

September 14, 2019

In this strategy briefing...

We just completed a two-day roadshow meeting with our institutional investor clients in Boston/ Providence. The good news is that we found multiple instances where our fundamental equity long-only clients widened their YTD relative performance in the month of August (they bought the dip!). But a few issues seemed to keep popping up. – *Strategy* – [Page 3](#)

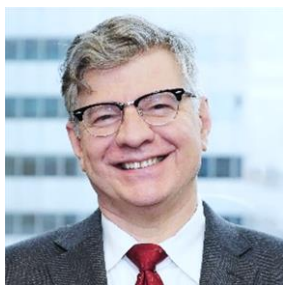
You have to be impressed by the persuasive power of price movement on sentiment and headlines. I'm obviously just a bit biased, but the sudden reversal from bearish to bullish headlines only reinforces the importance of including technical analysis in one's investment process. – *Technical* – [Page 8](#)

There were some small positive signs this week that the US and China might be moving towards some progress in the current trade war battles. The Chinese requested that the Trump Administration delay for two weeks, purportedly because of a national holiday, the implementation of the next round of tariffs. – *Policy* – [Page 10](#)

FS Insight Investment Views

Near Term View:	Falling 10-yr, weakening USD, & higher odds of Sep. rate cut = very bullish. Stick with trades working in '19, especially asset-light stocks
YE Target:	3,125 (YE P/E 17x · 2020E EPS \$184)
Style:	Cyclical, US better than RoW
Focus Shots Stock Ideas:	GOOG, AAPL, NKE, AMGN, BKNG, FB, PG, ROK, TSLA, AMZN, AXP, BF/B, BIIB, CBRE, CSCO, EMR, GRMN, KSS, MNST, NVDA, PM, PSX, PYPL, QCOM, TGT
Additions:	BF/B, BIIB
Deletions:	XLNX, DE

The Wall Street Debrief



Vito J. Racanelli
Senior Editor & Marketing Intelligence Analyst
Formerly a Senior Writer at Barron's, where he covered stocks, bonds, and financial markets

[@WSIntelligencer](#)

A Reversal of Fortune: Value, Small Caps Stocks Catch a Bid

A funny thing happened in the U.S. stock market last week. I don't want to get Biblical on you but it seems—for a while anyway—the last were first and the first were last. I don't know if the violent sector, market cap and style rotation seen last week will last, but there could be some larger and longer significance to these changes. I'll get to that in moment.

Not only did the U.S. stock market have a good week, up roughly 1%, but it was what went up for a change that matters potentially: the orphans, stocks that nobody wanted. The Standard & Poor's 500 index closed at 3007. US Treasuries were crushed last week, down nearly 6%. Ouch. Monday saw Mr. Market turn on a dime and embrace things that in some cases haven't been performing for a very long time.

First, Value stocks. Remember those? No? Underperformers for the last decade. Well, they jumped, finishing up about 2.6% last week while growth stocks, everybody's everything, fell slightly. Momentum and tech stocks didn't do so well, either.

Second, small caps, an underperformer this year, did the Cinderella thing and caught a bid. The Russell 2000 index of small caps rose some 5%. Indeed, according to data from Bespoke Investment Group, from Monday to Wednesday small-cap growth outperformed large-cap growth by an amount that topped 99.1% of prior occurrences.

Most extreme was the small-cap value relative to large-cap growth, the second largest 3-day move since the financial crisis and one of the largest moves since the data for these two series since 1995.

What arose surprisingly was that assets that nobody wanted before Monday are suddenly valuable. Will it last and what does this mean? Frankly, I'm not 100% certain but I still look for the bull market to rally on through the end of the year, as noted in

Analysis not opinions

these pages week after week. One week doesn't necessarily make a trend. But there are two ways to look at this violent change in investor attitude.

The glass-is-half-empty folks, otherwise known as the bears, claim investor are buying value stocks and small caps because they have less to fall in a bear market, since they've done so poorly. Me? I remain a half-full guy. I think investors are beginning to wise up to the idea that the Federal Reserve Board is going to keep cutting rates, perhaps not as quickly as President Donald Trump wants but still good enough for stocks and profits. (For more see page 6.) And last week the European Central Bank cut its key deposit rate and said it would begin €20 billion (\$22billion) a month of asset purchases, or quantitative easing, starting Nov. 1.

The U.S. and China will again begin talks to try to end or mitigate the ongoing trade war. There were a couple of tension easing moves last week, too. Investors are buying value stocks because they are the cheapest and stand to gain the most in a new leg of the rally. Same goes for small caps. And cyclical outperformed the defensives last week. For more on this see page 3.

Bespoke also had another interesting stat. The SPX has been stuck around 3000 for 12 months, even as it hit new highs. A bad sign? Bespoke notes that SPX's 52-week 200-day moving average has been stuck inside a 3% band for just the seventh time in the index's history. In the six prior periods, forward returns were pretty consistently to the upside.

One year later, for example, the S&P 500 had an average gain of 16.0% (median: 20.2%) with gains 83% of the time. Over the next two years, the S&P 500 saw an average gain of 28.2% (median: 23.9%) with positive returns in all five periods. These periods of consolidation look more like pauses to refresh than a prelude to a rollover, says Bespoke.

Here's an interesting tidbit from Kent Engelke, chief economic strategist, Capitol Securities: Value has greatly lagged growth/momentum for at least 10 years and August was the worst month for value in at least 20 years. Value/small cap is synonymous to active management. Momentum is synonymous to passive management. It is a well know axiom on Wall Street that once everyone is doing the same thing, a significant transition could be immediately at hand, Engelke wrote.

Perhaps the correct question to ask is will this week be significant, perhaps viewed as the high-level mark of passive investing. Only time will answer this question, he adds.

Quote of the Week: Bloomberg reported that Morningstar data shows passive assets under management rose to \$4.27 trillion, moving ahead of the \$4.246 trillion managed by active managers. Historic.

Looking Questions? Contact Vito J. Racanelli at vito.racanelli@fsinsight.com or 212 293 7137. Or go to www.fsinsight.com.



Vito Racanelli, Sr. Editor & Marketing Intelligence Analyst



Thomas J. Lee, CFA
 Co-Founder & Head of Research
 Previously Chief Equity Strategist at J.P. Morgan from 2007 to 2014, top ranked by Institutional Investor every year since 1998.

[@Fundstrat](#)

Fundamental equity managers want to know...what's up with these violent rotations?

I just completed a two-day roadshow meeting with our institutional investor clients in Boston/ Providence. The good news is that I found multiple instances where my fundamental equity long-only clients widened their YTD relative performance in the month of August (they bought the dip!). But a few issues seemed to keep popping up.

Foremost on their minds, at the moment, is a fundamental explanation for the violent rotations seen in the past few days, meaning significant shifts in (i) small-caps up > 1% 3 days in a row after selling off 7% in August; (ii) rotation out of secular growth into cyclical stocks (cloud vs semis); (iii) reversal of high P/E secular growers vs low P/E value within sectors; (iv) surge in graveyard/zombie sectors plus the macro reversals of: (i) interest rate increase and (ii) gold sell-offs. Anecdotes include: "it seems like all sector and factor bets are now just a function of interest rate moves" and another "suddenly, the market changed its mind about secular growth at any price."

Particularly given there has been little incremental macro developments to justify this. And in fact, many have cited work from other strategists that ISM and LEIs should continue to weaken—the most common data point being the ratio of new orders/inventory is weakening and that points to further weakness. Thus, why do seemingly "offensive" trades like cyclicals/inflation/small-caps suddenly have some life?

Many also pointed out that the Street is much more cautious now than it was a few months ago. Granted, this should not be surprising given ISM fell below 50, US yield curve inverted and talk of negative rates is not "happy talk" but many PMs also noted that Street strategists are now arguing for a persistence of PMIs to stay below 50 for some time. Take a step back—if the Street is cautious, and markets are rising, which one of these is "signal" and should be more reliable?

As I have written before, data shows that the long-term yield curve does a pretty good job of predicting ISM. The long-term yield curve (10M change of 30Y 10Y yield spread) signaled 16M ago a downturn in ISM PMI was coming (see chart below). And it currently suggests the ISM will fall towards 50 by 3Q19 but then soar to new highs in 2020.

Figure: Long-term yield curve 10M change (advanced 16-months) and ISM Manufacturing Past 6 years

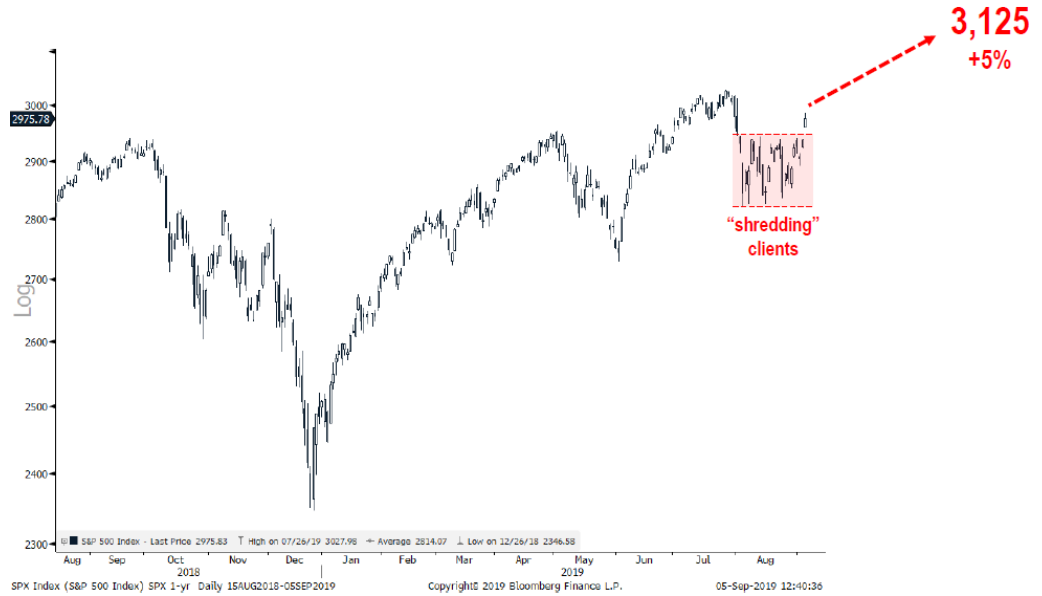


Source: FS Insight, Bloomberg

This move upwards, in my view, is explaining the outperformance of Cyclical stocks.

Given the fact the sell-side remains quite bearish and consensus broadly got bearish in August (for valid but transitory reasons), I think much of the violent rotation is an “unwind” of this bearish positioning.

Figure: S&P 500 looks like it remains in a solid bullish trend YTD



Source: FS Insight, Bloomberg

While some skeptics argue this is a mean reversion trade that will not last, I would argue the opposite. If the S&P 500 manages to make new highs (>3,025), this is a repudiation of the bearish thesis, exactly at a time when the bears thought their thesis was about to payoff big.

Like the wide world of sports, this is “defeat from the jaws of victory.” In other words, this would put greater credence to my thesis at start of 2019 that a “new bull market” is starting, similar to 2009.

What could go wrong? Macro risks are elevated. The biggest risk is an escalation of the trade war and White House overall.

Bottom line: I see a rally in 2H19, taking the S&P 500 above 3,125, which is 5% higher than current levels (see chart above).

Thomas Lee, Co-Founder & Head of Research

Figure: Comparative matrix of risk/reward drivers in 2019
Per FS Insight

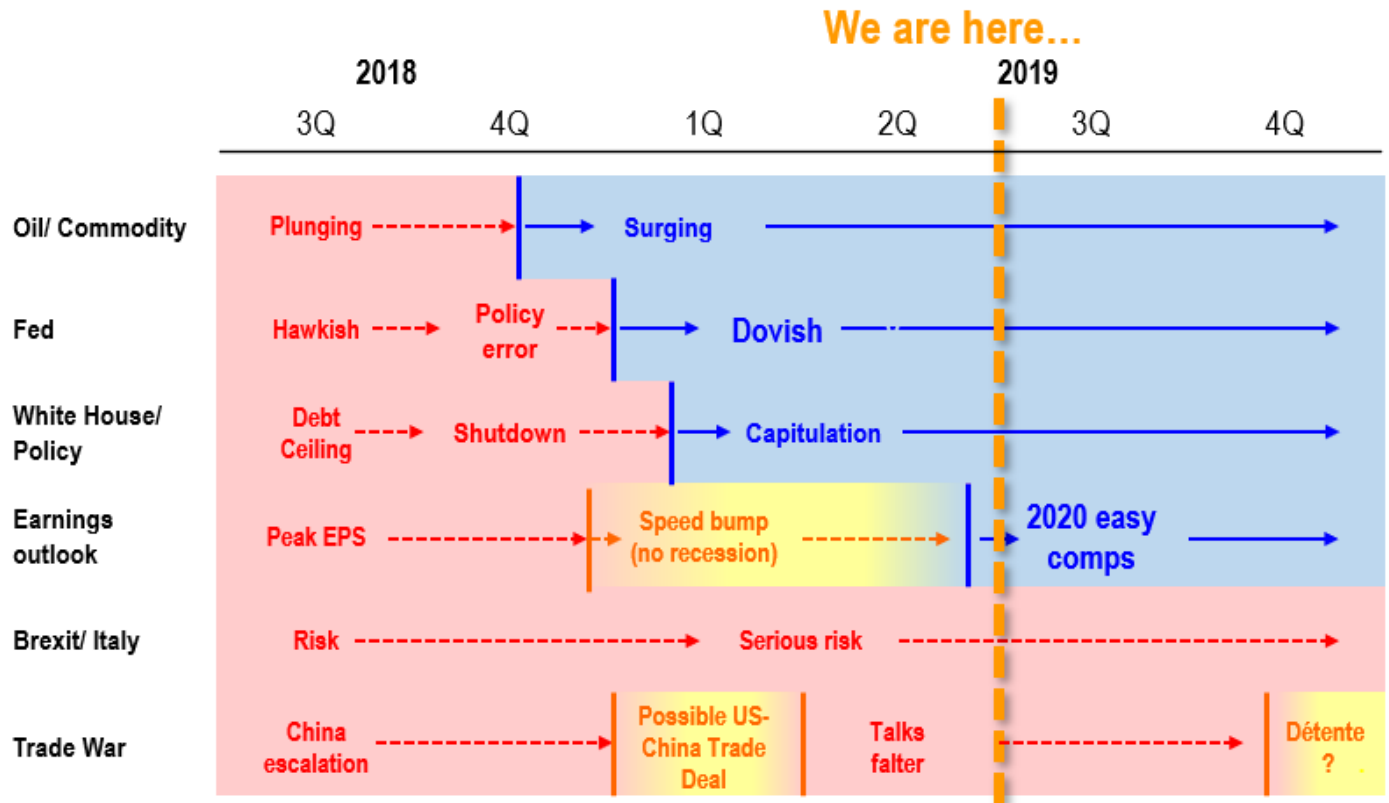


Figure: FS Insight Portfolio Strategy Summary - Relative to S&P 500

** Performance is calculated since strategy introduction, 1/10/2019

Themes	Execution of Strategy	Date added	Last 4 Months				1Q19* (since 1/10)	2Q19	3Q19	4Q19	2019** Portfolio Rel. Return
			May	Jun	Jul	Aug					
S&P 500	S&P 500 Price Index		(6.6%)	6.9%	1.3%	(1.8%)	9.2%	3.8%	1.2%	14.6%	
Tactical — 6-12M											
1 Value / Growth Tilt	Market re-discovered valuation risk. • Quality - Defensive • Growth - Quality	1/10/19	(1.0%)	(0.4%)	0.5%	(0.0%)	1.3%	(2.5%)	1.1%	(0.1%)	
2 Seasons the <u>NEW</u> Seasonality	Overweight groups with good seasons. CURRENT: Online & Electronics Retail, Healthcare Tech, Tech Hardware, Home Ent, Tobacco, Semis, Biotech	1/10/19	(4.8%)	1.7%	(2.2%)	2.2%	0.5%	(3.2%)	0.4%	(2.5%)	
3 FANG in odd years	FANG works in "odd" years. • FANG-plus.	1/10/19	(5.9%)	3.0%	0.8%	(2.2%)	1.0%	(4.0%)	(0.2%)	(3.8%)	
Thematic — 3-5 years											
4 Millennials prime years	Millennials driving >50% GDP growth. • Millennial transformation. • Millennial accelerates growth.	1/10/19	(0.1%)	(0.2%)	0.9%	(3.1%)	1.9%	(0.5%)	(2.0%)	(0.9%)	
5 Labor shortage— AI/ automation	World is short 78 million workers. • Automation/ AI suppliers. • Beneficiaries of Automation/ AI	1/10/19	(4.3%)	2.8%	(0.5%)	(0.5%)	1.6%	(1.8%)	(0.1%)	(0.5%)	
6 Higher inflation— Assets vs OpEx	Inflation trending higher long term. • Assets over OpEx.	1/10/19	0.5%	0.3%	0.7%	(1.3%)	2.8%	(0.7%)	(1.0%)	0.9%	

Source: FS Insight, Bloomberg



[@federalreserve](#)

Central Bankers Do the Limbo

It seems these days central banks are doing the interest rate Limbo dance.

The Limbo dance requires participants to pass under a low bar without falling over or dislodging the bar. Every round, the bar gets a little lower. Sounds a lot like central bankers trying to deftly navigate monetary policy with every round of easing leaving them less room to maneuver.

The ECB just this week lowered its deposit rate to -0.5% from -0.4% (it first "bent" below zero in 2014) and announced new bond purchases. This is going from loose to ultra-loose policy. What comes next if policy loosens further? Even lower rates, or possibly helicopter money.

Europe is troubled by falling wages and an absence of secular growth trends like the ones that have benefited the US (shale revolution, tech sector), which means ultra-loose monetary policy could be a lot of lubricant on a damaged engine.

And in his speech following the ECB meeting, Draghi stressed that Europe's governments must loosen their purse strings. He recognizes that an economy needs effective fiscal as well as monetary policy to function properly.

The Euro has continued to depreciate against the Dollar and fell again following the ECB's latest cut, which supports their exports but greatly displeases President Trump who tweeted Thursday: "European Central Bank, acting quickly, Cuts Rates 10 Basis Points. They are trying, and succeeding, in depreciating the Euro against the VERY strong Dollar, hurting U.S. exports.... And the Fed sits, and sits, and sits. They get paid to borrow money, while we are paying interest!"

What the President wishes to see is rates at "ZERO, or less", which the US has so far avoided following 2008. He believes bringing rates down further would allow the US to refinance its debt at lower rates, but the efficacy of this proposal is unclear. And of course, there is the ongoing concern of what tools the Fed will have left if rates are at zero (or less) and a recession hits.

The CME Fed Futures Market, previously predicting a 100% chance of another rate cut at the next FOMC meeting, now shows 80%. Powell is likely feeling pressure to keep up with his central banking peers across the pond in continuing to support markets through monetary easing. He's next to do the Limbo.

The 10-yr note yield ended Friday around 1.90% versus 1.56% the previous week.

Upcoming: 9/17-18 - FOMC meeting.

Focus Insight Stock List



Below we've highlighted the FocusS stocks that we recommend across at least two of our investment strategies for 2019.

Figure: Focus Insight Stock List
As of 09/13/19, source: FS Insight, Factset

Ticker	Company	DQM Rank	Mkt Cap (\$M)	YTD perf (relative to S&P 500)	P/E ('19E)	Value / Growth Tilt	Seasonality	FANG in odd years	Millennials	AI / Automation	Inflation	Qu1e	Strategy Count
1	GOOG	1325	\$858,405	(0.4%)	25.4x	•	•	•	•	•	•	•	5
2	AAPL	1158	988,849	18.8%	18.8x	•	•	•	•	•	•	•	4
3	NKE	73	137,087	(1.9%)	30.3x	•	•	•	•	•	•	•	4
4	AMGN	1053	117,320	(19.4%)	13.7x	•	•	•	•	•	•	•	3
5	BKNG	701	87,855	0.0%	20.2x	•	•	•	•	•	•	•	3
6	FB	676	533,516	22.7%	28.4x	•	•	•	•	•	•	•	3
7	PG	300	305,772	13.0%	27.0x	•	•	•	•	•	•	•	3
8	ROK	216	19,539	(9.0%)	19.4x	•	•	•	•	•	•	•	3
9	TSLA	1121	43,976	(46.2%)	N/A	•	•	•	•	•	•	•	3
10	AMZN	823	909,336	2.5%	77.4x	•	•	•	•	•	•	•	2
11	AXP	696	98,806	5.0%	14.9x	•	•	•	•	•	•	•	2
12	BF/B	733	30,196	14.5%	35.7x	•	•	•	•	•	•	•	2
13	BIIB	96	43,679	(41.2%)	7.3x	•	•	•	•	•	•	•	2
14	CBRE	2596	18,159	14.9%	14.4x	•	•	•	•	•	•	•	2
15	CSCO	90	212,986	(4.1%)	16.2x	•	•	•	•	•	•	•	2
16	EMR	263	40,351	(10.1%)	18.0x	•	•	•	•	•	•	•	2
17	GRMN	412	16,216	14.8%	21.6x	•	•	•	•	•	•	•	2
18	KSS	184	8,426	(40.1%)	10.2x	•	•	•	•	•	•	•	2
19	MNST	247	32,243	0.3%	29.0x	•	•	•	•	•	•	•	2
20	NVDA	681	110,887	16.5%	34.1x	•	•	•	•	•	•	•	2
21	PM	52	113,701	(10.5%)	14.0x	•	•	•	•	•	•	•	2
22	PSX	541	46,065	(0.7%)	13.1x	•	•	•	•	•	•	•	2
23	PYPL	686	125,528	6.9%	33.9x	•	•	•	•	•	•	•	2
24	QCOM	209	95,508	18.1%	22.6x	•	•	•	•	•	•	•	2
25	TGT	208	55,226	43.6%	17.5x	•	•	•	•	•	•	•	2
Average (relative to S&P 500)		606	\$201,985	0.3%	23.5x								
Median (relative to S&P 500)		541	\$95,508	0.3%	19.8x								

Additions: BF/B, BIIB
Deletions: XLNX, DE

The Focus Portfolio overperformed the S&P 500 by 30 bps YTD.



Robert Sluymmer, CFA
 Head of Technical Analysis Strategy
 Former Managing Director leading RBC's U.S. Technical Research team with over 26 years of expertise in investment research and technical analysis.

[@rsluymmer](#)

Watch for Cyclical bottoming for sign of new up cycle

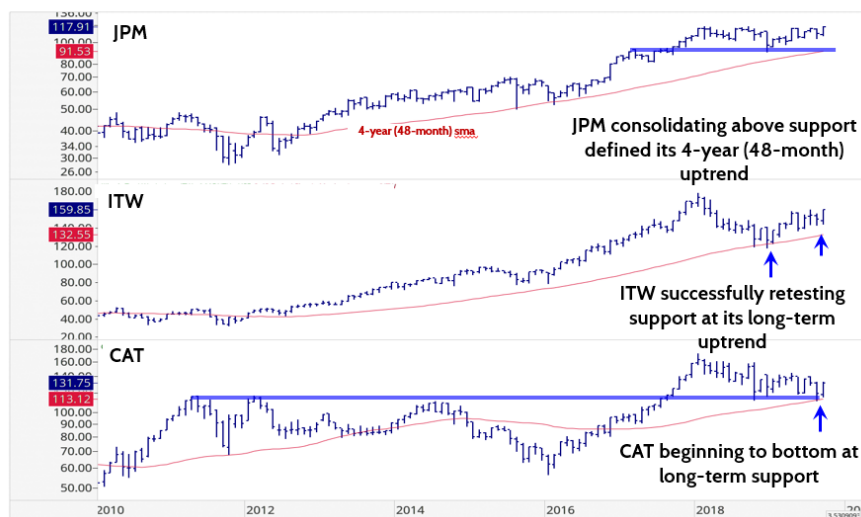
You have to be impressed by the persuasive power of price movement on sentiment and headlines. I'm obviously just a bit biased, but the sudden reversal from bearish to bullish headlines only reinforces the importance of including technical analysis in one's investment process. Why? Well, despite the short-term wiggles that have developed through the summer, the longer-term technical backdrop has served as a very helpful steadying perspective through all the headline noise.

Pull up a monthly chart of the S&P 500 on your favorite charting software for a longer-term perspective that steps back from the near-term wiggles that dominate headlines. What you'll see is a market index that has traded in a very narrow range following a major rebound from its secular uptrend using the 200-week (4-year) moving average. In fact, as I've regularly highlighted here, 2019 looks very similar to 2016 which was another period when equity markets stalled in the shadow of pending global recession... that never happened.

Now, of course, I can't state for sure there won't be a recession, but if you believe equities are reasonably good at discounting events 6-12 months ahead, then the S&P's chart pattern is hardly bearish, at least not yet. If you been reading this space regularly, my view remains unchanged expecting a Q4 upside acceleration by stocks into year-end and well into 2020-2021. Until I see otherwise, equity markets are tracking a very normal bullish 4-year cycle acceleration. For active traders, I'm expecting one more short-term pullback from current levels given daily momentum indicators are becoming overbought. Pending pullbacks are viewed as buying opportunities in anticipation of an upside surge through Q4.

The focus of the three stock charts this week reinforce the broader market cycle commentary above. JPM, ITW and JPM are good proxies for companies moving money globally, manufacture 'stuff', and digging and building respectively. These monthly chart profiles are broad consolidations to important technical support at their rising secular uptrends defined by 48-month (200-week) moving averages. If the economic backdrop is truly deteriorating, as many forecasters are warning, why are these global cyclicals merely in relatively shallow consolidations and beginning to bottom at major support.

Global cyclical barometers (JPM, ITW, CAT) bottoming at long-term support



Source: FS Insight, Bloomberg, Optuma

In the interest of keeping these charts easy to read, I didn't include monthly momentum indicators which are a useful way to view the longer-term cycles. If you were to add them to each of these charts, you would see they are all in the very early stages of a cycle upturn after peaking in late 2017/early 2018. If you are interested seeing these indicators added to these charts feel free to contact us and I'll forward them.

The bottom line is that these cyclical stocks appears to be have simply consolidated for 12-18 months after a strong bull cycle between 2016-2018 and are showing technical evidence of bottoming as part of a new up-cycle. As part of a diversified portfolio, I would encourage investors to add some cyclicity back to your portfolio particularly if the current positioning is heavily over-weighted in bond proxies.

Figure: Rob's Weekly Sector Review

Source: FS Insight, Factset

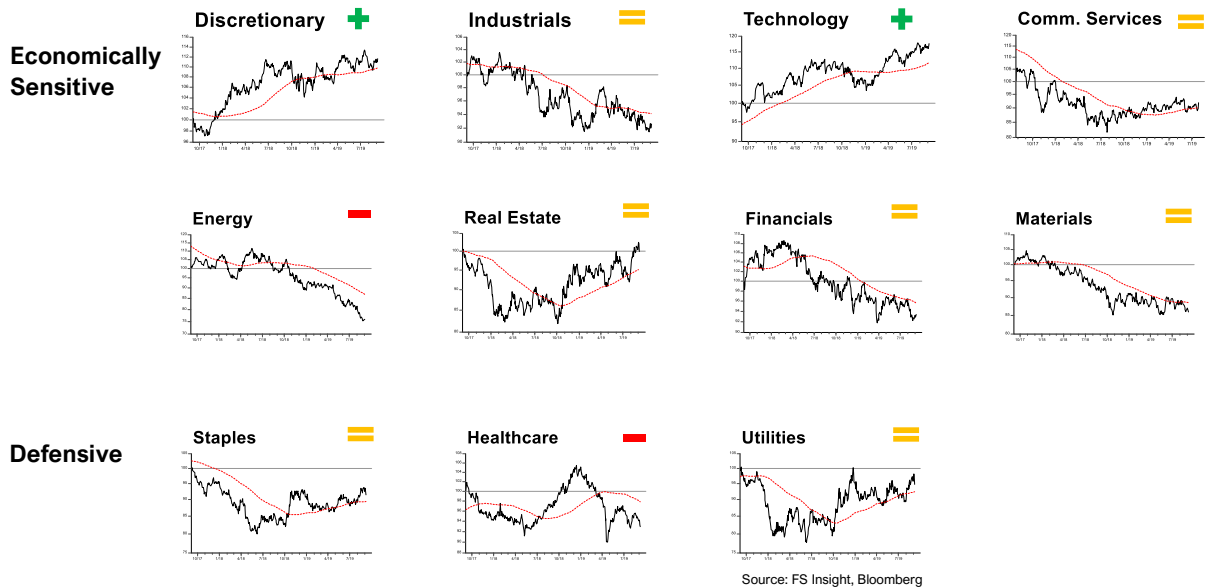
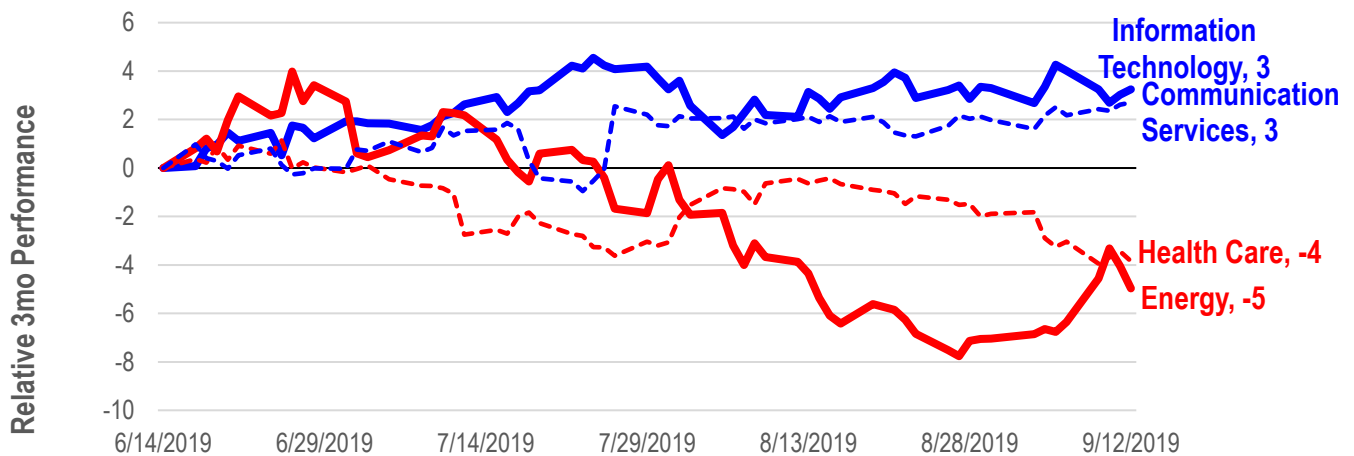


Figure: Best and worst performance sectors over past 3 months



Source: FS Insight, Bloomberg

Robert Sluymer

Robert Sluymer, Head of Technical Analysis Strategy



L. Thomas Block
Washington and Policy Strategist
Formerly Global Head of Government Relations at J.P. Morgan for 21 years, and previously served as Legislative Assistant and Chief of Staff in the House, and Legislative Staff Director in the Senate

 [@TomBlock_FS](https://twitter.com/TomBlock_FS)

China trade war sees some sunlight, eyes on the Fed, and federal budget deadline approaches

There were some small positive signs this week that the US and China might be moving towards some progress in the current trade war battles. The Chinese requested that the Trump Administration delay for two weeks, purportedly because of a national holiday, the implementation of the next round of tariffs.

The President agreed to delay the next round of scheduled increases from October 1 to October 15. This would give the two sides time to have a face to face meeting which is scheduled to happen in DC in early October. On Friday the Chinese responded to the two-week delay by agreeing not to impose their reciprocal tariff increases on October 15. Knowing that the farm vote is front and center in the President's thinking, the Chinese actions will apply to pork and soybean products.

While the Chinese action is a solid goodwill gesture it does not rollback the tariffs that they have already applied to both pork and soybeans. However, this does create a better atmosphere for some more meaningful action in October.

On the Fed front all attention will be on next week's FOMC meeting. While the President continues to jawbone the Fed to dramatically lower rates, the general expectation is that the Fed will lower the Funds rate by 25 bps. What will be closely watched is the Chairman's comments about future actions.

The inappropriate statement a few weeks ago by former NY Fed President Bill Dudley will give the President ammunition to attack any action or statement by the Fed that looks like a partisan posture aimed at the President. In my view Dudley weakened Chairman Powell's position.

The Congress only has two weeks to pass appropriations to fund the government past the October 1 beginning of the new fiscal year. While the House has acted on the major departments the Senate has become ensnared in the regular issues of the border wall and abortion. However, there seems to be a consensus across party lines that the Congress will pass a Continuing Resolution (CR) before midnight on September 30 to keep the government open.


While President Trump is always a wild card, and the CR won't deal with his desire to expand his authority to build the border wall, the general expectation is that he will sign a CR that doesn't have any other hot political issues and there will be no government shutdown.

L. Thomas Block, Washington and Policy Strategist


Figure: Top Trump Tweets



Donald J. Trump
The 45th President of United States of America
[@realDonaldTrump](#)

- 

Donald J. Trump @realDonaldTrump · Sep 11
The Federal Reserve should get our interest rates down to ZERO, or less, and we should then start to refinance our debt. INTEREST COST COULD BE BROUGHT WAY DOWN, while at the same time substantially lengthening the term. We have the great currency, power, and balance sheet.....

7.4K 14K 58K
- 

Donald J. Trump @realDonaldTrump · Sep 11
....The USA should always be paying the the lowest rate. No Inflation! It is only the naïveté of Jay Powell and the Federal Reserve that doesn't allow us to do what other countries are already doing. A once in a lifetime opportunity that we are missing because of "Boneheads."

4.9K 10.3K 44.6K

Economic Calendar

From 9/16/19 – 9/20/19

NEXT WEEK'S MAJOR U.S. ECONOMIC REPORTS & FED SPEAKERS			
TIME (ET)	REPORT	PERIOD	PREVIOUS
MONDAY, SEPT. 16			
8:30 AM	EMPIRE STATE INDEX	SEPT.	4.8
TUESDAY, SEPT. 17			
9:15 AM	INDUSTRIAL PRODUCTION	AUG.	-0.20%
9:15 AM	CAPACITY UTILIZATION	AUG.	77.50%
10:00 AM	HOME BUILDERS' INDEX	SEPT.	66
WEDNESDAY, SEPT. 18			
8:30 AM	HOUSING STARTS	AUG.	1.191MLN
8:30 AM	BUILDING PERMITS	AUG.	1.317MLN
2:00 PM	FED ANNOUNCEMENT		2-2.25%
2:30 PM	JEROME POWELL PRESS CONFERENCE		
THURSDAY, SEPT. 19			
8:30 AM	WEEKLY JOBLESS CLAIMS	14-SEP	N/A
8:30 AM	PHILLY FED SURVEY	SEPT.	16.8
8:30 AM	CURRENT ACCOUNT DEFICIT	Q2	2.5%/GDP
10:00 AM	EXISTING HOME SALES	AUG.	5.42MLN
10:00 AM	LEADING ECONOMIC INDICATORS	AUG.	0.50%
FRIDAY, SEPT. 20			
	NONE SCHEDULED		

Source: MarketWatch

Disclosures

This research is for the clients of FS Insight only. For additional information, please contact your sales representative or FS Insight at www.FSInsight.com.

Conflicts of Interest

This research contains the views, opinions and recommendations of FS Insights. At the time of publication of this report, FS Insight does not know of, or have reason to know of any material conflicts of interest.

General Disclosures

FS Insight is an independent research company and is not a registered investment advisor and is not acting as a broker dealer under any federal or state securities laws.

FS Insight is a member of IRC Securities' Research Prime Services Platform. IRC Securities is a FINRA registered broker-dealer that is focused on supporting the independent research industry. Certain personnel of FS Insights (i.e. Research Analysts) are registered representatives of IRC Securities, a FINRA member firm registered as a broker-dealer with the Securities and Exchange Commission and certain state securities regulators. As registered representatives and independent contractors of IRC Securities, such personnel may receive commissions paid to or shared with IRC Securities for transactions placed by FS Insight clients directly with IRC Securities or with securities firms that may share commissions with IRC Securities in accordance with applicable SEC and FINRA requirements. IRC Securities does not distribute the research of FS Insight, which is available to select institutional clients that have engaged FS Insight.

As registered representatives of IRC Securities our analysts must follow IRC Securities' Written Supervisory Procedures. Notable compliance policies include (1) prohibition of insider trading or the facilitation thereof, (2) maintaining client confidentiality, (3) archival of electronic communications, and (4) appropriate use of electronic communications, amongst other compliance related policies.

FS Insight does not have the same conflicts that traditional sell-side research organizations have because FS Insight (1) does not conduct any investment banking activities, (2) does not manage any investment funds, and (3) our clients are only institutional investors.

This research is for the clients of FS Insight only. Additional information is available upon request. Information has been obtained from sources believed to be reliable, but FS Insight does not warrant its completeness or accuracy except with respect to any disclosures relative to FS Insight and the analyst's involvement (if any) with any of the subject companies of the research. All pricing is as of the market close for the securities discussed, unless otherwise stated. Opinions and estimates constitute our judgment as of the date of this material and are subject to change without notice. Past performance is not indicative of future results. This material is not intended as an offer or solicitation for the purchase or sale of any financial instrument. The opinions and recommendations herein do not take into account individual client circumstances, risk tolerance, objectives, or needs and are not intended as recommendations of particular securities, financial instruments or strategies. The recipient of this report must make its own independent decision regarding any securities or financial instruments mentioned herein. Except in circumstances where FS Insight expressly agrees otherwise in writing, FS Insight is not acting as a municipal advisor and the opinions or views contained herein are not intended to be, and do not constitute, advice, including within the meaning of Section 15B of the Securities Exchange Act of 1934. All research reports are disseminated and available to all clients simultaneously through electronic publication to our internal client **website, fsinsight.com**. Not all research content is redistributed to our clients or made available to third-party aggregators or the media. Please **contact your sales representative** if you would like to receive any of our research publications.

Copyright 2019 FS Insight LLC. All rights reserved. No part of this material may be reprinted, sold or redistributed without the prior written consent of FS Insight LLC.