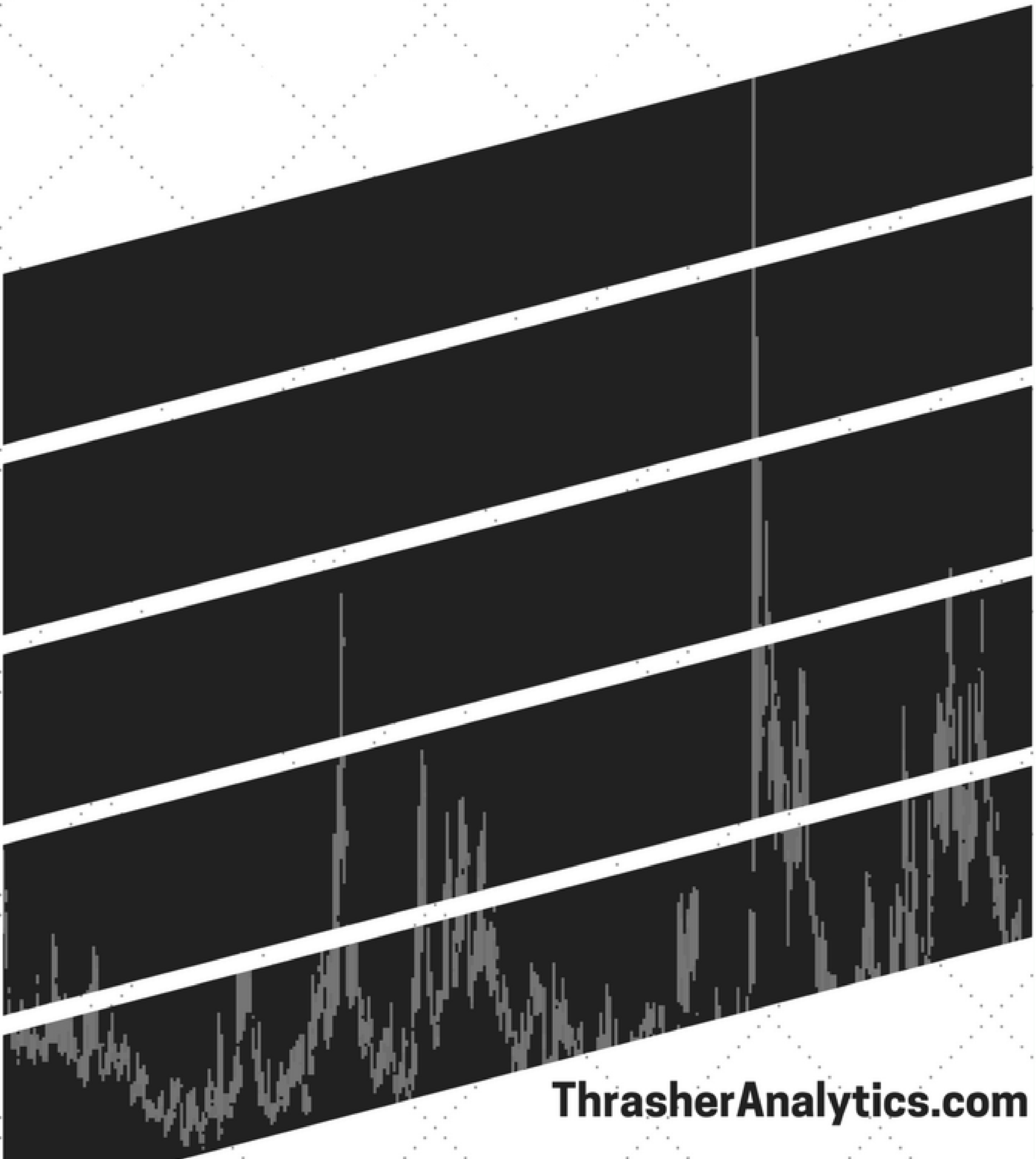
THRASHER ANALYTICS

BI-WEEKLY RESEARCH & ANALYSIS



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Executive summary

Below is a brief overview of some of the commentary included in this week's letter. I thought this may be helpful for some to read if they do not have enough time on Monday morning to review the entire letter at once. This highlights a couple of the topics I cover.

While the overall tone of this and past letters has been bearish, as a reminder, the purpose of Thrasher Analytics is to highlight risks within different pockets of the market I believe are important to traders and money managers. While I do try and mention bullish opportunities as well, the main focus of this letter is to discuss downside potentials and where loss could occur if exposure were obtained there. Think of this bi-weekly note as a spotlight on risk that I hope helps you better manage your own and your clients portfolios. Thank you.

Sentiment

To get a judge of sentiment within this market we can turn to how traders are choosing to be positions, specifically where are we seeing the most 'extreme' in positioning using COT data. I think no one would question that would be in gold and Treasury's, I'll touch on gold within the newsletter but we're seeing massive short positions being built in gold and Treasury futures, two 'safe haven' areas of the market. Traders have also taken their net-short position against VIX futures to a level that's only been seen a handful of times since 2012, with nearly each prior test of this level leading to a large move higher in volatility.

Another anecdotal sign that you don't see at market bottoms… Vanguard has just announced all ETF trades placed in Vanguard brokerage accounts will be free. This comes on the back of Fidelity's recent announcement of the first manage fee-free mutual fund. Fund companies are in a race for asset and investor's dollars, slashing fees (or cutting them all together with these two examples) in order to gain market share. This is just one small example of the froth that's beginning to form within the market, by no means a direct call for a top but simply something to be aware of with regards to sentiment within the industry.
Also interesting to note that just as Apple became the first U.S. company to hit $ 1 trillion market cap, another trillion level was hit. This time it was Goldman Sachs estimate of total U.S. buybacks for 2018. The bank's buyback desk has seen $754 billion shares repurchased and raised their full year estimate to $ trillion, which would equate to a 46% increase from 2017.

Fixed Income

In this week's letter I share one of my favorite fixed income charts that's currently signaling a move lower in the 10-year Yield. Based on the divergence I highlight with this chart, I think we could see a double top at 3% in TNX with a move back to at least 2.8% as fixed income markets firm up and sellers dry up.

The latest weakness in bonds has also pushed up the 30-year Yield but we still remain ultra-long-term resistance that's yet to be materially broken since the start of the bond bull market. Resistance currently resides at 3.17% on the 30-year yield, which is just a few basis points above where the yield current rests.

Volatility Movement Over the Last Month

We haven't seen a lot of movement in volatility in the first seven months of 2018 outside of the massive spike in February. For those that were subscribers at the time, I did send out a special VIX update on June 12th, just before spot VIX went from 12 to 18. In that letter I noted the rise in Treasury vol correlation breakdown between 9- and 30-day volatility which I thought would lead to a rise in spot VIX. I followed that up with a letter on June 25th that equities were at support and while we weren't oversold' but dip buyers appeared to be coming back to the market, which was an encouraging sign for equities to bounce, which they in fact did. The special VIX update on June 18th when spot VIX was just under 12 did see a move higher, but nothing major as volatility hit 14 before quickly heading lower. This lack of major rise in volatility helped set us up for what I think we're approaching now a potential VRT signal.

Executive summary

Lack of Volatility Dispersion

The primary topic of my Charles H. Dow award winning paper was on the compression within the daily movement of the Volatility Index. My research found when the VIX became extremely 'calm' it created the necessary environment for it to spike higher. I noted, and still believe, that this compression by itself does not signal a VIX spike but believe it sets the stage for one. The best example I've used when presenting on this topic, whether in media interviews, podcasts, or the presentation I made at the Univ. of Chicago, is comparing a very low reading in the standard deviation of the Volatility Index to storm clouds being created. In order to have a thunderstorm, we often must first half darkening cloud formations. But just because we can see dark clouds in the sky doesn't guarantee a storm will follow.

We now have a low reading, hitting the threshold I layout in my paper, "Forecasting a Volatility Tsunami", in volatility dispersion, i.e. the clouds have now been formed, what's next in my analysis is to turn to the VRT to look for signs of a potential spike in volatility – the resulting thunderstorm created by the clouds.

Rising SKEW

In this week's letter I also show a ratio chart between the SKEW Index, which measures 'fat tail' risk protection based on two sigma option pricing, and the spot VIX index. Historically when the ratio has gotten to its currently level we've seen a large miss-pricing of volatility that's lead to some rather large moves within the VIX.

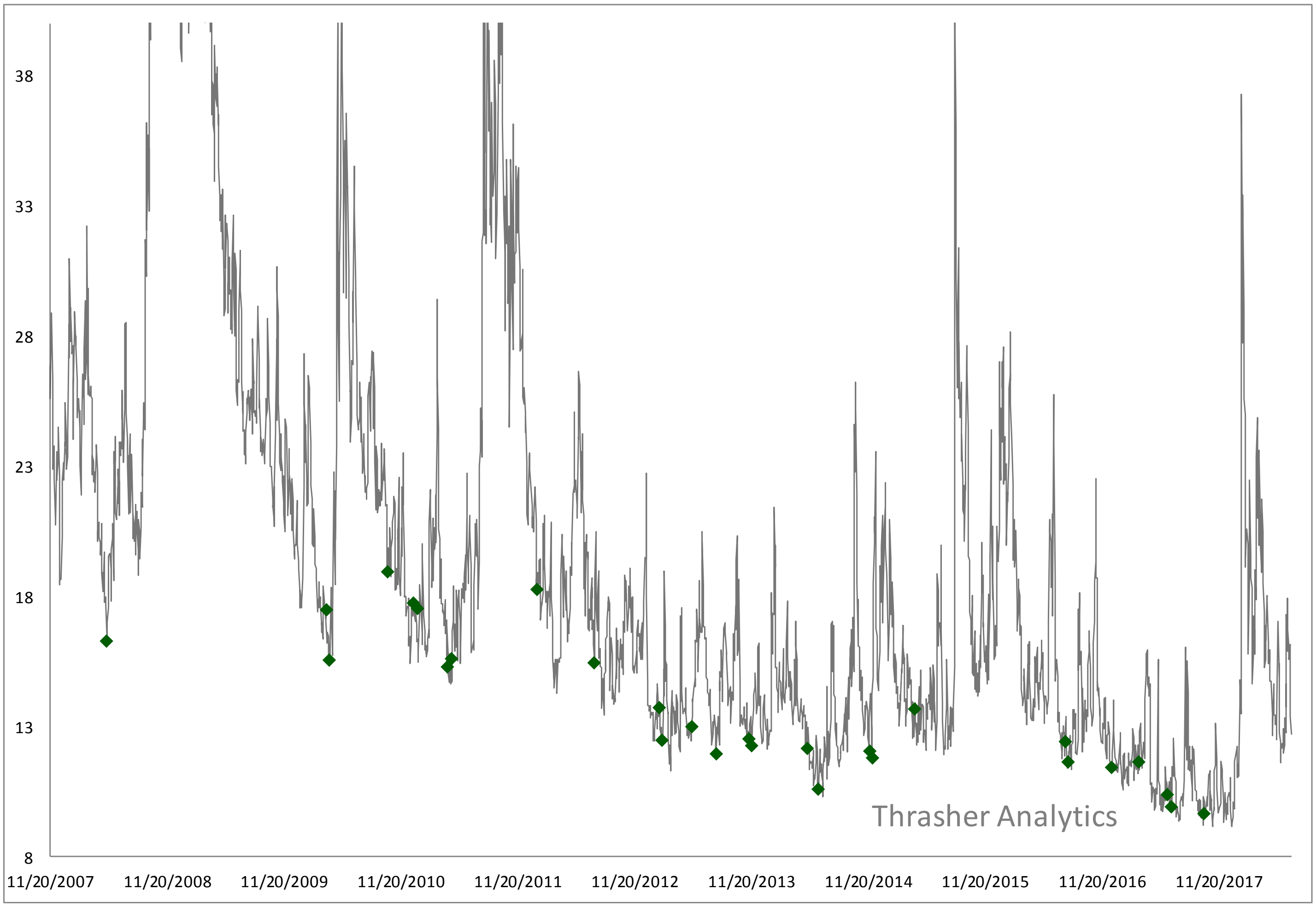
Volatility Risk Trigger (VRT)

My proprietary volatility model has had several of its underlying indicators met their necessary thresholds to take us a knife's edge away from an official VRT signal and warning for a spike in volatility. In this week's note I share more about the VRT and provide an additional chart of when 5 of the 13 short-term indicators have triggered in the past, which does not equate to a VRT official signal but still provides (what I believe) necessary information about the current heightened risk in the volatility market.

Risk Appetite

I continue to see divergences in risk appetite within the U.S. market. While the major large cap indices move higher, traders are not showing a preference for edging up risk via high beta or smaller cap stocks. This trend can continue but creates shaky ground if the equity market were to miss-step.

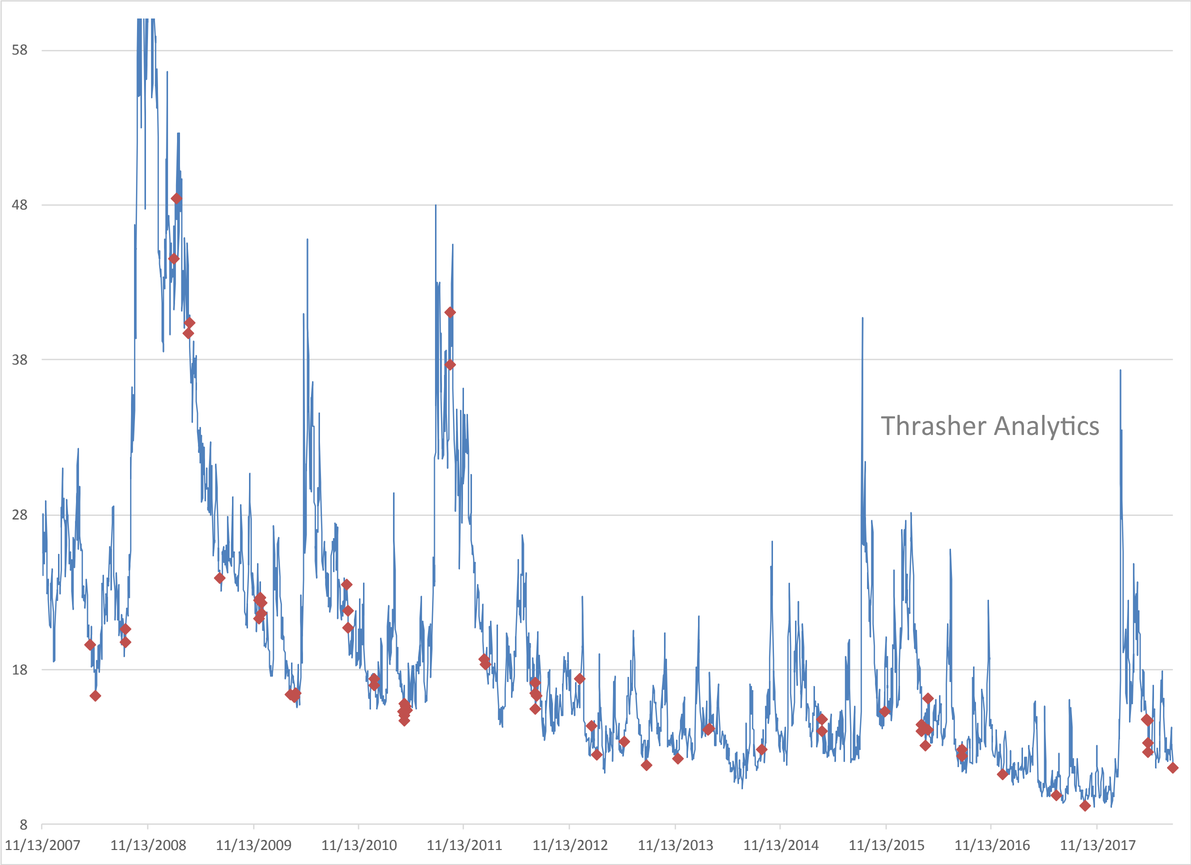
volatility Risk Trigger (VRT)



Let me start by saying, we are incredible close to an official VRT signal. The VRT is made up of both long-term and short-term indicators and data lookback periods. Many of the short-term signals have triggered with just one of the long-term data sets hitting its threshold. For an official VRT signal, there needs to be more long-term triggers, which could occur anytime in the next week or two if volatility doesn't materially rise first.

On the next page I show the VIX with markers for when five of the 13 short-term indicators have met their threshold, as you'll see the readings are a bit noisy, which why the bar is set higher for official VRT signals. But there's still a degree of volatility timing accuracy worth paying attention to.

volatility Risk Trigger (VRT)



As I said, the above chart shows when just five of the VRT short-term indicators have triggered, as they have currently through Friday.

Most recently it had a few miss-fires coming off the 2018 February spike, had quite a few accurate lows in VIX in 2016-2017, and several accurate calls in 2012-2013, with two being early in 2014. It marked the low in volatility before the corrections in 2010 and 2011 as well as 2007. If I were building a model (as I did… the VRT), this wouldn't be good enough to hit 'finish' on, which is why the VRT is much more accurate, relying on multiple lookback periods to decrease the noise in the data. But because of what I'm going to be sharing further on in this letter, I wanted to share the above data and chart to emphasis the heightened level of risk in volatility I think we current are at. As the VRT model changes I'll of course be keeping you informed.

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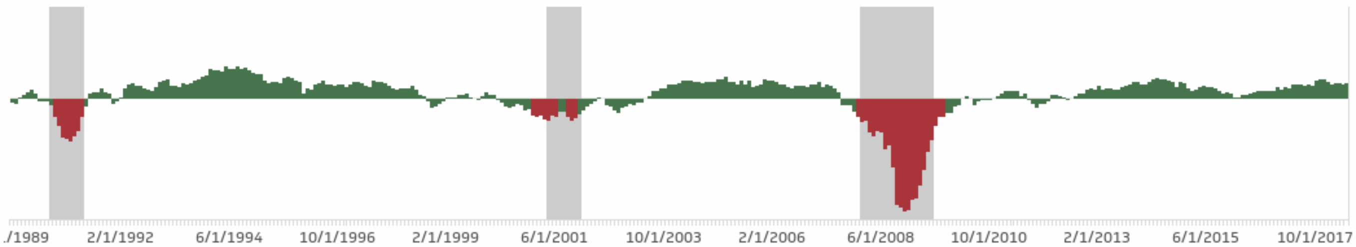
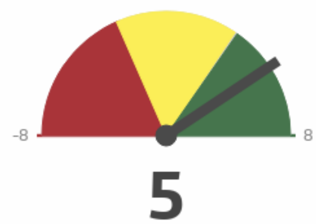
Economic Dashboard

Leading Economic Indicator



Corporate Composite

Industrial Composite



Corporate Indicators

Indicator	Value	Threshold	Trend
Corp. Operating Surplus	1,667,011	1,674,509 Less Than	
Corp. Disposal Income	592,366	527,122 Less Than	
Corp. Cash Flow	14.9	0 Less Than	

Industrial Indicators

Indicator	Value	Threshold	Trend
YoY Change in Manufacturing Sales	3.2	0 Less Than	
YoY Change in Industrial Production	3.8	0 Less Than	
YoY change in Non-Defense New Orders	8	0 Less Than	
YoY Change in Durable Goods New Orders	3.1	0 Less Than	

Economic Dashboard

Banking Composite

2

Consumer Composite

3

Banking Indicators

Indicator	Value	Threshold	Trend
% of Banks Tightening Standards	-11	0 Greater Than	
% of Banks Tightening Standards for Comercial & Industrial Loans	-3	0 Greater Than	
% of Banks Tightening Standards on Credit Cards	9.4	0 Greater Than	
Deliquency Rate on Credit Cards	2.5	2.5 Greater Than	
Deliquency Rate on Commerical & Industrial Loans	1.2	1.3 Greater Than	
Non-Financial Liabilities	459.8	433 Less Than	
Ratio of Non-Performing Loans	1.2	1.2 Greater Than	
% of Banks Increasing Willingness to Make Consumer Loans	9.2	0 Less Than	

Consumer Indicators

Indicator	Value	Threshold	Trend
YoY Change in Non-Farm Payroll	1.6	0 Less Than	
Avg. Weekly Hours Worked in Manufacturing	42.1	42 Less Than	
3Yr Change in Real Income	13.0	8 Less Than	
YoY Change in Retail Sales	6.5	5 Less Than	
Housing Building Permits	1,292	1,311 Less Than	
YoY Change in Consumer Sentiment	3.4	0 Less Than	
Barrel of Crude Oil	71.2	20% 6-month Change	
Shiller Home Price Index	203.0	197 Less Than	
Labor Slack	-0.8	0 Less Than	

Financial Stress Composite

-2.9

Headline Economic Indicators

Real GDP Growth	**2.8%**
Nominal GDP Growth	**5.4%**
YoY Change in Federal Debt-to-GDP	**1.6%**
Unemployment Rate	**3.9%**
Inflation (CPI)	**2.8%**
Core Inflation (CPI)	**2.2%**
Inflation (PCE)	**5.1%**
Core Inflation (PCE)	**1.9%**

Financial Stress Indicators

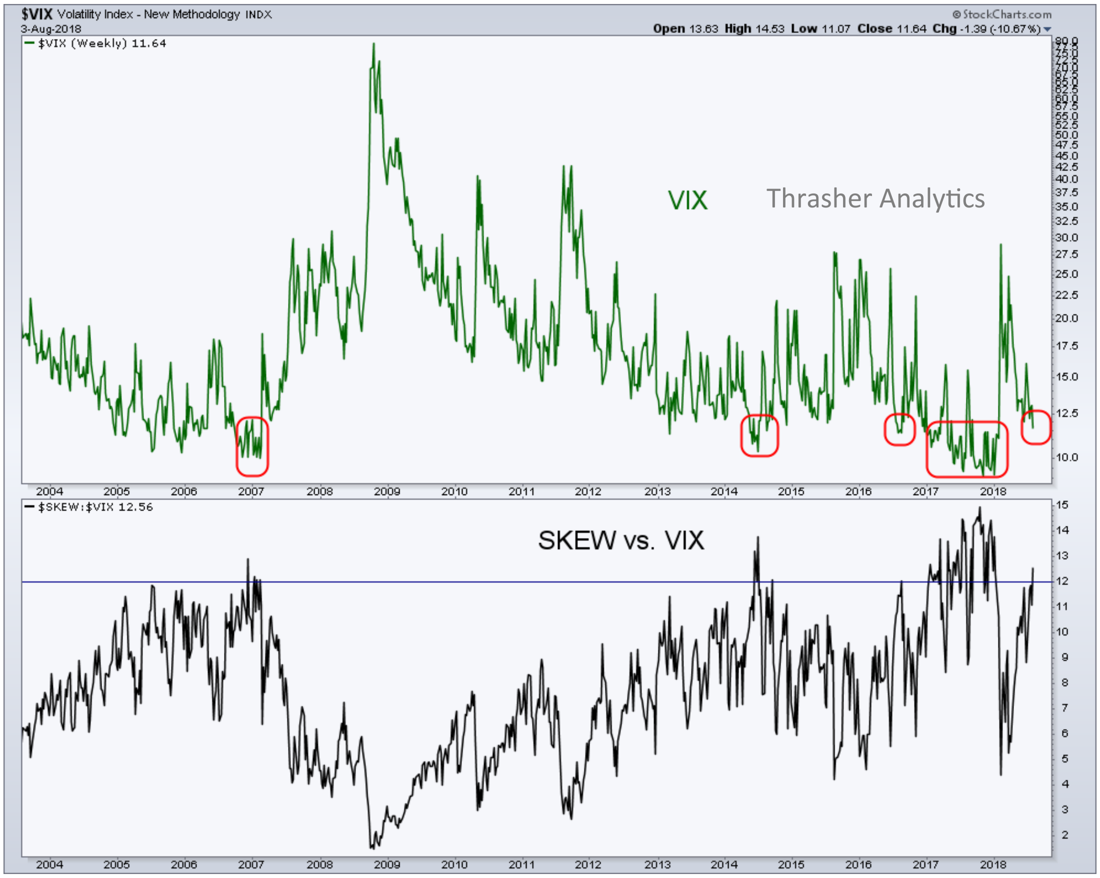
Indicator	Value	Threshold	Trend
St. Louis Stress Index	-1.1	-1.1 Greater Than	
Kansas City Stress Index	-0.6	-0.5 Greater Than	
Chicago Stress Index	-0.8	-0.8 Greater Than	

Broad Market Commentary

The S&P 500 had a good last two days, moving the index closer to its prior July high and hopefully to the prior all-time high set in January. Unfortunately, once again, we still don't have heavy buying volume to accompany this price move. In fact, since April, there's been just ten days of above-average volume (blue arrows) when the market has been up. Mean while 21 days have seen above-average volume on down days since April. This has yet to stop buyers from moving price higher, but it doesn't seem to be occurring on the back of major institutional activity.

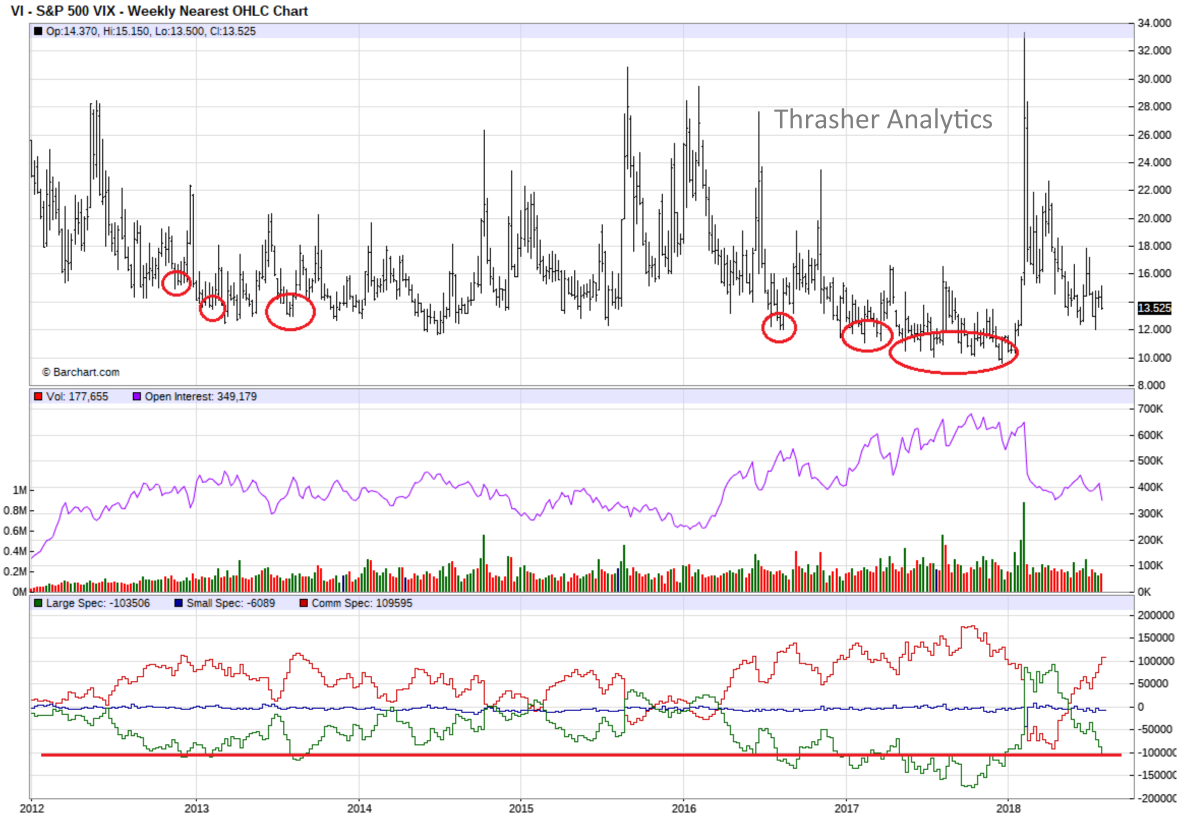
Support has been found at 2800, with price holding just above the prior level of resistance during the range from February through June, with sellers having briefly stepped in around the 2850 area. These are the two levels I'll be keeping an eye on in the coming week(s), looking for one to break as supply or demand dries up.

SKEW-VIX Ratio Has Been Rising



Whenever the topic of the SKEW Index seems to come up its often immedatley dismissed. The main reason for this is by it self traders don't seem to find much value in it as it can be rather 'noisy.' However, when we look at SKEW, which measures deep out-of-the-money option pricing, often associated with 'fat tails' with the 30-day VIX Index, a great deal of value (in my opinion) can be drawn. That's exactly what the chart above shows. In the bottom panel we have the ratio between SKEW and VIX with the VIX in the top panel. When the ratio has gotten above 12, which occurs when SKEW out-paces the VIX by declining less or rising more. An attainment of this level hasn't happened often, only four groups since mid-200s. First in 2007, when VIX was under 10, again in 2014, 2016, and then it got crazy in 2017 with the massive miss-pricing of volatility (which we know how that ended!). Once again, SKEW is telling us that volatility is being under-valued. In 2007 it took a couple of weeks before vol moved higher, the '14 and '16 reactions were much quicker, and 2017 saw a multi-month build up, with a few mini-vol moves in between. Which will occur this time? It'd be naïve to say, but I think we do see a move higher in volatility, whether it's immediate or requires a week or two build.

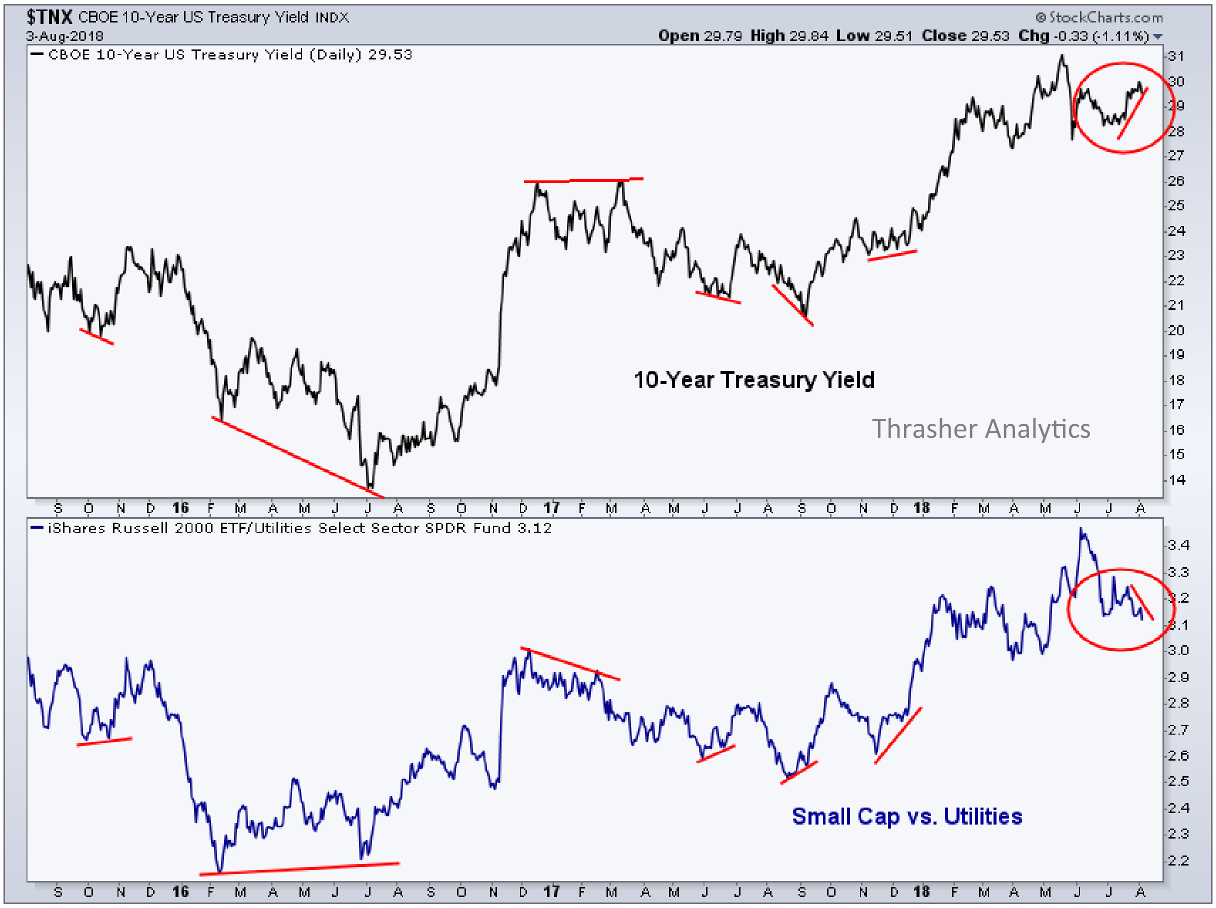
Traders Continue to Bet Against the VIX



The above chart shows the net positions by each investor group in VIX futures. Since February's massive spike in volatility, traders have slowly been building back up their net-short position in the VIX futures market by Large Speculators. Since 212, there have been just a handful of instances of speculators building this large of a net-short position in volatility index futures. Nearly each time we saw a near-immediate rise in volatility. First we had the late 2012 move in from roughly 14 to 22, in early 2013 from 13.5 to 18, 13 to 18 again a few weeks later in '13 and then it took several years for vol bears to get emboldened enough to short this much vol. But they did in 2016 before the front month VIX went from 14 to 27 and again in early 2017 with VIX eventually going form 12 to 16. Then in the back half of '17 we saw an extremely large build in net -short vol that eventually led to the VIX-plosion in February of this year.

Once again, an over-confidence has led to another large build-up of short interest in volatility, which will more likely than not act as the investor 'kindling' that will burn up in a volatility spike if one does occur.

Equity Divergence Signaling Lower Treasury Yield



This is one of my favorite tools for evaluating the Treasury market for two reasons: 1. no one else I know of is using it (which creates a nice edge) and 2. because its consistently worked.

Above is the 10-year Treasury yield and the ratio between small cap stocks and utilities. It's well known that the utility sector is often highly correlated to fixed income markets. So by evaluating utilities relative to small caps, we can get an idea of how the direction the equity market thinks fixed income yields should be moving. While it's often the case that fixed income leads the broader equity market, when the ratio of small caps to utilities diverges from yield, the 10-year more times than not corrects its direction.

We have a divergence building up right now. With the recently move in the 10-year going from about 2.8% back to 3%, the same level of strength has not been shown in the higher beta, riskier, small cap equity market. The Russell 2000 has been under-performing utilities, setting a new multi-week lower low as of Friday. I think this setups the opportunity for a double-top at 3% in the 10-year yield that will be followed by a strengthening in fixed income and a move in TNX back to at least 2.8%.

Equity Market Risk Appetite

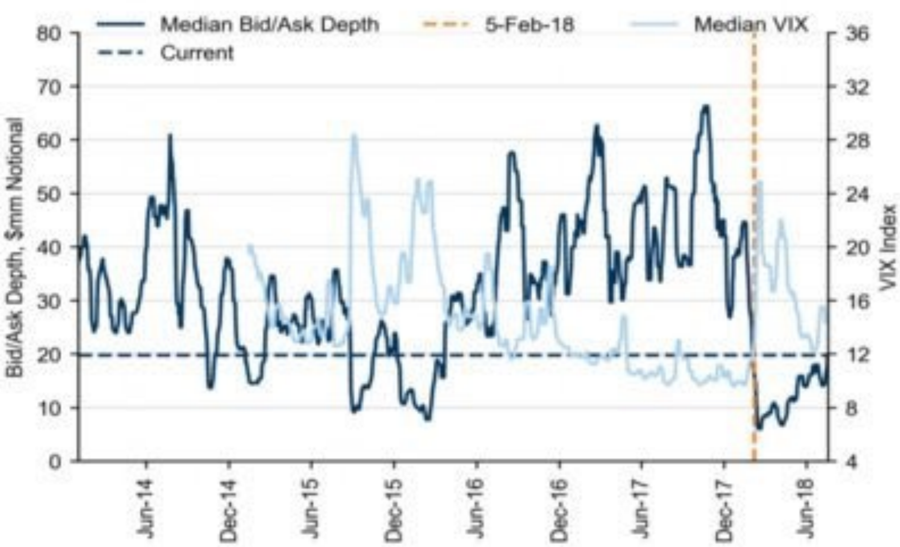
I continue to show this chart every few weeks because I continue to believe it's important in understanding the risk appetite of the market. With the S&P moving towards its prior July high, there's only one risk appetite gauge showing confirming– high yield bonds vs. the aggregate bond index. Meanwhile, equal weigh large caps are still well off their June high, high beta vs. the S&P 500 keeps making lower lows in relative performance, and small caps have been unable to regain their early '18 strength as their relative performance to large caps is almost back to the prior July low already.

It's very possible, as we've seen, for the major index to move without confirmation in other risk-taking corners of the market. But if the market does miss-step, there's not much underlying strength for it to grasp on to. Traders appear to be keeping their equity focus on the mega cap names and riding the equity index itself rather than increasing beta or turning to smaller market cap stocks. This is not normal or indicative of an overly strong market. We'll see how long these divergences can last.

Lack of Liquidity in Equity Market

Exhibit 3: Bid/ask depth remains near its low points from 2015-6 (when vol was higher)

10-day rolling median E-mini future bid and ask sizes, based on 5-minute intraday snapshots



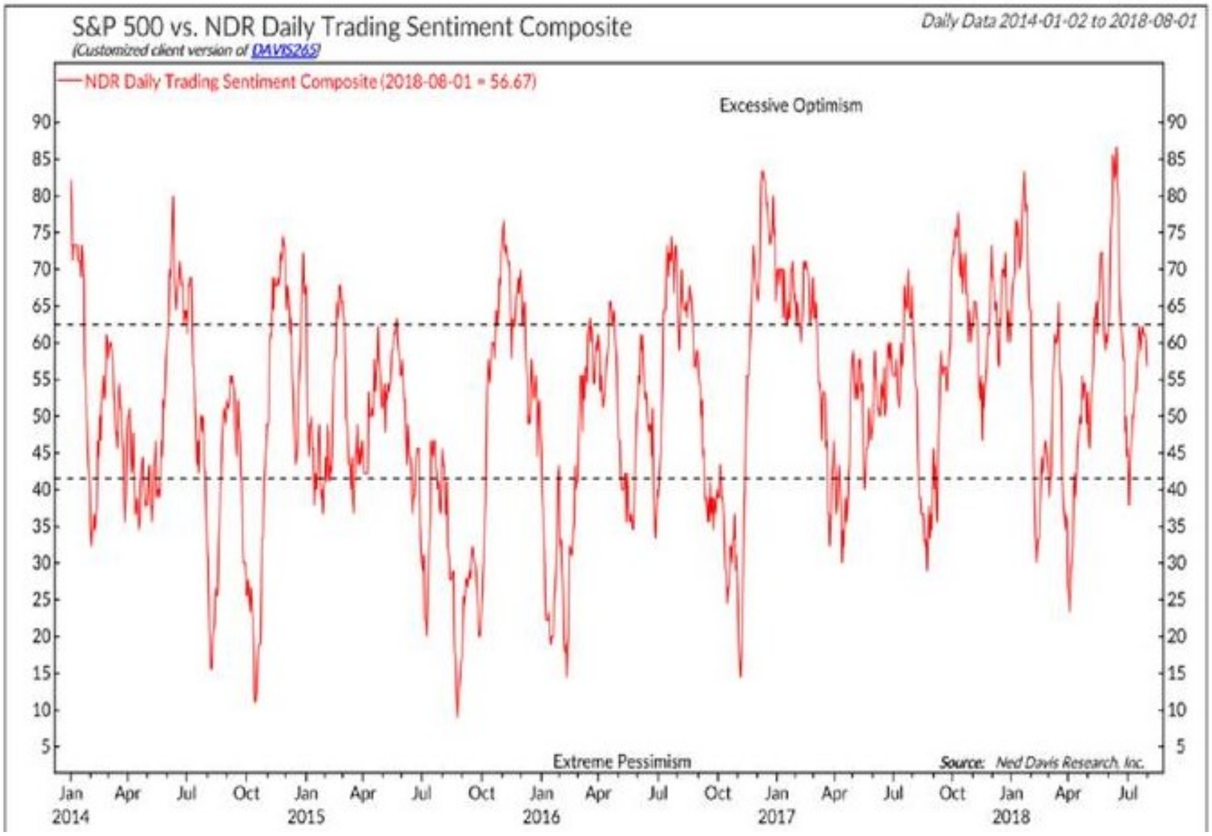
What's one of the best signs for the health of market? It's liquidity. When liquidity dries up, it can create a real problem that easily can escalate. A lack of liquidity is a main driver of what happened in 1987 (among other things). As I discussed in my last note, August has historically been one positive month for VIX seasonality, but we enter August, liquidity in futures has not bounced back since the February VIX spike. Bloomberg noted this Goldman Sachs quote, "To the extent liquidity is the new leverage, if we start off our next sell-off with already-diminished equity market liquidity, how much liquidity will there be at the depths of the sell-off," Goldman analysts Rocky Fishman and John Marshall asked in their note." The bid-ask spread has fallen by 50% according to GS, which could exacerbate falling stock prices as traders lack the ability to properly execute trades at desirable prices. This could lead to a steeper sell-off than what normally would occur when spreads are tighter.

How Long It Takes to Recover

SPX Set New All Time High On	Then Dropped This Much...	...And Bottomed On This Day	Then Took This Many Days	To Set a New All Time High on This Day
Jan 26 2018	-11.8%	Feb 9 2018	110 as of 5/30/18	??
May 20 2015	-15.2%	Feb 11 2016	151	Jul 11 2016
Oct 11 2007	-57.7%	Mar 6 2009	1496	Apr 10 2013
Mar 24 2000	-50.5%	Oct 10 2002	1737	Jul 13 2007
Jul 16 1990	-20.4%	Oct 11 1990	124	Feb 12 1991
Jan 3 1990	-11.3%	Jan 30 1990	119	May 29 1990
Aug 25 1987	-35.9%	Oct 20 1987	645	Jul 26 1989
Oct 10 1983	-14.7%	Jul 25 1984	180	Jan 21 1985
Jan 11 1973	-49.9%	Oct 4 1974	2113	Jul 17 1980
Dec 2 1968	-37.3%	May 26 1970	650	Mar 6 1972
Feb 9 1966	-23.7%	Oct 10 1966	200	Apr 28 1967
Dec 12 1961	-29.3%	Jun 25 1962	431	Aug 30 1963
Aug 2 1956	-21.5%	Oct 22 1957	337	Sep 24 1958
Jan 5 1953	-14.8%	Sep 14 1953	178	Mar 11 1954

The clock has been running for quite a while for how long it'll take the U.S. market to make a new high in the S&P 500. @OddStats shared the above chart on Twitter with the very interesting observation that whenever the market has taken longer than 180 days to recover from a correction and make a new high, it's resulted in a bear market. We'll hit the 180 day mark on Thursday and with the S&P just a few points off its January peak, it's possible we beat the buzzer. While I personally wouldn't base an investment decision purely on this stat, the notion behind it, specifically that a market that takes too longer to recovery from a decline as a sign of the underlying weakness, I think is accurate and worth noting.

Investor Sentiment



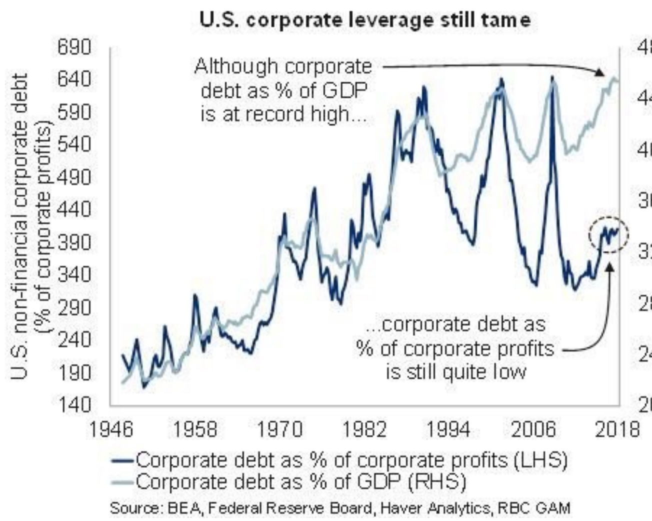
The above chart comes from Ned Davis Research, and shows their Trading Sentiment Composite. Sentiment was rising in July and got close to NDR's threshold of 62.5 (top dotted line) which notes excessive optimism. The gauge as sense pulled back but still remains somewhat elevated, in the higher-end of the neutral range. While sentiment is not at an extreme, it's also no where near being overly pessimistic either.

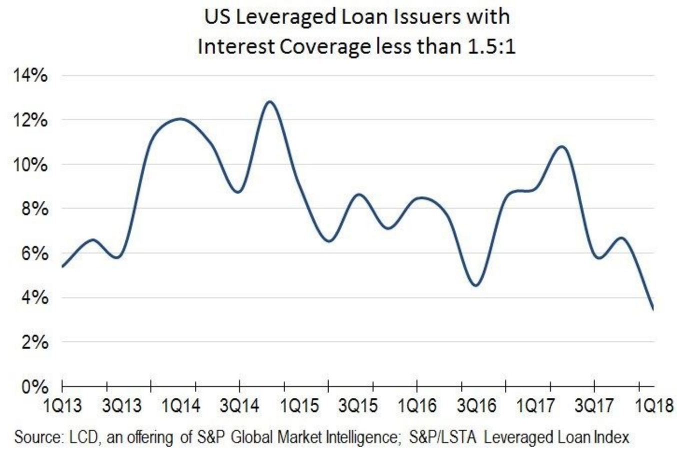
Internet Index

One of the strongest sub-sectors this year has been the internet index, as shown above with the First Trust Internet Index (FDN). FDN has been leading the U.S. equity market for nearly all of 2018, and is made up largely of the popularized FAANG stocks, with the largest weightings being Amazon (10.83%), Facebook (7.96%), Netflix (5.63%), Alphabet A & B shares (10.89%), Salesforce.com (5.13%) and PayPal (4.92%). With Facebook's 20% decline post-earnings and several other notable earnings misses and stock declines, FDN has moved off its recent high. Note the bearish divergence in momentum as well as the bearish divergences in relative performance and trend strength at the most recent high in FDN.

It seems this popular area of market strength has begun to show signs of weakness as it just tested its June low. With the bounce off the prior low, it's possible FDN may have another move left 'in the tank' but the ETF and stock group doesn't appear as healthy as it was had been earlier in the year. If the Internet stocks do rollover many traders who have gone overweight the FAANG names will feel the pain and the market will need to see a rotation out of tech and into another pocket of stocks.

Corporate Debt Isn't As High As Some May Think





A popular theme for perma-bears has been the rising level of corporate debt, often showing a chart of corporate debt as a percentage of GDP as it breaks above the prior two highs set in 2000 and 2007. However, as the chart above on the left shows, while as a % of GDP debt is now at a new high, as a % of corporate profits, it's still well below the 2000 and 2007 levels. The leverage taken on by U.S. companies has yet to reach an 'extreme' level when taken into account the level of profit that's come with it.

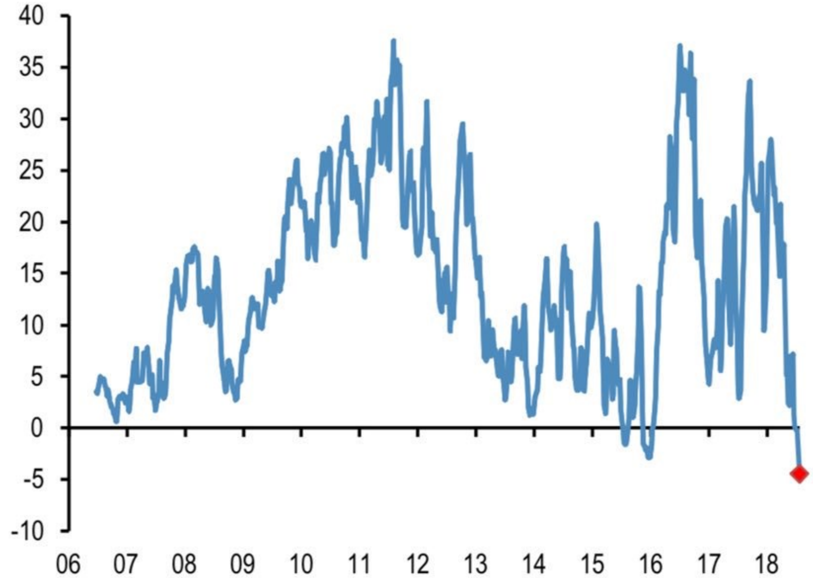
On the right is a great chart from Standard & Poor's showing the percentage of loan issuers that would have an issue serving their debt, which has been declining since early 2017 and now at a multi-year low.

From a corporate debt servicing perspective, it doesn't seem companies have reached a level where their debt built up has become a problem. While there's been a large issues of cov-lite loans that are causing some to grow concerned, companies (so far) have been able to control and manage their debt levels with healthy profits. Hopefully this trend continues.

Massive Short in Gold Futures

Figure 14: Gold spec positions

$bn. CFTC net long minus short position in futures for the Managed Money category.



Source: CFTC, Bloomberg, J.P. Morgan.

This chart became very popular over the weekend on social media, which shows the large build-up in net-short futures contracts in Gold. Never have large speculators been this short gold since the great financial crisis. They did dip their toe in being net-short in mid-2015 before a counter-trend rally in gold from roughly $1080/oz. to $1180/oz and again in late-2015 at the eventual Gold low at $1060/oz. While the price of gold is still well off those 2015 levels, sentiment towards the shinny metal has tanked and created a unique opportunity. I think gold is over-due for a move higher. The chart has become constructive for at least a counter-trend rally in gold, with daily momentum creating a bullish divergence and weekly momentum nearing an 'oversold' level in the Relative Strength Index (RSI). If Gold can hang on above $1200 then it has my attention from the bullish side.

On a side note, sentiment towards precious metals has gotten so bad that Vanguard has gone as far as changing the name of their Precious Metals and Mining Fund (VGPMX) to Global Capital Cycles Fund, removing the reference to metals. When an asset class is so hated that fund families scramble to change the name of a fund, that's a pretty good sign that that asset is pretty out-of-favor within the industry and could see a short-squeeze if price begins to show any sign of firming up.

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