



Jaguar 2Q 2019 Outlook and Premium Ideas

Thank you for your interest in Jaguar 2Q 2019 Outlook and Premium Ideas. The file is divided into 5 sections as following:

- 1Q 2019 Recap and Performance
- 2Q 2019 Macro Outlook and Sentiment
- Jaguar Premium Ideas with full analysis
- Key Debates and Catalysts
- Large Institutional Option Positions

In absolute term, through Friday, March 29th, 1Q Top Picks produced net gain of +8.47% vs S&P return of +11.9%, resulting in negative alpha of -346 bps. Cumulatively, since inception in Jan'17 our Quarterly ideas have produced +2275 bps of net alpha.

We are back with only one primary goal in mind – To provide you noise-free in-depth research, filtered exclusively with goal of helping you make better investment decisions and be informed of risks and opportunities. Macro environment deteriorated further in Q1 with signs of normalization seen in March led by major shift in monetary policies globally towards ultra-dovish, which kept thick bids under the S&P. A major catalyst in Q1 was US-China trade that continues to be delayed, further giving equity participants breathing room. Lastly, political risks in the US subsided with special counsel investigation finishing with a dud. These positive outcomes led to expansion in valuation multiples in post December recovery particularly in Software and Healthcare groups while cyclicals underperformed. We thrive where others fail by always seeking answers in every stage of an investment opportunity or cyclical turn. We are aggressive stock pickers with differentiated research. We hope that you'll find the information useful.

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1Q 2019 Performance Scorecard

Performance of Top Picks from 1Q19 Outlook from January 4th to March 29th. Finished higher by +8.47% in absolute terms but missed the benchmark S&P by -346 bps which closed higher by +11.93% for the quarter.

1Q19 Top Picks

	Name	Symbol	Sector	Stock Price			Gain/(Loss)	\$\$ Allocation	Portfolio Gain	Beat S&P?
				4-Jan	Current Price					
1	Everbridge	EVBG	Tech - Cyber Security	\$ 55.00	\$ 75.01	36.4%	\$ 10,000.00	\$ 3,638.18	YES	
2	CareDx	CDNA	MedTech - Diagnostic	\$ 24.92	\$ 31.52	26.5%	\$ 10,000.00	\$ 2,648.48	YES	
3	Keurig Dr. Pepper	KDP	Staples - Beverages	\$ 25.56	\$ 27.97	9.4%	\$ 10,000.00	\$ 942.88	NO	
4	BJ's Restaurants (Short)	BJRI	Restaurant - Casual Dining	\$ 51.36	\$ 47.28	7.9%	\$ 10,000.00	\$ 794.39	NO	
5	CSX Corp (Short)	CSX	Railroad	\$ 62.79	\$ 74.82	-19.2%	\$ 10,000.00	\$ (1,915.91)	NO	
6	McDonald's	MCD	Restaurant - Fast Food	\$ 178.28	\$ 189.90	6.5%	\$ 10,000.00	\$ 651.78	NO	
7	Tandem Diabetes	TNDM	MedTech - Insulin Pumps	\$ 34.71	\$ 63.50	82.9%	\$ 10,000.00	\$ 8,294.44	YES	
8	Visteon (Short)	VC	Auto Parts	\$ 60.90	\$ 67.35	-10.6%	\$ 10,000.00	\$ (1,059.11)	NO	
9	Disney	DIS	Entertainment	\$ 109.61	\$ 111.03	1.3%	\$ 10,000.00	\$ 129.55	NO	
10	Cirrus Logic (Short)	CRUS	Tech - Semi	\$ 32.22	\$ 42.07	-30.6%	\$ 10,000.00	\$ (3,057.11)	NO	
11	Eaton (short)	ETN	Industrial Machinery	\$ 68.53	\$ 80.56	-17.6%	\$ 10,000.00	\$ (1,755.44)	NO	
Total Profit								\$ 9,312.14		
Portfolio Return								8.47%		
S&P Current Price								2,834		
S&P Q1 Return								11.93%		
Overall Beat S&P?								NO		
Alpha								-3.46%		

All Jaguar Quarterly Outlooks Issued Since Inception

Since inception of Jaguar Quarterly Outlooks in January 2017, cumulatively portfolio is up +48.1%. This compares to S&P 500 Index which is up +24.1%, the Russell 2000 Index up +13.5% and NASDAQ 100 Index up +51.7%.

Click [HERE](#) for Unlock version of 1Q 2019 Outlook and Premium Ideas
(absolute return +8.47%, missed S&P by -346 bps)

Click [HERE](#) for Unlock version of 4Q 2018 Outlook and Premium Ideas
(absolute return -11.56%, beat S&P by +231 bps)

Click [HERE](#) for Unlock version of 3Q 2018 Outlook and Premium Ideas
(absolute return +7.64%, beat S&P by +44 bps)

Click [HERE](#) for unlock version of 2Q 2018 Outlook and Premium Ideas
(absolute return +11.49%, beat S&P by +856 bps)

Click [HERE](#) for unlock version of 1Q 2018 Outlook and Premium Ideas
(absolute return -5.73%, missed S&P by -451 bps)

Click [HERE](#) for unlock version of 4Q 2017 Outlook and Premium Ideas
(absolute return +10.02%, beat S&P by +389 bps)

Click [HERE](#) for unlock version of 3Q 2017 Outlook and Premium Ideas
(absolute return +11.48%, beat S&P by +816 bps)

Click [HERE](#) for unlock version of 2Q 2017 Outlook and Premium Ideas
(absolute return +10.82%, beat S&P by +680 bps)

Click [HERE](#) for unlock version of 1Q 2017 Outlook and Premium Ideas
(absolute return +5.33%, beat S&P by +57 bps)

Where We Went Wrong

Over last 10 years of managing money and running client services and nearly 20 years of actively trading, one thing I believe deep down in my heart is the power of pure honesty and integrity. This is the money game. Yours and mine hard-earned dollars are at stake here. When something is wrong, pretending that it is not, can destroy portfolios and lives and send the clock backward. When we are wrong, there is no point in sugar coating. Acknowledging a blunder is the first step in avoiding mistakes in the future.

All of our long ideas performed remarkably in Q1 beating the S&P by wide margin with exception of **Disney (DIS)**. None of our short ideas worked in Q1 given incredible V-shape recovery in the S&P post December crash with exception of **BJ's Restaurants (BJRI)**. Overall the portfolio performance kept us firmly in green neck to neck with the S&P.

CSX Corp (VC) – Our bearish view was driven by cyclical slowdown in transportation data as evident in railcar orders, deterioration in rail pricing power and specific to CSX the continued decline in coal shipments which had seen a decline YoY during last 43 of 65 weeks going into year-end 2018. Additionally, CSX moves a lot of autos and we saw during Q1 US SAAR come down from 17.5M to 16.5M with February being particularly bad. However, we were surprised by operational strength with operating ratio holding strong in earnings release that kept overall EPS projections firmly in place. *Stock finished higher +19.2% in Q1. The short thesis did not work out and while risks of cyclical pressures remain to weigh in the future, we believe there are other better short opportunities in transports than CSX. Move to sidelines.*

Visteon (VC) – This short recommendation was most surprising to us. Once again, our bear case was based on US auto SAAR falling apart sharply which indeed happened from 17.5M to 16.5M during Q1. Additionally, we saw disaster February auto sales from Detroit Big 3 and over in Europe from BMW. In January's Detroit Auto Show, forward EBITDA growth estimate was cut from flat to -6.4% YoY and after disaster February auto sales we believe they will be cut when Q1 earnings comes out. *Stock finished higher +10.6% in Q1. At one point it was up +50% in Q1 before giving up most of gains in March. We believe fundamentals have further deteriorated progressively and we also believe US SAAR is heading towards 14M over time which will be catastrophic for Detroit 3. We still like this short opportunistically.*

Cirrus Logic (CRUS) – This was another short recommendation that really surprised us. About 80% of revenues come from Apple. In a rare pre-announcement in early January Apple sharply cut its shipment and growth estimates which have been warning about since September that nobody originally believed. At start of year CRUS FY2020 (ends in March) EPS estimate was \$2.83. At end of March that had been cut to \$2.13 (lowest since 2015). Additionally, throughout in Q1 smartphone sales globally worsened, making a case for further cuts ahead. *Stock finished higher +30.6% in Q1. The rise in stock made no sense to us. Arguably, in bulls defense it could be said that potential iPhone 5G launch in late 2019 could reignite growth. Arguably MLNX acquisition kept M&A bid under semis. We still don't see signs of stabilization in smartphones (see Samsung earnings warning in late March). We believe stock will catch to downside.*

Eaton (ETN) – The bear case was driven by weakening growth trends in Lightning business with channel checks showing OEMs have moved to price cuts. Additionally, ETN order are highly correlated to global PMIs which deteriorated further particularly in Europe (France, Germany, UK, Spain all saw PMIs dipped under 50 in Q1). In China excavator sales deteriorated further. Lastly, ETN lightning business has major exposure to auto cycles which was up +7% in 3Q18 and it turned negative in 1Q19. *Stock finished higher +17.6%% in Q1. This was truly surprising to see, but once in bulls defense it could be argued that combination of \$800 billion in money printing by China (combination of infrastructure spending and tax cuts) as well as LTLRO launch in Europe (their version of QE) and 180-degree turn in Fed's tone in the US, all has optimism building that growth will rebound in 2H19. We are still holding puts in ETN with bearish bias.*

Disney (DIS) – The big surprise to us, particularly during late Q1 (March) sell off. Up until then stock was performing in sync with broader market rally. We highlighted 3 major bull cases in Disney: 1) Strong studio performance (which happened as expected with blow out box office performance of Captain Marvel and other films), 2) Strong park attendance (which happened as evident in earnings report and management raised ticket prices twice in Q1 ahead of Star Wars opening), and 3) Strong ESPN+ and Disney+ launches (which happened with sharp jump in subscriptions). *Stock finished down +1.3% in Q1. Unfortunately, what hurt the stock on March 19th was final tender offer to close out FOX deal which had net affect of higher than expected increase in share count, which led to forward EPS projections moving down a bit. We firmly believe that is noise and stock will recover. We remain buyers at this level.*

Other Spots Where We Wrong –

Please note all discussions that fall under “Key Debates” is reflection of views that may take longer than normal to play out, or at minimum give you context to think about certain stocks and sectors. We don't count their performance but will cover some to provide added color.

Trimble Navigation (TRMB) – Company saw its earnings quality deteriorate during Q1 pressured by weakening end markets in Europe, severe draughts in Australia and overall drop in machinery sales in China. But that didn't affect the stock. Operational improvement was strong. *No longer recommending this short. Step aside.*

IPG Photonics (IPGP) – Company FY2019 EPS power was seen at \$7.20 at start of year. After absolutely disaster quarter, now seen at \$6.10. Function of strong correlation with global PMIs and Industrial Production that is coming down. We reiterated the bear case late March. *We still believe there is downside ahead.*

Dish Network (DISH) – A secular declining business with consistent subscription losses at accelerating rate and further compounded with HBO pulling the plug just as Game of Throne season finale to begin in April. The only bull case for DISH is that spectrum may have some value for a strategic value buyer, but that argument has failed for multiple years. *We remain short.*

Marriott (MAR) – Globally RevPar growth is slowing with plenty of channel checks to go along. Earnings revealed that from both MAR and BKNG. But it is not crashing. Difficult name to short at this juncture with some late Q1 stabilization seen. *Bear case has weakened. Step aside.*

Where We Went Right

This is where I get to brag about fabulous performance in several spots. Really proud of Jaguar research team identifying opportunities in a volatile headline-risk driven market.

Tandem Diabetes (TNDM) – *Up +82.9% in Q1 vs. S&P up +11.9%. Excellent work by Avo!* This was a controversial pick but Avo laid out a strong bull case that materialized superbly. Back in 2017 JNJ discontinued its manufacturing of diabetes pumps which has led to strong market share gains for TNDM, PODD and others. The bull case was on based on idea that 60% of JNJ pump customers will switch to new entrants in 2019 followed by 15% in 2020. That logic is playing out beautifully and strong earnings report was clear indication of that. Canada approved t:slim X2 pump in October, so that's just starting to come online and still has course to run. We believe the bull case isn't over. *At one-point stock was up +115% in Q1. We believe there is more upside ahead but stock has run too much too fast in short term. We expect a few months of pause and consolidation before a run towards \$100.*

Everbridge (EVBG) – *Up +36.4% in Q1 vs. S&P up +11.9%. Excellent work by Jay!* This was the second time Jay had recommended making this a Top Pick in Quarterly Outlook after first inclusion in 2Q18 Outlook which you can find [HERE](#). Both times the timing was impeccable as trade performed nicely materially beating the S&P. EVBG Critical Event Management Solutions continues to be highly differentiating factor that saw +700% ASP growth led by strong enterprise and government adoption as evident in +41% YoY revenue growth last quarter, only modest deceleration from +43% in prior quarter. We believe if it wasn't for 7% dilution due to secondary share offering in Q1, stock would've posted even better gains. *Stock remains our high conviction pick. Several major catalysts are still coming up in 2019 including OES bill adoption in California in July and increased adoption in Europe of national alert systems following model examples of Netherlands and Sweden. Lastly, 7-figure opportunity yet to materialize with the US Army.*

CareDx (CDNA) – *Up +26.5% in Q1 vs. S&P up +11.9%. Excellent work by Jay!* The primary bull case was led by strong prospects of cancer testing procedure called AlloSure which has been the biggest contributor to growth. In Sep-18 there were 40 centers and 480 patients enrolled in AlloSure Registry. By Dec it had increased to 47 centers and 748 patients which resulted in remarkable +88% YoY growth accelerating from +74% in prior quarter. CDNA also saw consistently positive news flow during Q1 including partnerships with Cedars-Sinai Transplant Center, partnership with Thermo Fisher One Lambda and, launch for lunch cancer patients, and validation of AlloSure Heart study in leading transplant journal. *The only thing that may change in the future is head-on competition with NTRA which is launching soon, but there is no reason why both stocks can't work higher. We continue to endorse the bull case for more upside.*

Keurig Dr. Pepper (KDP) – *Up +9.4% in Q1 vs. S&P up +11.9%. Excellent work by Jay!* Each quarter we like to include one or two low-beta picks in order to reduce the overall volatility in portfolio construction. Key to proper portfolio construction. KDP didn't beat the S&P but I believe the sentiment started to shift in favor of staples towards the end of Q1 so better times are still ahead. We also saw steady leap call accumulation in KDP during Q1. *We remain very positive on stock outlook and believe it will continue to outperform over the course of year with positive institutional money flow during the time of yield curve inversion.*

Mercadolibre (MELI) - Up +61% in Q1 vs. S&P up +11.9%. Excellent work by Fahad! The Latin American ecommerce giant wasn't made a Top Pick (it should've been) but was suggested in Key Debates and later on an official trade alert was issued to buy June 380/480 call spread going into earnings. Going into 2018 year end we saw an inflection point for growth-oriented Brazil stock led by sharp increase in capex environment after multi-year decline. MELI posted +36% revenue increase in Brazil, +78% in Mexico and +29% in Others. Subsequently PYPL made \$750M investment in MELI. But I believe what really stands out is digital payment opportunity with implications of penetration rising at same speed as China resulting in \$150 billion TAM in next 5 years and it would still remain less 10% of total ecommerce. Really impressive breakout quarter and pick by Fahad. By no means this is done going up. There will be pauses and consolidations along the way, but still significant upside remains.

Palo Alto Network (PANW) - Up +31.7% in Q1 vs. S&P up +11.9%. Excellent work by Fahad! We provided a particular survey results in Q1 Outlook which suggested that security spending as a percentage of overall cloud spending will increase from 11% share in 2018 to 23% by 2021. The Q1 earnings season perfectly reflected that with security standing out as the best growth segment within cloud as even though arguably total cloud capex showed some signs of deceleration. This massive bull case needs reemphasizing and we believe the cycle still has several quarters to run from changing share mix within cloud. While we specifically highlighted PANW is the cleanest way to ride the wave but practically all 6 cyber security stocks we highlighted performed remarkably well. PANW was at \$184 when at time of this bull case and we targeted \$225 by end of Q1. Stock went beyond our expectations and closed at \$242. We remain buyers here for further upside.

Thompson Reuters (TRI) - Up +24.3% in Q1 vs. S&P up +11.9%. Excellent work by Fahad! This was one of the best and most "peaceful" stealth rally among all of Q1 ideas than anything else. Steady nonstop uptrend all quarter long without any hiccups. When company launched new Westlaw Edge in July 2018, it was the most robust product launch in the history that quickly pushed company's organic growth rate to 7 year high. We consensus unable to fully realize the opportunity and give credit to the management, we saw an opportunity for stock to run strong coming out of late 2018 market crash. Refinitiv added another \$3 billion TAM and remains target of potential suitors for M&A including Blackstone and Moody's. Really impressive run in stock and we believe TRI customers will continue to switch to Westlaw Edge and this transition will run until end of 2019. Plus, there is still M&A optionality for Refinitiv. More upside ahead.

Lennox International (LII) - Up +20.4% in Q1 vs. S&P up +11.9%. Excellent work by Fahad! The HVAC leader advanced from \$225 to \$265 during the quarter without flinching. While our bull case was entirely based on potential catalyst related to disposition of UTX's Carrier business (that still hasn't happened yet), dramatic drop in 10-year bond yield and corresponding 70 bps drop in 30-year mortgage rates led to improving investors sentiment towards housing exposed names. LII benefited from that. Impressive run but we believe upside is limited from here. Valuations have expanded above average. Secondly, we didn't like huge drop in Architectural Billings Index from 55.3 in Jan to 50.3 in Feb. We suggest take profits and step aside.

2Q 2019 Macro Outlook and Sentiment

We started 1Q19 with the following high-level view of macro:

1. Monetary Condition → Dovish! Likely 1 or zero hike in 2019, possibly start of rate cuts
2. Inflation → Weaker inflation led by commodities, wage downward pressure TBD
3. Uncertainty → Many as discussed sector by sector

For 2Q19, we are holding the following view:

1. Monetary Condition → More Dovish! Expect min 1 and realistically 2 rate cuts in 2019
2. Inflation → Weaker inflation led by commodities, wage downward pressure TBD
3. Uncertainty → Downward 2H19 earnings revision, yield curve, US-China trade, Brexit

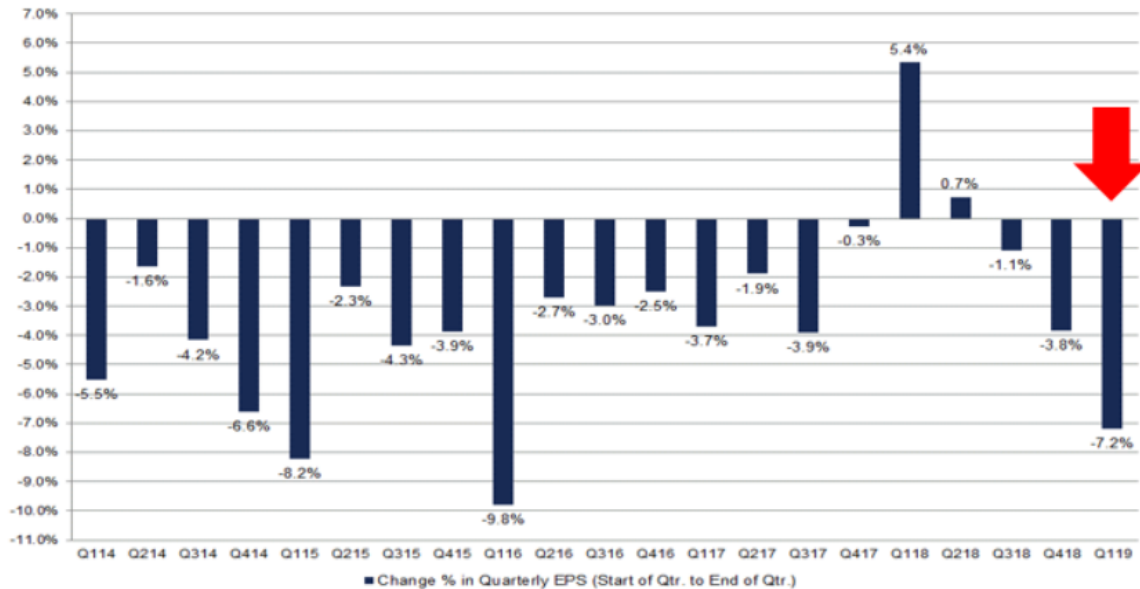
We discussed previously how 4Q18 was abnormally weak. Turned out 1Q19 was exactly the opposite as abnormally strong. Massive V-shape action in S&P. If we combine two quarters together and look at them as one from Oct-18 to Mar-19, the simple reality is while the S&P is essentially flat, the economic footprint is much weaker today than it was 6 months ago. This point cannot be underscored. While we believe excellent bullish opportunities remain related to specific catalyst-driven stocks, we have to be mindful of risks associated with slowing economy that will ultimately pressure 2H19 earnings revisions to downside in cyclical sectors.

Q1 strong market performance was unequivocally led by extremely dovish Fed. Plain and simple. We believe without that force of hand by central banks in place, post-December market bounce would've stopped short long time ago.

From Synchronized Growth to Synchronized Dove - Consider this. Let's start with the US. The Fed hiked rates in Dec-18 and market crashed. Exiting 2018 market was pricing 2 rate hikes in 2019. By February market was pricing 1 rate hike in 2019. After March FOMC, market was pricing zero rate hike in 2019. By late March, market was pricing at least 1 rate cut and potential 50/50 chance of 2 rate cuts before end of 2019. Talk about drastic change of expectations in such a short amount of time. But it wasn't just the Federal Reserve. Over in China in mid-Jan the PBoC injected \$80 billion into banking sector in a heartbeat like it was no big deal. By late Jan, about \$370 billion had been pumped into China. This was followed by \$400 billion of fiscal stimulus (infrastructure and tax cuts) in February, followed by more injection into banking sector in March. Nearly \$1 trillion was printed by China in just Q1. Now let's look at Europe. Not only ECB in Q1 extended the deadline for maintaining its periphery bond buying program, but also a new LTLRO (their version of QE) was announced in February. BoJ and BoE sort of lagged others in Q1 with their own plans but nonetheless contributed to pushing notion consistently that easy monetary policies will remain in play.

It took \$1 trillion money printing by China, new QE program by ECB and 180-degree turn by the Fed to turn S&P around in 1Q19 to regain all its losses from 4Q18 even as economy weakened.

S&P 500 Change in Quarterly Bottom-Up EPS
(Source: FactSet)

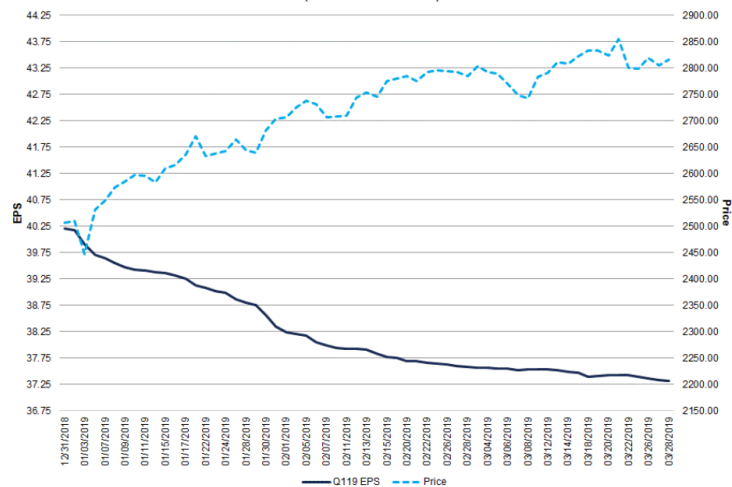


Largest Cut to S&P EPS Estimates Since 2016 – According to FactSet, during Q1 analysts lowered S&P earnings estimates by -7.2%. Please note it is quite common for EPS estimates (even during good year) to start strong and then gradually come down. But this time it was off the chart. How significant is a -7.2% decline? During the past five years (20 quarters), the average decline in the bottom-up EPS estimate during a quarter has been 3.2%. During the past ten years, (40 quarters), the average decline in the bottom-up EPS estimate during a quarter has been 3.7%. During the past fifteen years, (60 quarters), the average decline in the bottom-up EPS estimate during a quarter has been 4.0%.

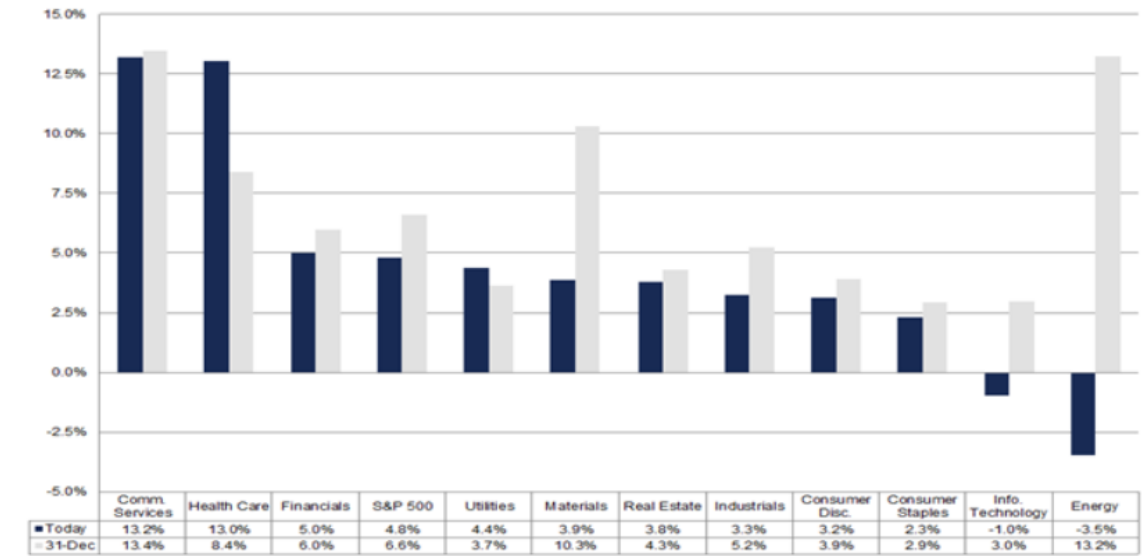
Thus, the decline in the bottom-up EPS estimate recorded during the first quarter was larger than the 5-year, 10-year, and 15-year averages. At the sector level, all 11 sectors recorded a decline in their bottom-up EPS estimate during the quarter, led by the Energy (-34.0%), Materials (-16.3%), and Information Technology (-8.3%) sectors. The Energy sector witnessed the largest decline in its bottom-up EPS estimate for a quarter since Q1 2016 (-108.6%).

The Materials sector saw the largest decline in its bottom-up EPS estimate for a quarter since Q4 2016 (-17.1%). The Info Tech sector recorded the largest decline in its bottom-up EPS estimate for a quarter since Q4 2012 (-10.0%). Overall, ten sectors recorded a larger decrease in their bottom-up EPS estimate relative to their 5-year average.

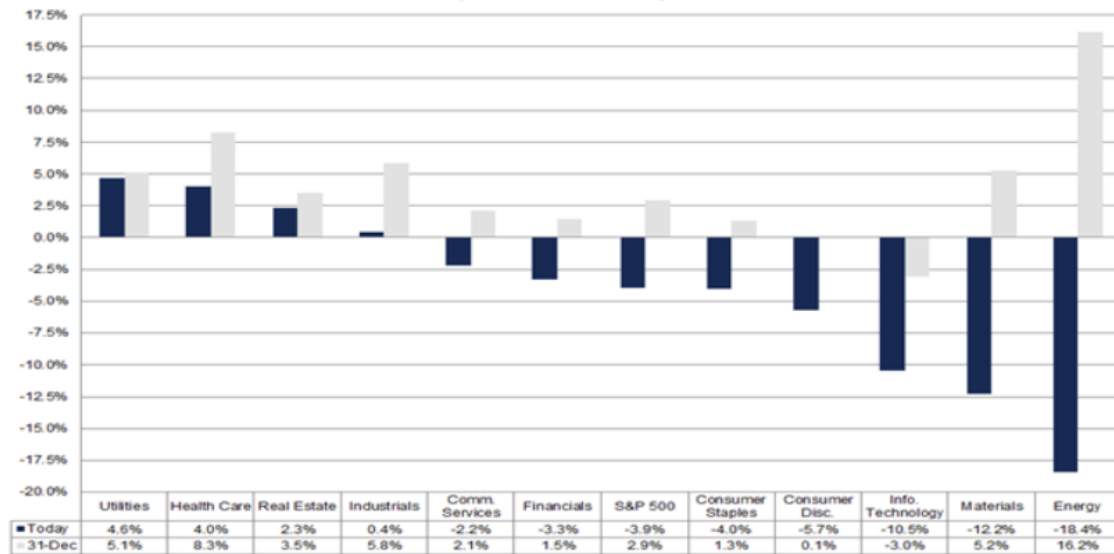
S&P 500: Change in Q119 EPS vs. Change in Price
(Source: FactSet)



S&P 500 Revenue Growth: Q1 2019
(Source: FactSet)



S&P 500 Earnings Growth: Q1 2019
(Source: FactSet)



Telecoms and Healthcare Provide the Best Balance Between Growth and Defensive - In terms of revenues, S&P Q1 growth expectations were +6.6% YoY at start of quarter. By March end it had dropped to +4.8% YoY, the lowest rate since late 2016. Only Healthcare and Utility sectors saw their revenue growth projections improve as we progressed through Q1 while 9 out of 11 sectors saw deterioration. Energy and Info Tech fared the worst with revenue growth rate falling into negative territory. Put it differently, Telecoms and Healthcare are expected to see the best growth than any other sector. And this is why you will see why the focus in this quarterly outlook as well as much of discussion in chat room, webinars and official trade alerts lately have been so focused on these two sectors. These two sectors also tend to materially outperform post 10 minus 2 yield curve inversion which we believe has high chance of happening in Q2.

Thoughts on Yield Curve Inversion – We expect dividend paying stocks to provide consistent source of outperformance over next 6 to 12 months. This is counter intuitive to broad consensus view that is looking for Technology and to outperform next.

- Historically, Consumer Staples and Healthcare are the best performing group in the 12 months subsequent to market peak. This was evident before last 4 bull market ended with average gain of 23% and 19%, respectively, the highest of any other sector and 3x the outperformance of Financials (which many pundits in market today are proposing to get long after Fed rate hike in December). The worst performing sector was Tech (taking a shot directly at all those people who are piling into “FANGs” of the world):

Table 39: Relative sector performance in the 12 months subsequent to the market peak (ppt)

Mkt Peak	Consumer Discretionary	Consumer Staples	Energy	Financials	Health Care	Industrials	Info Tech	Materials	Telecom	Utilities
1980	10.6	21.2	-16.6	26.5	19.9	1.4	-11.3	-1.9	37.1	14.8
1987	-3.3	3.8	5.9	-0.2	-1.0	-5.9	-9.5	0.0	12.6	10.1
1990	1.2	19.1	-5.0	-3.4	30.1	-4.9	-11.3	0.3	-20.7	-12.9
2000	4.9	47.2	26.3	31.7	38.0	17.3	-38.9	11.0	-16.7	54.3
2007	-0.9	23.5	6.0	-16.3	7.8	-2.5	-4.2	-5.0	-3.4	6.1
Median	1.2	21.2	5.9	-0.2	19.9	-2.5	-11.3	0.0	-3.4	10.1
Average	2.5	23.0	3.3	7.7	19.0	1.1	-15.0	0.9	1.8	14.5
oip%	60.0%	100.0%	60.0%	40.0%	80.0%	40.0%	0.0%	40.0%	40.0%	80.0%

Source: BofAML US Equity & Quant Strategy, Bloomberg S&P

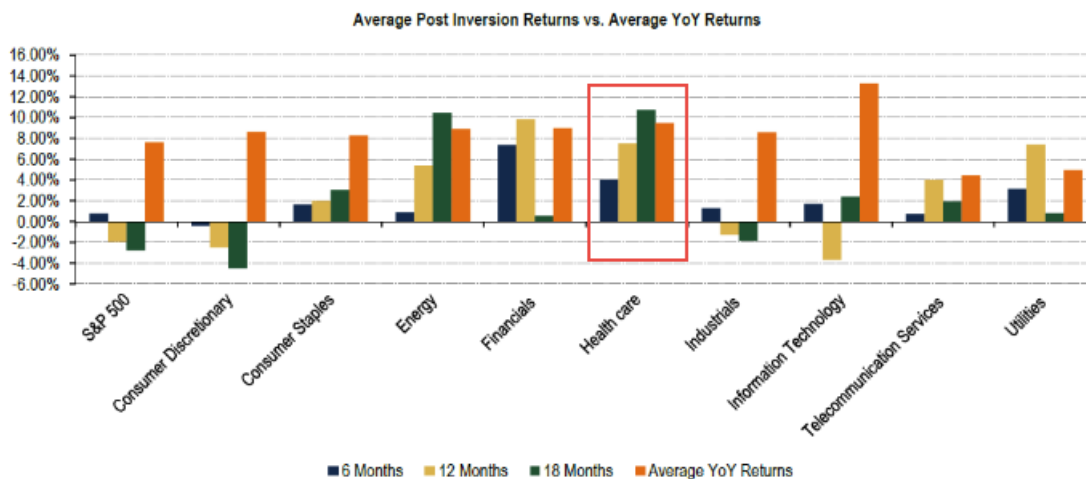
This is all based on assumption that growth peaked in the US in 2018 and will either take plenty of time to re-accelerate or it will get worse from here. Meantime, the ultra-dovish tone from the Federal Reserve likely to keep interest rates low for quite some time, thus making dividend yielding stocks attractive for positive institutional flows.

How Does it Affect S&P? - Sometimes the S&P peaks within two to three months after 10 minus 2 spread turns negative. Sometimes it takes up to 2 years for S&P to peak. Looking at last 10 observations back to 1956, the S&P topped out within approximately three months of the inversion six times (1956, 1959, 1965, 1973, 1980, and 2000). The S&P took 11 to 22 months to peak after the other four inversions (1967, 1978, 1989, and 2005).

The S&P tends to peak 7.3 months (average) or 2.6 months (median) after a yield curve inversion. The range of S&P peaks is from 1.6 months (1973) to 21.6 months (2005) after the inversion – a wide range. History shows the initial post-inversion drawdown is -5.2% on average. The drawdowns typically last two months. After the initial drawdown, the S&P can have a meaningful last gasp rally. This is the rally that can be described as final euphoric or impulsive move. This rally has averaged +16.7% and 6.7 months.

Healthcare has had the best performance on the most consistent basis. The 6, 12 and 18 month post-inversion returns were 4.01%, 7.48%, and 10.74%, respectively, versus average annual returns of 9.45%. Reason is obvious. Whenever we don't regulatory risk overhang (like the one created by thought of single payer system as proposed by Hillary Clinton in 2015), healthcare always proves to be the best defensive sector with growth that one could find, beating out even Staples, Utilities, REITs and other all of which have some form of cyclical weight and much lower growth rate. Put it simply, you are much better off parking money in Pfizer or Merck market and macro data is peaking than Procter and Gamble or Kimberly Clark.

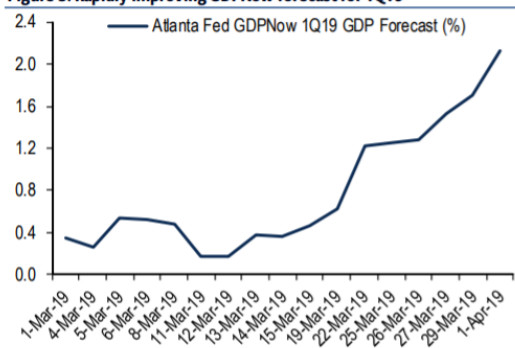
Chart 3: Average Post Inversion 6, 12, & 18-month returns vs. average annual YoY returns



With all this background in place, one would conclude that it is time to go ultra-defensive and in long run that may turn out to be the best course of action. However, as investors we have to constant remind ourselves that situation remains quite fluid.

Yo-Yo Market – With \$1 trillion money printing in Jan-Mar period, we saw sharp rebound of March Caixin China Manufacturing PMI into expansion territory (50.8 vs. 49.9 in February and 48.3 in January) and now suddenly the global economic backdrop doesn't look so weak. Moreover, a surprisingly strong ISM Manufacturing for March (55.3 vs. 54.5 expected) highlighted that the US economy certainly is not weak. With better than expected Construction Spending and Business Inventories data equally dramatic is the fact that Atlanta Fed's GDPNow forecast for 1Q19 now stands at 2.13%, up from a meager 0.17% at the low in March. We also saw rebound in March preliminary Consumer Sentiment. Housing has been a huge beneficiary of 70 bps drop in 30-year mortgage rates and most recent data points on New Orders from Lennar and KB Home earnings reflected this improving sentiment. Given this backdrop not surprisingly risk assets continued to rally in early April while Treasuries sold off materially.

Figure 3: Rapidly improving GDPNow forecast for 1Q19



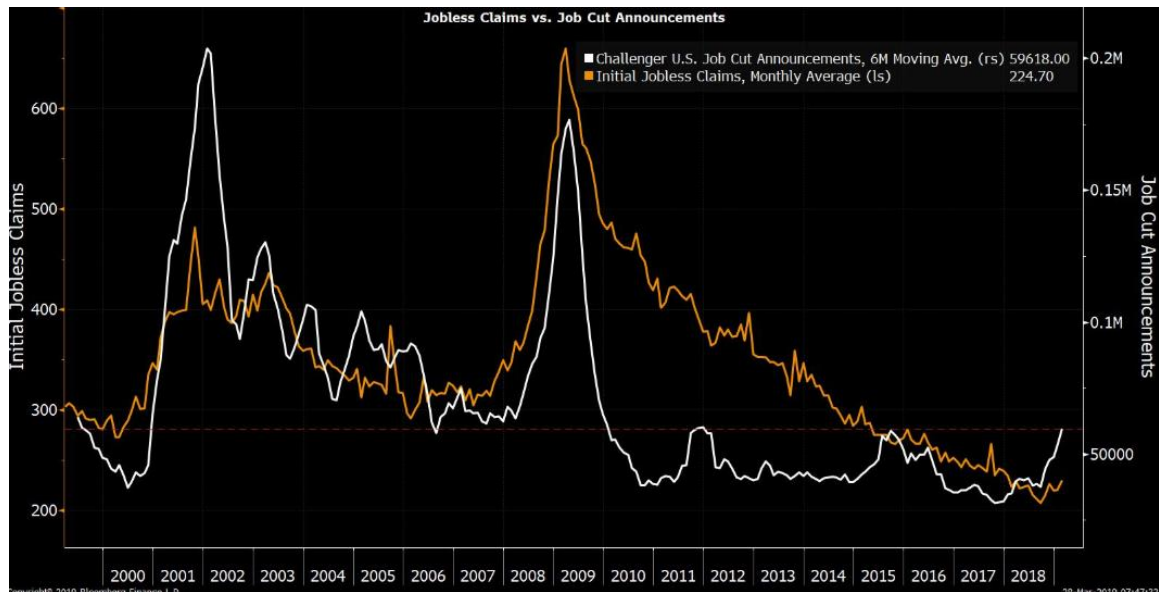
Source: Atlanta Fed

Figure 4: The yo-yo curve



Source: Bloomberg, BofA Merrill Lynch Global Research

However, not everything is improving in aftermath of central banks going dovish. Durable Goods are getting worse with New Orders firmly negative. Auto sales are falling apart with US SAAR dropping from 17.5M to 16.5M in past three months. Semi sector remains with elevated inventory with guidance cuts still happening as of end of March led by Samsung and sharply drop in South Korea's exports. US Trucking sector continues to work through cuts in ACT Class 8 Orders after two years of order rate that was 3x the demand. Weekly Jobless Claims have spiked a little and more importantly Challenger Job Cut Announcements have reached the highest level since 2010, a trend that should be concerning. US Retail Sales badly missed expectations in Jan and March with YoY growth rate turning negative.



Confidence is the Cheapest Form of Stimulus

Everyone Expects 2H19 to be Strong – Growth has slowed and there is absolutely no denying it. But central banks have also pressed on gas, elevating the market and countering any negative wealth effects of 4Q18 market crash. The question remains do we stabilize here and gradually work higher with improving data, or growth rate across all cyclical industries take another leg down by summer 2019? Currently the situation is every consensus view on the street is looking for sharp rebound in earnings in 2H19 even in some of the most depressing sectors such as semi. This optimism can be called into question without continued stabilization in growth trends during Q2. Confidence is the cheapest form of stimulus. Confidence has been returning with US-China trade on hold as discussions continue. Confidence can return with Brexit on April 12th that involves an agreement of the majority. Confidence can return with delay in repeal of Obamacare until after 2020 elections.

Macro bottom line: Growth is much weaker, valuations are uncomfortably much higher, central banks are much more dovish, bond market is pricing in 80% chance of recession in next 12 months, and there is risk of more drastic downward revisions in 2H19 earnings estimates. Market has bounced back materially pricing in recovery. We believe the balance is tilted towards more risks than opportunities. Trade carefully in Q2. Any erosion in confidence and quickly change the technical picture in S&P for the worse.

Jaguar Premium Ideas

At Jaguar, everything we do starts from bottom-up detail research and analysis. Many of you that are on website each day understand our process and ways of thinking. We like to think outside of the box. For each stock, we first take the prevailing widely-held fundamental view on Wall Street and we tear that apart into pieces. Then we compare those street opinions to what managements are telling us in their earnings reports and what industry and channel checks are showing us. Once we have the collective wisdom from all corners, only then we form our own opinion. This is the core of our process of doing fundamental research.

It is hard work and smart work. It requires inclination, the desire to get hands dirty with details that actually matter. It requires plenty of reading and understanding to form a strong opinion. As a result, quite often you will find us at opposite side of conventional Wall Street thinking, or technicals on the chart. It's not our job to agree or disagree with the street. Our job is to simply highlight risks and find opportunities where we can make money for our clients. If that goes against conventional wisdom, so be it.

In this section you will find Jag Premium Ideas. In each idea we have tried to attach the narrative to a particular catalyst in sight.

OneSpan (OSPN)

Trade: Sell September 17.5 puts for \$1.40 credit and buy September 20 calls for \$1.90 debit

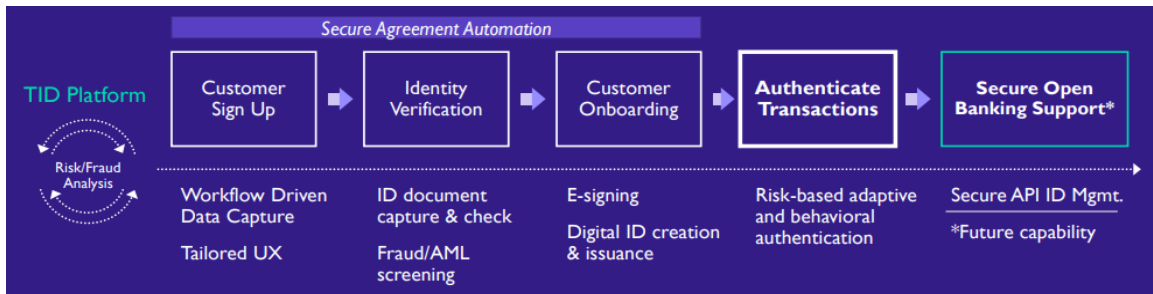
Alternate Trade: Buy common stock for \$19.10 or less.

Kaspersky Lab defines Biometrics as biological measurements — or physical characteristics — that can be used to identify individuals. Fingerprint mapping, facial recognition, and retina scans are all forms of biometric technology, but these are just the most recognized options. Researchers claim the shape of an ear, the way someone sits and walks, the veins in one's hands, and even facial contortions are other unique identifiers. Because physical characteristics are relatively fixed and individualized, they are being used to replace or at least augment password systems for computers, phones, and restricted access rooms and buildings.



Let's now turn our attention to OneSpan, formerly known as Vasco Data Security, a cyber security stock, but more specifically, a leading provider of authentication and fraud prevention solutions for the financial services industry. These solutions, which are delivered through the company's Trusted Identity (TID) Platform, include:

- **Identity Verification:** Validate ID documents and consumer identities via third-party identity and verification services through a single API integration.
- **Authentication:** Authenticates users and transactions using a range of multi-factor authentication services, including hardware & software tokens and biometric capabilities.
- **Risk Analytics:** Analyzes mobile, app and transaction data, in real-time, to detect fraud.
- **Mobile App Security:** Detects and mitigates malicious mobile app attacks before they can do damage.
- **E-Signature:** Enables customers to e-sign on any device, strengthening compliance.



As stated earlier, OneSpan caters to the financial services industry, with 80% of total revenue coming from financial institutions. Here is a quick breakdown of its **“blue chip customer base.”** As you will see, Europe plays a substantial role, and I will dive into this region much more later in this report.



Earlier this month, a report prepared by the Information Security Media Group said that based on a broad survey of financial institutions, the report revealed the sector’s challenges in authentication practices and strategies, and highlights the growing tension between improving security, reducing fraud and enhancing the digital customer experience.

The survey results reveal the biggest challenges stopping banks and financial institutions from being able to confidently authenticate customers and step up security include:

- 96% of organizations still rely on legacy processes tied to username and passwords for authentication.
- 44% have too many disparate tools, which are challenging to coordinate effectively.
- 44% are challenged by the use of legitimate credentials exposed in data breaches and social engineering schemes in account takeover attempts.

As a result of these challenges, more than 60 percent of respondents plan to invest in new multifactor authentication technologies in 2019, including those that rely on biometrics and AI/machine learning.

OneSpan CEO Scott Clements would respond, **“The report’s findings echo what we are seeing with our customers. Financial institutions are under pressure to improve their defenses against continuing and evolving threat vectors. Many are now choosing innovative technologies that dynamically respond to attacks as part of a layered security approach that stops fraud while improving the customer experience.”**

Q4 Earnings Recap

On February 19th, the company would report its Q4 earnings results which resulted in its stock price appreciating 15% in the next trading session:

- EPS of \$0.17 vs \$0.06 estimate – Beat
- Revenue of \$64.8M vs \$59.73M estimate – Beat
- Q4 Revenue increased 19%
- Q4 Subscription Revenue increased 68%
- Q4 Software License Revenue increased 6%
- Q4 Hardware Revenue increased 13%
- Q4 Product and License Revenue increased 11%
- FY19 Revenue Guidance of \$229M - \$237M vs \$231.49M estimate

CEO Scott Clements would add, **“For the year, we achieved 10% revenue growth, including a doubling of sales from new customer logos. And for the first time ever, our software and services revenue exceeded our hardware revenue.”**

Throughout the course of the call, a handful of topics were covered that should be on everyone’s radar:

Mobile Security Suite (MSS) – This is OneSpan’s complete toolkit, with solutions ranging from App Shielding, to Device Identification, to Fingerprint Authentication, to Face Authentication. The CEO would say:

“Mobile Security Suite had an outstanding year with revenue growth in excess of 50% and our opportunity pipeline remains robust. Many of our existing customers are adopting Mobile Security Suite and are often operating in mixed environments that use both Mobile Security Suite software and our hardware products reflecting the diverse needs of their own customer bases.”

E-Signature and Identity Verification Solutions – Completely separate from its Mobile Security Suite, OneSpan offers a risk-free E-Signature solution to its clients under two types of plans:

ENTERPRISE PLAN

FULLY AUTOMATE AND CUSTOMIZE THE E-SIGNING EXPERIENCE FOR YOUR HIGH-VOLUME CUSTOMER TRANSACTIONS

Eliminate all manual processing and related errors and costs by integrating electronic signatures with your front and back-end systems. OneSpan Sign's powerful REST-based open API and SDKs come packed with everything you need to ensure rapid development and deployment.

PROFESSIONAL PLAN

SEND AND SIGN DOCUMENTS WITHIN MINUTES WITH OUR READY-TO-USE WEB AND MOBILE APPS – STARTING AT ONLY \$20 PER USER/MONTH

Get an electronic signature application fully optimized for web and mobile signing right "out of the box". OneSpan Sign also enables you to quickly configure the solution for your unique requirements, including white-labeling the e-signing experience for your brand to ensure the most seamless and trusted workflow.

In Q4, **E-Signature subscription revenue grew in excess of 20%**. With the availability of a qualified electronic signature capability, OneSpan will deliver a new secure agreement automation offering to address global market needs. **"We see substantial opportunities for accelerated growth in this area. As we noted previously, our customers are increasingly choosing to deploy e-signature in the cloud through a recurring revenue model."**

Europe – Another important catalyst investors should be keeping an eye on over the next several months surrounds its presence in Europe. CEO Scott Clements, in his prepared remarks on the Q4 conference call, said that two weeks ago, he met with one of Europe's largest financial institutions. And they told him that **they need OneSpan's help in moving their identity security infrastructure into an agile cloud environment, so that they can be more responsive to the emerging needs of their customers.** **"We're carefully integrating our portfolio of capabilities and to solutions that respond to these business drivers."**

Now, fast forward to the Q&A session where Dougherty analyst Zack Turcotte would ask management if they expect similar level of revenue for EMEA in the next 12, 24 months? And could they see some additional international cross-selling opportunities, specifically for e-signature, through those customers?

Management would respond by saying that with respect to e-signature, they have a number of things that are going on with the intent of strengthening opportunities for their e-signature business in the rest of the world. They have focused on their e-signature business more than most other competitors in the financial services and the regulated industries. **"The reality is that in Europe, the banks have been slow to take up e-signature because initially there was uncertainty about the requirements and the implications of the eIDAS regulation. We have seen that clarify."**



****eIDAS, or Electronic Identification Authentication and Trust Services, is an EU regulation that states that all organizations delivering public digital services in an EU member state must**

recognize electronic identification from all EU member states from September 29th, 2018 and onward.

New Products – Management would highlight that several new products are slated for FY19 release including the newly announced AI-based Risk Analytics solution to address the growing problems of account takeover and new account fraud as well as a Qualified Electronic Signature (QES) product. Management said that modest contribution to FY19 guidance from new products was baked in, but that **strong performance could provide opportunity to top forecasts.**

Analyst Commentary

BTIG Research – On February 19th, analyst Joel Fishbein would reiterate his Buy Rating and \$21 price target saying that with secular tailwinds at OneSpan’s back as well as an improving and expanding product portfolio, fundamentals are as encouraging now as we can remember. From a valuation perspective, the company’s high-growth software revenue segments appear dramatically undervalued compared to peers. Net, their core thesis of steady margin expansion and low double-digit top-line growth appears intact.

National Securities – Back on January 3rd, analyst Matthew Galinko initiated OneSpan with a Buy Rating and \$20 price target saying he expects operating leverage to re-emerge beginning in 2019 following the company’s revenue shift mix from hardware authenticators to software security and eSignature products. The analyst expects a scaled-up software business to drive higher margins over time and support multiple expansion.

A Potential Sale?

Last, but not least, it should be noted that back on February 5th, Ancora Advisors announced that they had sent a letter to the Board of Directors of OneSpan. In the letter, Ancora stated that they believe the transition from hardware to software has obscured the real growth of the company’s software assets which has caused the market to severely undervalue OneSpan’s software business. In light of the numerous risks associated with these types of business transitions, Ancora strongly urged the Board to immediately explore strategic alternatives for the entire company and/or a sale of the Sign business, as either of those outcomes represent far better risk-adjusted options to maximize value for shareholders than OneSpan’s current strategic plan.

OSPN OneSpan Inc. Nasdaq CM

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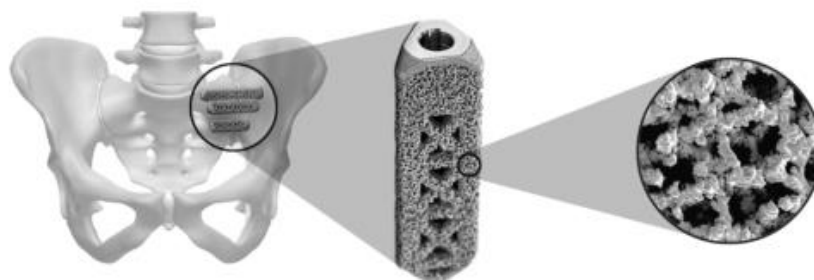
Technology / Software Tuesday 2-Apr-2019 11:11 am
 Open: **19.17** Ask: **18.95** P/E: **207.68** Options: **yes** Chg: **-1.56%**
 High: **19.27** Ask Size: **200** EPS: **0.09** Annual Dividend: **N/A** Chg: **-0.30**
 Low: **18.92** Bid: **18.88** Last Size: **100 shrs** Yield: **N/A** Last: **18.92**
 Prev Close: **19.22** Bid Size: **100** VWAP: SCTR (Small): **70.8** Volume: **49,909**



SI-BONE (SIBN)

Trade: Buy common stock for \$19.00 or less.

SI-BONE is a medical device company that uses a proprietary minimally invasive surgical implant system called iFuse, to treat sacroiliac joint dysfunction that often causes severe lower back pain. This is a relatively new medtech company as it first debuted last October.



Per the company's S-1 filing, patients with sacroiliac joint dysfunction may experience debilitating pain. SI-BONE believes that the sacroiliac joint is the last major joint to be addressed by the orthopedic implant industry. Studies have shown that the disability that results from disease of the sacroiliac joint is comparable to the disability associated with a number of other serious orthopedic conditions, such as knee and hip arthritis and degenerative disc disease, each of which has surgical solutions where an implant is used, and a multi-billion-dollar market exists.

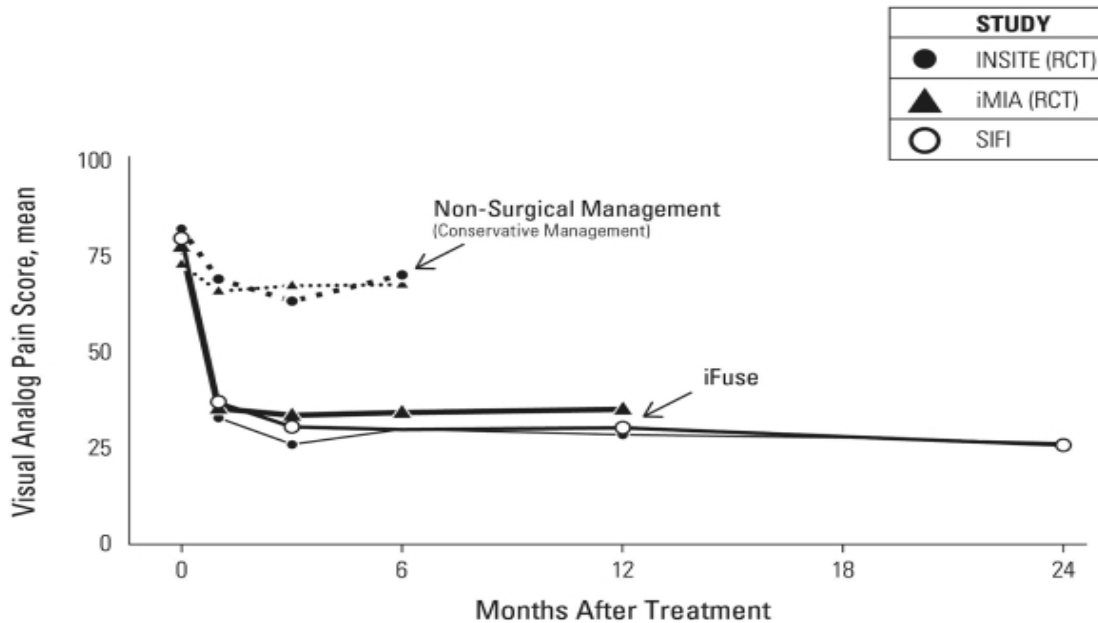
The company's implants have a triangular cross section, which resists twisting of the implant within the bone in which it is implanted, helping stabilize the joint even before fixation of the bone onto the implant, or bony in-growth which results in fusion. Products from their competitors use screws to treat the sacroiliac joint, which do not resist twisting within the bone as well as our patented triangular implants. A study it performed showed that its iFuse implants have more than six times the rotation resistance of a screw designed for sacroiliac joint fusion. It holds issued patents on implants with cross-sections of many non-round shapes, including the triangular shape they use for iFuse. They also hold issued patents for the method of placing those implants across the sacroiliac joint, as well as other parts of the spine and pelvis. **Each titanium iFuse implant is at least three times the strength of a typical eight-millimeter surgical screw** and the larger porous surface area of our implants allows for bony in-growth.

	SI Screws	iFuse
Rotation	 <ul style="list-style-type: none"> 1X resistance 	 <ul style="list-style-type: none"> >6x resistance
Safety	<ul style="list-style-type: none"> Unknown 	<ul style="list-style-type: none"> Very low complication rate
Revision	<ul style="list-style-type: none"> Unknown 	<ul style="list-style-type: none"> 3.5% (4-year)
Clinical Evidence	<ul style="list-style-type: none"> 16 publications (no RCTs) 	<ul style="list-style-type: none"> >65 publications
Surface	<ul style="list-style-type: none"> Smooth  	<ul style="list-style-type: none"> Porous 

INSITE Trial

The company had conducted a clinical trial called INSITE, which was a randomized control, multi-center trial of 148 patients aged 21-70 with confirmed diagnosis of SI joint pain. Subjects were placed in two groups: (1) Immediate SI joint fusion with iFuse or (2) Non-surgical management. Notably, non-surgical subjects were given the option to "cross-over" into SI joint fusion after 6 months. By 24 months, 89% of the non-surgical group had elected to cross-over. The results, which were both clinically meaningful and statistically significant ($p < 0.0001$), are summarized below displaying mean reduction in pain across the company's trials.

Sacroiliac Joint Pain



Market Opportunity

SI-BONE estimates that over 30 million American adults have chronic lower back pain. For patients whose chronic lower back pain stems from the sacroiliac joint, their experience in both clinical trials and commercial settings indicates that iFuse could be beneficial for at least 30% of patients who are properly diagnosed and screened for surgery by trained healthcare providers. Approximately 282,000 patients in the United States were estimated to have received multiple non-surgical steroid injections for sacroiliac joint pain in 2017. **Based on market experience and internal estimates, and the assumption that the average person suffering from sacroiliac joint dysfunction has been in pain for five years, the company estimates that the potential market for iFuse in the United States could be 279,000 patients annually, for a potential annual market in the United States of approximately \$2.7 billion.** Since they introduced iFuse in 2009, more than 34,000 procedures have been performed by over 1,700 surgeons, in the United States and 33 other countries.

Morgan Stanley, in their initiation note from November 12th, said their market model assumes an annual incidence of 94k assuming (1) 22.5% of lower back pain is attributable to the SI joint (6mn patients), and (2) ~28% of those patients advance to surgery. They see this ramping through 2030 to 150k annual procedures based on incremental proportion of patients advancing to surgery (See Exhibit 8 below for their detailed market model build). **Based on Si-Bone's current market share of ~70%, they estimate this market to be only ~6% penetrated, to which they model ~34% iFuse penetration by 2030.**

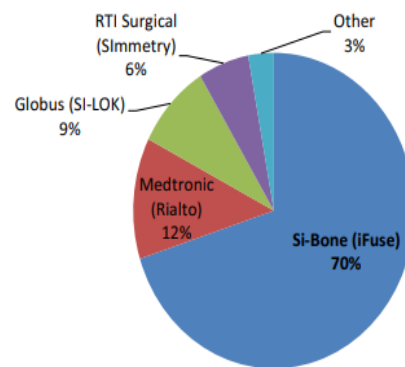
Exhibit 8: SI Joint Fusion Annual Market Model Estimate

United States SI Joint Fusion Market	
Population (mn)	328.0
% Patients w/ Chronic Lower Back Pain	8.1%
Patients w/ Chronic Lower Back Pain (mn)	26.6
% Patients w/ SI Joint Pain	22.5%
Patients w/ SI Joint Pain (mn)	6.0
% Patients Advancing to SI Joint Surgery	28.5%
Total Treatment Years per Patient	20.0
Annual Patients Advancing to SI Joint Surgery (000s)	85.2
Avg # of Joints Fused per Patient	1.10
Annual SI Joint Fusions per Year (000s)	93.7
ASP	\$9,800
Addressable Market	\$918

Source: Company Data, Morgan Stanley Research, PubMed

In that same note, Morgan Stanley points out that SI-BONE currently holds 34 issued patents in the United States, with an additional 11 pending. Internationally, the company holds 6 issued patents with 7 pending. The patents largely cover cross-sections of many non-round shapes of the implant (including triangular) as well as the method of placing those implants across the SI joint and other parts of the spine and pelvis. Specifically, on the procedure, the IP covers (1) a lateral insertion path through the ilium and into the sacrum, and (2) a posterolateral insertion path angling through the SI joint. The IP protection is a significant

Exhibit 1: SI Joint Fusion Implant Market Share (2017)



Source: Company Data, Morgan Stanley Research estimates
Note: Market share estimates based on 2017 revenue. "Other" revenue is estimated at \$2.0mn

headwind for competitors aiming to develop triangular-based implants, thus further protecting SI-BONE's exclusivity contracts with payors. The U.S. patents begin to expire starting August 2024, providing significant runway and lead-time for Si-Bone to further penetrate the SI joint fusion market.

What Does The Rest of 2019 Have in Store?

On March 7th, SI-BONE reported its second earnings report in its brief history, with Q4 revenues coming in at \$15.6M, an increase of 13% Y/Y. Meanwhile, revenues for 2018 came in at \$55.4M, an increase of 15% Y/Y. As far as FY guidance, the company said it expects revenue to be in the range of \$65M - \$66.5M, representing growth of 17% - 20% over FY2018. In addition, they expect their U.S. and international businesses to grow at similar rates during the year.

"Our fourth quarter 2018 accomplishments and first quarter 2019 announcements reflect the ongoing strength of our business building robust clinical data and expanding our reimbursement coverage," said Jeffrey Dunn, President, Chief Executive Officer, and Chairman.

Sales Force Expansion – In his prepared remarks on the conference call, CEO Jeffrey Dunn would discuss the company's Reps/CSSs. As a quick overview, SI-BONE has Mature Reps, which are sales reps that are highly technical in their skill set with meaningful spine or interventional pain experience. In addition, they also have Clinical Support Specialists (*or* CSSs), and they assist in case coverage.

Mr. Dunn would say that in 2019, they're focused on growing sales in new territories through the addition of direct sales reps and are -- and on more deeply penetrating existing territories through the addition of CSSs. ***"To that effect, we plan to add 10 to 15 direct sales rep during the year to large or unpenetrated territories. We also plan to aggressively increase our number of CSSs, adding 25 to 30 new specialists throughout the year to support smaller and rapidly growing territories. This will bring the ratio in the U.S. of mature direct sales reps to CSSs, close to 1 to 1."***

In a post-earnings note, BAML analyst Bob Hopkins would comment that there were 450 active surgeons at the end of 2018 (***defined as performing a procedure in the last three months***) and guidance assumes there are 100 more active surgeons added over 2019. SIBN finished 2018 with 45 mature reps and 22 clinical support specialists. The plan for 2019 is to add 10-15 mature reps and 25-30 clinical specialists. A mature direct rep today does over \$1m in sales but with the support of a clinical specialist, SIBN expects this to double to over \$2m. ***"We get the sense that if things go well, SIBN could accelerate hiring in 2019 to drive additional growth, particularly if there are additional payer wins."***

47 DIRECT SALES REPS

- Deep relationships in spine and pain
- Leverage expertise to create referral channels
- Focused technical sales force
- Supported by:
 - Clinical Support Specialists (22)
 - Field Marketing Specialists (7)

10 SALES REGIONS



>30 SELECT INDEPENDENT AGENTS

Note: As of December 31, 2018

23 | SI-BONE

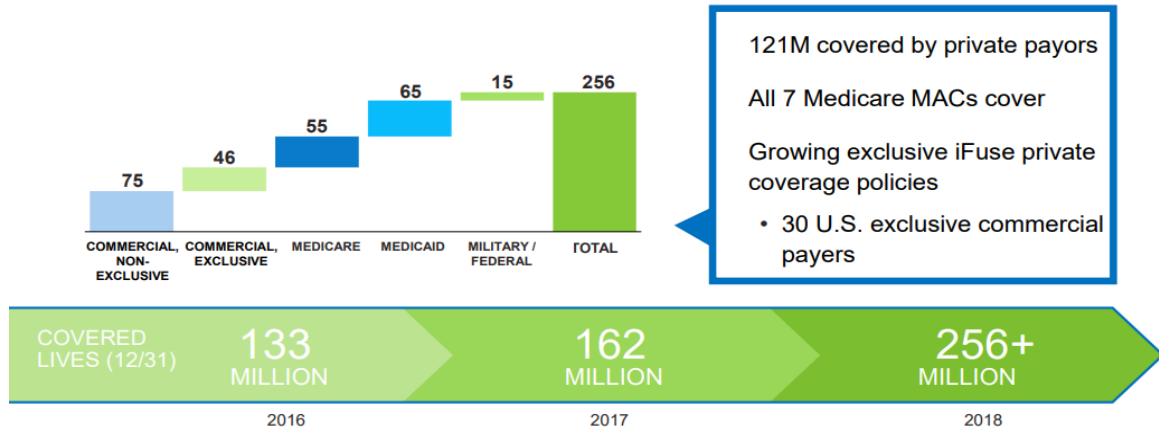
New Payers – BAML’s comment is the perfect segway into highlighting another important catalyst SI-BONE is currently experiencing: Continued success with winning new payers. This topic reminds me a lot of **Inspire Medical Systems (INSP)**, which we made a Top Pick in the Q4 2018 Outlook. At one point in the quarter, it seemed like every couple of weeks, the company would issue a press release detailing new coverage.

If we circle back to the Q4 earnings call, management would say that recently, 5 new payers published positive coverage policies for MIS SI Joint fusion when performed exclusively with the triangular iFuse Implant System:

1. On November 20th, BlueCross BlueShield of Arizona began exclusive coverage of iFuse.
2. On December 22nd, Excellus BlueCross BlueShield’s policy took effect, providing access to the iFuse procedure in Western New York.
3. On January 1st, CareFirst, the largest healthcare insurer in the mid-Atlantic region, published positive coverage policy.
4. On February 1st, Premera Blue Cross, the largest health plan in the Pacific Northwest, also published an exclusive policy.
5. On March 4th, Highmark in the Pittsburgh area, which has 4 million covered lives, switched from covering the procedure to exclusively covering iFuse.

They also established a branch in France that will help to capture the revenue opportunity from the exclusive positive coverage decision made in December 2018 by the French Public Health System.

“These wins demonstrate continued progress expanding our market leadership in providing surgical products for the sacroiliac joint and improving patient lives. With these payer additions, we now have over 263 million covered lives in the United States. Approximately 62 million of these covered lives across 32 payers have exclusive coverage for iFuse.”



iFuse Bedrock – Finally, the company **announced in Q4 it is expanding into adjacent markets.** All of this will be possible due to the FDA clearance of their new iFuse Bedrock technique, which is a technique for use in adult deformity surgeries. ***“It allows the surgeon to place 1 iFuse implant on each side of the sacrum from the posterior approach. The iFuse implant provides an additional fixation device crossing the SI joint alongside an S2AI screw.”***

According to the company, in the last few years, iliac screws and S2AI screws have been used at the bottom of the construct in adult deformity procedures. However, loosening and breakage of the screws sometimes creates issues, and the design characteristics of screws ignores the important notion of fusing the sacroiliac joint at the base of the spine to create a foundation for the long construct.

It believes that this is an exciting step forward since many long fusions are performed at leading academic institutions around the world. They announced that their team is **now engaged with many of these institutions** such as Duke, Rush, Scripps, NYU, University of Minnesota, Barrow Neurological Institute and the Hospital for Special Surgery in New York.

SIBN SI Bone, Inc. Nasdaq GS

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Health Care / Medical Equipment

Tuesday 2-Apr-2019 11:18 am

Open: 18.90	Ask: 19.00	PE:	Options: no	Annual Dividend: N/A	Chg: -0.01
High: 19.00	Ask Size: 200	EPS:	Yield: N/A	Last: 18.90	Volume: 7,816
Low: 18.65	Bid: 18.80	Last Size: 2100 shrs	SCTR:		
Prev Close: 18.91	Bid Size: 600	VWAP:			

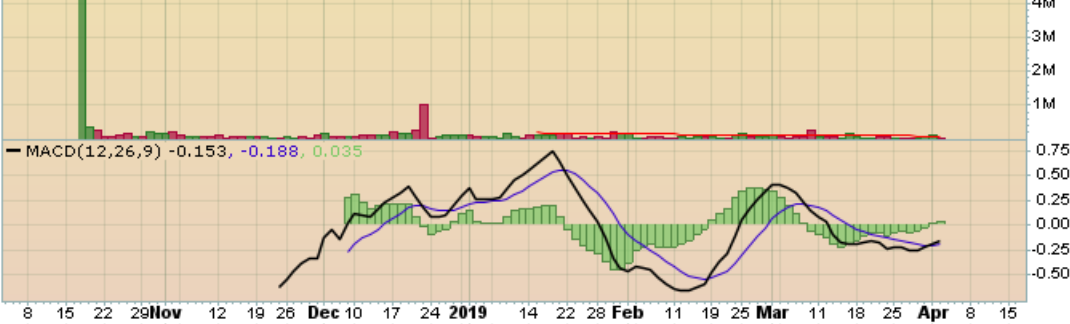
▲ RSI(14) 50.19



☞ SIBN (Daily) 18.90



■ Volume 7,816, EMA(60) 90.42K



Ulta Beauty (ULTA)

Trade – Buy September 350-400-430 Skip Strike Call Butterfly Spread for \$12.75 debit or less.

Led by CEO Mary Dillon since 2013, Ulta Beauty is one of the preeminent and distinguished beauty retailers in the US. The company's stores offer cosmetics, fragrances, haircare and skincare products, bath and body products, salon styling tools, and salon services.

Unique Assortment with Breadth Across All Price Points



Diving straight into the company's Q4 earnings results from March 14th, we find:

- EPS of \$3.61 vs \$3.56 estimate – Beat
- Revenue of \$2.12B vs \$2.11B estimate – Beat
- Net Sales increased 9.7%
- Comparable Sales increased 9.4%
- Transactions increased 7.1%
- Average Ticket increased 2.3%
- Retail Comp Sales increased 7%
- Salon Comp Sales increased 6.2%
- E-Commerce Comp Sales increased 25.1%

As most of us know, when looking at a retailer, comparable sales is the most important metric to focus on. As shown above, the company delivered **a +9.4% comp in Q4, which easily beat the company's guidance of 7% - 8% and consensus of 7.9%**. In addition, it should be noted that over the last few quarters, comp sales have been trending higher, always an encouraging sign:

- Q218 – Comp Sales increased 6.5%**
- Q318 – Comp Sales increased 7.8%**
- Q418 – Comp Sales increased 9.4%**

Category Performance

Taking a look under the hood, we find that the top performing categories in the quarter for ULTA were mass cosmetics, prestige boutique brands, fragrances, and prestige skincare. Smaller departments, including accessories and sun care, also contributed double-digit sales growth. Notably, mass cosmetics was the best performing category, driven by Morphe, Revolution Beauty, and e.l.f.

The company noted it is dedicating more shelf-space to the best performing brands and expanding successful brands like Colourpop to more stores in FY2019. Within prestige boutique, top brands included Benefit, Clinique, Lancôme, and MAC, all of which are expected to expand to new doors and new expressions in FY2019, as well as Estée Lauder, Kylie Cosmetics, NARS, and Tarte, driven by new product launches.

Fragrances delivered double-digit comp growth in F4Q18, and prestige skincare also experienced strong growth led by Mario Badescu, First Aid Beauty, and Proactiv. Stifel noted the success in mass cosmetics reflects the company's ability to identify trendy brands that are able to generate incremental store traffic, in part reflecting Ulta's ability to become the exclusive retailer of digitally native brands, like Morphe, Colourpop, and Kylie Cosmetics.

The Sell Side Send Their Regards

Following earnings, **Loop Capital** analyst Anthony Chukumba raised his price target on Ulta to \$340 to reflect the findings of his latest prestige beauty product pricing study that suggests retailers **"continue to largely adhere to manufacturer's suggested retail prices, with discounting still virtually non-existent."** The analyst sees the pricing trends as a positive for Ulta Beauty given its **"wider assortment of prestige and mass market brands"** relative to the competition, along with its **"robust"** loyalty program and many cases of exclusive brand relationships. Chukumba adds that the decline in **"free gift with purchase" offers suggests "strengthening prestige beauty products demand."**

Jefferies analyst Stephanie Wissink raised her price target for Ulta Beauty to \$357 from \$335 saying the company's Q4 sales and earnings beats **"were needed"** and **"validated a defensibility belief that was getting lost in the quarterly comp vs margin debate."** The company's growth sustainability supports a higher multiple, Wissink tells investors in a post-earnings research note. She kept a Buy rating on shares.

Wells Fargo analyst Ike Boruchow raised his price target for Ulta Beauty to \$350 from \$280 saying the Q4 report **"was a big win for the bulls."** Ulta illustrated broad based strength and the ability to drive meaningful growth via smaller digitally-native brands, Boruchow tells investors in a post-earnings research note. He sees the company's momentum and accelerating growth as **"deserving of a more premium multiple today."** The analyst keeps an Outperform rating on shares.

BMO Capital analyst Shannon Coyne noted that brand awareness remained at all-time highs **(55%/90% unaided/aided)**, with strength across Generation X and Generation Z, and progress among Latinas and African Americans.

JPMorgan analyst Christopher Horvers said that near term trading dynamics aside, ULTA remains a core growth holding and its ability to drive comp from mass, prestige, and/or digitally native brands is the key takeaway from the quarter.

Ultamate Loyalty

In her prepared remarks on the Q4 call, CEO Mary Dillon would highlight that their **Ultamate Rewards Loyalty program remains one of their most valuable assets**. Membership at the end of the year reached 31.8 million active members representing **active member growth of 14.4%** compared to 2017.

“Our store team sustained focus on conversion benefited from robust store traffic during the quarter. As we anniversaried the launch of our elite Diamond tier, we are pleased to see the number of guests that attain Diamond level was ahead of plan with very high guest engagement. The latest loyalty program benefit was launched at the beginning of the new fiscal year with a new perk offering our guest the ability to use points on all skin, brow, makeup and hair services, and guests are loving it.”

Mary Dillon would go on to add that the company has been talking about **personalization as the next frontier of loyalty**. They're currently focusing their efforts around personalization by incorporating relevant product recommendations and replenishment reminders across digital channels with much more of the works in concert with their acquisitions of QM Scientific and GlamST** last fall.

***In November 2018, Ulta Beauty acquired QM Scientific and GlamST—two technology startups in artificial intelligence and augmented reality. QM Scientific operates an artificial intelligence-powered shopping assistant. The vendor’s technology learns each individual customer’s preferences and habits over time, enabling devices, apps or bots to respond to shoppers with relevant and timely answers and suggestions. GlamST offers mobile, web and in-store virtual makeover tools that use augmented reality. Augmented reality superimposes images over real-world objects through device cameras. Ulta didn’t disclose purchase prices for two companies.*

Higher Share of Wallet and Loyalty from Platinum and Diamond Tiers

- ~41% share of wallet
- 96%+ retention
- 33% are omni-channel
- 18% shop services



Ultamate
REWARDS
DIAMOND

BENEFITS	YOU GOT IT!		
	MEMBER	PLATINUM	DIAMOND
Spend per calendar year	FREE	\$450	\$1,200
Points earned per dollar	1.0	1.25 \ 25% FASTER	1.5 \ 50% FASTER
Free birthday gift	♥	♥	♥
2X points in your birthday month	♥	♥	♥
\$10 Birthday coupon		♥	♥
Points never expire		♥	♥
Everyday free shipping (order of \$25 or more)			♥
Annual \$25 Beauty Service Card			♥

Ultamate Rewards Member Statistics

	F2016	F1Q17	F2Q17	F3Q17	F4Q17	F2017	F1Q18	F2Q18	F3Q18	F4Q18	F2018
Net Revenues	4,854.7	1,314.9	1,289.9	1,342.2	1,937.6	5,884.5	1,543.7	1,488.2	1,560.0	2,124.7	6,716.6
Y/Y % change	24%	22%	21%	19%	23%	21%	17%	15%	16%	10%	14%
Ultamate Rewards Members (mm)	23.4	24.5	25.4	26.4	27.8	27.8	28.6	29.5	30.6	31.8	31.8
Y/Y % change	28%	26%	23%	22%	19%	19%	17%	16%	16%	14%	14%
2-year CAGR	26%	26%	26%	25%	23%	23%	21%	20%	19%	17%	17%
% of sales from Ultamate members	90%	92%	92%	92%	93%	92%	93%	94%	95%	95%	94%
Ultamate Member Sales (estimate)	4,387.7	1,205.7	1,183.4	1,238.2	1,797.1	5,424.5	1,439.5	1,395.2	1,478.1	2,013.2	6,325.9
Y/Y % change	34%	29%	22%	20%	24%	24%	19%	18%	19%	12%	17%
Sales/Average Member	\$210.75	\$50.34	\$47.43	\$47.81	\$66.31	\$211.89	\$51.05	\$48.03	\$49.19	\$64.52	\$212.28
Y/Y % change	7%	1%	(3%)	(2%)	3%	1%	1%	1%	3%	(3%)	0%
2-year CAGR	5%	3%	2%	2%	4%	4%	1%	(1%)	0%	0%	0%

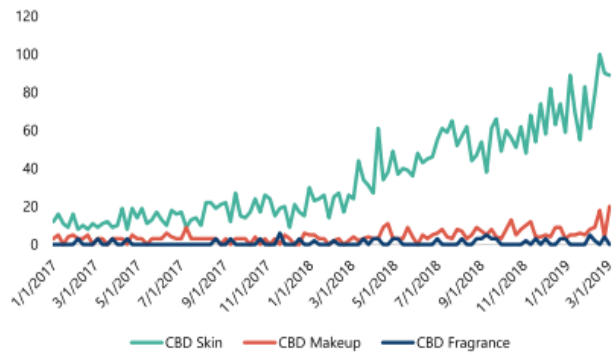
Note: Growth may not match company reports due to rounding.
Source: Company reports, Stifel estimates.

Hooked on Mary Jane

On March 12th, the Jefferies analyst team put out an excellent industry note titled **“CBD in Beauty & Personal Care.”** They go on to highlight that the legal U.S. Cannabis market nears \$10B today, growing to \$60B by 2025, per Euromonitor. Wellness aligned categories have among the best potential to capitalize on growth given generally loose regulatory frameworks around topicals, low cost digital content to market, and specialty venues to merchandise. As the trend develops, large conglomerates are infusing CBD into existing labels and could augment through M&A. Origins Hemp Mask, Murad's Hemp Serum, and Keihl's Cannabis Serum are examples.

When it comes to search trends for CBD beauty, these have increased significantly Y/Y and YTD in both the United States and worldwide. By region, search patterns correlate with markets where cannabis regulations are being relaxed and/or potentially relaxing. Cannabidiol, which is the most common direct derivative of cannabis (vs. hemp), is a key signal of consumer interest and growing curiosity around efficacy. **CBD Beauty search is dominated by skincare** - similar to product assortments at the current stage. Skincare searches are 4x that of make-up, the next largest category of CBD beauty search. Relative to other beauty trends including k-beauty, contouring, and mineral, CBD has had a slower, more steady build, which may signal a more durable and sustainable growth curve over 5+ years vs. more **“hit driven” (aka fashion)** based trends that tend to rise/fall over 3-4 year cycles.

CBD Search Trend by Beauty Category:



Source: Google Trends; Jefferies

Search Trends for CBD Beauty



Source: Google Trends; Jefferies

Switching back to Ulta Beauty, CEO Mary Dillon on the Q4 conference call would state:

“We’re **broadening our brand portfolio with the addition of new brands** like Urban Skin Rx, a line of clinical skincare product designed for women of color, Fountain of Truth, a clean, cruelty-free line developed by Giuliana Rancic; My Clarins, an exclusive line of vegan skincare products from Clarins; and **Cannuka, a skincare line infused with CBD and honey.**”

CBD Beauty - Cannuka



Source: Cew.org; Jefferies

Profile: Cannuka

Cannuka is a founder run indie beauty brand offering products that combine CBD derived from hemp, Manuka honey, and vitamin rich oils to provide daily skin therapy that both "calms and heals skin." The founders are a husband (farmer) and wife (dermatologist) pair. The company has an extended range of products for face, lips, cuticles, elbows, and other areas of skin dryness or inflammation. (Source: Cannuka website)

Most recently, Piper Jaffray analyst Erinn Murphy was out with a note saying, “**Last week, we noticed CBD brand Cannuka in the "New Arrivals" page on Ulta.com. This is the first time we have seen CBD available at Ulta and we think we will likely see a continued focus on the category going forward given the high level of interest from consumers and retailers.** We also observed a number of recent product launches in our checks. The popular Morphe x Jeffree Star collaboration launched in all Ulta doors on 3/3. Smith & Cult recently launched a line of makeup, some of which is exclusive to Ulta. Further, the hemp seed oil-based face mask from Origins, "Hello, Calm" (formerly Sephora-exclusive), is now also available at Ulta. Overall, we remain confident that Ulta is maintaining momentum in its brand & product newness pipeline heading into 2019.”



★★★★★ (10)

CANNUKA
CBD Healing Skin Balm
\$58.00



★★★★☆ (4)

CANNUKA
CBD Cleansing Body Bar
\$18.00



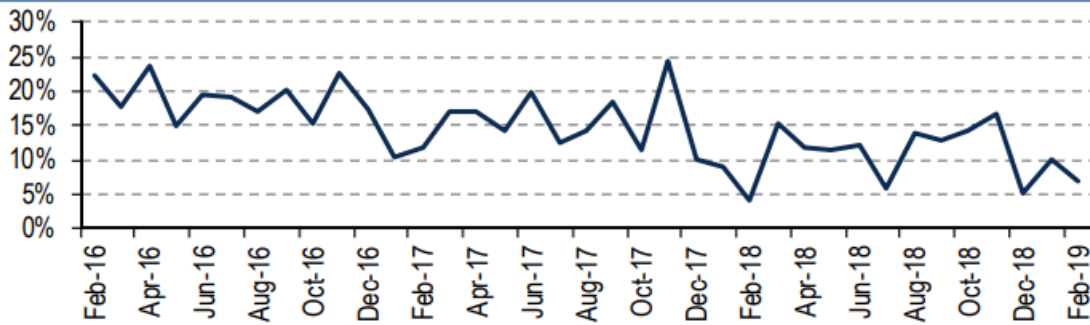
★★★★☆ (7)

CANNUKA
CBD Calming Eye Balm
\$38.00

Beauty Checks Softening? – It’s Only an Illusion

On March 14th, BAML issued their monthly beauty spending report, in which based on aggregated spending on BAC credit/debit cards, spending at beauty retailers ticked down to +4.2% Y/Y in February from +5.6% in January, decelerating 3pts on a two-year stack to +6.9% in February vs +10.2% in January.

Chart 1: Two-year stack for y/y Beauty retail spending on aggregated BAC credit/debit cards



Source: BAC internal data

If we switch over to JPMorgan, they were out with a note following Nielsen checks. They found that total beauty product sales in the food, drug, and mass channels were down 2% Y/Y for the four weeks ended February 23rd, after a (0.1%) decrease reported the previous month. The two-year average decelerated 390 bps to (2.8%) vs +1.1% last month.

You may be thinking to yourself, why am I posting these soft numbers in a bullish write-up? Well, if we take a closer look at the chart below, we will see the correlation between ULTA's Same-Store Sales and the Nielsen data since Q3 2012 – Q3 2018. Needless to say, **the correlations are not yet statistically significant.**

Figure 4: ULTA Quarterly Comp Correlations

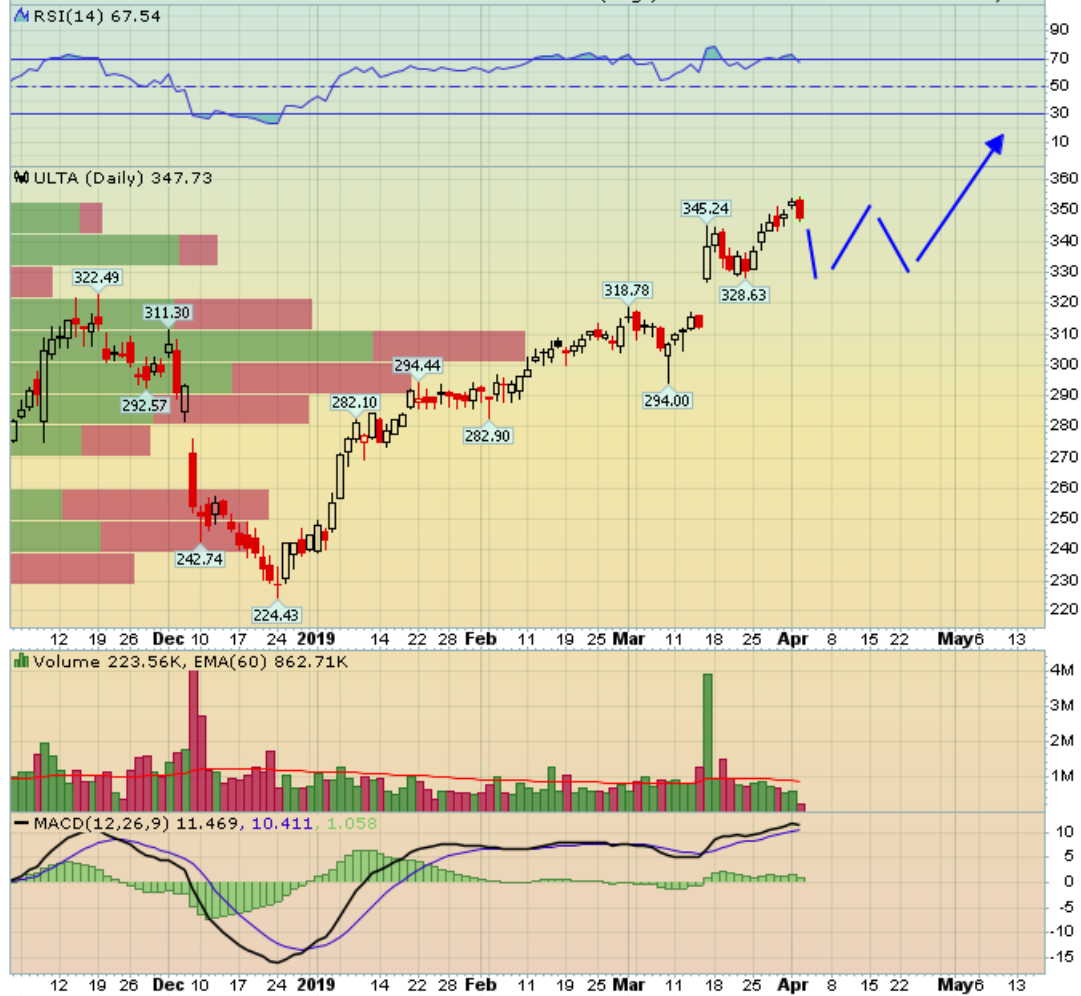
	Correlation
Total Beauty Products Growth	-29%
Total Cosmetics Growth	25%
Total Facial Skin Care Growth	-11%
Total Hand/Body Lotion Growth	-47%
Total Hair Care Growth	-54%
Total Fragrances	-57%

Source: Company reports, The Nielsen Company, and J.P. Morgan estimates.

ULTA Ulta Beauty, Inc. Nasdaq GS

© StockCharts.com

Consumer Discretionary / Specialty Retailers		P/E: 31.76		Options: yes	Tuesday 2-Apr-2019 11:38 am	
Open: 353.37	Ask: 347.91	Ask Size: 400	EPS: 10.95	Annual Dividend: N/A	Chg: -1.37%	
High: 354.09	Bid: 347.52	Last Size: 100 shrs	Yield: N/A	SCTR (Large): 97.4	Last: 347.73	
Low: 346.59	Bid Size: 100	VWAP:			Volume: 223,560	
Prev Close: 352.55						



National Beverage (FIZZ)

Trade – Buy October 55/40 Put Spread for \$4.30 debit or less.

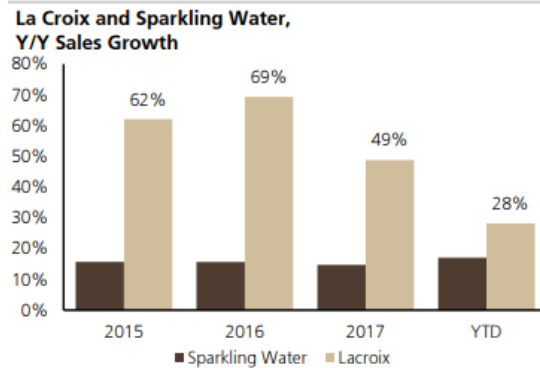
National Beverage can best be described as a cult stock that develops, produces, markets, and sells a portfolio of waters, juices, energy drinks, and carbonated soft drinks primarily in the United States and Canada. It offers beverages to the active and health-conscious consumers, including sparkling waters, energy drinks, and juices. Make no mistake about it, its growth lies within its most popular brand: La Croix.

I just Love my...
LaCroix!!



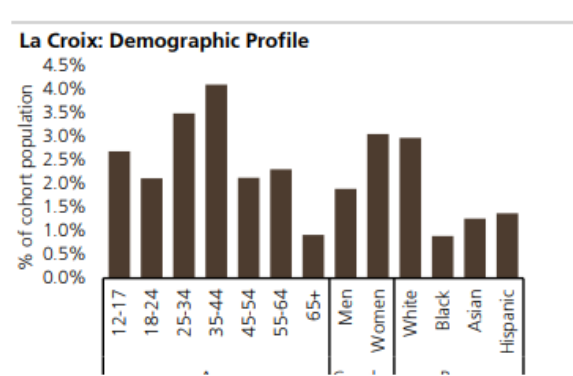
For several years, between 2015 and 2018, National Beverage returned 500% growth as LaCroix sales began to skyrocket on the back of health and wellness trends with the core millennial demographic. Sparkling water grew 16% on an average over the past 4-years, far ahead of other beverage categories with LaCroix being the single largest contributor to category growth. LaCroix's primary consumer was believed to be millennial women, and with each cohort falling under 4% population penetration, there was sufficient room for continued growth.

Figure 3: LaCroix was the single largest contributor to the category growth



Source: Nielsen, UBS

Figure 5: Per MRI, LaCroix consumption indexed highest with white millennial women



Source: MRI, UBS

National Beverage's massive growth did not go unnoticed, as the other big players (**Coca-Cola and Pepsi**) jumped into the fray via acquisitions and new launches (**more on this later**).

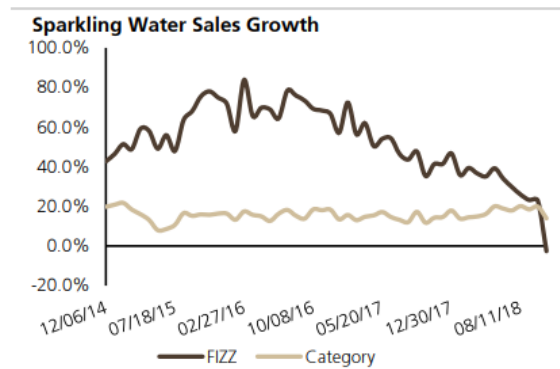
- In October 2017, **Coca-Cola (KO)** acquired premium sparkling water brand Topo Chipo
- In February 2018, **PepsiCo (PEP)** launched Bubly
- In August 2018, PepsiCo acquired at-home sparkling water maker SodaStream
- In September 2018, **Keurig Dr. Pepper (KDP)** acquired its allied brand partner CORE Nutrition
- In November 2018, KDP acquired distribution rights for premium bottled water brand Evian

The Music Has Stopped

I will get into the company's most recent earnings report as well as recent Nielsen checks, but UBS was one of the first to come out and say that growth will slow. More specifically, if we take a look at their initiation note from December 12th where analyst Sean King slapped a Sell Rating and \$80 price target on the stock, they noted that LaCroix was already showing signs of decelerating growth with the increasing competitive intensity in the category. There were also early signs for share declines, and they expected LaCroix would face an uphill task to reverse course.

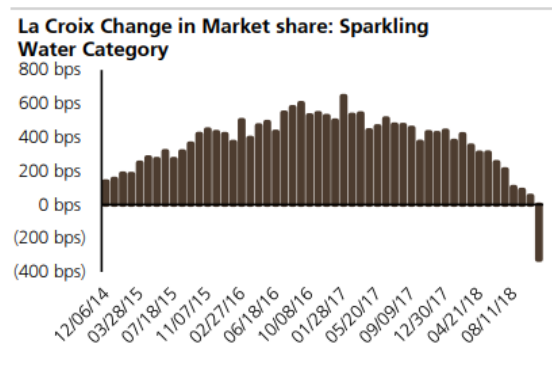
They had said that Nielsen scanner results for the period-ending 11/3/18 released on 11/13/18 showed FIZZ sales decline from +14.6% to -2.1% while the 2-year stack slowed 1340 bps from +31.4% to +18.0%. This drove an immediate 11% correction in the stock and a public statement from the company saying that third-party sales reports misrepresent total company distribution. Management cited reduced display activity at key retailers following **"scurrilous allegation that temporarily lowered sales."** UBS was having trouble seeing how these lost promotions will rebound quickly and noted an increasing correlation between tracked and reported sales for FIZZ.

Figure 10: Healthy category growth and an on-trend brand established LaCroix as the leading Sparkling Water brand



Source: Nielsen, UBS

Figure 11: Recent lost promotions may be reason for concern. The next monthly read in mid-December will help determine how temporary the lost promotions are



Source: Nielsen, UBS

Q3 Earnings Results

In one what was, without question, the most unique press release I have ever seen related to an earnings report, CEO Nick Caporella would say:

*"We are truly sorry for these results stated above. **Negligence nor mismanagement nor woeful acts of God were not the reasons – much of this was the result of injustice!** Managing a brand is not so different from caring for someone who becomes handicapped. Brands do not see or hear, so they are at the mercy of their owners or care providers who must preserve the dignity and special character that the brand exemplifies. It is important that LaCroix's true character is not devalued intentionally – in any way. National Beverage Corp. is and will remain the preeminent innovator that adds zest and authenticity to the 'sparkling water' phenomenon in North America."*

When you get past this nonsense, you will find that National Beverage had a disaster report:

- EPS of \$0.53 vs \$0.76 estimate – Big Miss
- Revenue of \$220.9M vs \$236.99M estimate – Big Miss
- Net Sales decreased 2.8%
- Branded Case Volume decreased 4.1%
- Gross Profit decreased 11.7%
- Gross Margin of 36.5% vs 40.1% Y/Y – Miss

The CEO would try to offset some of the pain by saying that comparisons were further skewed by the adoption of the new tax act in the third quarter of the prior year, which included credits and rate reduction adjustments aggregating \$11.3 million. **“Nothing herein mentioned has detracted from the ultimate value and future of our dynamic company.”**

The following day, Guggenheim analyst Laurent Grandet would downgrade the stock to Sell and lower her price target to \$45 from \$72 and say, **“As we said previously, if sales remained lackluster, we could envisage a scenario that merits significantly impaired growth rates for LaCroix. In addition, such a scenario would likely merit a lower valuation multiple to more accurately reflect the growth outlook. Given retail sales are not recovering and social media trends are decisively negative, we see little hope that the brand can recover (at least in the hands of National Beverage). We are reducing our LaCroix sales growth estimates in FY19 / FY20 / FY21 to +12% / -1% / +3% (from +15% / +11% / +10%).”**

Competition

As I mentioned at the onset of this report, the level of competition in the flavored sparkling water category continues to increase as new brands enter the market and existing brands expand / renovate their offering breadth.

Figure 5: The growing flavored sparkling shelf could present an increased challenge for LaCroix going forward



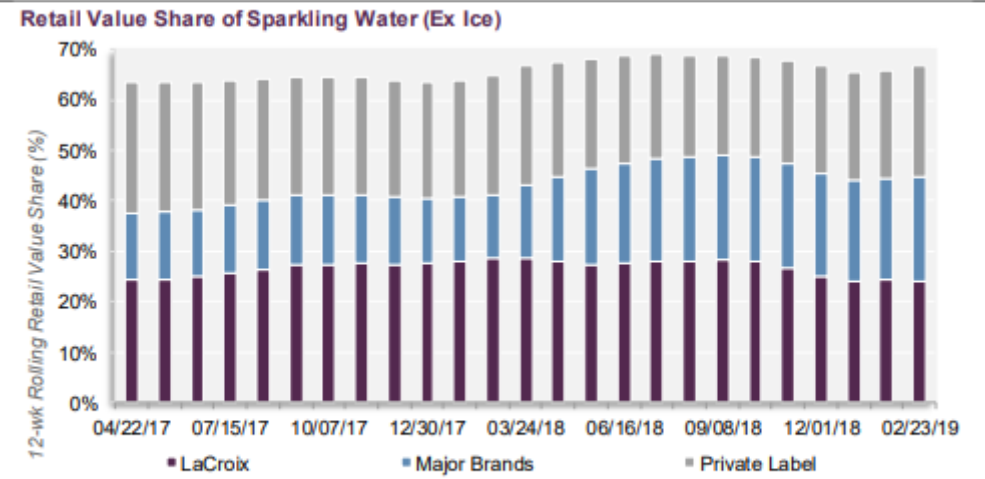
Source: Company websites
Assortment compiled by Guggenheim Securities, LLC

Guggenheim’s analysis suggests that as LaCroix sales growth began suffering following the *naturalness debate*** in October, the category has continued to grow at a healthy high-teens rate. **Where LaCroix was previously driving 40-50% of category growth, it now represents a 5-6 point drag on the category** as the brand’s growth has decelerated. This highlights Guggenheim’s

concerns about more intense competition and, in their view, suggests that many consumers who were drinking LaCroix have since found that other brands offer acceptable substitutes – even to the point where those consumers have not returned to the brand in the months following the controversy.

***Late last year, a new class-action lawsuit was filed against National Beverage, alleging that while the brand claims to be “all natural,” it contains a number of artificial ingredients, including linalool, which is used in cockroach insecticide.*

Figure 7: While LaCroix has lost share, the aggregate of major competitive brands have gained around 800 bps of share over the past year



Source: Nielsen xAOC+C, Guggenheim Securities, LLC
 Note: Flavored Sparkling segment excludes the Sparkling Ice brand
 Major brands includes Nestle Regional Brands, Zephyrhills, Dasani, Glaceau Smart Water Sparkling, Topo Chico, and Bubly

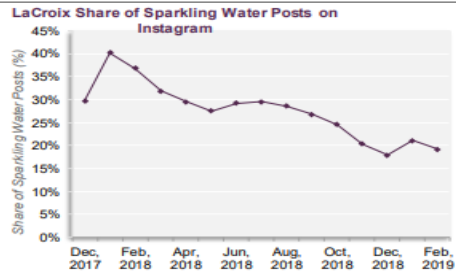
Media Trends

According to Guggenheim, in terms of social media conversations on specific competitors, Topo Chico (**Coca-Cola**) is gaining traction on Instagram, reaching about half of LaCroix’s post volume and slightly more than Bubly, despite its low national market share at ~4% of sparkling water. This could indicate that Topo Chico, as it expands geographically through grassroots marketing, could potentially be an underappreciated long-term threat to LaCroix. Both Topo Chico and Bubly have around ~8% share of sparkling water Instagram conversations today. Additionally, PepsiCo is prioritizing Bubly again this year as it proved with a 30-second Super Bowl LIII spot – in our view, this poses an additional risk to LaCroix.

Of note, LaCroix’s share of sparkling water discussions on social media has fallen to around that of San Pellegrino, approximately 20%. This reflects a similar trend as shown in the retail sales data as San Pellegrino and Perrier’s share is closer to that of LaCroix today compared to a year-ago.



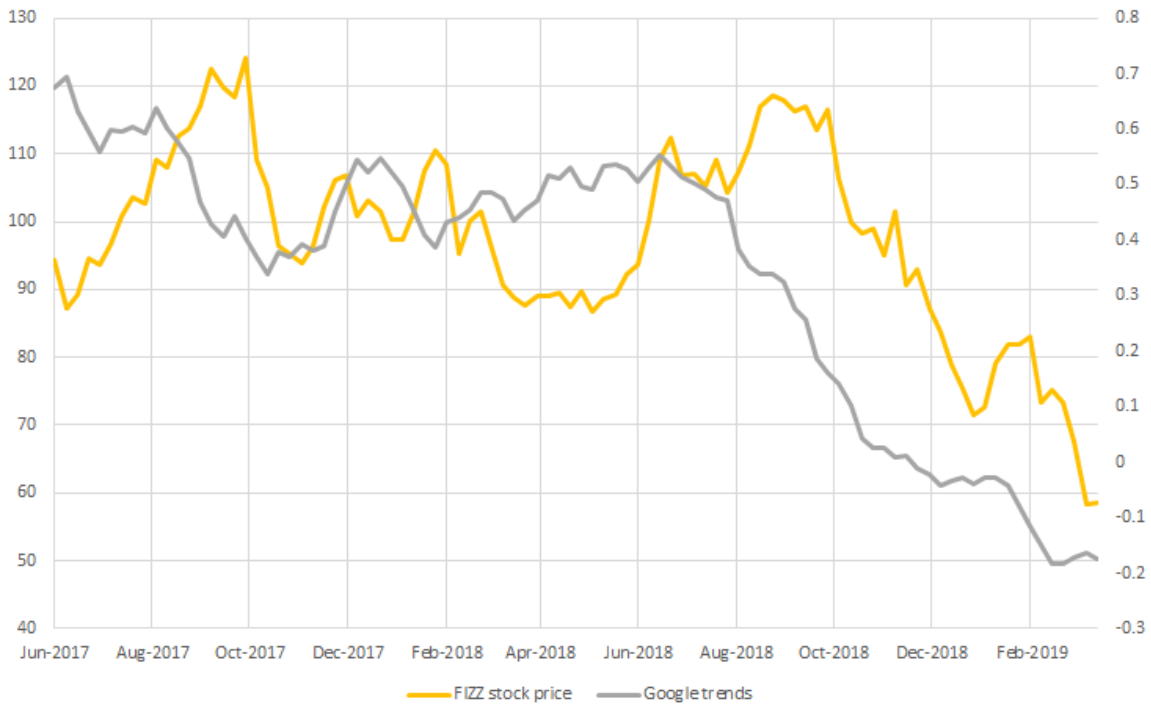
Figure 3: LaCroix's share of sparkling water conversations has drastically declined



Source: Social Standards, Guggenheim Securities, LLC

In addition, if we take a look at recent Google search trends for the company's main brand, we see a drastic fall since the middle of last year:

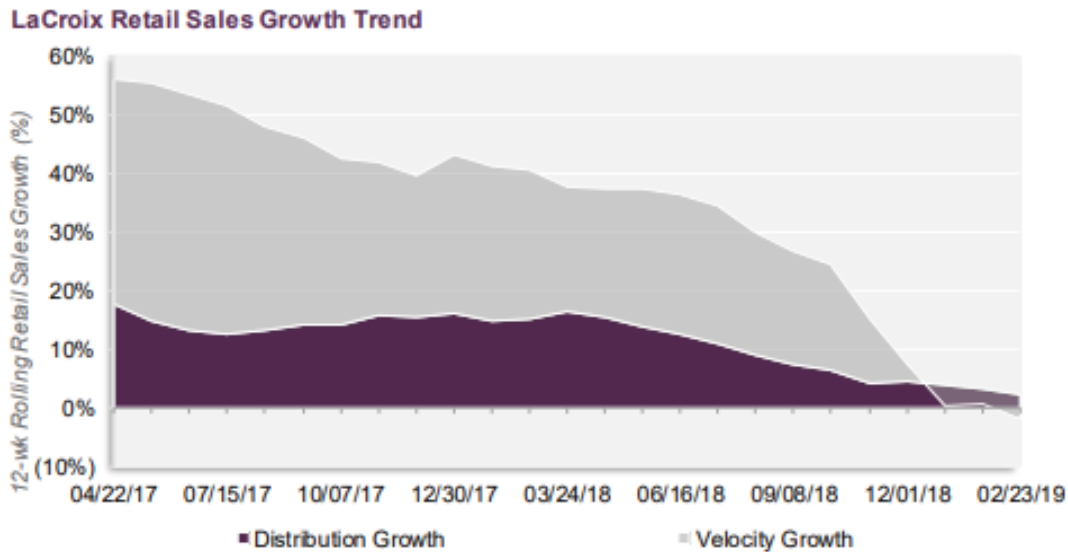
Google trends for "La Croix" and FIZZ stock price



Nielsen Checks

Finally, we have been getting updated channel checks from both Guggenheim and UBS within the last month, and results do not show any improvement for La Croix. Here is the breakdown: March 8th – Guggenheim said **in the most recent 12-week period ending February 23rd, 2019, LaCroix declined 1.9%**, with distribution growth slowing to +2.1% **and velocity declining for the third straight 12-week period at -3.9%**.

Figure 1: Retail sales growth for LaCroix stepped down significantly in recent periods, now in decline in the most recent 12-wks



Source: Nielsen xAOC+C, Guggenheim Securities, LLC

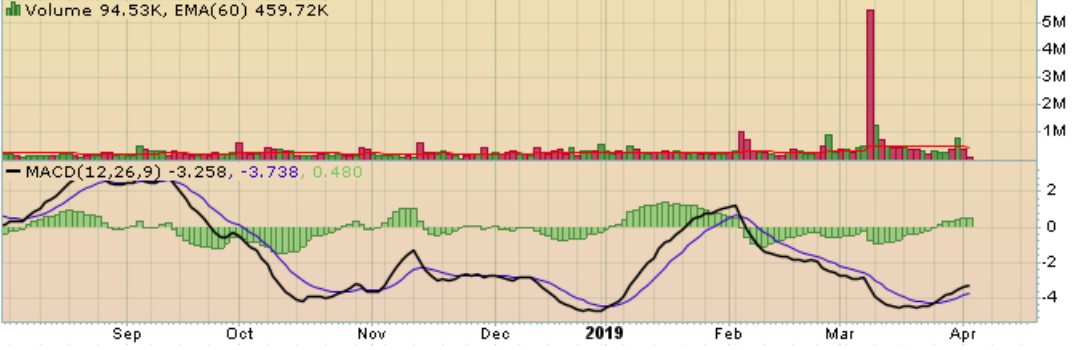
March 8th – UBS said that FIZZ trends continued to decelerate materially in February despite increased marketing in Q3. They believe increased brand support is proving less effective in the face of stepped up competition from larger peers KO, PEP and Nestle. Nielsen data for the 4-weeks ending 2/23 showed a -10% volume decline for LaCroix. **More importantly, sales velocity, or sales per point of distribution has continued to deteriorate. This tells us that the health of the brand continues to fall independent of lost display activity.**

March 19th – Guggenheim weighed in on National Beverage after a Nielsen interim update. They note **LaCroix is still not showing any signs of a rebound with sales trends remaining weak, down -5.8% in the 4-wks with velocity down nearly 7%.**

FIZZ National Beverage Corp. Nasdaq GS

© StockCharts.com

Consumer Staples / Soft Drinks			Tuesday 2-Apr-2019 11:45 am		
Open: 57.71	Ask: 57.02	P/E: 17.64	Options: yes	▼ -1.20%	
High: 58.76	Ask Size: 100	EPS: 3.23	Annual Dividend: N/A	Chg: -0.69	
Low: 56.81	Bid: 56.92	Last Size: 100 shrs	Yield: N/A	Last: 56.89	
Prev Close: 57.58	Bid Size: 100	VWAP:	SCTR (Small): 6.0	Volume: 94,534	



Grubhub (GRUB)

Trade – Buy September 70-55-45 Skip Strike Put Butterfly Spread for \$4.00 debit or less.

Grubhub is an online and mobile food-ordering company that connects hungry diners with local takeout restaurants. Its online and mobile ordering platforms allow diners and corporate businesses to order directly from takeout restaurants in the United States and London. The company's brands include GrubHub, Seamless, MenuPages and Allmenus.



Local favorites

Satisfy any craving with delivery from popular neighborhood restaurants and chains. Reorder go-tos or find something new.



Delivery to your doorstep

Get great food delivered or save time and money and preorder for pick up. Either way, order tracking and updates keep you in the know.

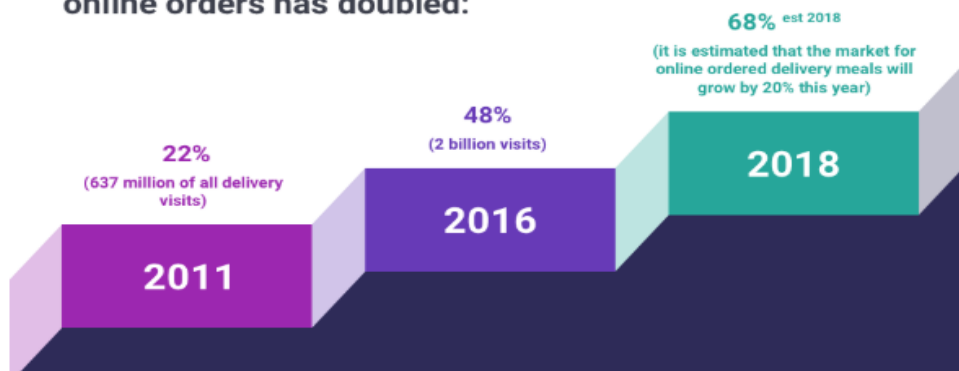


Spend less, eat more

Exclusive coupons, promos, and daily deals keep your belly and wallet full. Order online and get food you love without breaking the bank.

It's obvious that we are living in a digital age where everything happens online, including eating. And according to Hudson Riehle, SVP of Research and Innovation Services for the National Restaurant Association, ***“From the consumer perspective, there’s nothing more convenient than having the restaurant come to them. The off-premise component has been primarily responsible for industry growth over the past decade, and it won’t be decreasing.”***

In less than five years the percentage of online orders has doubled:



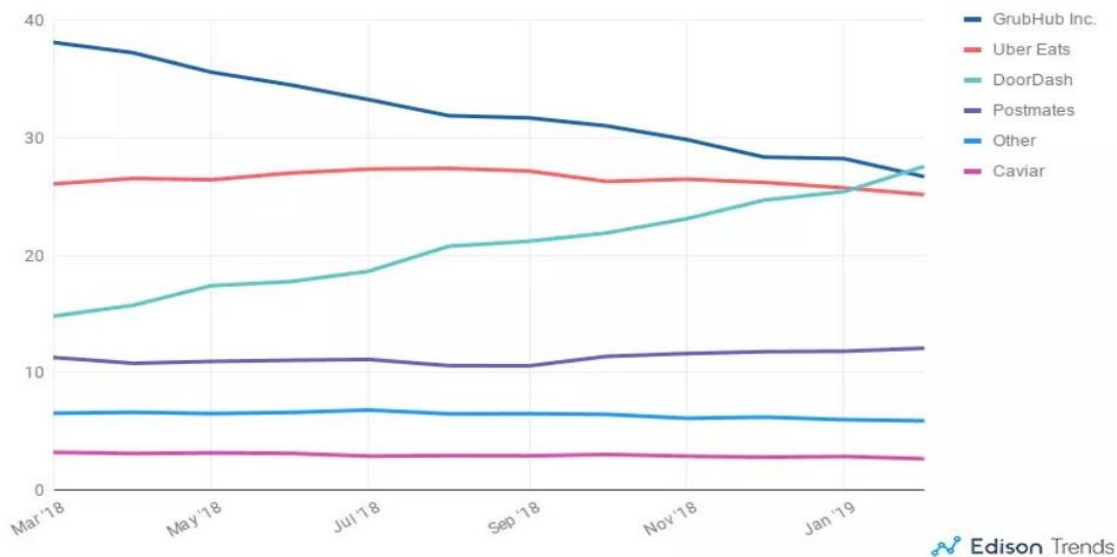
The Competition is Already Here

Shares of **Grubhub** have plunged over the past 6 months due to concerns about the food delivery service's decelerating growth, rising expenses, and market share losses to opponents like DoorDash and Uber Eats. A lot has been made recently surrounding DoorDash, which was founded in 2013, and subsequently expanded to over 3,300 cities across the U.S. It was valued at \$7.1B after its latest funding round, and its big backers include SoftBank, Sequoia Capital, and Singapore's Temasek Holdings.

DoorDash's share of the U.S. third-party food delivery service market rose from 13% in January 2017 to 31% in January 2019 according to Second Measure. During the same period, Grubhub's market share plunged from 87% to 43%. Uber Eats, to round it out, claimed 26% of the market in January.

Unlike Grubhub, which grew its market share through acquisitions, most of DoorDash's growth was organic. Its only major purchase was that of delivery and logistics start-up Rickshaw in late 2017. This means that DoorDash isn't spending much money integrating smaller businesses or worrying if all of its subsidiaries are on the same page. DoorDash claims that it tripled its annual sales in 2018, but it hasn't disclosed any exact sales or profit figures yet. Those figures will be revealed if DoorDash files for an IPO -- which could enable it to compete much more aggressively against Grubhub.

Share of Total Consumer Spend, Top On-Demand Food Platforms, USA



Leading US Food Delivery Service Metrics, Sep 2018

	Users (millions)	Sessions per user	Exclusive users (%)
GrubHub	17.2	3	57%
DoorDash	15.5	4	54%
UberEats	8.1	6	47%
Postmates	2.8	7	55%

Note: adults ages 18+; based on monthly unique users
 Source: Verto Analytics, "Verto Watch" as cited in company blog, Oct 31, 2018

242791

www.eMarketer.com

Earnings Results and Commentary

- EPS of \$0.19 vs \$0.28 estimate – Miss
- Revenue of \$287.7M vs \$290.72M estimate – Miss
- Revenue increased 40% Y/Y
- Active Diners increased 22% Y/Y
- Daily Average Grubs (DAGs) increased 19% Y/Y
- Gross Food Sales increased 21% Y/Y
- Q1 Revenue Guidance of \$310M - \$330M vs \$322.53M estimate
- FY Revenue Guidance of \$1.315B - \$1.415B vs \$1.35B estimate

CEO Matthew Maloney would add on the conference call, ***“Launching new delivery markets was also a meaningful investment in growth last quarter. New markets have been ramping more quickly because of our national marketing, enterprise restaurant partnerships and targeted local independent restaurants sales. As a result of this success in new markets and our ability to see a clear path to sustainability, we decided to launch a total of 125 new markets versus the originally expected 100 new markets in the fourth quarter.”***

Stifel - Management’s Q119 and FY19 revenue guidance was in-line with consensus, though the Q119 / FY19 adjusted EBITDA guidance ranges were well below the Street’s expectations. They believe the disconnect between consensus and management’s guidance was due to the higher levels of ops & support expenses required to build out the newer markets in FY19. ***“Although the efficiency in new markets is already improving, the operating drag will be most pronounced in 1Q:19 given it’s the first full quarter with all of the new geographies up and running.”***

Roth Capital – Said that while revenue grew ~40% Y/Y, ***the rate slowed ~1,100bps from ~51% Y/Y growth seen in mid-2018, as well as a ~900bps slowdown in Y/Y growth***. Gross food sales were up ~21% Y/Y (~\$1.38B), but ~2.7% lower than their estimate and slowing off trending peak growth as GRUB had begun to face tougher Y/Y comps from various acquisitions.

Recent Checks

On March 19th, Grubhub shares slid following comments from KeyBanc analyst Andy Hargreaves in which he said that diner retention, initial diner spend, and peak diner spend all appear to be deteriorating.

The note would say that Grubhub's New Diners per Cohort have grown at an average pace of 28% Q/Q over the previous four quarters, which is strong. However, ***diners in newer cohorts are churning more and spending less***. Hargreaves said ***in the 3Q18 cohort, Grub retained just 36% of diners in the subsequent quarter, compared to 42% initial retention in the 4Q17 cohort, and 59% initial retention in the 1Q17 cohort***. Of diners that are retained, average quarterly spend in 2018 cohorts appears likely to peak at around \$120, down from average peak spend of \$155 for 2017 cohorts.

Lastly, the note would touch on the competition in which he said that Uber has doubled down on its food delivery service, UberEats, in recent months as it prepares for an IPO that could fetch

over \$100B. But the bigger share losses for GrubHub have come at the expense of DoorDash, which raised its last round at a valuation of \$7.1B. **“DoorDash’s share gains began accelerating in 2Q18 and show little sign of slowing,”** KeyBanc said.

Short Sellers

GrubHub is one of the most heavily shorted stocks on Wall Street, and on March 21st, financial technology and analytics firm S3 Partners analyst Ihor Dusaniwsky said GrubHub **short sellers have been aggressively selling the stock this week after an extended absence.**

According to the S3, GrubHub has an outstanding short position of 15.12 million shares worth about \$1.07 billion. That short position makes GrubHub the fifth most shorted stock in the U.S. Internet & Direct Marketing Retail sector behind only **Amazon.com (AMZN), Wayfair (W), Booking Holdings (BKNG), and Expedia Group (EXPE)**. In terms of short percent of float, GrubHub’s 16.6% ratio is higher than any of the other companies mentioned other than Wayfair (24%).

GrubHub short sellers have had a pretty good start to 2019 with the stock down nearly 10%. Dusaniwsky said short sellers started piling into the stock starting around September of 2018. From September to February of 2019, GrubHub’s short position tripled, increasing by about 10.3 million shares. During that stretch, the stock’s share price dropped by more than 40%. In the month of March, however, Dusaniwsky said short sellers seemed to take a breather, decreasing their position by 392,000 shares in the first couple of weeks of the month. **Dusaniwsky said short sellers returned aggressively on Wednesday, triggering a spike in GrubHub’s short position.**

JaguarScan

Over the past couple of weeks, JaguarScan has been showing sporadic bearish flow, albeit all in the near-term. For example:

- On 3/19, there was a small buyer of 100 April 70 Puts for \$1.80, an \$18,000 bearish bet.
- On 3/20, there was a small buyer of 108 April 65 Puts for \$2.05, a \$22,139 bearish bet.
- On 3/27, there was a small buyer of 110 April (5) Weekly 74 Puts for \$7.50, a \$82,500 bearish bet.

Puts bought by Expiration, Strike				
Strike	3/29/2019	4/5/2019	4/18/2019	Total
65.00			\$22,139	\$22,139
70.00			\$18,000	\$18,000
74.00		\$82,500		\$82,500
78.00	\$120,400			\$120,400
Total	\$120,400	\$82,500	\$40,139	\$243,039

GRUB GrubHub Inc. NYSE

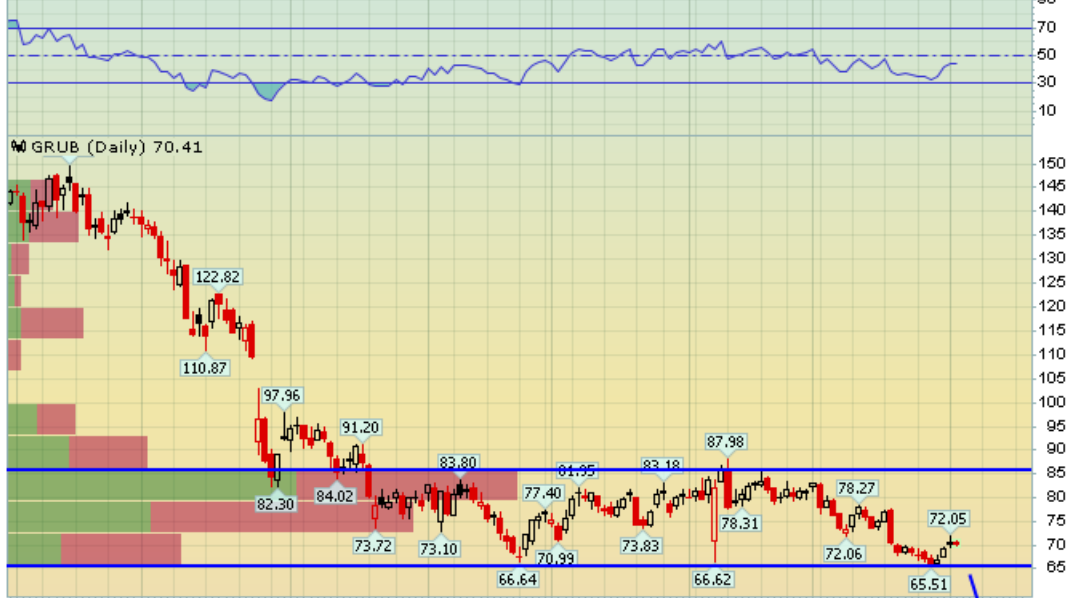
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Consumer Discretionary / Restaurants & Bars

Tuesday 2-Apr-2019 11:59 am

Open: 70.60	Ask: 70.45	P/E: 82.25	Options: yes	Chg: -0.10%
High: 71.15	Ask Size: 900	EPS: 0.86	Annual Dividend: N/A	Chg: -0.07
Low: 69.88	Bid: 70.37	Last Size: 100 shrs	Yield: N/A	Last: 70.41
Prev Close: 70.48	Bid Size: 300	VWAP:	SCTR (Small): 8.6	Volume: 538,663

RSI(14) 44.01



Neuronetics (STIM)

Trade – Buy common stock for \$15.30 or less.

Neuronetics is a medical technology company with a relatively recent IPO in June 2018 after which shares climbed to nearly \$40 over the course of late summer. Unfortunately, 2018's market crash started in October taking most every stock and sector lower and shares have not yet recovered. In addition, investors have expressed concerns over Neuronetics' competitors taking market share and an expansion into Japan that was delayed.

The company provides non-drug treatment for **Major Depressive Disorder (MDD)** using **Transcranial Magnetic Stimulation (TMS)** technology which targets specific areas of the brain that are believed to be underactive in patients afflicted with depression. Although the IPO was recent, Neuronetics' platform has been around for a decade, having received FDA clearance back in 2008 which gave the company first-to-market advantage. The next approval was granted in 2013 to Israel-based Brainsway (stock trades on Tel Aviv market).

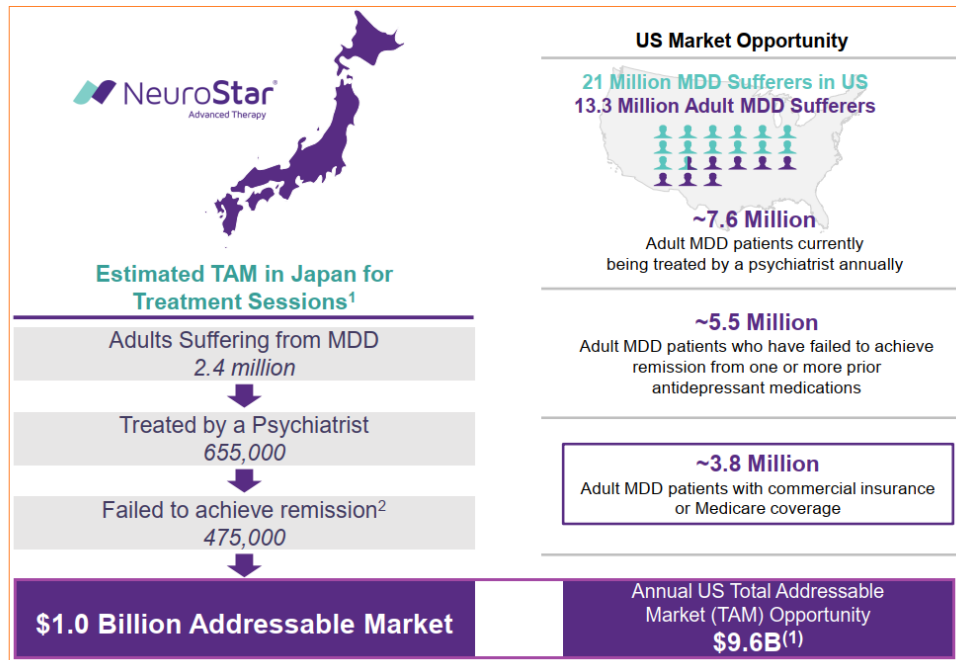
Currently there are five players in TMS therapy for MDD space with Neuronetics having the lion's share of the market as measured by Installs and Offices Installed in.

Key Transcranial Magnetic Stimulation Players									
Company	System	Indication	FDA Approval	Commercial Focus	Installs FY18E	Offices Installed	Sales Force	Service & Repair	Reimbursement Team
Neuronetics	NeuroStar	MDD	2008	Clinical	907	635	90	16	10
Brainsway	Deep TMS DTMS OCD	MDD OCD	2013 2018	Clinical	265	200	18	4	0
MagVenture	MagVita Theta Burst	MDD MDD	2015 2018	Research Clinical	90	78	5	3	0
MagStim	Rapid2	MDD	2015	Research & Neurology	70	65	4	2	0
Nexstim	NBT System 2	MDD	2017	Neurosurgical Mapping	34	34	4	1	0

Neuronetics also has the largest support system with over 90 sales representatives and a staff of 10 that specifically takes care of setting up reimbursements with insurers.

Investor Concerns

Japan - One issue that often has been mentioned is Neuronetics' projected entry into the Japanese market for which they have been waiting to get reimbursement coverage for a while – to be clear, the company's TMS treatment and system received approval for use back in September 2017. While the company was eyeing 2H2019 for a decision, they unexpectedly received it on March 27th. This is a very positive development for Neuronetics that has been resolved earlier than hoped for and it outs them, at the very least, four years ahead of competitors in the Japanese market. In terms of numbers, management estimates around 2.4 million adults afflicted with MDD in the country of which 475,000 could potentially qualify for TMS therapy. This could represent upwards of \$1.0 billion total addressable market. Comparatively, the US market is estimated to be \$9.6 billion.



Boring Technology Section

In the US, Neuronetics' NeuroStar Advanced Therapy platform has a commanding lead with its installed base of 907 units (FY2018). Its closest competitor, Brainsway, has 265 units and the rest of the companies combined account for just under 200 units. The company's domestic market share is 66.4% and expected to remain stable, around 65.5% over the next three years as overall industry unit count is forecast to increase by 1,125 to approximately 2,500 units. NeuroStar therapy works by emitting brief, intense pulses of current from a coil positioned on the patient's head which generates an electromagnetically induced electric field within the brain, targeting a very specific area.



MDD symptoms have been demonstrated to benefit from these TMS pulses delivered to the dorsolateral pre-frontal cortex (DLPFC) region of the brain – this is where a hub of cortical connections is accessible which enables mood regulation therapy. The depth of NueroStar’s stimulation pulses reaches 1-2 centimeters, less than ¾ of an inch.

Mechanically, the TMS coil used is a figure-8 shape with opposing current circulation, air cooled by a recently re-designed fan that was also upgraded from comfort and efficiency. This figure-8 coil is wrapped around a proprietary-design iron core, patented by Neuronetics and the combination of these elements, along with the efficient cooling design, work together to enable generation of much higher power than competitors’ setups.

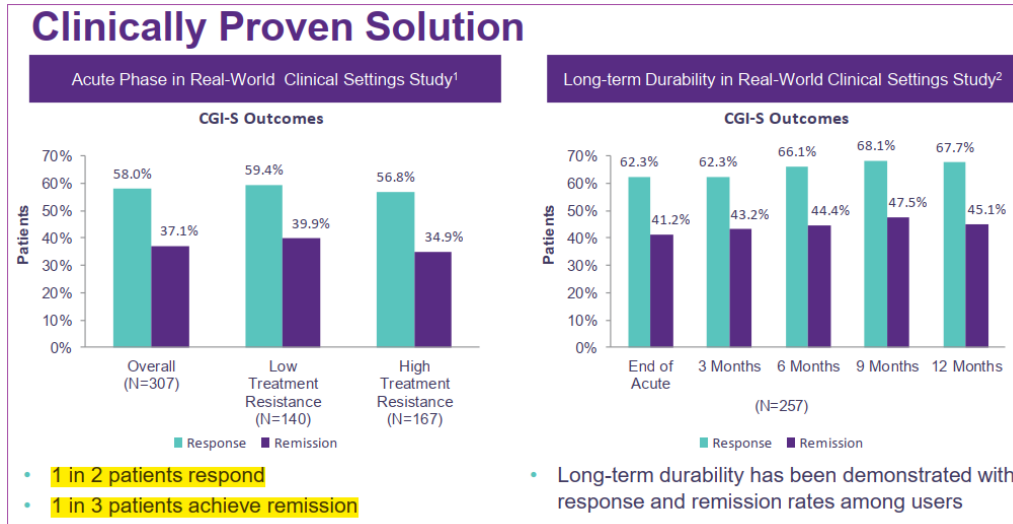
Driving the coils’ pulses is a sensing component called SenStar Connect, another proprietary technology that belongs to Neuronetics. This is used to detect variations in magnetic resistance caused by changes in a patient’s position: the system operates at precision levels measured in millimeters.

To ensure that the coil setup is precisely positioned on the head, NeuroStar platform uses a 3D laser-guided system using six points of reference. Compared to competitors that employ rudimentary hand-measured placement and alignment, Neuronetics’ system can thus target a very small and specific area very precisely over the course of a patient’s therapy which typically run 25-35 sessions.

Brainsway - Neuronetics’ closest competition at this time, Brainsway also uses TMS therapy however there are some variations in their technology. While Neuronetics uses their NeuroStar 3D laser-guided system to position the coil at every session, Brainsway uses a cap fitted over the patient’s head and manually adjusted into position with rulers thereby introducing imprecise placement from session to session. Compared to Neuronetics’ highly targeted stimulation pulse, Brainsway uses a ‘shotgun approach’ emitted from an H-Coil-type design that penetrates as deep as 5 centimeters (2 inches) into the brain with much less focus on a specific point. This method of deeper wavelength penetration also tends to stimulate other regions of the brain unnecessarily which in turn increases the risk of seizures.



To date, there have not been any head-to-head testing between the two approaches and practitioners appear to be mostly in favor of Neuronetics’ technology. Clinical testing also sways in favor of Neuronetics. An independent study back in 2011 involving 191 patients in double-blind, sham-controlled conditions showed that of the 141 qualifying subjects from Phase I, 30.5% were reported to be in remission after Phase II’s open-label trial.



Comparatively, Brainsway's company-sponsored 2015 study use per-protocol evaluation, meaning that any patients that dropped out of the trial for whatever reasons were not counted, somewhat padding the numbers. The outcome showed a 32.6% remission rate from TMS treatment, versus 14.6% for sham treatment.

MagVenture - Possibly more of a threat to market share could come from MagVenture's Theta Burst TMS therapy which was approved in August 2018. The company claims that the technology can deliver a session in about three minutes where Neuronetics' session lasts nineteen. According to real-life conditions though, when set-up and takedown are taken into account, this sixteen minute spread is actually reduced to just six.

Emitting packs of high-frequency bursts which are five times greater than NeuroStar's, the reduction in time requirement would allow practitioners to push through more patients on a daily basis. However, this approach has a higher potential of inducing seizures due to the highly concentrated energy pulses applied over a relatively short time. As such, some insurance companies that have looked at the platform's operation have decided against providing coverage.

It should be noted that Neuronetics has said that technically they are able to increase their pulsing in a similar manner, however they have not had any customer requests or interest to date. Furthermore, to get approval from the FDA, new trials would have to be conducted which would cost upwards of \$10 million. Management states that they have not perceived unusual business loss from Theta Burst; nevertheless, the lower cost may sway some practitioners away.

Other Indications

Neuronetics has talked about expanding into other treatments, specifically post-traumatic stress disorder (PTSD) and bi-polar disorder. The market potential *from each of these segments* is estimated to be equal to that of MDD's, potentially tripling the company's patient numbers. While some companies are entering the obsessive-compulsive disorder market, Neuronetics has decided to steer clear of it as the addressable market is very small.

OUS Expansion - Aside Japan, management has discussed their interest for expansion into the UK and China. There aren't any timelines for either geographic market, any future commentary could be positive for the shares.

Recurring Clientele - From the 52% of patients that respond to initial TMS therapy, 95% respond to subsequent treatment. This sets up for recurring patient revenue in further years as many have expressed a need for sessions a year or two past their initial treatment. With its competitive edge and better technology, recent coverage approval in Japan and plans for geographical and label expansion, Neuronetics has a long run ahead. Currently shares trade at ~2.9x sales, a discount for a company that will most likely see 20%+ top-line growth at least over the next three years.




Royal Caribbean Cruises (RCL)

Trade – Buy September 120/135 Call Spread for \$4.70 debit or less.

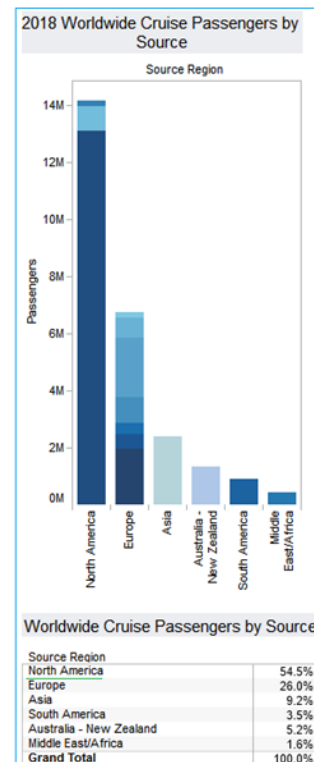
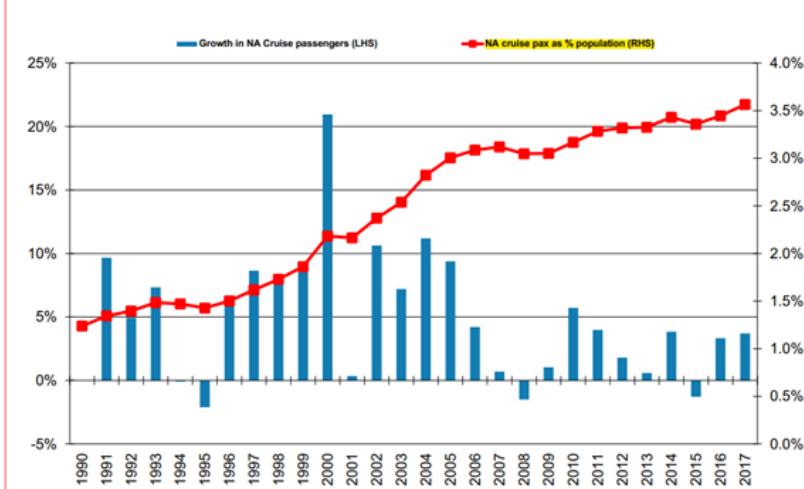
Royal Caribbean Cruises remains the second largest cruise ship company in the world with a 26.7% market share, trailing only to **Carnival Corporation (CCL)** whose 47.4% market share is reflective of its fleet size of 102 ships.

The company, founded in 1968, sails all over the world under six brands with a total 65 vessels:

-  Royal Caribbean International 26 ships
-  Celebrity Cruises 15 ships
-  Silversea 10 ships
-  TUI Cruises 7 ships
-  Pullmantur 4 ships
-  Azamara Club Cruises 3 ships

North Americans account for 54.5% of worldwide cruising crowd, numbering around 15.5 million: primarily these are passengers from the US. Although global demand continues to grow, market penetration for shipboard holidays remains very low, for instance North American passenger numbers as a percentage of population is only at about 3.6%.

Exhibit 30: North American cruise passenger numbers have grown only modestly over the last decade, with penetration levelling out at c. 3.5%



Celebrity Edge

The newest ship in Royal Caribbean's fleet, Celebrity Edge entered service on December 9th 2018 and immediately garnered high demand. With a passenger capacity of 2,918, the ship incorporates a luxurious environment that includes a rooftop garden, outward facing swimming pool, stellar entertainment venues and dining experiences. Forgoing waterslides, mini-put course and rock climbing walls, the targeted audience is a more upscale crowd that likely prefers service over price and less children running underfoot.



This is likely one of the main reasons that since its launch, Celebrity Edge has been able to price fares at a significant premium over competitors on Caribbean and European routes. Pricing is also at a premium to Royal Caribbean's mainline fleet, bringing in 150% more for Caribbean routes and 85% for Europe. Celebrity Edge is not the only Royal Caribbean ship commanding a premium over peers' fares, both Symphony of the Seas and Harmony of the Seas prices have been 10% above other operators in the region.

Pricing Checks

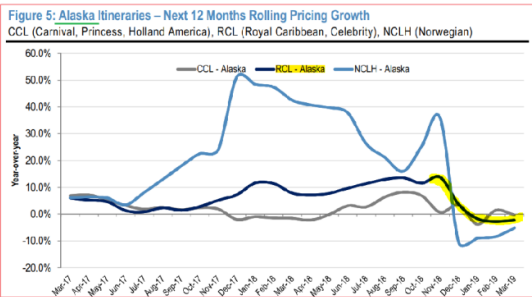
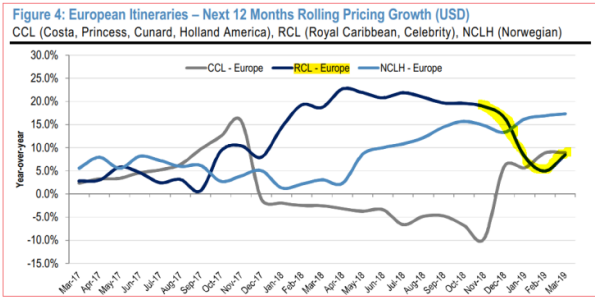
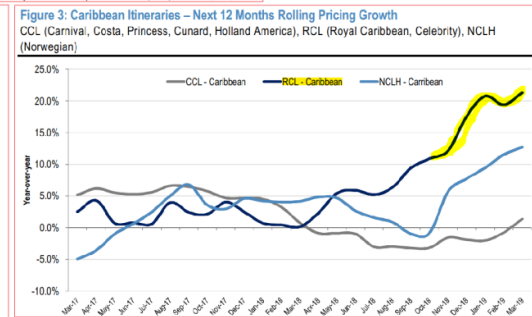
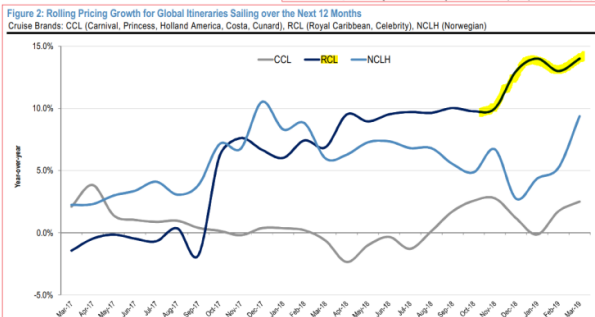
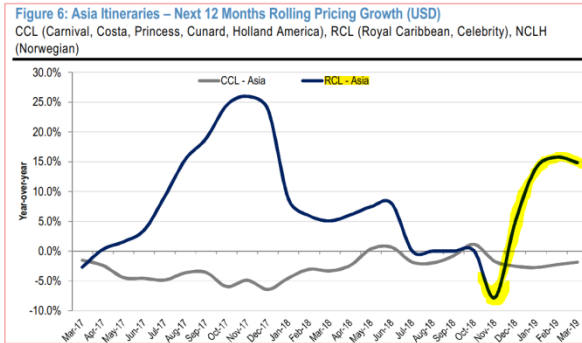
The latest channel checks as surveyed by JP Morgan in early March show global itinerary pricing for all three cruise operators (Royal Caribbean, Carnival and **Norwegian (NCLH)**) accelerated in March, for most of their major markets. Although Norwegian saw the biggest sequential acceleration with March up 9.4% YoY compared to February's 5.2% increase, Royal Caribbean's gains in March were 14% YoY – however this was preceded by February's 13% increase which shows a continued sustained early-2019 pricing level.

Here is a regional breakdown for Royal Caribbean:

- 🚢 Caribbean pricing was up 21% YoY; this follows February's 19% YoY increase, markedly higher than peers
- 🚢 European pricing was higher by 8.4% YoY in March, besting February's 4.9% gains
- 🚢 Alaskan pricing improved by 2.3% YoY for March, a positive turn from February's 2.8% YoY decline. This segment is facing tough comparisons and also has plenty of capacity

Since forward pricing typically covers a 12-month period, quarterly estimates tend to be quite accurate from current data. The aforementioned checks imply 8% YoY acceleration for 3Q2019 and 11% for 4Q2019, mainly from Caribbean routes that have regained strength from a sedate 2018 hurricane season that followed 2017's unusually active one.

The following charts show geographical forward-pricing. Aside from Alaska (where I would love to sail to), all regions including Asia have seen remarkable price growth, especially for Royal Caribbean.



Perfect Day at Coco Cay

In early 2018, Royal Caribbean embarked on a \$200 million makeover of their privately-leased Bahamian island situated 60 miles North-Northwest of Nassau. The island, which is actually named Little Stirrup Cay, was transferred to Royal Caribbean back in 1988 when they acquired Admiral Cruises – the brand was subsequently discontinued in 1992.

The island’s new amenities will turn it into a one-stop water park featuring North America’s tallest waterslide among its thirteen. There will also be the Caribbean’s largest wave pool, a 1,600-foot long zipline, kids’ waterpark, rock climbing wall, snack shacks, beaches, snorkeling, kayaking, and a helium balloon ride that rises above the island.



For those that want to luxuriate, there will be private cabanas to rent including overwater ones. These range in price from \$300 to \$1600, can accommodate from six to eight people and most include admission to the park. Just about everything on the island is at added cost: there is a basic admission fee which covers entry, snacks, the waterslides and wave pool, however the rest are optional, a-la-carte style. Most of the cruises that will make Coco Cay a part of their itinerary will be of short duration, typically 3-4 day excursions out of Floridian ports. The low cost of the cruise itself will likely justify passengers spending at the island.

Coco Cay's attractions and amenities are opening in three phases, the new dock and beaches were ready in March while the waterpark and zipline will be available in May. Private cabanas won't be ready until next winter, opening in December 2019.

Exhibit 6: The spread between RCL's and CCL's onboard spend per capacity day is nearing peak levels...
Onboard spend per ALBD

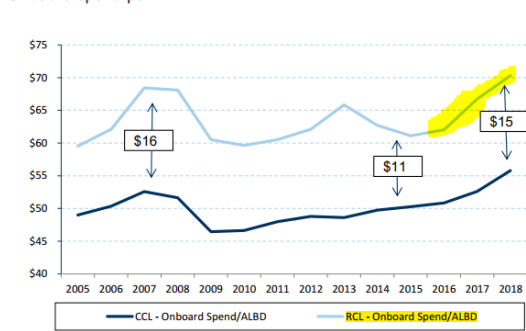
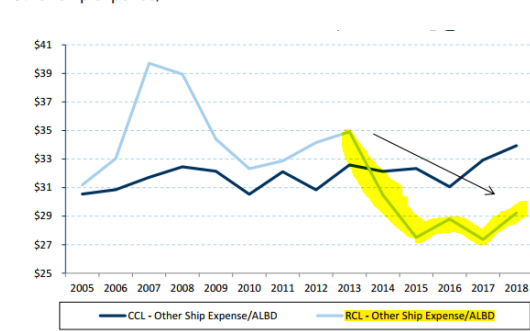


Exhibit 7: While RCL has been able to leverage dry dock costs amidst better top-line.
Other ship expense/ALBD



Royal Caribbean remains the best-managed cruise ship operator in the industry. They have managed to increase on-board spending by passengers while reducing costs. Their range of service levels cover mainstream to luxury with global destinations. New and renovated ships contribute to 'smooth sailing' while plenty of entertainment options and amenities entice many to remain onboard at ports of call, spending even more money on board. Looking ahead to the rest of 2019, pricing checks have sent a strong message so far: Royal Caribbean is in hot demand.



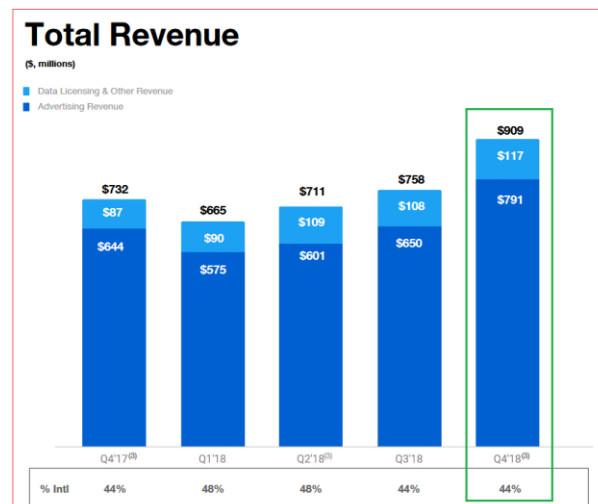
Twitter (TWTR)

Trade – Buy September 35/45 Call Spread for \$2.70 debit or less.

In February, Twitter shares sold off sharply after reporting 4Q2018 earnings. Although the company beat on both EPS and revenues, they posted a decline in monthly active users (MAU) on both sequential and annual basis. Management also stated that FY2019 operating costs would increase by as much as 20% as they continue to invest their platform's expansion. Investors expressed concerns on quarterly sales guidance as well as it was below expectations – consequently, this could impact EPS growth momentum.

Despite these perceived issues, perhaps sellers were quick in jumping the gun, especially after it was announced that MAU data would no longer be published as of 1Q2019. As it is thought to not be a true measure of user engagement, Twitter will instead focus on **monetizable daily active users (mDAU)**, a more accurate representation.

MAU count has been declining for three consecutive quarters due to European General Data Protection Regulation (GDPR) changes that increased consumer rights and data privacy protection, some product changes that reduced notification messages to re-engages users and also Twitter's own internal cleanup of tens of millions of suspicious, fake or spam accounts – these were never productive for interactions, conversations nor advertiser engagement in any case and ultimately were a nuisance to other users. By the numbers, MAU declined 3% YoY to 321 million, down 5 million from the previous quarter. Geographically, US users were down by 1 million to 66 million, and international users were lower by 4 million. By contrast, daily active users (DAU) grew 9% YoY to 126 million: this was the second quarter in a row that printed a 9% gain, preceded by eight consecutive quarters of double-digit growth. Most of this new stream is from the international segment that has added 13 million new users since 1Q2017.



Monetization

During 4Q2018, advertising revenue per MAU grew 25% YoY to \$2.47 – this is the highest quarterly posting for this metric. Over the last four quarters, Twitter ad revenue has seen remarkable YoY growth, sequentially posting 18%, 20%, 31% and 26% increases. After 2017's disappointing numbers, FY2018 was higher than both FY2016 and FY2017. If the company's monetization maintains its current momentum, top line growth should continue – even with minimal change in user numbers. After all, despite 4Q2018 MAU decline, advertising revenue increased both at home and abroad.

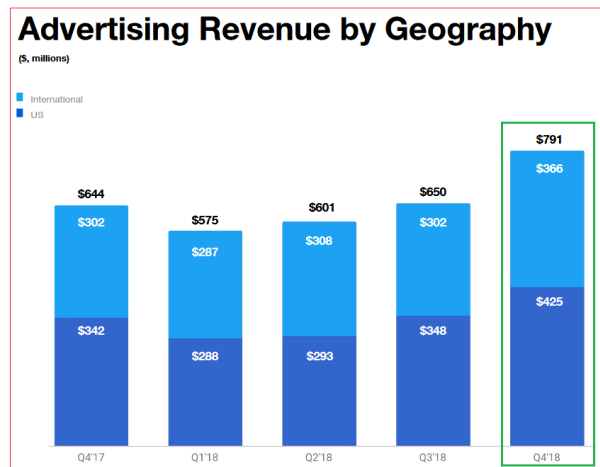
Exhibit 6: Twitter Advertising Revenue per Monthly Active User

	Q1:16	Q2:16	Q3:16	Q4:16	Q1:17	Q2:17	Q3:17	Q4:17	Q1:18	Q2:18	Q3:18	Q4:18
Twitter Ad Revenue/MAU	\$1.71	\$1.71	\$1.72	\$2.01	\$1.45	\$1.50	\$1.52	\$1.95	\$1.71	\$1.79	\$1.99	\$2.47
Y/Y Growth	33%	15%	3%	-5%	-15%	-12%	-11%	-3%	18%	20%	31%	26%

Advertisers don't necessarily get caught up in user growth metrics like the investing community does, what they want is to see interaction on a quality platform. Twitter's enhancements to the 'health' of their platforms (desktop and mobile) reinforce management's commitment to clean up spammer posts, abusive content and bot accounts, none of which are particularly interested in advertising anyway. Signup procedure has also seen added anti-spam/bot measures through the addition of extra verification steps for account creation (a code sent by text for example). All this has resulted in increased interactions and conversations between real users.

Generating Interest

Management commented that they have seen new influx due to the propagation of Tweets quoted within mainstream media articles and posts. Real journalism may be on life support, however we currently live in a very trend-influenced society that seemingly has a need to accumulate the most followers, friends, retweets, or subscribers. As long as these 15-minute fame seekers remain in vogue, social media platforms will be their soap boxes from which advertisers can pick and choose targeted ads to send out, almost to an individual level as determined by powerful algorithms. Other global events also bring in new signups and also reignite interest for existing users. Political events, sports championships and tournaments, stock markets and global daily news coverage are some of the biggest draws with Twitter being one of the fastest (if not THE fastest) ways to get instantaneous news coverage with very easy search terms via hashtags or key words.



Moving Pictures

Increasingly, Twitter has seen more video advertising than ever before, in fact they now account for over 50% of advertising revenue for the company. The developer team has tweaked their video website to facilitate advertisers who wish to promote their products. Twitter's platform has become a go-to medium for large multinationals with new product launches, As highlighted by management, there remain plenty of opportunities ahead and future plans include expansion small and medium business sector, a largely untapped market.

Live video is also another growth driver. Twitter has already partnered with many professional sports associations and leagues who post video content consisting of game highlights, goals, outstanding plays and other interesting in-the-moment occurrences that tend to generate very high interest and create conversations.

During 2018, over 100 new such agreements were entered into which include the latest trend of e-Sports organized The Overwatch League (part of **Activision Blizzard (ATVI)**). The two most interesting events for 2019 will most likely be FIFA Women's World Cup and US presidential campaign which will extend to November 2020 election. Of course there are plenty of others all through the year; currently the NCAA March Madness is heading into its final week with the final game to be played on April 8th in Minneapolis. NHL playoffs start in April and extend through June, meanwhile MLB season just began.

Partnerships extend beyond sports to movie studios like **Disney (DIS)**, digital media sites such as BuzzFeed and news organizations like **Reuters (TRI)** and Bloomberg. Some of their past and present agreements are shown below.

Date	Content Provider	Networks/Programs	Sport	League	Network(s)	Parent	Year		Scope
							Begins	Expires	
1/23/2017	Dick Clark Productions (Dalian Wanda)	Red Carpet Awards pre-shows							
4/7/2017	IGN Entertainment	E3	Soccer	FIFA	Twitter	Twitter	2019	2019	Global
5/30/2017	BBC	British Election coverage	E-Sports	Overwatch League	Twitter	Twitter	2018	NA	Global
6/29/2017	IGN Entertainment	Comic-Con							
9/13/2017	Bloomberg (APAC)	News content	Soccer	MLS	Twitter	Twitter	2018	2020	U.S.
9/13/2017	Buzzfeed Japan	Cooking series							
9/13/2017	Network 18	News content	Basketball	NBA	Twitter	Twitter	2018	2019	U.S.
9/13/2017	KBS World TV	Music Bank	Baseball	MLB	Twitter	Twitter	2018	2018	Global
9/13/2017	Filmware Awards (India)	Comparison content							
9/13/2017	ARIA Awards (Australia)	Live coverage	Cricket	ICC	Twitter	Twitter	2018	2018	APAC
9/19/2017	21st Century Fox	FOX fall line-up	High School	High School Basketball	Twitter	Twitter	2018	2018	Global
10/31/2017	Billboard	Women in Music 2017	High School	High School Football	Twitter	Twitter	2018	2018	Global
11/6/2017	Time Inc.	People TV							
11/6/2017	Band Together Bay Area	Wildfire Benefit Concert	Motorsports	Nascar	Twitter	Twitter	2018	2018	Global
11/9/2017	The Game Awards	Game Awards 2017							
11/13/2017	Global	Popbuzz Presents	Soccer	FIFA	Twitter	Twitter	2018	2018	Global
11/20/2017	The Players' Tribune	#Verified	Soccer	FIFA	Twitter	Twitter	2018	2018	Global
12/17/2017	Bloomberg	Tictoc							
12/19/2017	Emaar Properties	New Year's Eve (Dubai)	Tennis	Tennis Australia	Twitter	Twitter	2018	2018	APAC
1/4/2018	Dick Clark Productions, HFFA	Golden Globe Awards (After-Show)	E-Sports	Riot Games (League of Legends)	Twitter, Periscope	Twitter	2017	NA	APAC
1/10/2018	Time Inc.	The Chatter							
4/30/2018	Disney	Various	Football	NFL	Twitter, Periscope	Twitter	2017	NA	Global
5/2/2018	Disney	SportsCenterLive for Twitter	Basketball	WNBA	Twitter Live	Twitter	2017	2020	U.S.
9/12/2018	Various	Live video, highlights	Golf	PGA	Twitter	Twitter	2017	2018	Global
10/9/2018	Tegna	Political debates	Lacrosse	NLL	Twitter	Twitter	2017	2018	U.S. & Canada
10/24/2018	Warner Media (AT&T)	House of Highlights							
1/4/2019	Hollywood Reporter	Golden Globes Aftershow	Various	Various	Twitter	Twitter	2017	2018	APAC
1/7/2019	BuzzFeed	AM to DM	Hockey	NHL	Twitter	Twitter	2016	NA	U.S.
1/9/2019	The Ringer	Big Little Lies Aftershow							

Twitter continues to improve user experience and engagement which, in turn, has translated to increased advertiser interest. Cost per engagement continues to decline, a boon for advertisers, while ad engagements are still growing at a moderate pace. Management is very proactive in finding new sources of advertising revenue through new partnerships at a global scale. Yet shares remain under-appreciated by most analysts and investors. The company's platform is probably the least invasive to personal privacy while offering instant access to developing news worldwide. Combined with better monetization, Twitter is likely to return fall back into favor - it already proved itself to be a solid performer, holding up quite well relative to general market conditions during 2018's crash.

TWTR Twitter, Inc. NYSE

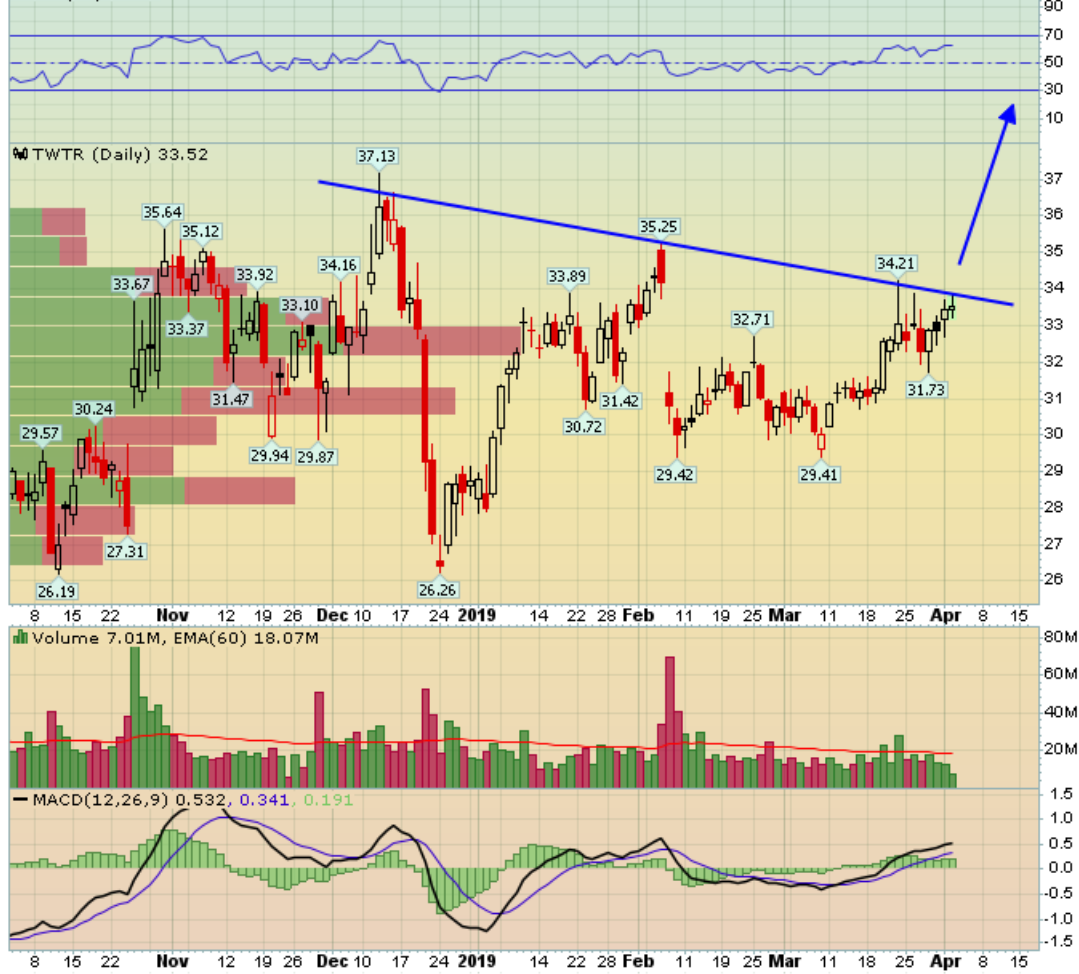
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Communication Services / Internet

Tuesday 2-Apr-2019 12:38 pm

Open: 33.44	Ask: 33.52	P/E: 21.49	Options: yes	Chg: +0.24%
High: 33.84	Ask Size: 1200	EPS: 1.56	Annual Dividend: N/A	Chg: +0.08
Low: 33.23	Bid: 33.51	Last Size: 100 shrs	Yield: N/A	Last: 33.52
Prev Close: 33.44	Bid Size: 800	VWAP: 	SCTR (Large): 82.6	Volume: 7,011,567

RSI(14) 62.81



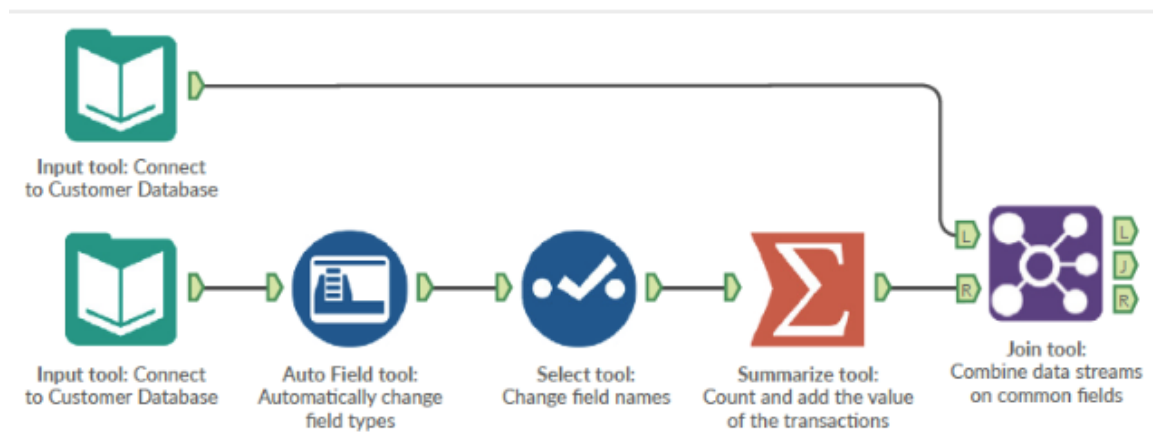
Alteryx (AYX)

Trade – Buy August 85/105 Call Spread for \$6.50 debit or less.

A computer scientist named JCR Licklidge said once: **“You will only see value in analytics once you remove the friction between man and machine.”** Today Alteryx is making that possible by getting rid of tedious job of writing codes.

Alteryx is \$3.1 billion high growth provider of a cloud-based, self-serve data prep and analytics platform. The bull case for Alteryx was first made by Jay in Weekend Research way back on November 19th, 2017 with stock at the time trading at \$27 per share. See [HERE](#). The reason for revisiting at this time is incremental fundamental pieces of information that gives us confidence that strong growth trajectory will remain in place and likelihood of M&A.

Background - Data prep is still a highly fragmented market that's dominated by complex internal R/Python coding or simple Excel implementations. That said, demand in the middle (self-service) is accelerating as enterprises address one of the most painful bottlenecks in empowering more citizen data scientists. Investment in standalone data prep as an independent stack and the addition of data cataloging are additional drivers. In our view, Alteryx stands at the nexus of these transitions. **The key differentiating factor in favor of Alteryx as a provider of data analytics is it allows users to create any level of predictive and statistical analysis of any type of raw data without writing any codes. We believe this differentiating factor will become increasingly important as 5G buildout would allow enterprise customers to analyze explosion of data in ways it has never been done before. When you think about Alteryx, just remember two things: No coding and no structured workflow to analyze data.**



Alteryx believes that predominant approaches to analytics suffer from legacy architectures that compromise business agility and are too slow and inefficient to serve modern data driven business effectively. The surge in widespread use and adoption of public cloud and hyperscalers (Amazon, Google, Microsoft) has led to paramount increase in massive volumes of data stored in cloud and legacy warehouses. The good thing is this data is cheaper to access today than by historical standards and elastic in nature to move around. The bad thing is much of this data remains cumbersome for proper analysis to help with corporate decision making as it requires

incredible amount of prepping and cleansing by an army of engineers spending countless number of hours on coding and design. What makes it worse is when data is residing in various unstructured warehouses in legacy architectures that have yet to fully adopt cloud. In addition to the time and effort spent on data prep and application of schema, data pipelines tend to lack the agility to respond to business developments in real time as the “question” changes.

Hypothetically assume you’re a middle manager at corporate level of a lodging company and your job is to do feasibility/market studies of real estate locations so you can make recommendations to upper management about opening new properties and/or closing/refurbishing existing properties. You have gazillion amount of unstructured data available in warehouses from census to property cost variables from vendors, to customers history of preferences, payments, feedback, etc. to use for your feasibility report. But each time you have one “question” that can help you with decision making, your team spends countless number of engineering hours just on coding. You understand all answers to your questions are deeply buried in massive volumes of unstructured data you already have in hand. You just have no way of quickly getting that answer. In a dynamic business environment when answers are needed immediately, this could also mean a loss of opportunity or costly mistake, just because your engineers are still coding to have an answer for you. This happens everyday in every company, and the amount of data stored is only going higher at accelerating rate.

Therefore, AYX is different than others. Instead of trying to solve a problem by allowing users to produce sexy charts (that still need tons of custom coding), AYX is attacking the issue by eliminating the need to do any coding. Get the data prepared and cleansed as fast as possible. The rest is easy!

Data Chaos - Hidden data references the fact that 37% of analyst time is spent searching for data. 6 billion hours per year are spent on working in spreadsheets, which translates into 26 hours per week are wasted and 8 of those hours are from needlessly repetitive tasks. Modeling inefficiencies references the fact that there is \$60 billion a year spent on repetitive manual spreadsheet work. Wasted efforts references the fact that 87% of data science models are only partially deployed (source: [IDC](#)). Structuring data in Excel is tedious and time consuming. An Excel user’s job involves repeatedly preparing updated data in the same format to produce the same reports. According to IDC, spreadsheet users spend, on average, 8 hours per week duplicating efforts to update reports. This translates into \$12,000 per analyst wasted maintaining spreadsheets every year. This is time better spent actually analyzing the data for the business.



Q4 Earnings Review - My enthusiasm about this stock stands from not only its unique data analytics offering, but also strong management under leadership of the Co-Founder and CEO Dean Stoecker ("DS"). Post Q4 earnings announced late February, the CEO gave several interviews on various occasions. Here are important points summarized:

DS reiterated his theme that "the thrill is back" in data analytics, a reference to the 30 million or so people around the world who have had to rely on using Microsoft Excel for their work, who he believes his software is now freeing, like slaves unchained: ***"When I changed the name of company before IPO, we thought it was a \$5 billion space [total addressable market]. When we raised money, we thought it was a \$8 billion space. Well, here we are seven years later, with the broadest horizontal platform, serving every vertical in a wide array of use cases, 180 very unique use cases, across all industries, serving 70 countries around the world. Every government has challenges as to how do I get value out of all this data."***

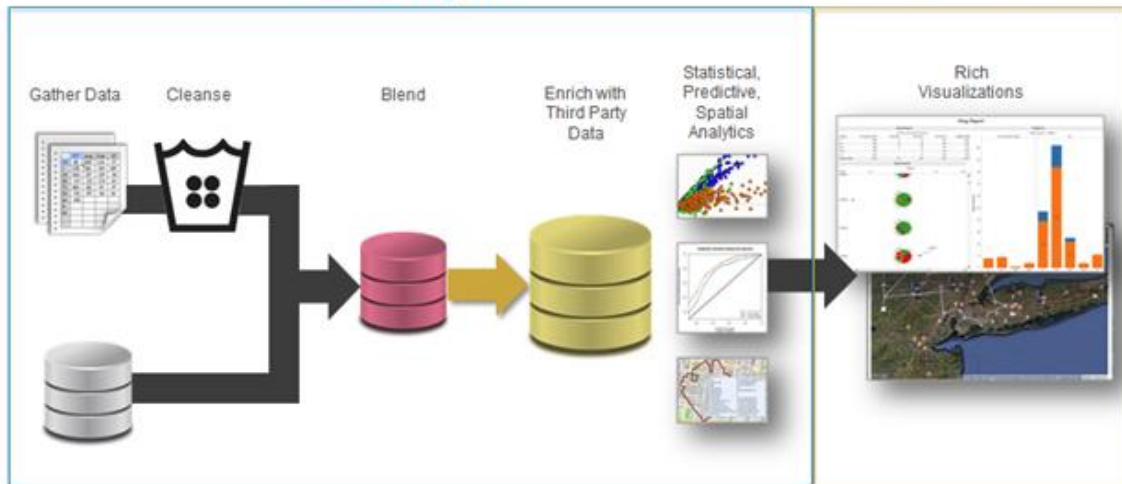
For proper comparisons, in Q4 company posted +57% YoY revenue growth passing \$60M under old accounting standards of ASC 605. The net dollar-based customer retention rate was remarkably strong at 129%, which by anyone's numbers is top pixel for a company growing as fast as Alteryx is. It signifies the size of the audience. Bookings grew faster than revenues at +60% YoY and Billings grew +65% YoY, acceleration from +59% in prior quarter. International revenues were up +92% YoY, the best growth in company's history. Customer count of 4,696 grew +38% YoY with net adds of 381, up from 338 added during same period in prior year. Average revenue per customer grew by +12% YoY to new record high of \$53,719. Management described the quarter as: ***"We are growing really fast, but with just a low-single-digit penetration of any of the customers we sell to."*** Essentially making the case that upsell opportunities remain.

The CEO of Alteryx took a direct shot at Tableau from competition stand point:

"We are in a very different space. Tableau is a repository for data. We went into an area where nobody else wanted to venture, the choke point of analytics, finding it and getting it ready. Our TAM is five times bigger than the TAM of Tableau. They are dealing with people who only live in visualizations. And that's understandable because no one ever got shot taking a cool, sexy chart to a meeting. If the world will be eaten by machine learning, the existential threat of visualization vendors is when they say, we are putting everything into machine learning on Salesforce, so why do I need to visualize anything? Tableau just said that they passed 86,000 customers and a billion dollars in revenue. We believe we can get to a billion dollars in 2021 with 16,000 customers. We are much higher value, which is reflective of the higher-order problems we are solving for businesses."

alteryx

tableau
SOFTWARE



I love that comment above. Put it differently, unlike Tableau, Alteryx is selling a single platform to range of industries with highly complex business models and trying to eliminate their need to spend hours on coding to analyze data. For example: to credit rating agencies in order for them to do bond issuance modeling, to the banks for them to do derivatives modeling and equity pricing; to airlines for them to hedge fuel and manage buyer loyalty programs; to the largest coffee retailer in the world for them to manage much of their real estate network; to the defense department to do all kinds of cool analytics around managing budgets; to the tax and audit departments around the world to manage all the finance work from transfer pricing to FX modeling to R&D tax credits; to sports teams to unlock the value of the mountains of data that can be collected from players, fans, the stadium itself and more. **This is why Alteryx CEO believes that his company will get to same level where Tableau is less than half the time and with less than 20% of customer base.**

The CEO believes old model of 90's and 2000's is no longer applicable. We don't need more capabilities. **"We need fewer tools, not more tools."** The CEO cited many bad M&A examples of companies that wrongfully focused on more tools on fewer invoices that led to business destruction. Such as Crystal Reports bought Business Objects (now defunct), Oracle bought Hyperion, IBM bought SPSS. These consolidations were all bad because they lost touch with their customers.

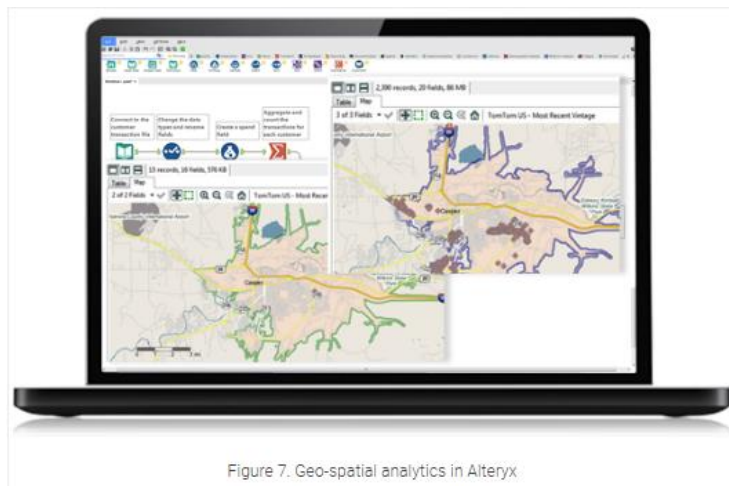
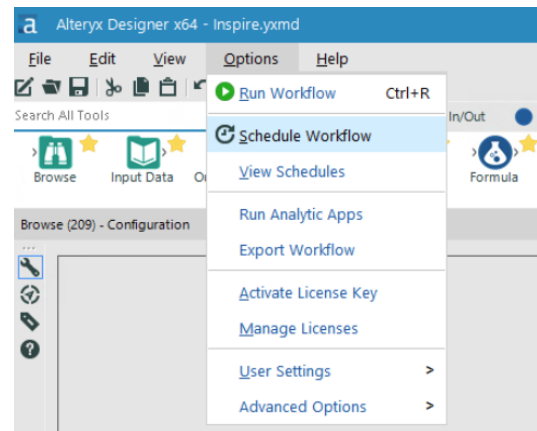


Figure 7. Geo-spatial analytics in Alteryx

“The typical new customer comes to us thorough a 14-day trial, and it lands in 45 days at typically \$10 to \$11 thousand purchase. Expansion happens right away from there. Once you get that first proof of a project, downloads increase from there. The peak expansion is really four to six quarters out from there, reaching annual contract value of over \$50,000. With the focus on digital transformations, we are seeing expansions happening bigger and faster.”

It should be noted that company has 538 of the global 2000 organizations as its customers. The digital transformation is showing major impact. Last quarter, AYX reported a doubling of \$1M+ accounts, and tripling of \$500K+ accounts. Exciting times for company to be in thick of these customers helping them solve their data science problems.

Use Case Example: Haystack helped a national furniture chain automate corporate sales reports across all sales channels. Using Alteryx, they developed an automated workflow that pulled sales data from their eCommerce platform, pulled transactional data from their ERP, and combined it with data from their Point of Sales (POS) system. This workflow not only blended disparate datasets, but applied all the analytics on a single canvas. Finally, the combined output data was pushed to a shared executive-level dashboard. This process was completely automated, ensuring that the business continually sees accurate, up-to-the-minute sales data.



Strong Niche Vendor Profile with Strong Product Portfolio – Alteryx has plenty of potential when it comes to boosting follow-on sales view new product offerings, as penetration rate on current accounts in low single digits even for the company’s best customers. One of company’s most promising new products is Connect, a collaborative data exploration platform that recently became generally available. With Connect, users can share and collaborate on data assets, reports, visualizations and workflows that are often locked down in specific silos (within Teradata, Tableau and Salesforce) across large organizations. Connect basically helps users find the right data assets needed to expand the analytics process.

What gives me confidence that strong growth will continue is really three folds: 1) low penetration in existing large accounts as discussed above, and 2) acceleration from two new product launches Connect and Promote that have not yet become meaningful drivers yet, 3) Europe is ramping, and 4) Push into healthcare vertical.

As BAML explained after Q4 earnings:

“We view outlook for 37% growth at the midpoint as conservative, with upside to 45% possible from contributions from the new Connect and Promote offerings, which have not yet been material contributors to growth. We believe that these offerings can represent 10% revenue mix each over time. Also, we believe the next gen analytics adoption cycle is beginning to ramp in Europe.”



Major Push into Healthcare Analytics is Coming - Additionally, in last earnings report management made this a big goal to enter healthcare space for data analytics. Alteryx sees big opportunities in this space and now has a dedicated team working on a multitude of use cases. Management didn't go into detail about this in earnings call but suggested that this will become a strong driver in the future. A question was asked by analyst community in earnings call, here is how management answered:

"We brought on a set of folks to help us prosecute analytics within the healthcare sector. We're contemplating even now the creation of vertical solutions. Nothing has been done yet. The market's still really ripe for the opportunities. We have lots of great healthcare use cases. BioBridge Global, for example, is a non-profit in south Texas. And they're doing amazing things around everything from identifying ways to optimize collection for blood banks to cadaver parts and body tissues to save lives. A Seattle-based genetics company is using Alteryx to provide information that delivers RXI effects report back to FDA."

AYX Alteryx, Inc NYSE

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Technology / Software

Tuesday 2-Apr-2019 12:44 pm

Open: 84.42	Ask: 84.02	P/E: 1155.16	Options: yes	Annual Dividend: N/A	Chg: -0.44
High: 85.00	Ask Size: 200	EPS: 0.07	Yield: N/A	SCTR (Small): 98.4	Last: 83.98
Low: 83.20	Bid: 83.95	Last Size: 100 shrs			Volume: 397,433
Prev Close: 84.42	Bid Size: 200	VWAP:			

▲ RSI(14) 63.90



Natera (NTRA)

Trade - Buy NTRA October 17.5 / 20 Bullish Risk Reversal for \$1.00 net debit or less.

The bull case for Natera was originally highlighted at MoneyShow conference presentation in Dallas, Texas in October 2018 (watch on YouTube [HERE](#)). After that we visited it recently on March 13th when Jay posted a bullish note on home page covering strong Q4 earnings report (see [HERE](#)). Now we are making it a Top Pick for Q2 based on our understanding of what drove strong performance and outlook at the company and what we believe should continue to be a set of strong product portfolio that should keep investors base active and optimistic. First, reflecting back at Q4 earnings when stock surged by +20%:

- Q4 EPS (\$0.51) vs (\$0.52) estimate, penny beat
- Q4 Revenues \$67M vs \$63.9M estimate, beat
- Q4 Revenues Growth +23% YoY
- Q4 Test Processed 167,172 which was +30% YoY

It should be noted that Q4 Revenue growth of +23% YoY was sharp acceleration from +17% growth company posted in Q3. Same with number of tests processed which accelerated from +28% in Q3. It should also be noted that 20% jump in stock that day on March 13th wasn't reflection of short covering. Short interest here is less than 4%. It was all fresh buying and we believe these bulls saw an opportunity with better growth emerging which is why they stepped in with second highest volume day since July 2018, a good sign of strong accumulation. The CEO commented:

"2018 was a very successful year for Natera. We grew revenues substantially over 2017, doubled our volume growth rate year over year, and delivered compelling data in both oncology and in kidney transplant rejection. We see 2019 as a key inflection point for Natera across reproductive health, oncology, and transplant."

Based on those comments, the question that we really need to address is what the key growth drivers are for 2019 that the CEO is referring to which makes him believe that 2019 will be an inflection point. To understand that, let's dive into product portfolio and development behind the doors.

Product Portfolio – There are several promising products in portfolio, many of which are already proven and selling well and they continue to increase their relevance by expanding their market and use cases for varying types of diseases and procedures. They are not without risks, but their addressable market sizes are big enough, with growth momentum strong enough, and with limited competition to keep NTRA bull case in play. **3-part fundamental bull case here, all catalyst-driven:**

Horizon – This is the 1st fundamental bull case. Horizon screens your genes to see if you're a carrier for up to 274 autosomal-recessive and X-linked genetic conditions. It is common for people to be carriers of at least one genetic condition. Carriers are usually healthy; however, they have a risk of passing on a genetic condition to their children. Horizon can be ordered before or during pregnancy. Horizon is different than others for many reasons:

- one of the largest panels available—274 unique conditions
- complimentary pre- and post-test genetic information sessions with genetic counselors
- next-generation sequencing—the latest technology—to provide better detection rates
- one of the first labs to screen for Duchenne muscular dystrophy
- a comprehensive Jewish panel—appropriate for both Ashkenazi and Sephardic Jews
- five screening panels customized for specific populations, and à la carte ordering
- patient-friendly reports, fact sheets, and videos to help you understand your results



To put it simply, Horizon is the first of kind non-invasive prenatal treatment (“NIPT”) for pregnant women to find chromosomal deficiencies in the fetus. The way it was always done in the past was through varying types of invasive procedures. Horizon procedure is currently not covered by medical insurance companies because it is not considered an illness or a disease. That logic started to change in summer 2018 when an organization called The American College of Obstetricians and Gynecologists (ACOG) recommended changing guidelines so the insurance and carriers start covering this procedure. ACOG guideline change recommendation was driven by advancement seen in these tests that wasn’t available before. For example, Horizon with its 274 screening of genetic conditions include:

- **Cystic Fibrosis** – Comprehensive screening gene via Next Generation Sequencing.
- **Fragile X** – Automatically detects AGG interruptions for select premutation carriers.
- **Duchenne Muscular Dystrophy** – Most common form of muscular dystrophy affecting children
- **Hemoglobinopathies** – Including alpha thalassemia, beta thalassemia, and sickle-cell disease
- **Spinal Muscular Atrophy (SMA)** – Enhanced screening which refines chance to be a silent carrier

Here is a direct comment from the CEO back in August 2018 which was reiterated in most recent earnings call about this potential positive outcome from ACOG:

“We’ve seen some encouraging news from ACOG that we think bodes well for broader adoption of NIPT. ACOG recently withdrew their previous guideline covering the use of cell-free DNA screening for fetal aneuploidies. The guideline included some ambivalent language regarding NIPT which prevented insurance policies from covering. That opinion is now no

longer in use. ACOG also reaffirmed their practice bulletin #163. We believe new bulletin is substantially more favorable towards average risk adoption. We think withdrawal of previous guideline and reaffirmation of practice clears the way for new guideline."

Fast forward, a question was asked in March 13th earnings call about timing of this new guideline. Here is how the management responded:

"We're engaged with ACOG. We've established a good relationship with them. We're also a participant of the NIPT consortium where many members; Illumina, Roche, etcetera, are engaged various ways with ACOG. And I think generally everyone is sort of hearing positive noises, but nobody has the exact playbook for what ACOG is going to do. So we obviously expect some positive guidance as we've reflected in our forecast, but we don't know the exact timing and we don't know exactly what the guideline is going to say."

This is an opportunity but also a risk, as you can see in comments above. JP Morgan believes it could happen in ACOG May 2019 meeting. Hence, one key reason for picking NTRA as Top Pick for Q2 Outlook for this catalyst, although if implementation does happen it will take 1 to 3 quarters to drive revenue traction, but we

Extending market leadership with doubled growth in 2018



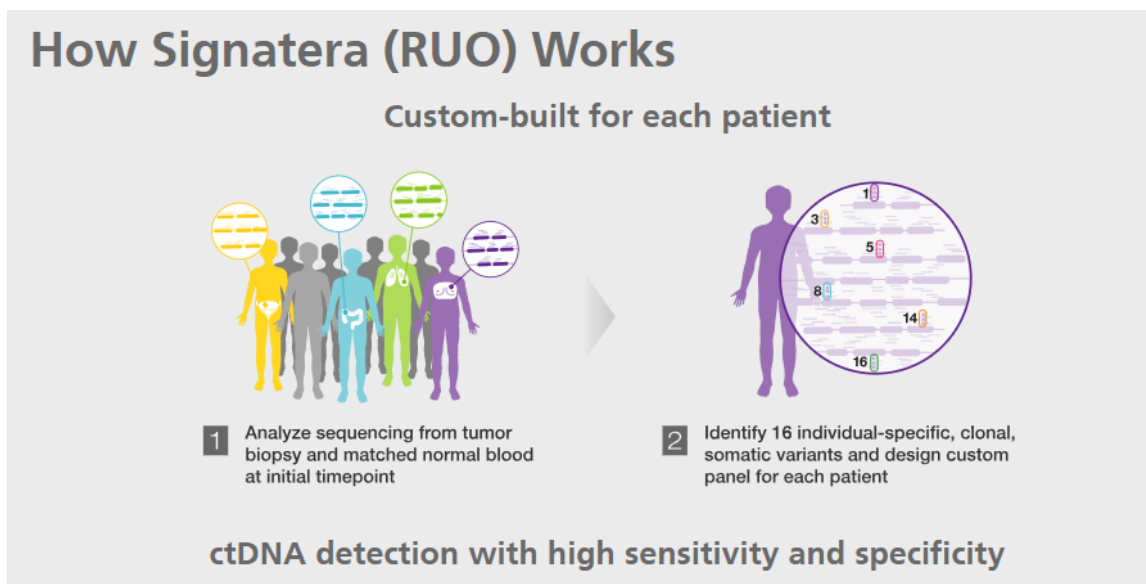
believe market is always forward looking and in this scenario the street will start to move estimates as well as valuation multiples higher. Even if it doesn't happen in Q2, without insurance coverage company is showing stealth acceleration for its Horizon NIPT tests as shown in picture to the right. Piper Jaffray on January 9th pointed out that if the large payers expand their coverage, this could nearly double the number of covered lives. That is certainly going to move street estimates higher. Back in November Morgan Stanley pointed out that currently management has identified its addressable market to be only high-risk pregnancies which is roughly 900,000 annually in the US. That will jump to include all average risk pregnancies (which is about 4 million) if insurance carriers start covering NIPT once ACOG finalized its guideline.

Regarding the competition, arguably ILMN, MYGN and PKI all three are competitors with their own prenatal screening technology, but none of these players are concentrated on the US specialist market where NTRA focuses.

Please note while I am limiting discussion on NIPT related to Horizon, but within prenatal test coverage company has several other products in play as well: **Spectrum** for pre-implantation genetics, **Panorama** for next-generation NIPT that includes kind for men as well, **Vistara** for single-gene NIPT, **Anora** for miscarriage test and lastly **Evercord** for newborn stem cell banking. The company has deep roots in providing all kinds of screening and test for pregnant women and options for their gynecologists to offer.

Signatera – This is the 2nd fundamental bull case. Signatera is the first ctDNA assay custom-built for treatment monitoring and minimal residual disease (MRD) assessment for breast cancer.

This is very promising technology. The Signatera methodology identifies 16 unique, clonal, somatic variants individualized to each patient's tumor, followed by multiplex PCR and ultra-deep sequencing for longitudinal ctDNA analysis of whole blood samples. The pan-tumor potential of Signatera has been demonstrated across several tumor types, including lung, colorectal, bladder, and breast.

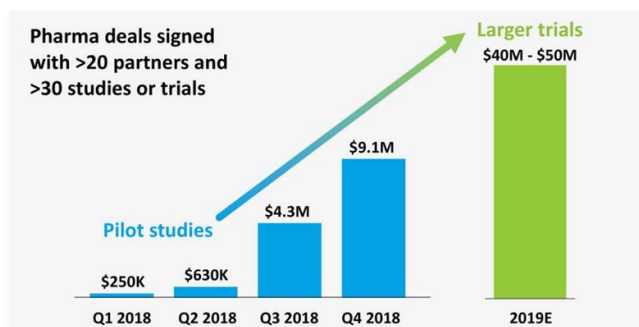


We believe continued success of Signatera in breast cancer assessment as well as kidney and other indications could make the company a buyout target in the future, by likes of Illumina.

How is Signatera Different - Signatera is different from currently available liquid biopsy tests which screen for a generic set of mutations independent of an individual's tumor. By targeting 16 or more patient-specific mutations, Signatera has a higher probability of detecting ctDNA targets in plasma, compared with a generic-panel approach. It detects variant allele frequencies (VAF) down to 0.01%—one mutant copy in a background of 10,000 genomic copies—and is optimized to achieve high specificity by requiring detection of multiple mutations for a ctDNA-positive call, leading to fewer false positives. Furthermore, Signatera provides researchers the flexibility to track additional mutations of interest, up to several hundred mutations, for clinical studies.

Use Cases Are Rising - These differentiating factors in favor of Signatera have been resulting in rising use cases by clinical studies at accelerating rate since the launch happened August 2017. In Q4 earnings conference call the company announced a \$50M partnership with BGI Genomics to leverage their extensive region operations to bring Signatera to the Chinese market. CEO

Targeting \$40M - \$50M pharma total contracted value



Steve Chapman said, ***“We believe China represents a very large clinical testing opportunity, and we also expect this partnership to support the adoption of Signatera into a pharma-sponsored clinical trial in China.”***

In addition to the BGI deal, the company also highlighted that their Signatera commercial efforts continue to accelerate. They started 2018 with just a few hundred thousand dollars in signed Signatera pharma services contracts and continue to evolve by signing several prospective clinical trials with leading pharmaceutical companies. ***“The bars on the page represent the total contracted value, which should be the amount of revenue we’d expect to recognize over time from signed deals based on the pricing and the test volume specified at each contract. We generally expect most signed deals to translate to recognized revenue over roughly 12 to 36 months depending on how long it takes for prospective clinical trials to enroll patients, among other factors.”***

It should be noted that biopsy (surgical tissue removal for genetic sequencing) in general is in secular growth uptrend, particularly for screening for cancer, and that is one reason why **CareDx (CDNA)** was made Top Pick in Q1 Outlook which worked out beautifully. For NTRA, the key to the value of the liquid biopsy is the vast volume opportunity, as these tests would be suitable for many of the 14+ million US cancer survivors and up to 2 million in treatment, driving a \$10 billion TAM based on \$300-\$1000 price per test depending on intended use and resulting level of complexity.

NTRA late 2018 signed a new agreement with Bristol Myers for the use of Signatera ctDNA assay in a Phase 2 trial validates the technology which is now in use in 25 trials with 10 companies, including a majority of the Top 10 players in pharma. Most of these 25 trials are pilots, which NTRA expects to roll into larger Phase 2 and Phase 3 trials. BMJ interest increased, as JP Morgan points out: ***“after the breast cancer I-SPY 2 study and the joint University of Leicester and Imperial College study, both unveiled at the San Antonio Breast Cancer Symposium at the end of last year, which showed that in a cohort of 49 breast cancer patients who had received adjuvant therapy, molecular residual disease was detected with a lead time of up to two years prior to clinical or radiological detection.”***

In my view, that is as clear indication of success of Signatera technology as possible and this is building block of sharp increase in use cases in the future in many clinical trials. **The catalyst will be NTRA plans to launch a Clinical Laboratory Improvement Amendment (“CLIA”) certification in Q2** which is required by law. With Signatera now already having >20 partnerships and in use in >30 clinical studies, the CLIA should easily go through and then use cases could explode higher.

Kidney Transplant Testing – This is the 3rd fundamental bull case. About 20,000 kidney transplants are performing in the US each year. But most importantly, recurring tests are done 7 times during the first year after surgery and 4 times/year afterwards. This has been a boon for **CareDx (CDNA)** with AlloSure product already in the market and strong Medicare coverages of about 75% of kidney transplant patients. Margins are also very high at 65% in this business. **The catalyst for NTRA in 2019 is official launch of its kidney transplant testing and subsequent CMS coverage by CMS to the same pricing as CDNA’s AlloSure. It is expected to happen in 2019, though difficult to see whether it will happen in Q2.**

Validation Study Endorsement - While I am uncertain of the timing of CMS coverage decision, I do believe it will happen and most importantly the science behind NTRA is even better than CDNA. There was an analytical validation study published in *Journal of Clinical Medicine* on January 7th (see Press Release [HERE](#)) demonstrating highly accurate performance, about 18% better than competitive tests in the market today. Additionally, the study performed better in T-cell rejection cases (which is about 33% of all cases currently). Lastly, NTRA kidney test is now the only test that worked in sub-acute clinical rejection (which is about 20% to 25% of all cases). Overall, this was very impressive study which is why I believe not only company will get CMS coverage but also product will be priced as CareDx AlloSure, if not higher.

Patent Dispute - Please note, on March 26th, CDNA filed a patent infringement lawsuit against NTRA. CDNA is asserting that it has exclusive license to use the patent that was originally granted to Stanford University that covers non-invasive monitoring of organ transplant rejection through cell-free DNA analysis. The lawsuit says NTRA is infringing through its marketing and performance efforts with expected launch coming by year end 2019 assuming CMS grants the coverage.

This is tricky. I am not a patent lawyer. But my first thoughts are consensus is not building any upside from potential NTRA kidney test launch because it has not been approved yet. So, I don't really think it's a risk. Secondly, one has to wonder if both CDNA and NTRA are basing their kidney test performance using the same patent that was granted to Stanford University, how is it that NTRA has been able to demonstrate better results than CDNA? Perhaps NTRA is not based on same science. It has differentiated itself.

Nevertheless, this could be a risk to stock but likely immaterial in my view.

NTRA Natera, Inc. Nasdaq GS

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Health Care / Medical Supplies

Tuesday 2-Apr-2019 12:49 pm

Open: 20.33	Ask: 20.59	P/E: -9.23	Options: yes	Chg: +0.59%
High: 20.78	Ask Size: 200	EPS: -2.23	Annual Dividend: N/A	Chg: +0.12
Low: 20.10	Bid: 20.55	Last Size: 100 shrs	Yield: N/A	Last: 20.58
Prev Close: 20.46	Bid Size: 100	VWAP:	SCTR (Small): 86.4	Volume: 162,213



Waddell & Reed (WDR)

Trade – Buy September 17.5 Puts for \$1.70 or less.

As we were finishing Q1, the yield curves globally started to roll over. This is all discussed in macro discussion in this Outlook. As a result, financials started to materially underperform after March FOMC meeting. The weakness wasn't just seen in money center banks such as **BAC, JPM, WFC** and others. It spread to investment banks such as **GS, MS**. It was significantly seen in **Regional Banking Index (KRE)** and its components (**CMA, STI** just to name a few), as well as it spread to online discount brokers (**AMTD, SCHW**) and asset managers (**AB, CNS, TROW, WDR, APAM, BEN, IVZ, LM, AMG, VRTS**, etc.). Here is what we saw in **WDR** options post March Fed Meeting:

- On March 12th buyer of 3,000 June 20 puts paid \$2.60 to \$2.80 offer
- On March 19th buyer of 3,000 June 20 puts paid \$2.70 offer

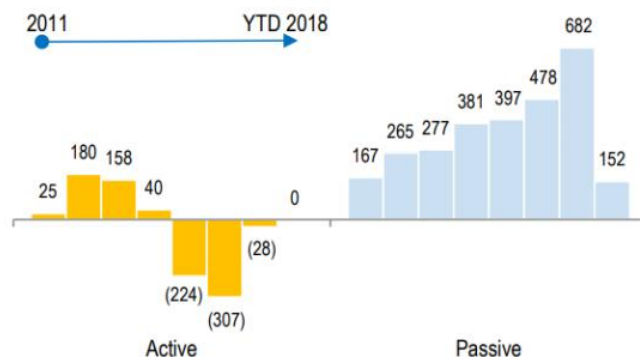
WDR has very low open interest in option chain aside from that \$1.6 million bearish bet now positioned quietly in June month looking for stock to continue to sell off in Q2. On average day stock trades less than 100 contracts. This gets my attention. WDR short interest also remains elevated, currently at 22%.

To understand what is affecting the industry, we have to use two lenses to dissect the trends, changing investment mix and capital flows. One has to do with secular downward pressure on active money management business led by consistent underperformance both in good and bad times. This dynamic was discussed extensively in 3Q18 Outlook when we made **SS&C Tech (SSNC)** as Top Pick in 3Q18 Outlook (see [HERE](#) on page 37). Take a look at SSNC stock chart with impeccable rally in 2019 YTD. The second reason is cyclical in nature that forces money out when global growth slows as indicative by yield curve inversion.

Please note WDR has about \$71 billion assets under management (“AUM”) and it increased by +2.4% in the most recent month of February for which we have data available. That sounds all great, until you dive deeper and understand the business to realize that 98% of fund's AUM is parked in Actively Managed accounts that keeps bleeding with outflows. In 2018, net outflows were -12% and YTD 2019 they have lost another -10% in outflows.

Industry Shifting from Active to Passive Secular Rotation (Secular Pressure) – This uncommon view beautifully plays for the benefit for SSNC which provides software and technology to empower passive fund's execution and operations. It also reflects terrible performance of actively managed funds. I believe we are seeing slow but tectonic shift in money management business. The combination of 1) the enhancement

US Net Flows (LT MFs & ETFs) – Active vs. Passive

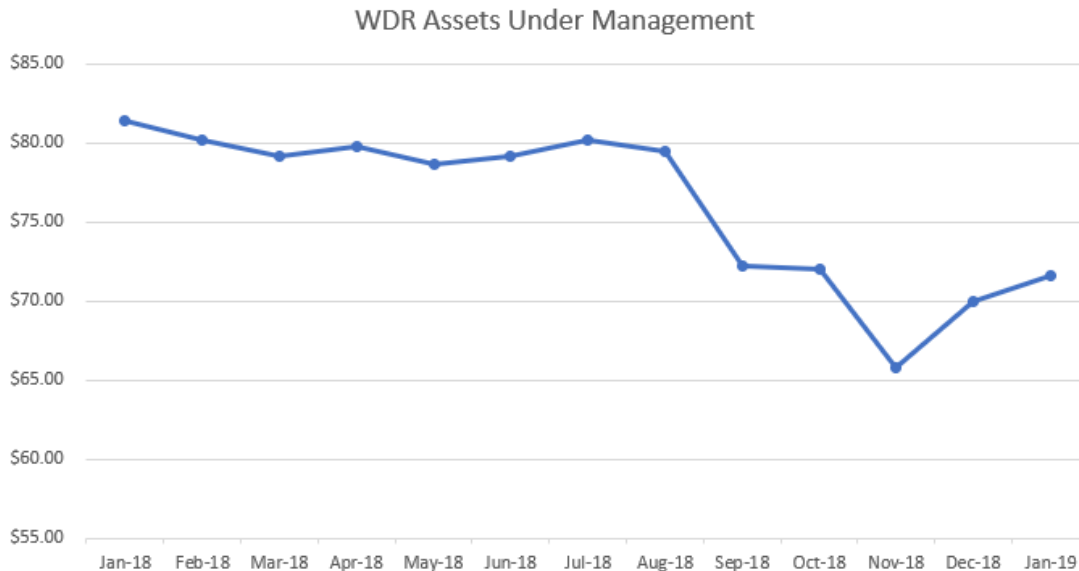


in technology making it much easier to access information that was not previously available, 2) the decade long underperformance of actively managed portfolios by hedge fund tycoons, 3) the layers of expensive fee structure charged by money managers, and 4) the extensive availability of do-it-yourself low cost passive products such as ETFs – all these and other variables are gradually causing a shift in mentality among investors about how their money is managed. They are going from active to passive and they are taking in charge of their own decisions and I believe this trend will continue.

Simply put, passive funds continue to gain market share of AuM over actively managed funds. According to recent study by PwC, global AuM within alternative assets and active funds is expected to grow at a CAGR of +6.7% from 2016 to 2020 vs. passives at a CAGR of +13.1%. Within the US, it is expected the trend from active to passive will accelerate, ultimately rising from current 34% passive share to 50% passive share by 2022. Chart to the right above highlights this ongoing trend according to data collected from TrimTrends. This isn't to suggest that active money management business is going obsolete by any means, but the industry will be forced to evolve itself after facing heavy and consistent performance and management fee pressure.

In 4Q18, WDR posted net cash outflows of \$3.78 billion which was worse than street estimate of \$3.2 billion. AUM was down -17% YoY. Huge decline. This resulted in -11% YoY decline in investment management fees. Investment fee margins also declined by 110 bps sequentially QoQ. Broker-dealer assets were also down -12% YoY and underwriting fees was down -5% YoY. There is not a single component in business that did not decline. To highlight, several negatives stood out in Q4 earnings:

- Revenues were down -8% to \$272M, on lower AUM and lower fees
- Average AUM was down -10% sequentially to \$72B
- Ending AUM was down -17% sequentially to \$66B (vs. \$80B in 3Q), driven by net outflows and negative market performance
- Outflows worsened to -\$3.8B (-19% aog) with outflows across equity and fixed income as well as channel (vs. -\$2.0B/-10% aog in 3Q)
- Outflows increased in unaffiliated & institutional channel
- Redemptions rose to \$6.5B (vs. \$4.5B in 3Q)
- The fee rate decreased to 63.5bps, (-0.9bps vs. 64.6 bps in 3Q), with a negative mix shift
- Negative sequential adjusted operating leverage of 390 bps decreased the adjusted operating margin to 16.3% (vs. 20.2% in 3Q)
- Advisor headcount declined
- Investment performance is weak, with 40%/54% of fund assets in the top half of Lipper rankings for trailing three/five years
- Non-op income aided the beat driven by a \$16M gain related to the annual revaluation of the pension plan liability (vs. \$0M in 3Q)



To the right, chart shows WDR AuM for past 13 months. I believe this is about to take another leg lower from here induced by further worried about economic slowdown and continued under pressure of actively managed accounts. WSJ in January highlighted that active managers face the toughest situation, with assets being withdrawn and pressure to cut fees increasing, but mergers that could save administrative costs may be becoming more likely, with smaller listed managers not yet trading at prices that reflect the possibility. In my view, M&A is one hope left for these assets managers to trade higher other both secular and cyclical pressure will only get worse over time particularly with slowdown in economy. In its earnings review, Citigroup questioned whether company has enough cash on hand to be able to survive on its own during next downturn. Citigroup has a Sell rating on stock with \$14 price target. BAML and Morgan Stanley also have Sell rating. I also believe with AuM under pressure you will see dividend cuts in the future. I believe 5.9% dividend yield is a bull trap. Last time company cut quarterly dividend from \$0.46 to \$0.25 was in early 2018 that resulted in -15% sell off in stock in about 3 months. I believe they will do it again.

Yield Curve Inversion (Cyclical Pressure) – About 21% of total AuM is parked in bonds and nearly all of that is actively managed. That means 79% of assets are in equities. In a bear case scenario, even if there is little risk of that right now but could develop over time in Q2 and onwards, if we assume that the US economy enters a recession and the Fed cuts rates by 75 bps. In this scenario, we would expect negative market returns and extremely weak revenue trends across capital market stocks, with only discount brokers and exchanges potentially posting decent returns only due to higher volatility and trading activity even though they will also face headwind from outflows and reduced activity.

In such scenario, BAML research believes we will flows decrease 3% on average similar to past cycles. In this weaker market backdrop, they estimate a -20% decrease in revenues for the asset managers and ~700 bps of operating margin contraction, leading to a -40% decrease in EPS. In this case, they expect asset managers stocks to depreciate ~40%, with multiples leveling out at ~11x. The interesting thing is EDR is specifically highlighted by BAML is one that has most

downside risk to earnings by decline of -64% in such scenario because of its exposure to underperforming markets.

Table 5: 2019 revenue and earnings growth – Bear Case

	Revenue growth	Earnings growth
AB	-22%	-36%
AMG	-33%	-27%
APAM	-33%	-53%
BEN	-23%	-45%
BLK	-21%	-34%
CNS	-24%	-33%
EV	-15%	-40%
FII	-5%	-27%
IVZ	-26%	-46%
JHG	-24%	-43%
LM	-20%	-46%
BSIG	-33%	-37%
TROW	-24%	-36%
VCTR	32%	5%
VRTS	-22%	-44%
WDR	-26%	-64%
WETF	-25%	-63%
Average	-20%	-39%

WDR Waddell & Reed Financial Inc. NYSE

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Financial / Asset Managers		P/E: 7.65		Options: yes	Tuesday 2-Apr-2019 12:54 pm
Open: 17.850	Ask: 17.520	EPS: 2.29	Annual Dividend: 1.0	Chg: -1.52%	
High: 17.890	Ask Size: 400	Last Size: 100 shrs	Yield: 5.71%	Last: 17.510	
Low: 17.470	Bid: 17.510	WVAP:	SCTR (Small): 41.2	Volume: 376,944	
Prev Close: 17.780	Bid Size: 400				



Key Debates and Catalysts

Critical underpinnings of our market views are subject to vigorous debate in the marketplace. We looked for debates that are likely to matter to investors, that are likely to be settled (or significantly advanced) in the future. Some of these are particularly relevant for Q2, most would likely take longer and play out throughout in 2019 and beyond.

The key here is taking an alternative yet high-probability view of certain sectors and stocks which will matter the most in the future. As such, at minimum, being able to provide you with view on risks and opportunities.

Putting Your Best Knee Forward

Trade – Buy ZBH September 130/145 Call Spread for \$5.30 debit or less.

On January 25th, 2019, **Zimmer Biomet (ZBH)** announced U.S. Food and Drug Administration clearance of the ROSA Knee System for robotically-assisted total knee replacement surgeries.

"Complementing the skill and expertise of the surgeon with ROSA Knee's robotically-assisted technologies can improve accuracy, precision and consistency, which can improve patient satisfaction, clinical outcomes and efficiency," said Christopher J. Cannova, M.D., Washington Joint Institute at OrthoBethesda. "ROSA Knee functions as a surgical assistant that gives me the tools and real-time data to perform bone cuts with greater precision and improve patient-specific soft-tissue balancing and implant alignment, without losing my feel for a natural fit and flexion."



As a quick note, we are in no way saying that **Stryker (SYK)**, who offers the MAKO system, is growing out of favor. Absolutely not! We believe, after a multitude of comments following AAOS, consensus [*estimates are egregiously low and any positive ROSA traction over the next few months from surgeons, hospitals could cause the analyst community to begin to factor in revenue estimates into their model, causing shares of ZBH to appreciate.*](#)

Here are just a few comments from recent meetings at the American Academy of Orthopedic Surgeons:

BTIG Research - **"Management noted a significant increase in surgeon leads (~1000 after day 1, ~1700 after day 2) compared to FY18's entire AAOS event which produced ~92 leads. The driving factor was the launch of the ROSA robotic system** for total knee arthroplasty. They believe foot traffic to see the robotic system was high, but management remained constrained in their excitement so as to not get ahead of themselves, noting that they still need to convert surgeons and the launch of ROSA will be limited through the early part of FY19 with broader commercialization occurring by 2H19.

JPMorgan – **"Our doc checks suggest Mako will continue to be the market leading Ortho robot, but Rosa should gain traction with Zimmer docs."** Starting with the competitive landscape of robotic offerings: (1) Stryker's Mako was viewed as the most comprehensive robotic offering, but is offset by a notable price tag, a restricted product portfolio, and some payor pushback on CT scanning; (2) **Zimmer Biomet's Rosa should have a notable opportunity with dedicated docs**

who don't want to use Triathlon and still want to market robotics, but a comparable price tag and the lack of a saw could hold it back.

SVB Leerink – “We caught up with one MEDACorp surgeon who thinks ZBH's ROSA, while not a game-changer, **might be "good enough"** to satisfy a cohort of ZBH loyalists who haven't yet purchased a robot and want robot marketing.” Even if ZBH's system is not viewed as equivalent to MAKO, they note that **the bar is very low** for what ROSA needs to do to drive improvement in ZBH's knee performance.

Insider Buying

Another positive catalyst to mention has been the incredible amount of insider buying from February 6th – March 4th, resulting in over \$3M in stock bought. See snapshot below from openinsider.com:

Filing Date	Trade Date	Ticker	Insider Name	Insider Title	Trade Type	Price	Qty	Owned	ΔOwn	Value
2019-03-04 16:32:04	2019-03-01	ZBH	Jafry Syed A.	Dir	P - Purchase	\$125.52	+1,925	1,925	New	+\$241,624
2019-02-19 06:03:05	2019-02-15	ZBH	Higgins Arthur J	Dir	P - Purchase	\$123.28	+500	2,400	+26%	+\$61,638
2019-02-14 16:30:58	2019-02-13	ZBH	Farrell Michael J.	Dir	P - Purchase	\$123.62	+2,000	2,000	New	+\$247,250
2019-02-11 16:32:13	2019-02-08	ZBH	Glasscock Larry C	Dir	P - Purchase	\$120.09	+2,000	8,633	+30%	+\$240,182
2019-02-11 16:30:44	2019-02-08	ZBH	Michelson Michael W	Dir	P - Purchase	\$119.69	+2,085	2,085	New	+\$249,553
2019-02-08 16:34:11	2019-02-07	ZBH	Hilado Maria Teresa	Dir	P - Purchase	\$118.18	+1,650	1,650	New	+\$194,990
2019-02-08 16:32:40	2019-02-07	ZBH	Hanson Bryan C	Pres, CEO	P - Purchase	\$119.02	+2,100	32,215	+7%	+\$249,936
2019-02-06 16:53:16	2019-02-05	ZBH	Boudreaux Gail	Dir	P - Purchase	\$119.33	+2,095	2,095	New	+\$249,988
2019-02-06 16:51:48	2019-02-06	ZBH	Begley Christopher B	Dir	P - Purchase	\$117.19	+2,540	2,540	New	+\$297,659
2019-02-06 16:50:19	2019-02-06	ZBH	Bernard Betsy J	Dir	P - Purchase	\$117.41	+4,250	4,250	New	+\$498,994
2019-02-06 16:47:50	2019-02-05	ZBH	Hagemann Robert	Dir	P - Purchase	\$119.83	+2,000	2,000	New	+\$239,651

Option Flow

So far, in the month of March, we have seen a handful of bullish bets:

- On 3/15, there was a buyer of 1,250 June 125 Calls for \$6.00, a \$750,000 bullish bet (*Call Roll*)
- On 3/20, there was a buyer of 500 May 130 Calls for \$3.40, a \$170,000 bullish bet.
- On 3/22, there was a buyer of 3,250 May 130 Calls for \$3.40 on a wide bid/ask spread of \$1.90 x \$3.70, a \$1.1M bullish bet.

ZBH Zimmer Biomet Holdings, Inc. NYSE

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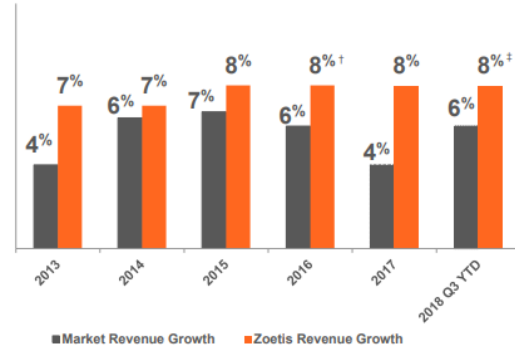
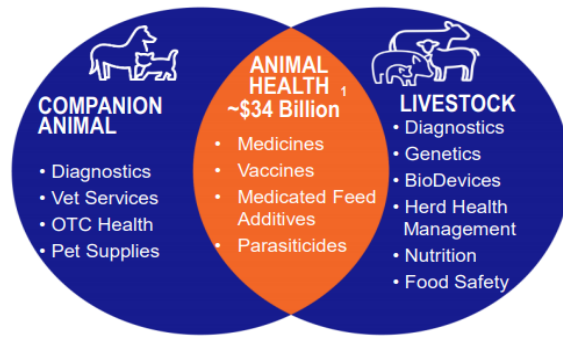
Health Care / Medical Equipment		P/E: -67.64		Options: yes	Tuesday 2-Apr-2019 1:01 pm
Open: 128.45	Ask: 127.01	EPS: -1.88	Annual Dividend: 0.96	Chg: -0.56%	
High: 128.51	Ask Size: 100	Last Size: 100 shrs	Yield: 0.76%	Last: 126.98	
Low: 126.80	Bid: 126.97	VWAP: 127.70	SCTR (Large): 53.8	Volume: 1,157,365	
Prev Close: 127.70	Bid Size: 200				



Man's Best Friend

Trade – Buy ZTS straight October 105 Calls for \$5.10 debit or less.

With consistent above-market revenue growth and significant margin expansion, shares of **Zoetis (ZTS)** have performed well since being spun out from **Pfizer (PFE)** back in 2012.



In its most recent quarter, the company beat on both the top and bottom line while reporting total revenue growth of 7%. Geographically, U.S. revenue increased 14% while International fell by 2%.

Dermatology Portfolio – One continued bright spot for Zoetis continues to be its Dermatology portfolio, which consists of both Apoquel and Cytopoint.

Apoquel = Tablet for canine atopic dermatitis, providing relief from allergic itch.

Cytopoint = 4-8 Weeks of relief with a single in-office injection for dogs with allergic or atopic dermatitis



This segment increased 25% Y/Y and generated total 2018 sales of \$593M (\$464M for Apoquel and \$129M for Cytopoint). JPMorgan analyst Chris Schott believes there is further runway for growth for this franchise over time. In particular, the analyst cites, **is the international rollout of both products which should drive significant growth over time with opportunities in markets such as China (where Apoquel has yet to rollout).** In addition, Zoetis continues to see a growth opportunity for Apoquel in the U.S. based on a mix of share gains (Apoquel increased to 63% patient share from 59% in 2018), overall market expansion (driven by Direct-to-Consumer) as well as further price increases.

New Products – CEO Juan Alaix would announce portfolio updates on the Q4 earnings call, which included Foster Gold PCV MH, their latest swine vaccine, that was introduced in the U.S.

and Canada to provide greater options and flexibility in protecting pigs from diseases. They also built upon their Simparica drug **to develop Revolution Plus, a topical parasiticide for cats that was recently approved in the U.S., Japan and Canada, while already being marketed in the European Union.** Finally, **pending FDA approval this year, they expect to launch a new injectable formulation to protect dogs against heartworms for up to 12 months.**

Potential Catalysts

Potential Launches	Timing	Comments
Injectable product to protect dogs against heartworm for 12 months	2019	ZTS is seeking FDA approval for an injectable product to protect dogs against heartworm for 12 months. Approval and launch possible in 2019.
Apoquel for atopic dermatitis in dogs in China	2019	ZTS plans to launch Apoquel in China in 2019.
Simparica Trio (parasiticide against fleas, ticks, and heartworms)	2020	Three-way combination parasiticide composed of Simparica and two other active ingredients. Under review in the US and Europe for the protection of dogs against fleas, ticks, and heartworms. ZTS expects to launch Simparica Trio in 2020, and believes the product has blockbuster potential.
Potential Milestones / Events	Timing	Comments
Complete construction of vaccine manufacturing facility in China	4Q19	ZTS expects to complete construction of its vaccine manufacturing facility in China by the end of 2019.
Potential competition to Apoquel and Cytoint	2019?	ZTS experienced particularly robust growth for its companion animal business over 2016-18 driven by success of its novel dermatology products Apoquel (JAK inhibitor) and Cytoint (anti-IL-31) for atopic dermatitis in dogs. Competition could materialize at some point.

Source: STRH estimates, Company reports

Abaxis Acquisition – In the company’s most recent 10-K filing, Zoetis disclosed a new Diagnostics segment, generating \$136M in sales in 2018, driven by its July 31st acquisition of ABAXIS, which contributed \$107M. In the most recent Q4, ABAXIS revenue rose 8% but also experienced impressive +DD growth excluding distributor-level destocking. Overall, **ABAXIS will add 300 bps to topline growth in 2019, and, according to Credit Suisse analyst Erin Wilson Wright, they are optimistic on its prospects to further cross-sell opportunities** across its core portfolio once SAP implementation is complete (2H19).

Finally, during the call, Zoetis noted that the **Abaxis field force is already working with Zoetis teams to promote the diagnostics portfolio, with the company planning to fully integrate diagnostics products (bundling, etc.) in 2019.** In international markets, Zoetis has almost completed the process of hiring a field force, with the team already generating demand on the ground.

Option Flow – We have tracked the following bullish flow:

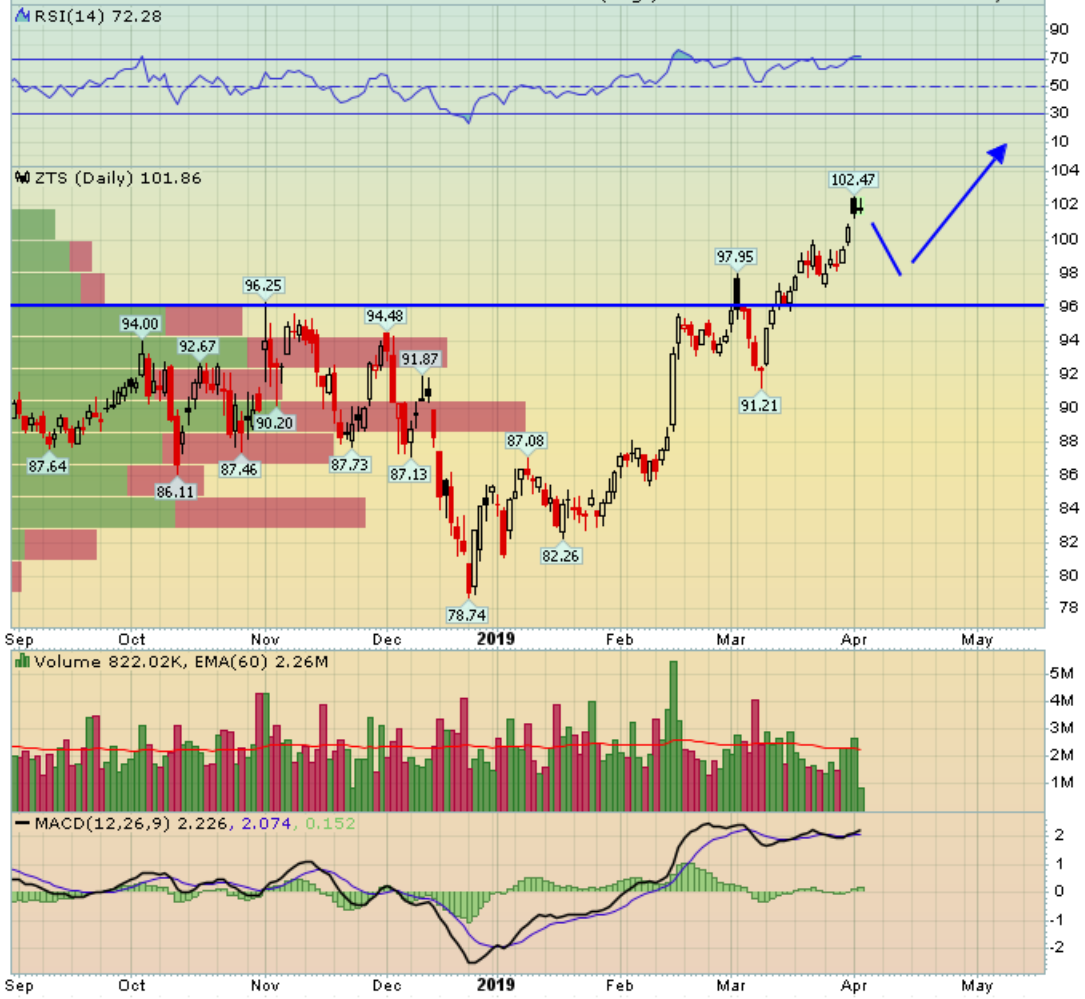
- On 1/15, long-term buyer of 125 January (2021) 60 Calls for \$30.30, a \$378,750 bullish bet.
- On 1/23, buyer of 128 July 92.5 Calls for \$2.40, a \$30,720 bullish bet.
- On 3/5, buyer of 250 January (2021) 105 Calls for \$9.50, a \$237,500 bullish bet.
- On 3/8, buyers of 3,500+ April 95 Calls for \$1.40 - \$1.50, a \$507,000 bullish bet.

Calls bought by Expiration, Strike				
Strike	4/18/2019	7/19/2019	1/15/2021	Total
92.50		\$30,720		\$30,720
95.00	\$79,260			\$79,260
97.50	\$54,115			\$54,115
105.00			\$237,500	\$237,500
Total	\$133,375	\$30,720	\$237,500	\$401,595

ZTS Zoetis Inc. NYSE

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Health Care / Pharmaceuticals Tuesday 2-Apr-2019 1:08 pm
 Open: **101.74** Ask: **101.87** P/E: **34.69** Options: **yes**
 High: **102.38** Ask Size: **400** EPS: **2.94** Annual Dividend: **0.542** Chg: **+0.32**
 Low: **101.57** Bid: **101.85** Last Size: **100 shrs** Yield: **0.53%** Last: **101.86**
 Prev Close: **101.54** Bid Size: **200** VWAP: SCTR (Large): **89.5** Volume: **822,021**



A Slice of Decelerating Comps

Trade – Buy DPZ September 240-210-195 Skip Strike Put Butterfly Spread for \$6.60 debit or less.

Domino's Pizza (DPZ), one of the most highly regarded restaurant stocks for some time now, has been posting decelerating comps for the past year. Have you noticed?

Q118 – Domestic SSS up 8.3%
Q218 – Domestic SSS up 6.9%
Q318 – Domestic SSS up 6.3%
Q418 – Domestic SSS up 5.6%



International Division – While most investors pay close attention to U.S. numbers, it should be noted that Domino's Pizza Group, the U.K.-based master franchise that holds exclusive rights to own, operate, and franchise branches of the chain across Europe has been having its own set of problems recently. The Financial Times, on March 12th, reported that **Domino's Pizza Group experienced "growing pains" internationally in a "mixed year," biting into its overall financial performance. The group said its performance in international markets was worse than it had anticipated last year amid a "number of challenges."** Its Swiss, Norwegian, and Swedish business continued to make losses though Iceland and Germany were profitable.

BAML, in a March 14th note following one of their conferences, spoke with the company who admitted that **the challenges in the international business exist.** They would go on to say that they have been more company specific than macro related and expect to be able to work through these fixes over time.

Restaurant Checks – BlackBox Intelligence was out on March 7th reporting that February comp sales for the overall restaurant industry fell 0.6%, with traffic down 3.67%, the worst result for traffic since September 2017. BlackBox also added, **"It was the worst month for the industry since February of 2018, which may be signaling a new troubling trend for chain restaurants."** Knapp Track was also out with commentary mentioning unfavorable weather and delayed tax refunds as a catalyst to these poor numbers.

COMP SALES & TRAFFIC



COMP SALES

-0.61%

rolling 3 months
1.12%



COMP TRAFFIC

-3.67%

rolling 3 months
-1.74%

Staffing – If we take a closer look at the most recent BlackBox Intelligence report, one area that stands out surrounds understaffed locations and its impact on restaurants.

*“Staffing woes continued for restaurants. The latest metrics show annual turnover rates increased again for hourly employees and all levels of restaurant management during January. **With restaurant turnover at historically high levels and rising, it is not surprising that the average restaurant company said 34 percent of their locations are not fully staffed at any given time.** Staffing challenges are compounded by the fact that the industry continues to expand its number of locations and add jobs. Chain restaurant year-over-year employment growth was 2.1% during January. The industry has been adding jobs at a pace greater than 2.0% for the last three months, adding to the staffing needs in an already extremely tight labor market.”*

JPMorgan, on the Q4 earnings call, would ask: “Are you currently staffed the way that you want to be?” Domino’s management admitted it is a very tight labor market right now. “So we’ve got to make sure, and our franchisees have got to make sure, that Domino’s Pizza is the best place for those drivers to work when they have many more choices today than they had 5 years ago.” I’m bringing this staffing/labor topic up because the company continues to be focused on their “**Fortressing Strategy**,” in which they want to build another 2,000 stores in the U.S. over the next seven to eight years. However, the company admitted that **U.S. comps in 2018 were negatively impacted by 1 point to 1.5 points due to their fortressing strategy.** Their international comp was also negatively impacted. **BTIG Research, in a post-earnings note, said they believe the comp impact was closer to 200 bps (2pts) in 4Q18.**

The key takeaway that I am trying to stress is that the company knows it has a labor issue, yet continues to want to grow its store count. They are building these stores, yet will continue to have problems staffing them. The end result, as we’ve seen, is a negative impact to domestic comp sales.

Option Flow – In the last week of March, we have begun to see unusually strong bearish flow:

- On 3/25, there were buyers of 550 June 250 Puts for \$17.00, a \$935,000 bearish bet.
- On 3/28, there was a buyer of 175 June 220 Puts for \$3.40, a \$59,500 bearish bet.

DPZ Domino's Pizza Group LTD NYSE

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Consumer Discretionary / Restaurants & Bars				Tuesday 2-Apr-2019 1:13 pm	
Open:	250.00	Ask: 247.80	P/E:	29.65	Options: yes
High:	250.71	Ask Size: 400	EPS:	8.35	Annual Dividend: 2.3
Low:	246.75	Bid: 247.56	Last Size: 500 shrs	Yield: 0.93%	Chg: -0.71%
Prev Close:	249.45	Bid Size: 300	VWAP:	21.5	SCTR (Mid): 21.5
					Last: 247.68
					Volume: 397,292



Your BEACON of Hope

Trade – Buy ARRY straight September 25 Calls for \$3.60 debit or less.

Array BioPharma (ARRY) is focused on the discovery, development and commercialization of transformative and well-tolerated targeted small molecule drugs to treat patients afflicted with cancer and other high-burden diseases. Array markets BRAFTOVI® capsules in combination with MEKTOVI® tablets for the treatment of patients with unresectable or metastatic melanoma. The company's Q2 earnings report showed that BRAFTOVI and MEKTOVI continue to receive a positive reception from oncologists treating BRAF-mutant melanoma patients, as it generated nearly \$23M in net product sales, with quarter-over-quarter growth of 62%. **"We're seeing strong demand for BRAFTOVI and MEKTOVI with over 2,600 total prescriptions during the second commercial quarter and approximately 4,000 total prescriptions launched to date. As a reminder, BRAFTOVI and MEKTOVI are written as separate prescriptions. So each time the combination is prescribed, there's one prescription for BRAFTOVI and one prescription for MEKTOVI."**



- **Second commercial quarter:**
 - \$22.7 million net sales, 62% Q/Q growth
 - >2,600 TRx in second commercial quarter
 - ~4,000 TRx to date
- **Prescribing in both academic and community centers**
 - New prescribers continue to be identified each month
 - 'Switch' patients are declining as proportion of new patient starts
- **Product profile continues to be perceived as differentiated**
 - OS, PFS and ORR results compelling
 - Tolerability profile provides new option for patients

In a fireside chat with CEO Ron Squarer and COO Andrew Robbins in February, Stifel noted that management candidly acknowledged the BRAFTOVI/MEKTOVI launch in melanoma has surpassed their initial internal expectations – as has the number of patients being actively switched from competitive regimens. To date, management's initial focus has been detailing those academic prescribers which management believes is responsible for writing the majority of BRAF/MEKi scripts within the U.S. However, **this focus will now begin to also shift towards community prescribers.**

On March 18th, the company would announce that the National Comprehensive Cancer Network has updated their Clinical Practice Guidelines in Oncology for Colon and Rectal Cancer to include BRAFTOVI in combination with MEKTOVI and an anti-EGFR antibody as a Category 2a treatment for patients with BRAFV600E-mutant metastatic colorectal cancer, after failure of one or two prior lines of therapy for metastatic disease. **JPMorgan viewed this update as a clear win for Array as it validates the SLI data (n=29; ORR of 48% / mPFS of 8.0 months / mOS of 15.3 months) and underscores the clear unmet need in the disease.**

All Eyes on BEACON

After the close on January 14th, Array announced updated safety and efficacy results, including mature overall survival (*mOS*), from the safety lead-in of its Phase 3 BEACON CRC trial evaluating the triplet combination of BRAFTOVI, MEKTOVI, and ERBITUX®, an anti-EGFR antibody, in patients with *BRAF*^{V600E}-mutant metastatic colorectal cancer (*mCRC*).

Stifel – The triplet combination was well-tolerated with patients receiving 300mg of encorafenib once daily, 45mg of binimetinib twice daily and a standard weekly dose of cetuximab. While median progression-free survival (***PFS=8 months, 95% CI***) and confirmed overall response rate (***ORR=48%, 95% CI***) did not change from the last update in June 2018, today's updated data demonstrates a mature median OS of 15.3 months with a median follow-up time of 18.2 months. As a reminder, a significant percentage of the patient population in the SLI cohort have received 2 previous lines of therapy (***43%***), while less than 35% of patients in the overall BEACON trial will have received 2 previous lines of treatment. Given this discrepancy in patient baseline characteristics, the improved OS in the arguably-sicker, SLI cohort is directionally encouraging.

Piper Jaffray – Initial *mOS* showed MEKTOVI, BRAFTOVI + Erbitux achieved a 15.3 month *mOS*. ORR of 48% and *mPFS* of 8 months remains consistent from ASCO. Historical data in 2nd-line *BRAF*-mutant CRC has shown *mPFS* on the order of only 4 months and *mOS* of 6 months with chemotherapy. ***As such, we believe the triplet is achieving unprecedented efficacy.*** There are no therapies approved to treat *BRAF*-mutant CRC and the FDA has awarded the triplet Breakthrough Designation to treat patients after 1+ lines of therapy.

JPMorgan – *Heading into the mid-year readout in 1H19*, we would note that investor expectations for the interim BEACON CRC results are high. Recall, the key endpoint for the readout is ORR (***primary endpoint comparison will be triplet regimen of encorafenib + binimetinib + cetuximab versus FOLFIRI + cetuximab or irinotecan + cetuximab***). Recall, the analysis for the *sNDA* will be based primarily on ORR and will form the basis of an accelerated approval strategy. ***In our view, there is little risk on triplet versus control arm differentiation, given what is known from the SLI and chemo combination data.*** However, we do see more risk around investor expectations on ORR, given the robust SLI data. Indeed, we DO NOT believe replication of SLI data is an appropriate base case benchmark (***i.e., 40-50%+ ORR; rather this is more the homerun scenario***). Interestingly, ***physician feedback suggests that ORR in the ~30-39%+ range would be very clinically differentiated (this is our base case scenario).***

JaguarScan

As of this writing, JaguarScan is showing an 87% bullish bias with action out in May, June, and the January (2020) LEAPs. Here are some of the more notable trades still in open interest:

- On 2/4, there were buyers of 231 June 20 Calls for \$2.90 - \$3.10, a \$69,610 bullish bet.
- On 2/15, there were buyers of 384 June 20 Calls for \$5.30, a \$203,520 bullish bet.
- On 2/22, there was a buyer of 100 June 26 Calls for \$2.80, a \$28,000 bullish bet.
- On 2/22, there was a buyer of 381 January (2020) 25 Calls for \$4.60, a \$175,260 bullish bet.
- On 3/22, there was a buyer of 750 May 25 Calls for \$1.40, a \$105,000 bullish bet.

Calls bought by Expiration, Strike

Strike ▲	5/17/2019	6/21/2019	1/17/2020	Total
20.00		\$378,600		\$378,600
25.00	\$105,000		\$175,260	\$280,260
26.00		\$28,000		\$28,000
Total	\$105,000	\$406,600	\$175,260	\$686,860

ARRY Array Biopharma, Inc. Nasdaq GM

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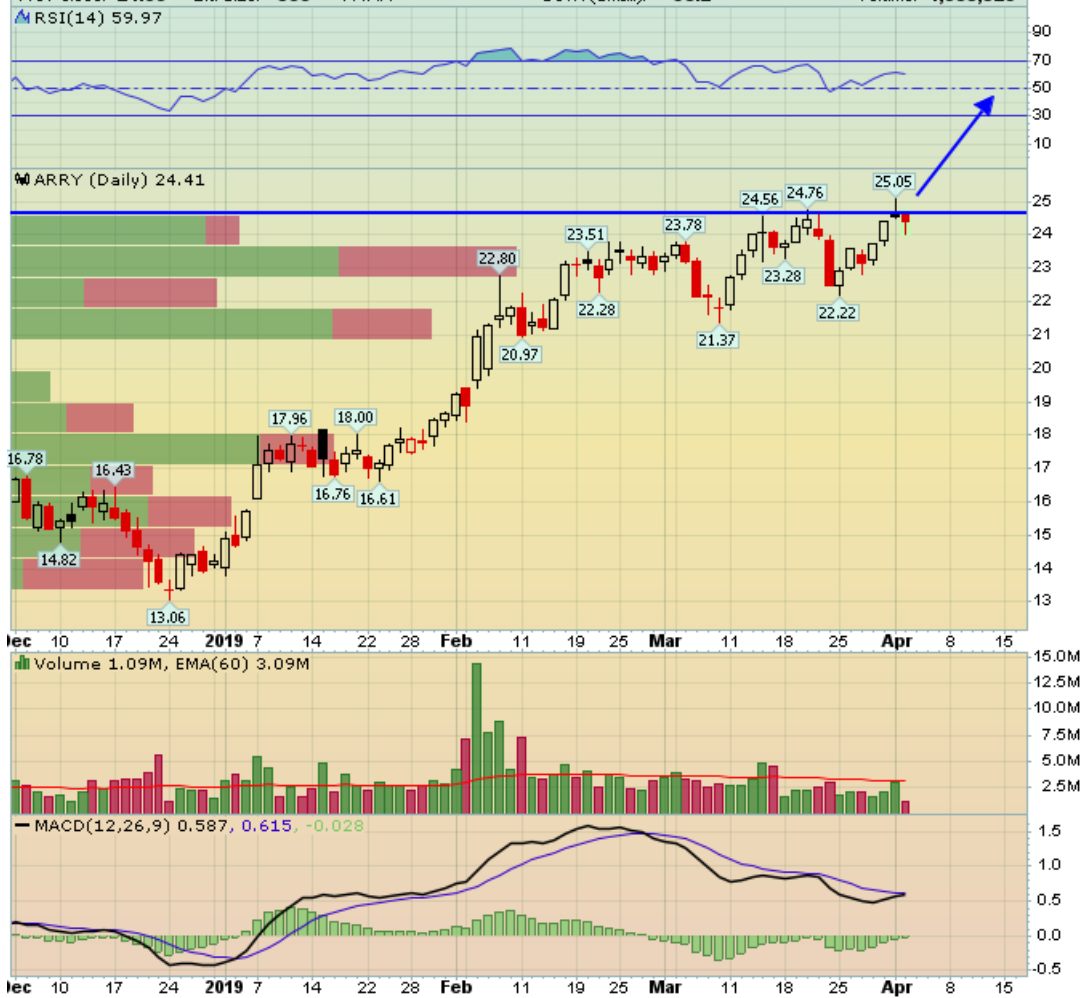
Health Care / Biotechnology Tuesday 2-Apr-2019 1:22 pm

Open: **24.69** Ask: **24.42** P/E: **-45.83** Options: **yes** ▼ **-0.77%**

High: **24.70** Ask Size: **100** EPS: **-0.53** Annual Dividend: **N/A** Chg: **-0.19**

Low: **24.04** Bid: **24.41** Last Size: **100 shrs** Yield: **N/A** Last: **24.41**

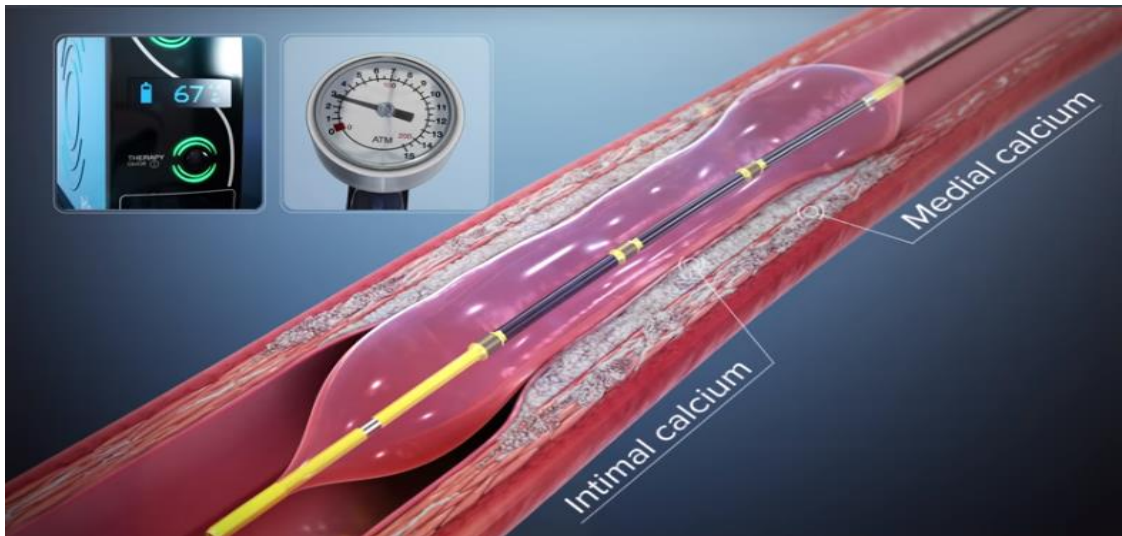
Prev Close: **24.60** Bid Size: **500** VWAP: SCTR (Small): **98.2** Volume: **1,085,523**



A Simple Solution for Large Problem

Trade – Buy SWAV common stock for \$32.25 or less.

I wanted to make **Shockwave Medical (SWAV)** a Top Pick given its promising future, but the difficulty comes with lack of enough earnings momentum since recent IPO to push it as Top Pick for Q2. I believe long term growth will be strong given that SWAV offers an easy to use and safer platform technology addressing over \$5 billion in market opportunity. Before you read further, highly suggest watching 3-min video [HERE](#).



Shockwave is a vascular-focused medical device company that offers a novel medical solution for treating calcified artery disease and calcium build up in the intimal (inner layer inside the artery) and medial (middle layer of the artery) layers of the arteries through the combination of traditional balloon angioplasty and lithotripsy. SWAV sells an elegant, easy to use balloon-based technology that uses sound waves to help interventional cardiologists & radiologists break up calcium in the arteries of the leg and heart. Calcium is a significant problem for doctors treating diseased arteries as it makes access and treatment of plaque materially more challenging. The Shockwave system uses a process called lithotripsy, which is a medical procedure involving the physical destruction of hardened masses such as kidney stones, bezoars or gall stones. Typically, lithotripsy is performed using ultrasound shockwaves where a mass can be broken into small particles and removed from the body. Shockwave has developed a way to miniaturize lithotripsy emitters for use in targeted vascular lithotripsy of calcium filled arteries (arterial disease). The Shockwave system is made up of a generator, which is portable and rechargeable with no external



connections, quick setup and no settings. The system also has a cable, which connects to the catheter and has a remote to begin the lithotripsy process. Finally, there are individual catheters sized and designed for different arteries, including the M5 catheter, for above the knee procedures, the S4 catheter for below the knee procedures and the C2 catheter for coronary procedures.

CAD / PAD Markets - SWAV promise relies in being able to address many health issues that do not currently have adequate treatment. Driven by aging population and increased diabetes rates, there are 8 million Americans (and 200 million worldwide) that suffer from Peripheral Artery Disease (PAD), which is narrowing or blockage of vessels that carry blood from the heart. The opposite, or Coronary Artery Disease (CAD) which is narrowing of vessels that supply blood to the heart is even worse with 16 million Americans affected. CAD market is particularly under-penetrated due to difficulty of use of available devices.

Femoropopliteal is \$700M opportunity globally with 325,000 cases identified each year. However, general lack of good efficacy of existing devices makes this hard market to address by competition. **Common Femoral** is another \$600M opportunity with 300,000 cases each year. Then lastly **Infrapopliteal (below-the-knee)** is another \$400M opportunity with 180,000 cases globally each year. In all of these markets, the biggest competitor is **Cardiovascular Systems (CSII)** which we have also written about in the past with bullish view.

We believe stock will start to respond positively during 2019 upon achieving several key catalysts and milestones as explained below.

Clinical Data - The company has completed 5 clinical studies with a total of 179 patients in 22 countries for peripheral, coronary and cardiac valve diseases. The company is also conducting 5 other studies with 2,000 patients in 190 centers globally. Previous Disrupt PAD 1 and 2 studies showed 100% effectiveness without any use of stent implants. There were no vascular complications and the dissection rate was only 1.7%.

- S4 below-the-knee product should come out by year end 2019
- PAD 3 trial should complete in Q4 2019 which would allow SWAV to qualify for Medicare reimbursement
- TAVL feasibility began in Q1 for patients with symptomatic / severe aortic stenosis and we believe each quarter we will get an update of this study at 3, 6 and 9 month mark
- Disrupt CAD 3 study also began in Q1 but this clinical data is not expected until 2020

The most significant catalyst in 2019 will be S4 Below-the-knee commercial launch in late 2019. This is already approved by the FDA but company voluntarily extended launch post FDA approval to address a number of issues with S4 balloon (related to holes in the balloon).

2018 revenues were only \$12.2M, expected to rise to \$30.1M in 2019, then \$66.3M in 2020 followed by \$118.2M in 2021. Essentially, street is forecasting revenues to double each year for next 3 years. I believe growth could be even better with S4 launch in 2019 and along with it improved reimbursement. Please note below-the-knee and coronary procedures receive 2x the reimbursement of above-the-knee.

SWAV ShockWave Medical Inc. Nasdaq GS

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Health Care / Medical Equipment Tuesday 2-Apr-2019 3:08 pm
 Open: **33.46** Ask: **32.75** P/E: Options: **no**
 High: **33.81** Ask Size: **500** EPS: Annual Dividend: **N/A** Chg: **-3.13%**
 Low: **31.51** Bid: **31.99** Last Size: **100 shrs** Yield: **N/A** Last: **32.48**
 Prev Close: **33.53** Bid Size: **200** VWAP: SCTR: Volume: **131,022**

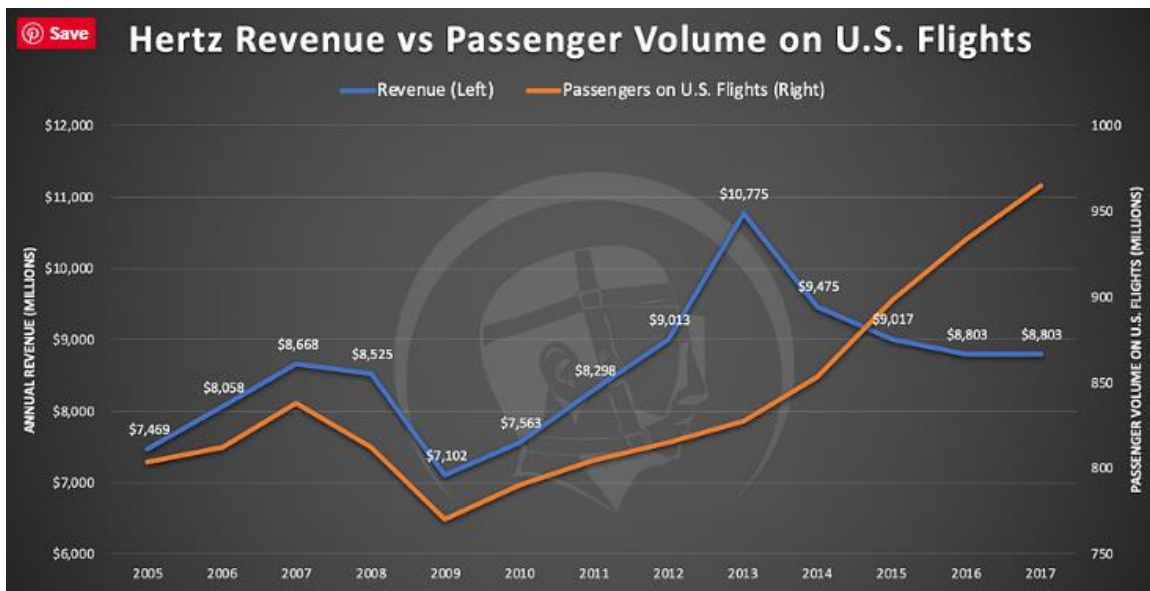


One Recession Away From Bankruptcy

Trade – Buy HTZ October 17 Puts for \$2.75 debit or less.

Hertz (HTZ) has some very heavy bearish bets positioned in option chain particularly in large open interest in January 15 and 12.5 puts. The only reason why stock has held up in high teens is because of strong used car pricing as seen in Manheim Index but which benefited 2018 tremendously but we believe that used car pricing environment is topping in 1H19 and will weaken in 2H19 putting a dent on secondary sales by HTZ. We also believe the hidden danger in HTZ has to do with excessive leverage on balance sheet resulting in Operating Cash Flows now unable to cover minimum interest payments.

In 2019, lease maturities are set to peak at 4.1 million (a 300k increase versus 2018). With this, we expect pressure to re-exert itself on used vehicle values leading to higher depreciation costs for CAR and HTZ. This is sharp contrast from -16% decline in HTZ depreciation expense in 2018 which we believe gave the company some breathing room but won't happen again. Despite high industry concentration (HHI of 40%) with the top three companies holding 95% market share in the US, we believe the rental car industry continues to lack pricing power. Public operators HTZ and CAR have seen domestic revenue per day growth struggle to keep pace with Enterprise. We believe that ride-sharing is placing an incremental burden in the on-airport market and has helped drive some of the volume underperformance at public Rental Car operators; specifically, HTZ/CAR US volume grew +2.7%/+1.3% in 2016, while enplanements were up 3.2% in 2016. Similarly, in 2017 HTZ/CAR US volumes were mixed (-1.3%/+1.4%, respectively) versus enplanements +3%; this comes after several years of outperformance post the downturn. 2018 was even worst for group. Put it differently, while airport traffic has remained robust, trend for rental cars have worsened and reason is simply stronger consumer adoption of ride-sharing services and we believe this trend only get worse over time. This is illustrated in chart below.



Goldman Sachs in its research note on February 11th pointed out that 2019 will be a peak of off-lease volumes which will flood the market with used cars, which will crush Manheim used car values. Negative for both used car traditional dealerships as well as rental car companies.

Exhibit 15: 2019 will be a peak year of off-lease volumes...
off-lease sales and off-lease volume in mns

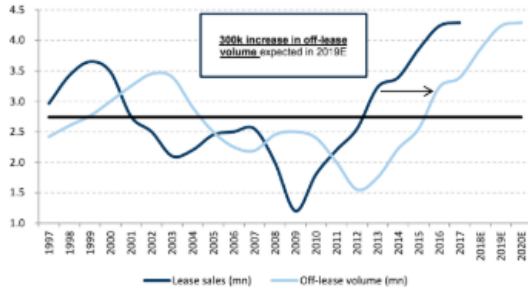
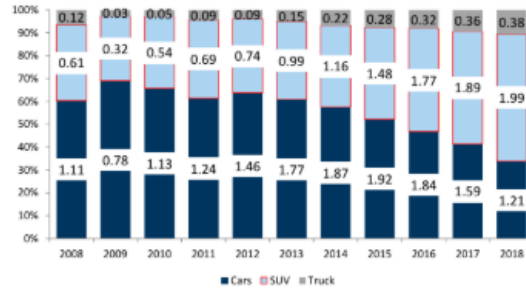
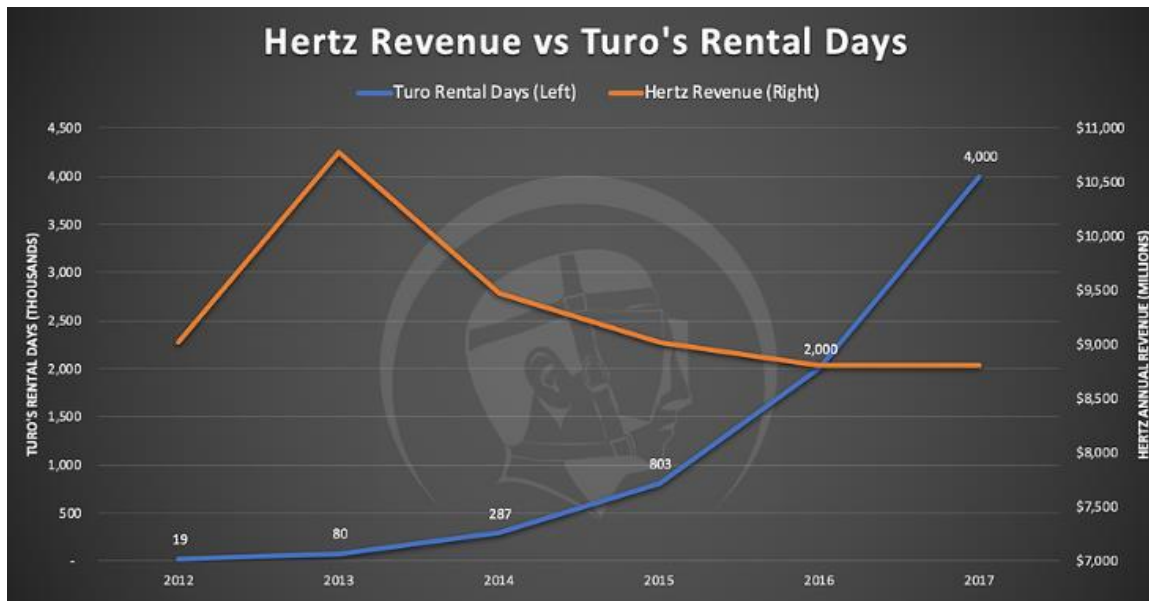


Exhibit 16: ...where mix has been shifting to light trucks
Vehicles coming off lease (mns)



It's a well-documented fact that Uber and Lyft have put significant pressure on Hertz's ability to generate revenue. However, one could argue that rental cars are still more convenient for longer-term use (e.g., multi-day business trips, family vacations, etc). Well, now we have competitor entering that space as well including Turo Rental, HyreCar, and several other startups. The OEM themselves (Ford and GM) are getting into "car subscription" services with various pilot programs in place such as Maven.



Another key pillar of bearish thesis in Hertz has been crushing debt. For past three years company operating income has not been able to cover minimum interest expense. In 2018 company generated \$442M in operating income and paid \$732M in interest expense. This was 3rd consecutive year of OI unable to cover interest expense. For context, last time this happened was in 2008 and 2009 great recession. HTZ has \$16.2 billion debt. Any further market share loss to ridesharing or decline in Manheim used car pricing will materially damage the company.

HTZ Hertz Global Holdings, Inc. NYSE

© StockCharts.com

Consumer Discretionary / Travel & Tourism		Options: yes		Tuesday 2-Apr-2019
Open: 17.49	Ask:	P/E: -6.45	Annual Dividend: N/A	▲ +0.40%
High: 17.85	Ask Size:	EPS: -2.70	Yield: N/A	Chg: +0.07
Low: 17.30	Bid:	Last Size:	SCTR (Small): 67.9	Last: 17.44
Prev Close: 17.37	Bid Size:	VWAP:		Volume: 4,260,950

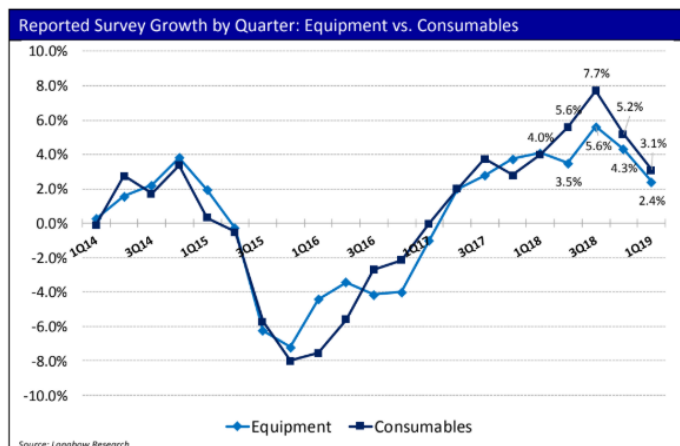


Derivative of Slowing Auto Sales

Trade – Buy LECO September 85 Puts for \$4.50 debit or less.

Lincoln Electric (LECO) is a manufacturer of welding, cutting and brazing products. Latest welding checks show sharply deteriorating trend driven by slowing auto sales and falling global PMIs. Longbow Research with channel checks show Q1 welding equipment sales increased +2.4% y/y, below the +4.3% reported during Q4. Meanwhile, consumable sales increased +3.1% YoY, -210bp behind the +5.2% level reported during 4Q checks. While softening into the low single-digit range, 1Q sales through mid-March generally matched expectations with 93% of contacts meeting or exceeding expectations for growth. However, end demand to date lacks the coordinated growth that characterized 2018. Key markets driving growth include construction, heavy equipment OEMs, and marine; while automotive (~18% of LECO sales) and mining markets continue to lag.

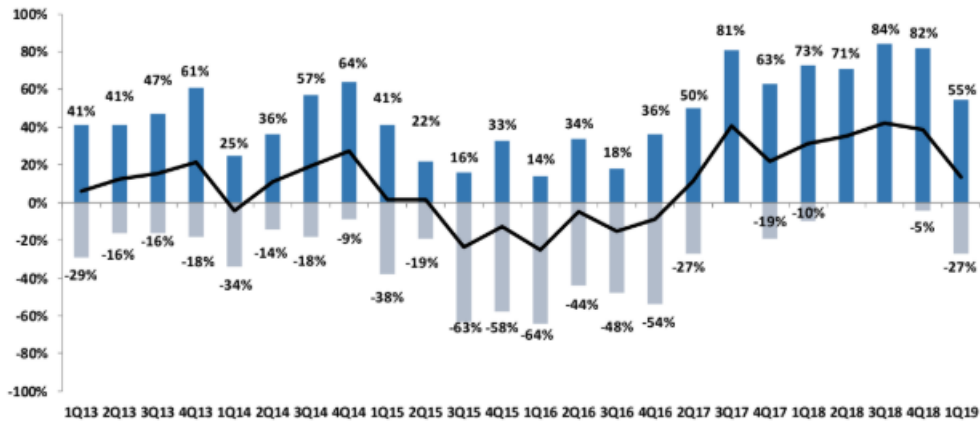
The American welding demand was up +6.4% in 3Q18, decelerated to +5.9% in 4Q18 and expected to decelerate to +5.1% in 1Q19 based on consensus view before re-accelerating to +6% in 2H19. However, with consumable channel checks coming in very weak at only +3.1%, there is risk that forward EPS estimates will get cut.



Looking at end markets, unsurprisingly, **Automotive** was the weakest end market on average among contacts. However, solid automation demand remains a partial offset with tier II and III suppliers (OEMs fairly saturated at this point). Lower automotive volumes present an ongoing headwind for LECO (Transport/Auto ~18% of LECO sales). **Mining** was the other main end market highlighted as facing lower demand during CY1Q. **Oil & Gas** related welding demand remains robust within the Permian Basin and, to a lesser extent, the Bakken, with particularly strong demand from the upstream and midstream sectors. Outside of these regions, activity is spottier, while energy projects in Canada continue to face headwinds. Net-net, energy demand remains a positive driver for the welding market. It should also be noted that of three companies that are affected by welding business (LECO, CFX, ITW) LECO has the highest exposure to international markets at 43% outside of North America. There is 76% correlation between these weak channel checks and actual sales.

Longbow Research concluded on March 20th: ***“We see further incremental downside risk to outlooks, with contacts assuming acceleration during CY2H.”***

Welding Consumables – Current Quarter Demand Sentiment



LECO Lincoln Electric Holdings, Inc. Nasdaq GS

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Industrial / Industrial Machinery

Tuesday 2-Apr-2019

Open: 86.21	Ask:	P/E: 19.83	Options: yes	▲ +0.86%
High: 87.16	Ask Size:	EPS: 4.38	Annual Dividend: 1.72	Chg: +0.74
Low: 85.27	Bid:	Last Size: 1.98%	Yield: 1.98%	Last: 86.78
Prev Close: 86.04	Bid Size:	VWAP:	SCTR (Mid): 42.5	Volume: 361,436

▲ RSI(14) 59.38



Simoa Bead & Planar

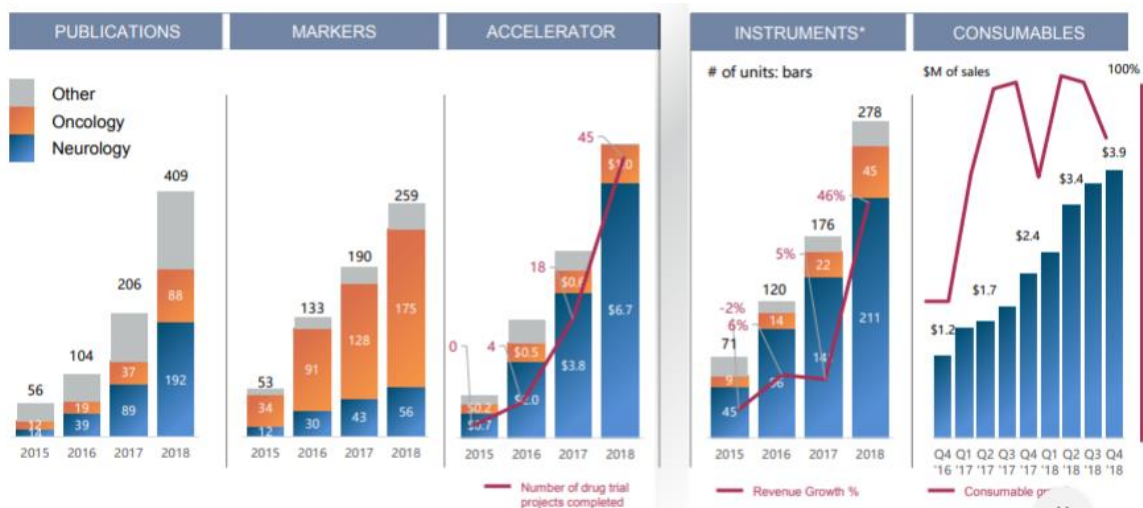
Trade – Buy QTRX common stock for \$24.35 or less.

Quanterix (QTRX) has been appearing on radar screen for last two quarters with exceptionally strong growth rates and still very much remain off the radar. The \$546 million small cap develops ultra-sensitive digital immunoassay platform and tools for life science research and diagnostics. Company has two leading products developed on Simoa technology:

Simoa Bead - Quanterix' digital biomarker detection technology, Simoa, is changing the way in which the biology of health and disease is studied by giving researchers the ability to examine critical proteins and nucleic acids, at ultra low - even baseline - levels, in most common sample types. **Simoa Planar** - An incredibly simple, flexible, robust, and ultra-sensitive immunoassay platform for measuring up to 10-plex biomarkers. The unique capabilities of our planar array platform are designed specifically to address many of today's unmet needs in immuno-oncology and other research areas.

Company posted a fantastic quarter on March 8th that caught my attention. **Q4 revenues increased by +65% YoY sharply beating street expectations of +40% YoY.** For the full year, QTRX grew its revenues +60% and expanded gross margins 260 bps (both excluding one-time collaboration revenue). **Looking ahead, management is targeting long-term revenue CAGR of +40% and gross margin expansion of +300 bps in 2019.** More importantly, Q4 highlighted the brisk of strong pace at which Simoa technology is gaining traction and it is indicative of future market potential. Few highlights:

- The near doubling of peer-reviewed publications in 2018 to reach total count 409
- Simoa technology utilization in at least 50 clinical trials in neurology and oncology
- Traction gaining for QTRX's CLIA lab in 2019 with >800 trials performed by customers
- Interest from major reference labs using QTRX platforms



Upcoming Catalysts – Management gave a fantastic presentation with earnings call on March 7th and highlighted robust product innovation as well as several launches and upgrades coming up that should continue to boost growth outlook:


- Launch of SP-X platform with 10-plex oncology assay in 1H19 (leveraging the Aushon planar technology platform)
- HD-X launch in 4Q19
- Menu expansion to 259 biomarkers in 2018 from 190 in 2017
- Plans to launch an instrument platform with 100x greater sensitivity by 2021 allowing detection in blood of protein post-translational modifications

QTRX has defined a technology that's got exquisite sensitivity on measuring protein biomarkers and blood and that sensitivity is approximately 1000-fold greater than the traditional ELISA technology that already was more sensitive than many other technologies. Company has been around only since 2013 since the technology was launched. But a few years ago, they decided to go after research first where there was no regulatory reimbursement risk. As a result, they went from zero revenues to \$38 million in 2018. So that's a very rapid ramp. And about 40% of that is consumables, which is high margin business and has great visibility with long term contracts with key customers, thus creating a moat around business.

Management highlighted in earnings call that the opportunity in diagnostics is about 10 times the size of research, and they are stepping up efforts to start reaching for business in diagnostics with key customers. Full management presentation can be found [HERE](#).

2019 Targets & Growth Catalysts

Quanterix
The Science of Precision Health

<div style="background-color: #003366; color: white; border-radius: 15px; padding: 10px; text-align: center;"> LSR Neurology </div> <p style="font-size: 0.8em; color: #003366;">Continue high double digit growth w/ high utilization Only <10% penetrated</p>	<div style="background-color: #4a7ebb; color: white; border-radius: 15px; padding: 10px; text-align: center;"> LSR Oncology </div> <p style="font-size: 0.8em; color: white;">3x larger than Neuro w/ minimal penetration today</p>	<div style="background-color: #00a0c0; color: white; border-radius: 15px; padding: 10px; text-align: center;"> Enter diagnostics: </div> <ol style="list-style-type: none"> 1. 50 Drug Trials (neuro/onco) 2. LDT partner (explore direct) 3. Explore IVD partnerships 4. Sponsor PPH 	<div style="background-color: #00a0c0; color: white; border-radius: 15px; padding: 10px; text-align: center;"> Financials: </div> <p style="font-size: 0.8em; color: white;">Long-term growth: 40% Utilization: Drive incremental utilization across all platforms Gross Margin: 300 bps Instrument: 25% growth</p>	
<ul style="list-style-type: none"> • Expand SR-X / HD1 Menu Add 25 Assays • Launch HD-X 4Q • Scale globally, IT and facilities. Add 40 HC / ½ commercial. 	<ul style="list-style-type: none"> • Launch SP-X 1H • Launch CorPlex Assays – 10 plex 	<ul style="list-style-type: none"> • 100x more sensitivity by 2021 YE • Lead next frontier of medicine; Protein Translational Modifications 		

QTRX Quanterix Corp. Nasdaq GS

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Health Care / Biotechnology

Tuesday 2-Apr-2019

Open: 23.27	Ask:	P/E: -17.29	Options: no	Chg: +4.06%
High: 24.55	Ask Size:	EPS: -1.41	Annual Dividend: N/A	Chg: +0.95
Low: 22.98	Bid:	Last Size:	Yield: N/A	Last: 24.35
Prev Close: 23.40	Bid Size:	VWAP:	SCTR:	Volume: 72,208

▲ RSI(14) 52.72



Large Institutional Option Positions

At Jaguar we track unusual institutional size option activities and provide that info to clients in real time under Jaguar Activity Tracker with links to research reports and charts. Click [HERE](#) to see how large option traders are positioned.

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Your privacy is very important to us. Accordingly, we have developed this Policy in order for you to understand how we collect, use, communicate and disclose and make use of personal information. The following outlines our privacy policy.

Before or at the time of collecting personal information, we will identify the purposes for which information is being collected. We will collect and use personal information solely with the objective of fulfilling those purposes specified by us and for other compatible purposes, unless we obtain the consent of the individual concerned or as required by law. We will only retain personal information as long as necessary for the fulfillment of those purposes. We will collect personal information by lawful and fair means and, where appropriate, with the knowledge or consent of the individual concerned. Personal data should be relevant to the purposes for which it is to be used, and, to the extent necessary for those purposes, should be accurate, complete, and up-to-date. We will protect personal information by reasonable security safeguards against loss or theft, as well as unauthorized access, disclosure, copying, use or modification. We will make readily available to customers information about our policies and practices relating to the management of personal information.

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