021

BMW iX3 electric crossover goes on sale in 2020

2021 BMW i4 details revealed: 80-kWh battery, 530 hp, 373-mile range

BMW's 2021 iNEXT Returns In New Teasers Showing Prototypes Production

Rivian electric pickup truck- funded by Amazon, Ford, Cox & others- is on the way

Renault upgrades Zoe electric car as competition intensifies

Peugeot 208 to electrify Europe's small-car market

Peugeot to offer EV version of new 2008 small crossover

Electric Mini Arrives 2020

Toyota and Subaru Agree to Jointly Develop BEV-dedicated Platform and BEV SUV

Mazda extends MX name to new MX-30 electric crossover

SEAT will launch 6 electric and hybrid models and develop a new platform for electric vehicles

Opel sees electric Corsa as key EV entry

Opel/Vauxhall will launch electric SUV and van in 2020

Skoda accepting deposits for electric cars

New Citroen C4 Cactus to be first electrified Citroen in 2020

FCA to invest \$788M to build new 500 EV in Italy

Maserati to launch electric sports car

Bentley Will Offer Hybrid Versions of Every Car It Makes and Add an EV by 2025

Lucid Motors closes \$1 billion deal with Saudi Arabia to fund electric car production

Meet the Canoo, a Subscription-Only EV Pod Coming in 2021

Two new electric cars from Mahindra in India; Global Tesla rival e-car soon

Former Saab factory gets new life building solar-powered Sono Sion electric cars

And in China...

VW ramps up China electric car factories, taking aim at Tesla

SAIC Volkswagen to roll out 3 MEB-based EV models in 2020/2021

JAC-Volkswagen Launch SOL E20X, The 1st EV from the Joint Venture

Audi Q2L e-tron debuts at Auto Shanghai

Audi will build Q4 e-tron in China

FAW-Volkswagen's Foshan plant said to produce e-tron Sportback

FAW Honggi starts selling electric SUV with 400km range for \$32,000

FAW (Honggi) to roll out 15 electric models by 2025

China's BYD launches six new electrified vehicles

Daimler & BYD launch new DENZA electric vehicle for the Chinese market

Geely, Mercedes-Benz launch \$780 million JV to make electric smart-branded cars

Mercedes styled Denza X 7-seat electric SUV to hit market

Mercedes 'makes mark' with China-built EQC

Daimler and BMW to cooperate on affordable electric car in China

BMW, Great Wall to build new China plant for electric cars

BAIC Goes Electric, & Establishes Itself as a Force in China's New Energy Vehicle Future

BAIC BJEV, Magna ready to pour RMB2 bln in all-electric PV manufacturing JV

Toyota, BYD will jointly develop electric vehicles for China

Lexus to launch EV in China taking on VW and Tesla

GAC Toyota to ramp up annual capacity by 400,000 NEVs

GAC Aion

GAC unveils new NEV offshoot dubbed HYCAN

Chevrolet's new China-only EV is called the Menlo and it looks good

Buick Rolls Out First Electric Car for China

General Motors' Chinese Venture to Sink \$4.3 Billion Into Electric Vehicles by 2024

Nissan & Dongfeng to invest \$9.5 billion in China to boost electric vehicles

PSA to accelerate rollout of electrified vehicles in China

Fiat Chrysler, Foxconn Team Up for Electric Vehicles

Hyundai Motor Transforming Chongqing Factory into Electric Vehicle Plant

Nio

Jaguar Land Rover's Chinese arm invests £800m in EV production

Renault reveals series urban e-SUV K-ZE for China

Renault & Brilliance detail electric van lineup for China

Renault forms China electric vehicle venture with JMCG

Honda Debuts New Everus VE-1 All-Electric SUV, But Only For China

Honda to roll out over 20 electric models in China by 2025

Geely launches new electric car brand 'Geometry' – will launch 10 EVs by 2025

Mazda to roll out China-only electric vehicles by 2020

Xpeng Motors sells multiple EV models

Changan New Energy

WM Motors/Weltmeister

Chery

<u>Seres</u>

Byton

Enovate

China's cute Ora R1 electric hatch offers a huge range for less than US\$9,000

Singulato

JAC Motors releases new product planning, including many NEVs

Seat to make purely electric cars with JAC VW in China

Iconiq Motors

Hozon

EV maker Bordrin skips flash, keeps real-car focus

Aiways

NEVS launches electric-car output with Saab 9-3 platform in China

Youxia

CHJ Automotive begins to accept orders of Leading Ideal ONE

Infiniti to launch Chinese-built EV in 2022

Zotye Auto to roll out 10 plus NEV models by 2020

Skywell makes inroads into China's NEV domain

Thunder Power

Leapmotor

Continental, Didi sign deal on developing EVs for China

Mine Mobility (Thailand)

Here's Tesla's competition in autonomous driving...

Consumer Reports finds Tesla's Navigate on Autopilot is far less competent than a human driver

Navigant Ranks Tesla Last Among Automakers & Suppliers for Automated Driving

Tesla has a self-driving strategy other companies abandoned years ago

Waymo and Lyft partner to scale self-driving robotaxi service in Phoenix

Jaguar and Waymo announce an electric, fully autonomous car

Renault, Nissan partner with Waymo for self-driving vehicles

Fiat Chrysler partners with Aurora to develop self-driving commercial vans

Hyundai and Kia Invest in Aurora

Aptiv and Hyundai Motor Group Form Autonomous Driving Joint Venture

Cadillac Super Cruise™ Sets the Standard for Hands-Free Highway Driving

Honda Joins with Cruise and General Motors to Build New Autonomous Vehicle

SoftBank Vision Fund to Invest \$2.25 Billion in GM Cruise

Ford-VW alliance with Argo could redraw self-driving sector

VW taps Baidu's Apollo platform to develop self-driving cars in China

Audi to join Daimler, BMW self-driving tech alliance

Daimler's heavy trucks start self-driving some of the way

SoftBank, Toyota's self-driving car venture adds Mazda, Suzuki, Subaru Corp, Isuzu Daihatsu

Volvo, Nvidia expand autonomous driving collaboration

Continental & NVIDIA Partner to Enable Production of Artificial Intelligence Self-Driving Cars

Intel's Mobileye has 2 million cars (VW, BMW & Nissan) on roads building HD maps

Nissan gives Japan version of Infiniti Q50 hands-free highway driving

Nissan and Mobileye to generate, share, and utilize vision data for crowdsourced mapping

Magna joins the BMW Group, Intel and Mobileye platform as an Integrator for AVs

Hyundai to start autonomous ride-sharing service in Calif.

Uber unveils next-generation Volvo self-driving car

Baidu kicks off trial operation of Apollo robotaxi in Changsha

Toyota to join Baidu's open-source self-driving platform

Baidu, WM Motor announce strategic partnership for L3, L4 autonomous driving solutions

Baidu plans to mass produce Level 4 self-driving cars with BAIC by 2021

Volvo, Baidu to co-develop EVs with Level 4 autonomy for China

Didi Chuxing Teams with NVIDIA for Autonomous Driving and Cloud Computing

Geely selects Volvo, Veoneer joint venture as autonomous tech supplier

BMW and Tencent to develop self-driving car technology together

BMW, NavInfo bolster partnership in HD map service for autonomous cars in China

FAW Hongqi readies electric SUV offering Level 4 autonomous driving

Tencent, Changan Auto Announce Autonomous-Vehicle Joint Venture

Huawei looks to self-driving cars in bid to broaden AI focus

BYD partners with Huawei for autonomous driving

Pony.ai, GAC Group launches Aion LX's level 4 self-driving version

Lyft, Magna in Deal to Develop Hardware, Software for Self-Driving Cars

Deutsche Post to Deploy Test Fleet Of Fully Autonomous Delivery Trucks

ZF autonomous EV venture names first customer

Magna's new MAX4 self-driving platform offers autonomy up to Level 4

Groupe PSA's safe and intuitive autonomous car tested by the general public

Mitsubishi Electric to Exhibit Autonomous-driving Technologies in New xAUTO Test Vehicle

Apple acquires self-driving startup Drive.ai

Momenta – Building Autonomous Driving Brains

JD.com Delivers on Self-Driving Electric Trucks

NAVYA Unveils First Fully Autonomous Taxi

Fujitsu and HERE to partner on advanced mobility services and autonomous driving

Lucid Chooses Mobileye as Partner for Autonomous Vehicle Technology

First Look Inside Zoox's Autonomous Taxi

Nuro's Robot Delivery Vans Are Arriving Before Self-Driving Cars

Here's where Tesla's competition will get its battery cells...

Panasonic (making deals with multiple automakers)

LG

BYD
Northvolt (backed by VW & BMW)
Farasis
Akasol
Cenat

Wanxiang

Svolt

Saft

Romeo Power

Toyota accelerates target for EV with solid-state battery to 2020

ProLogium Technology Will Produce First Next Generation Lithium Ceramic Battery For EVs

BMW invests in Solid Power solid-state batteries

Ford invests in Solid Power solid-state batteries

Hvundai Motor developing solid-state EV batteries

Most car makers will use those battery cells to manufacture their own packs. Here are some examples:

Daimler starts building electric car batteries in Tuscaloosa – one of 8 battery factories

GM picks Lordstown site for \$2.3 billion battery plant

GM inaugurates battery assembly plant in Shanghai

PSA to assemble batteries for hybrid, electric cars in Slovakia

Honda Partners on General Motors' Next Gen Battery Development

France's Saft plans production of next-gen lithium ion batteries from 2020

Sokon aims to be global provider of battery, electric motor, electric control systems

BMW Group invests 200 million euros in Battery Cell Competence Centre

BMW Brilliance Automotive opens battery factory in Shenyang

Rimac is going to mass produce batteries and electric motors for OEMs

Here's Tesla's competition in charging networks...

Electrify America is spending \$2 billion building a high-speed U.S. charging network

EVgo is building a U.S. charging network

191 U.S. Porsche dealers are installing 350kw chargers

ChargePoint to equip Daimler dealers with electric car chargers

GM and Bechtel plan to build thousands of electric car charging stations across the US

Ford introduces 12,000 station charging network, teams with Amazon on home installation

Petro-Canada Introduces Coast-to-Coast Canadian Charging Network

Volta is rolling out a free charging network

Ionity has over 150 European 350kw charging stations

E.ON and Virta launch one of the largest intelligent EV charging networks in Europe

Volkswagen plans 36,000 charging points for electric cars throughout Europe

Smatric has over 400 charging points in Austria

Allego has hundreds of chargers in Europe

PodPoint UK charging stations

BP Chargemaster/Polar is building stations across the UK

Instavolt is rolling out a UK charging network

Fastned building 150kw-350kw chargers in Europe

Deutsche Telekom launches installation of charging network for e-cars

Shell starts rollout of ultrafast electric car chargers in Europe

Total to build 1,000 high-powered charging points at 300 European service-stations

Volkswagen, FAW Group, JAC Motors, Star Charge formally announce new EV charging JV

BP, Didi Jump on Electric-Vehicle Charging Bandwagon

Evie rolls out ultrafast charging network in Australia

Evie Networks To Install 42 Ultra-Fast Charging Sites In Australia

And here's Tesla's competition in storage batteries...

<u>Panasonic</u>

S<u>amsung</u>

<u>LG</u>

BYD

AES + Siemens (Fluence)

GE

Bosch

Mitsubishi Hitachi

NEC

Toshiba

ABB

Saft

Johnson Contols

EnerSys

SOLARWATT

Schneider Electric

Sonnen

Kyocera

Kokam

NantEnergy

Eaton

Nissan

Tesvolt

Kreisel

Leclanche

Lockheed Martin

EOS Energy Storage

ESS

UET

electrIQ Power

Belectric

Stem

ENGIE

Redflow

Renault

Primus Power

Simpliphi Power

redT Energy Storage

Murata

Bluestorage

Adara

Blue Planet

Tabuchi Electric

<u>Aggreko</u>

<u>Orison</u>

Moixa

Powin Energy

Nidec

Powervault

Schmid

<u>24M</u>

Ecoult

Innolith

LithiumWerks

Natron Energy

Energy Vault

Ambri

Malk.com

So in summary, Tesla is about to face a huge onslaught of competition with a market cap larger than Volkswagen's or Ford's and GM's combined, despite selling around 400,000 cars a year while VW sells 10.5 million and Ford and GM sell 6 million and 8 million vehicles respectively, generating billions of dollars in annual profit. Thus, this cash-burning Musk vanity project is worth vastly less than its roughly \$124 billion enterprise value and—thanks to over \$30 billion in debt, purchase and lease obligations may eventually be worth "zero."

Finally, we continue to hold a short position in the Vanguard Total International Bond ETF (ticker: BNDX), comprised of dollar-hedged non-US investment grade debt (over 80% government) with a ridiculously low "SEC yield" of 0.52% at an average effective maturity of 9.7 years. With Euro area core inflation at 1.1% and—due to the ECB's money-printing ultimately headed much higher—I believe this ETF is a great way to short what may be the biggest asset bubble in history. Currently the net borrow cost for BNDX provides us with a positive rebate of approximately 0.4% a year and I think it's a terrific place to sit and wait for the Sat inevitable denouement of this insanity.

Thanks and regards,

Mark Spiegel