It is a complicated world out there

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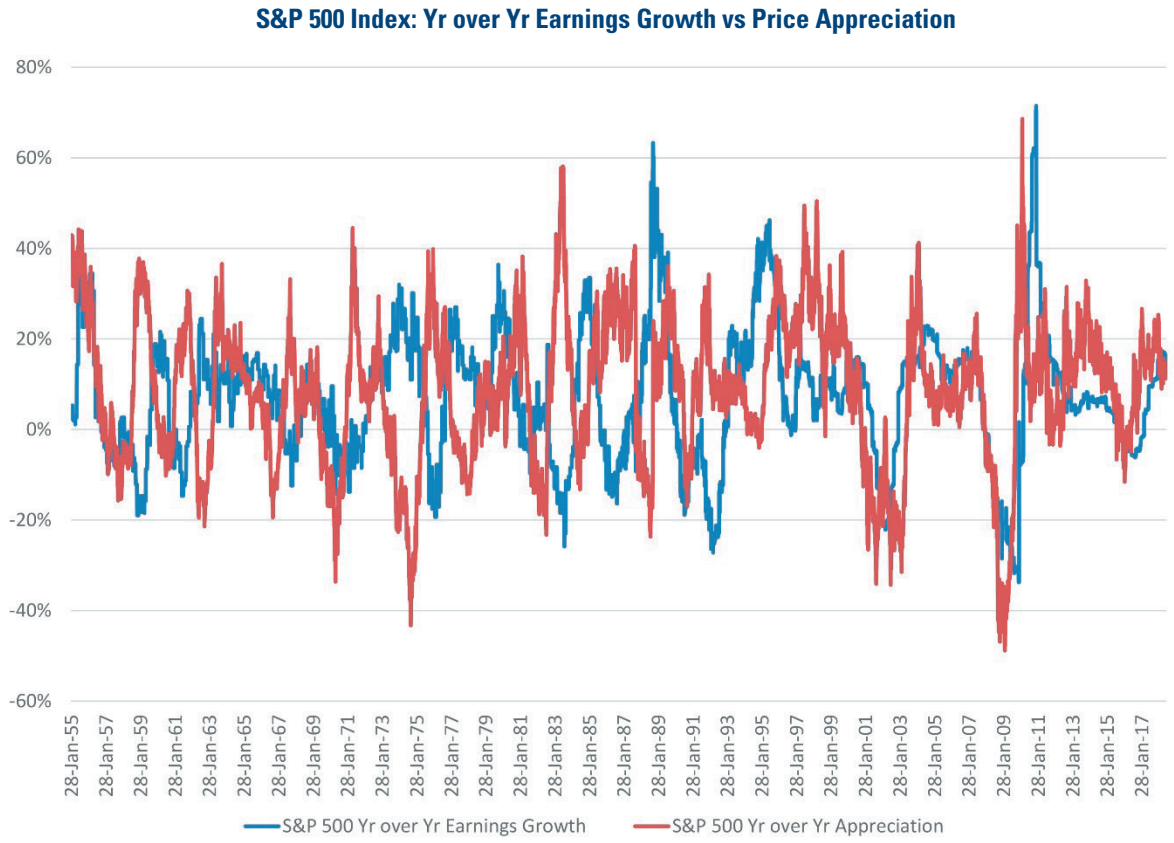
There are a couple of key concepts that investors should always remember. First, in the majority of cases you are buying a future stream of earnings when you buy the shares of a company. If you do not expect the company to earn an income you are speculating on some other outcome. Your expectation is that the earnings will grow over time and increase the value of your investment. Second, there is always a correlation between earnings growth and valuation. But when an investor over-values future earnings growth you have the potential for significant losses.

A good way to demonstrate how this works is at the index level. The following chart shows the year over year earnings growth and price appreciation of the S&P 500 Index.



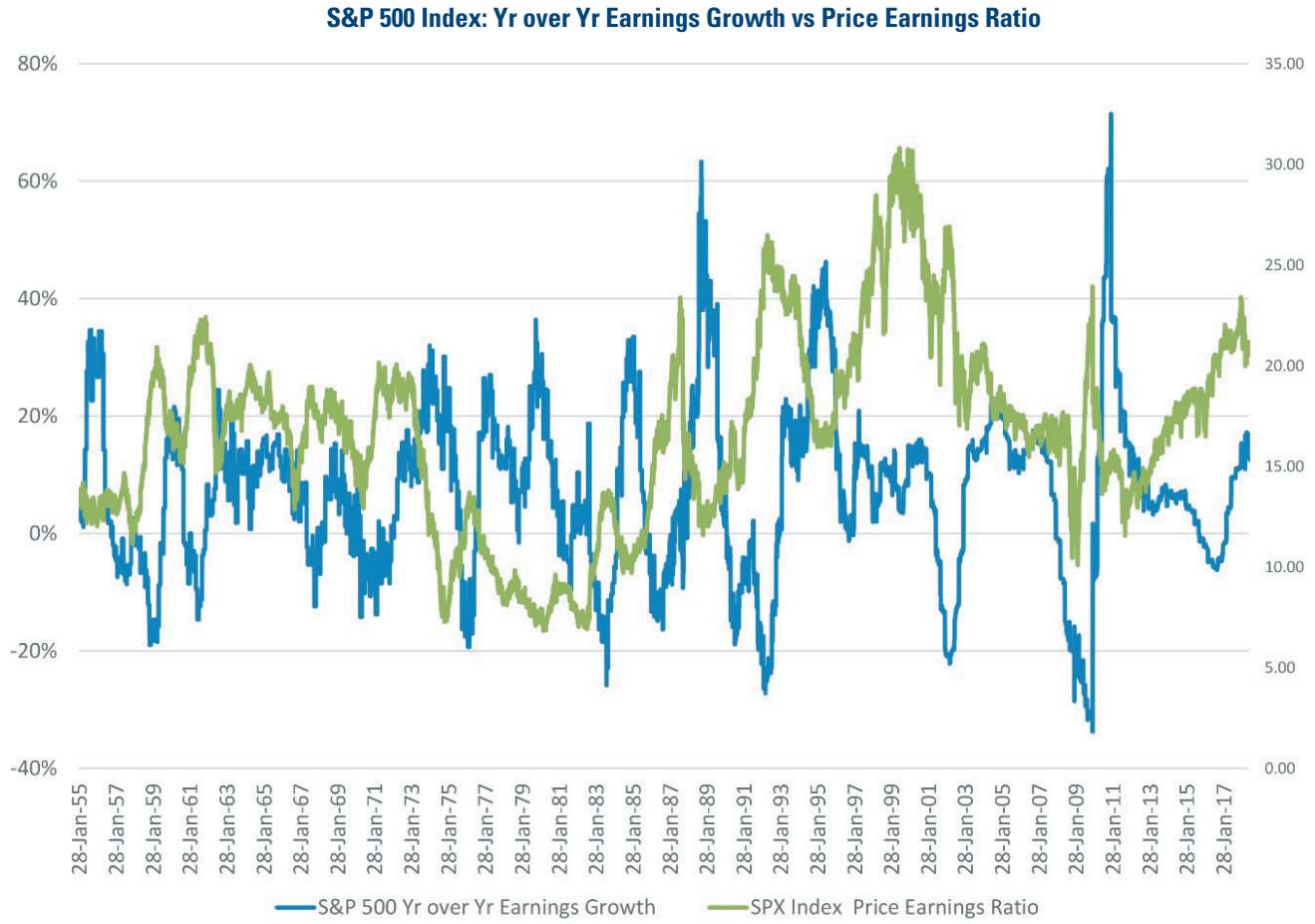
Source: Bloomberg L.P.; CI Investments

As of July 6, 2018

There is a fairly tight correlation between the direction of earnings growth and the direction of the stock market. Negative earnings growth invariably brings a correction, although there can sometimes be a lag. Outliers in this chart are periods when there have been multiple material contractions or expansions.

Earnings growth remained robust in 1973-1974 but the Price Earnings (PE) multiple collapsed under the pressure of higher inflation. The earnings collapse in 1976 brought a baby bear decline of just under 20%, but no recession. The other notable outlier is 1987, when the market initially performed well despite declining earnings. Multiples expanded from around 13x in January 1986 to 17x in January of 1987 and peaked at 23x in August of the same year. Since the early 1990s the correlation is tight. The correction of 2015-2016 was earnings based.

Another way of looking at this is to examine the earnings growth profile versus the PE ratio.



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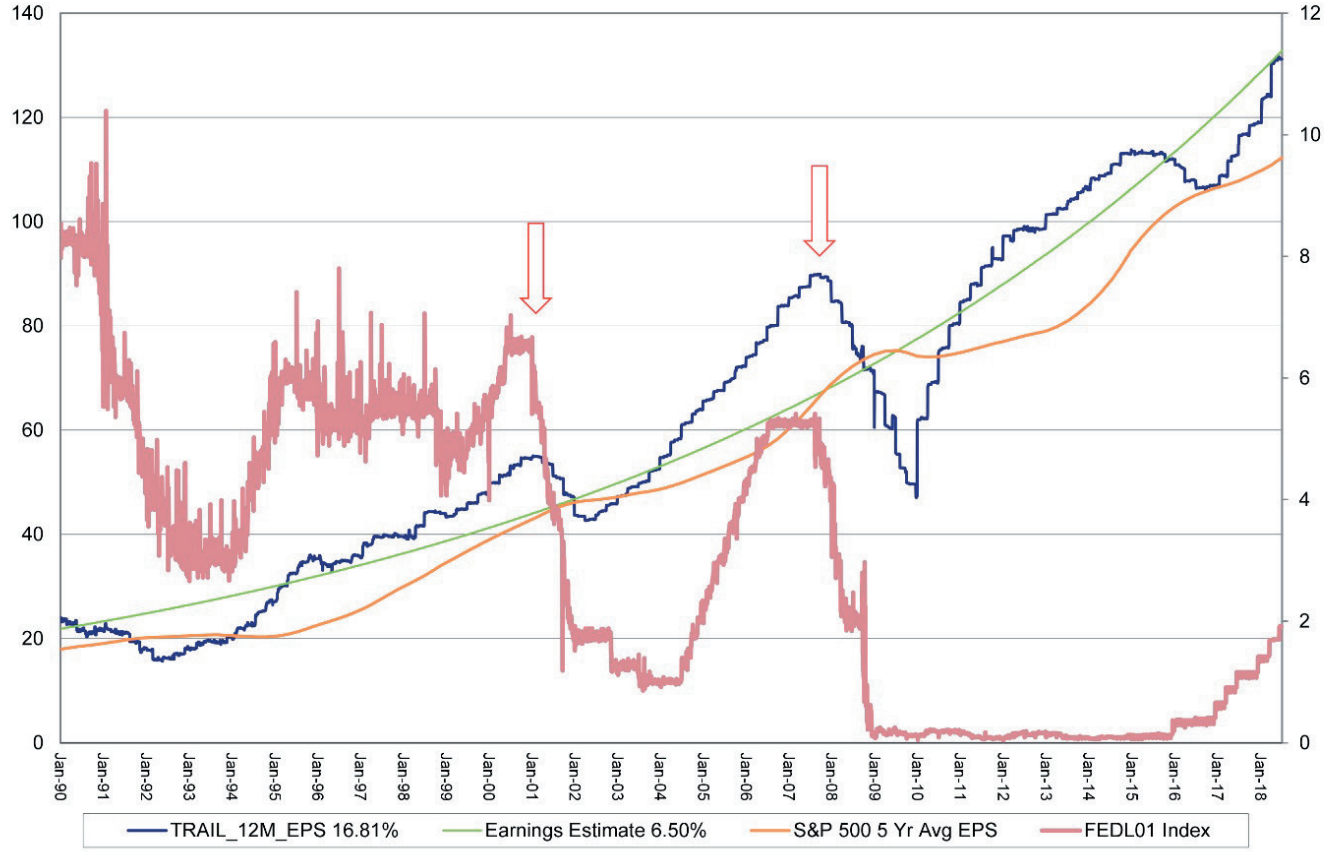
PEs are cyclical with earnings. As the cycles have gotten longer, PE has shown sensitivity to shorter term declines in earnings; as you can see with the 2015-2016 earnings dip shown in the above chart. In a long-cycle move like the 1990s, PEs can continue to rise regardless of whether there is true earnings support for the move. The current earnings growth for the index is somewhat offset by PE compression. Given the cyclicality of earnings, are we seeing the best the market has to offer? There is a tightening cycle under way in the U.S.

I used the next chart almost two years ago to point out that earnings typically do not start to decline until the Federal Reserve has completed its tightening cycle. We are not yet there. The down arrows on the chart point out that the first cut in the Fed Funds Rate is coincident with S&P 500 earnings rolling over. The severity of the earnings decline is dependent on how tight financial conditions get. I do not anticipate that we will have a repeat of 2008-2009. So, do you sell before the tightening is over? If investors have performance anxiety today, going to cash won't help, but taking the opportunity to upgrade investment quality could provide some comfort in a down market.

S&P 500 Reported Earnings vs Fed Funds



Source: Bloomberg L.P.; CI Investments

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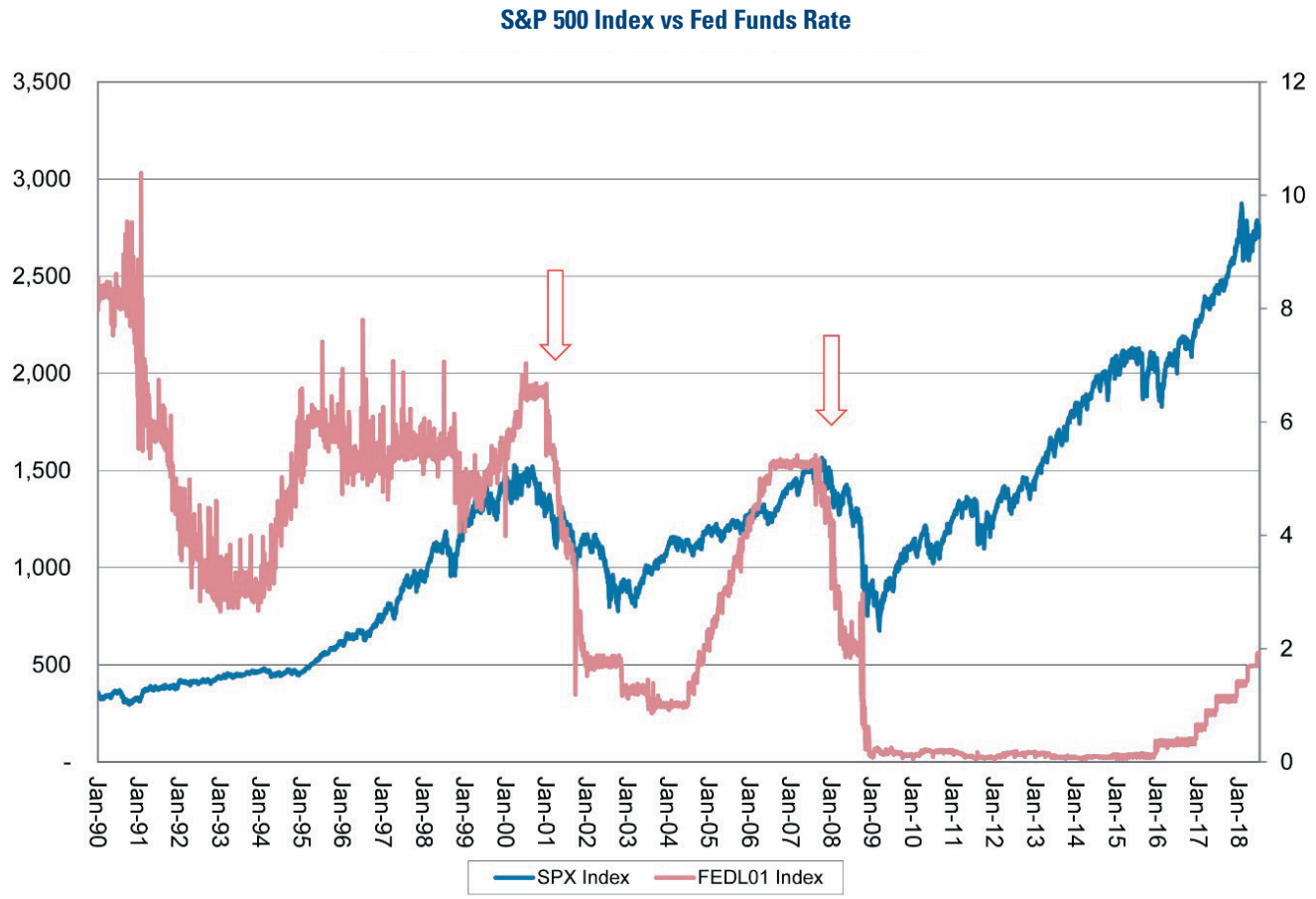
To put this in context, I have re-run the previous chart swapping the actual S&P 500 Index levels for the Earnings. The arrows are in the same positions.



Source: Bloomberg L.P.; CI Investments

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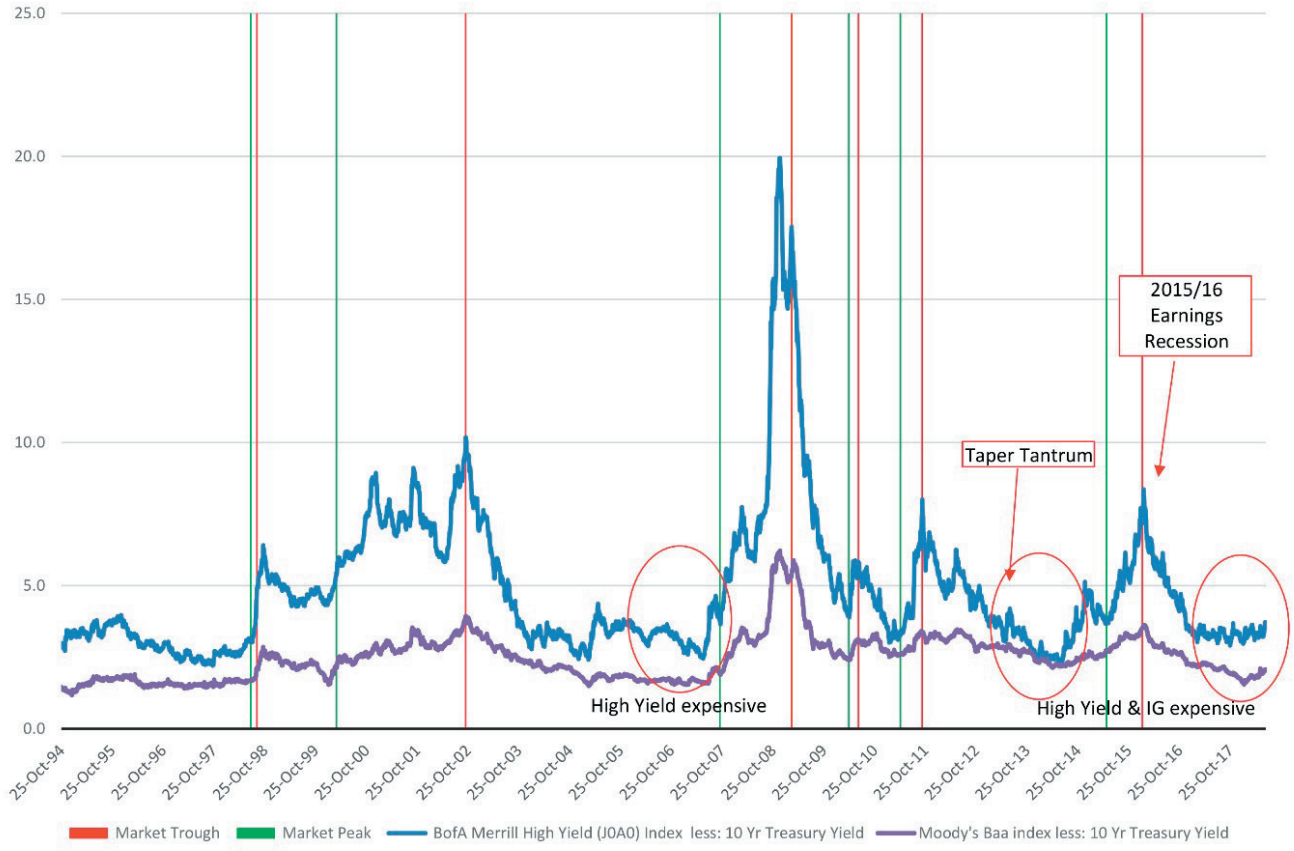
In the past two major cycles investors were rewarded for ignoring PE, paying attention to the trend in earnings growth, paying attention to when the Federal Reserve stops raising rates and using that as a signal to get a comfortable asset allocation to ride out a bear market with. You know that when the Federal Reserve begins to cut they have gone too far yet again.

In your asset allocation you need to allocate between defensive and aggressive assets within each asset class. In fixed income the buzz words are rates and credit. Rates refer to the government bond yield curve and are primarily managed using duration or the average term of your investment. Credit, in its most simple form, is any bond that is priced in reference to the risk-free or sovereign credit in each jurisdiction. Investors seeking higher yield explore credit. When you get into this realm of investing you need to be aware of two additional credit characteristics: investments in this part of the market can have a high correlation with the equity market and the liquidity of the investment can disappear in a recessionary bear market.

To illustrate the degree of correlation credit has with the equity market, I have overlaid red bars representing market troughs and green bars at market peaks on the below chart, which shows the yield premium over the 10-Year Treasury Bond of the Bank of America Merrill Lynch High Yield Index and the Moody's Baa Corporate Bond Index. I am using a 13% decline in the S&P 500 as my cutoff for tradable market declines. This captures meaningful corrections such as those in 2011 and 2015-2016. Each peak in spread for both high yield and investment grade bonds is coincident with a trough in the equity markets. In a bear market high yield gives you little diversification from equities and even investment grade credit has some correlation. Interestingly most market peaks occur while high yield spreads are rising. High yield spreads are essentially unchanged through the 2018 market spike and correction. Investment grade spreads initially declined and have backed-up recently. The credit markets are not yet worried about the economy.

Bank of America Merrill U.S. High Yield & Moody's Baa Indices: Yld Spread over 10-Year Treasury Yield



Source: Bank of America Merrill Lunch J0A0 High Yield Index, Bloomberg L.P., CI Investments

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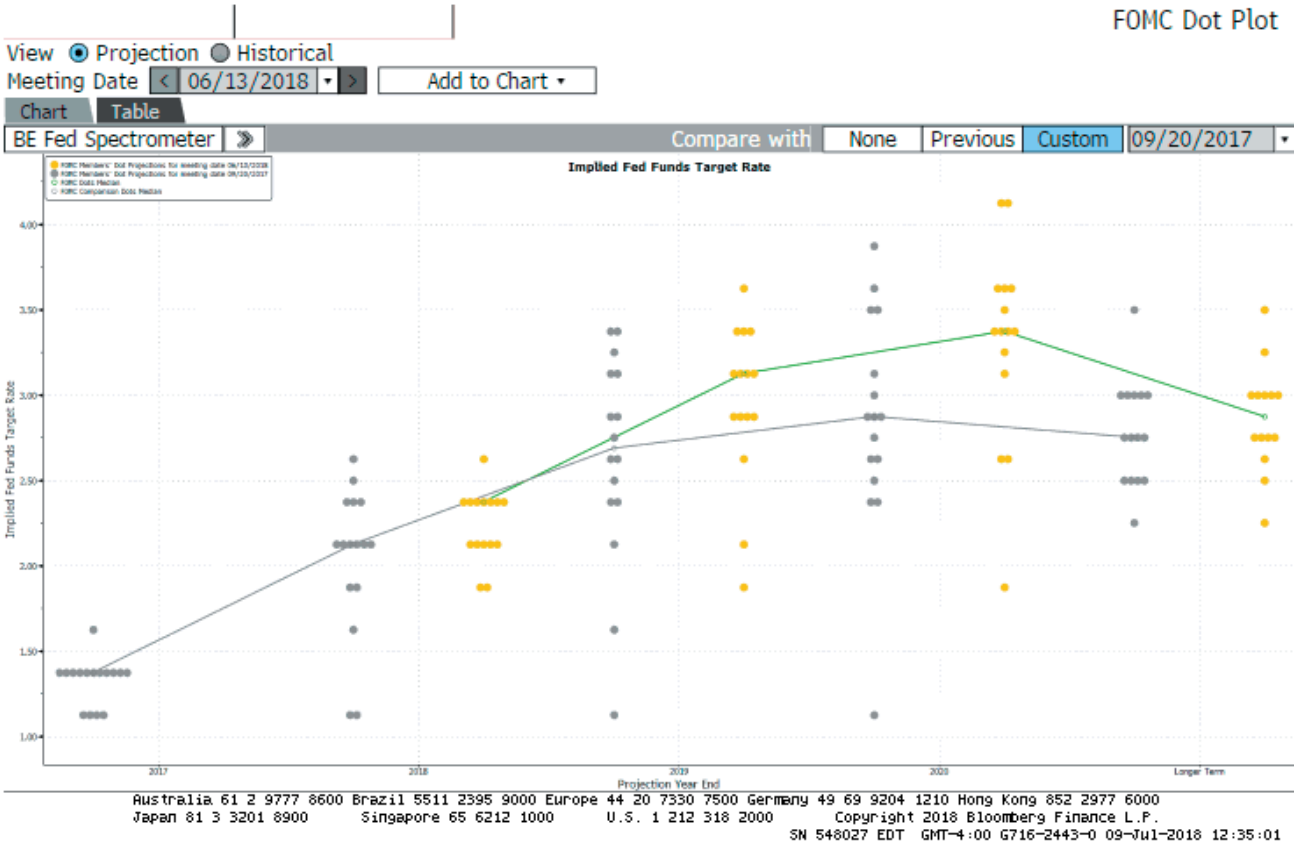
A current area of concern is in the "rates" market. The Federal Reserve tightened again on June 13, 2018 and both the rhetoric and "DOTs" are skewing more hawkish. The DOT plot below is for June 13, 2018 and is compared to September 20, 2017. The weighted average DOTs for 2018 is 2.242 and for 2019 is 2.958.



Source: Bloomberg L.P., CI Investments

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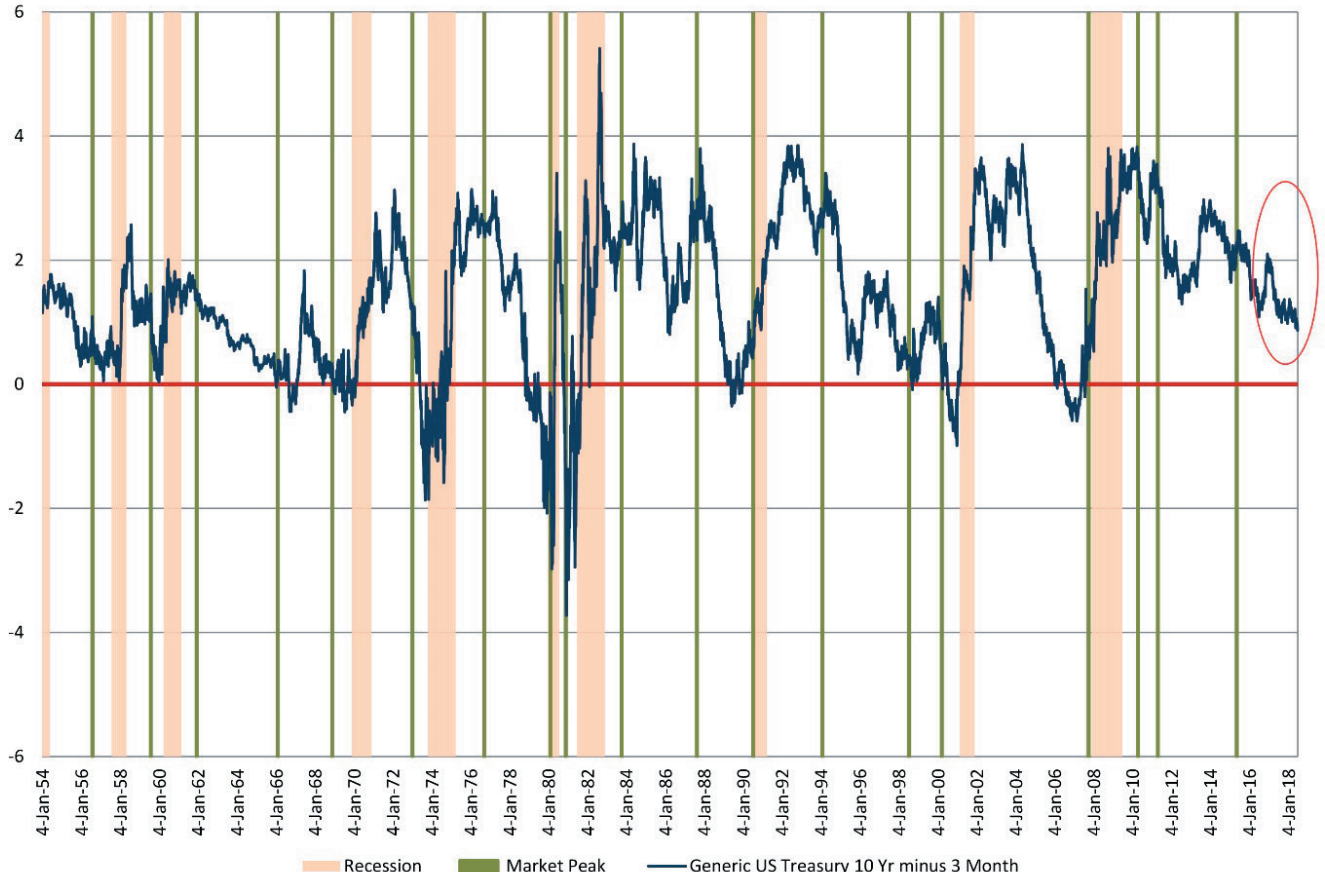
The only way you can get to 2.42 is if there are three more tightenings in 2018 with an exit Federal Funds Rate (FFR) of 3.00% or higher. The table below, which I created, calculates what the average FFR for 2018 will be using the consensus view of 25 basis points of tightening in the calendar quarters. Expect a surprise move this summer. The only way the Federal Reserve can approximate the average view of the voting members is for them to raise rates more rapidly.

	Fed Funds Rate (FFR)	# of Days	% of Year	Pro-Rated FFR
12/31/2017	1.50	80.00	21.9%	0.33
3/21/2018	1.75	84.00	23.0%	0.40
6/13/2018	2.00	63.00	17.3%	0.35
8/15/2018	2.50	28.00	7.7%	0.19
9/12/2018	2.75	91.00	24.9%	0.69
12/12/2018	3.00	19.00	5.2%	0.16
12/31/2018		365.00	100.0%	2.11

The weighted average FFR for 2019 of 2.958 is much easier to get to. Enter the year at 2.75%, raise in March to 3.00% and that is all. The key implication to me is the yield curve is flat or inverted by Q1 2019. This is important.

Slope of the Yield Curve: 10 Year Treasury Bond minus 3 Month Treasury Bill



Source: Bloomberg L.P.; CI Investments

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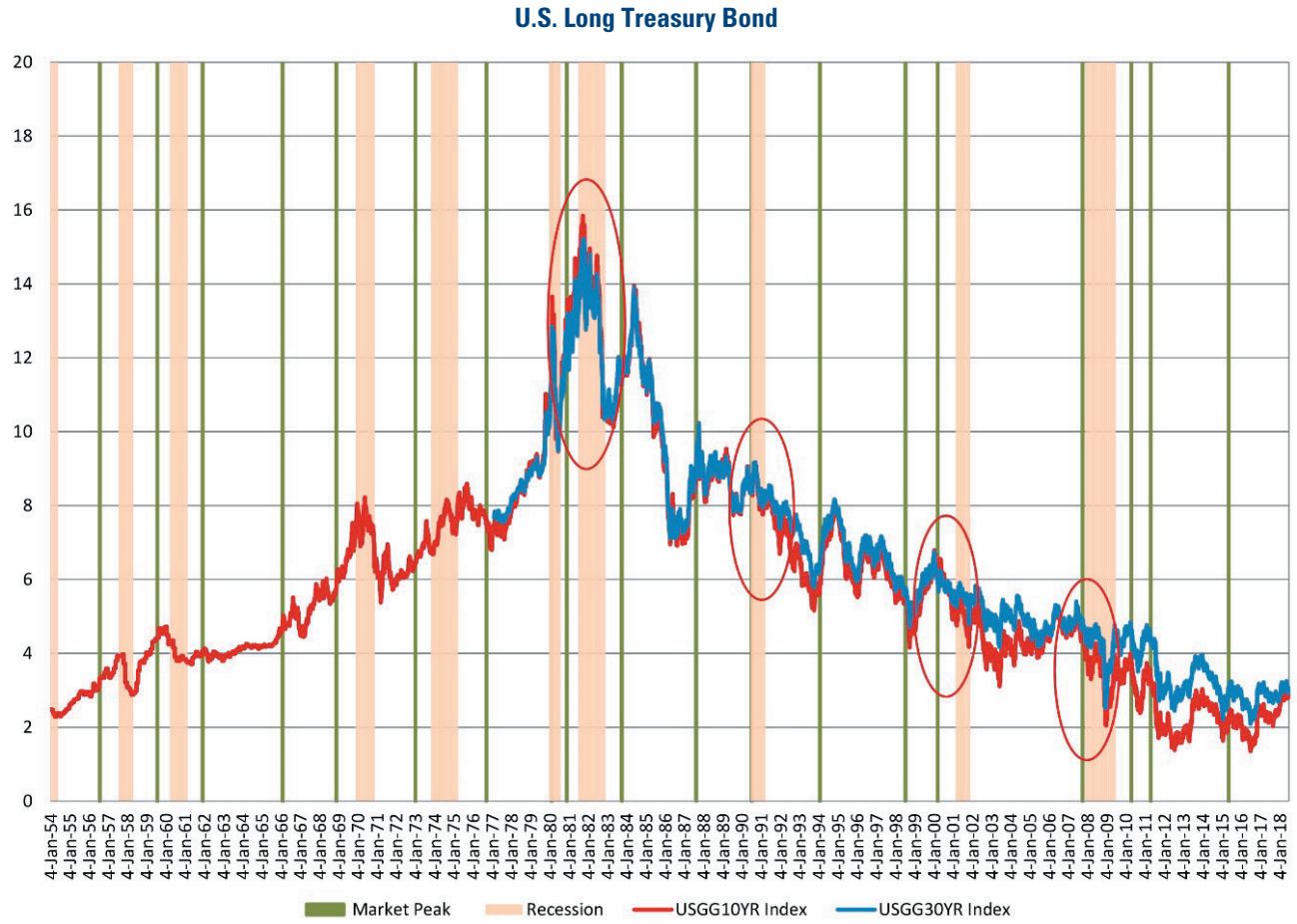
In the modern era, cyclical stock market peaks frequently occur during the final flattening or inversion of the yield curve. Since 1954 there have been 11 flat or inverted yield curves followed by nine recessions. It's also worth noting that the two inversion outliers in 1966 and 1998 were not pain free: 1966 was a year of protest with the Vietnam War, race riots and the birth of the Black Panther movement, while 1998 brought the Asian financial crisis and the Russian debt default, which took down the Long-Term Credit hedge fund and provided a harbinger for the 2008 credit crisis.

If we are in the last innings of this cycle, then you really should consider your portfolio correlations. Ideally you will want to introduce a non-correlated asset class to your portfolio. During cyclical downturns driven by tightening credit conditions, long-term bonds are negatively correlated with equities: their yields fall, and prices rise as investors flee to safety. I have replaced the spread in the above chart with the 10-year treasury bond yield.



Source: Bloomberg L.P.; CI Investments

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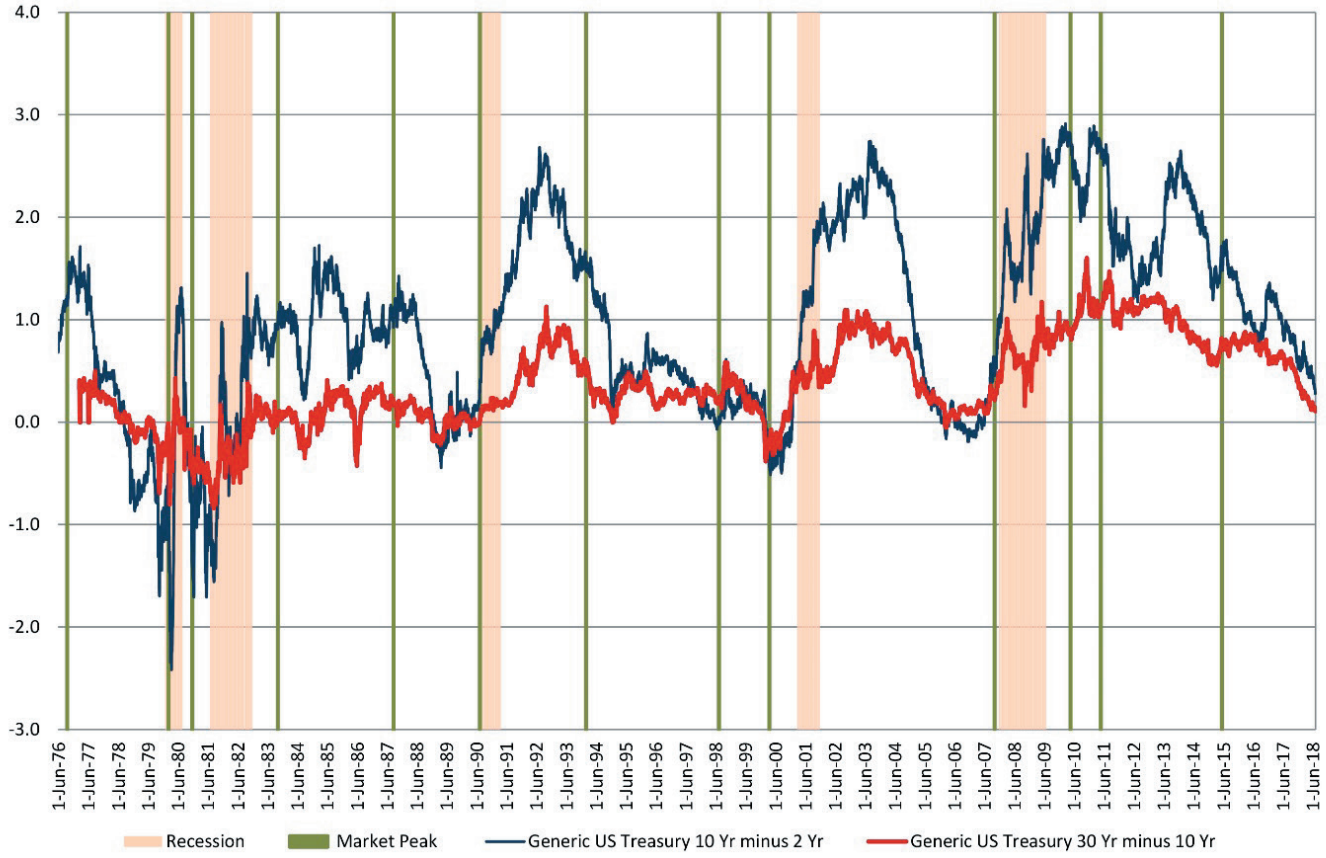
During the past four recessions the yields on the 10- and 30-year bonds fell and the prices rose as the economy deteriorated. During this tightening cycle the yield on the 30-year bond has been quite sticky with the yield on the 10-year bond closing in on it.

This tells me two things: long-bond investors are not getting overwrought about the risks of materially higher inflation and we are quite late in this tightening cycle. As the yields converge, the yield curve is already essentially flat for the 10- and 30-year bonds, and we have a timeline for it to be totally flat in Q1 2019. While the above chart is dated July 6th, on June 19 the 30-year bond yield broke below 3%. More proof that yields are converging.

Slope of the Yield Curve:
10 Year Treasury minus 2 Year Treasury & 30 Year minus 10 Year



Source: Bloomberg L.P.; CI Investments

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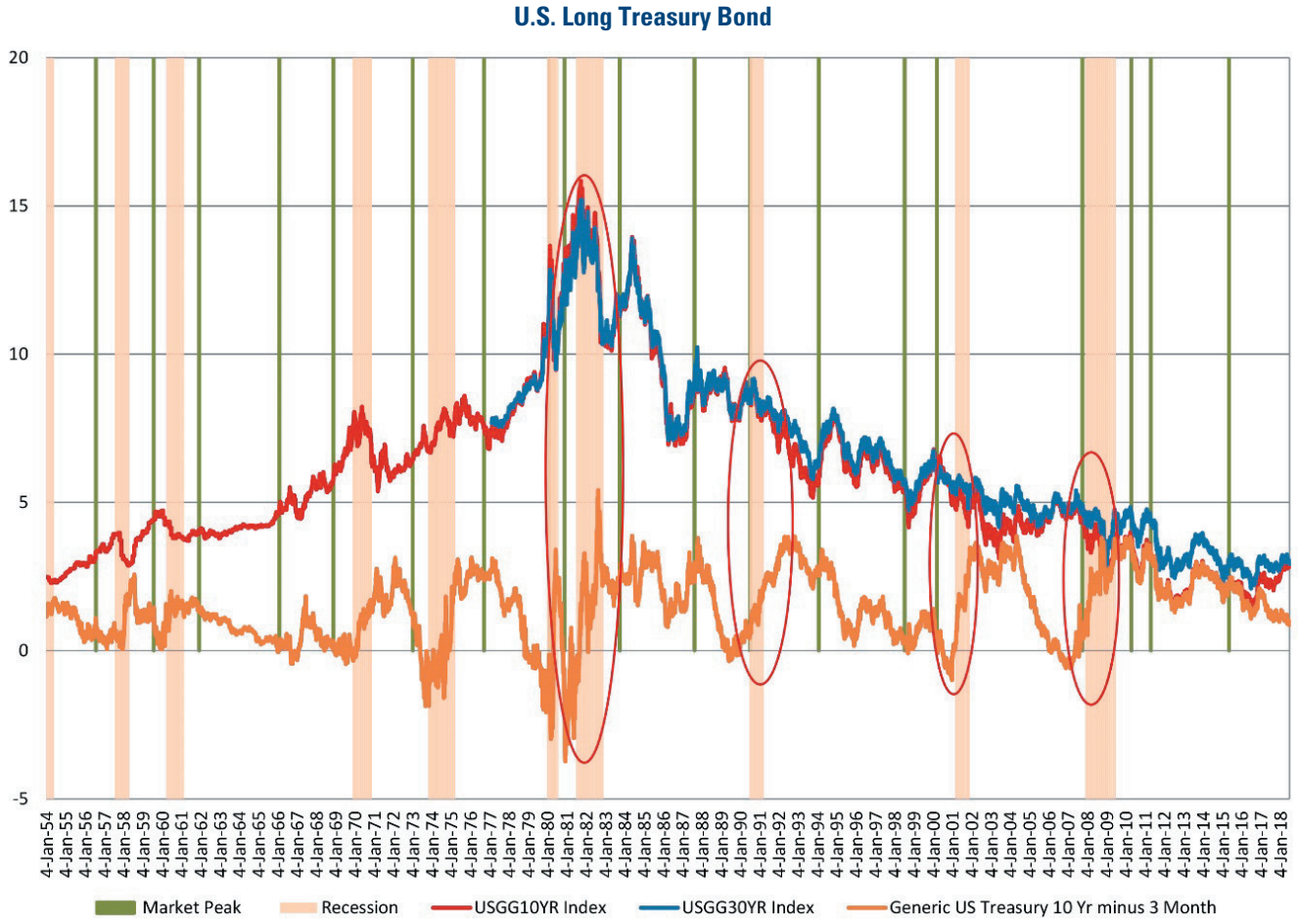
For reference, in the above I have included the 2-year and 10-year as well as the 10-year and 30-year Treasury rates. These slopes converge late in the tightening cycle. Currently the 30s minus the 10s is 10.8 basis points and the 10s minus the 2s is 28.5 basis points. The weighted average DOT for the Fed Funds Rate for 2018 is 2.242%, for 2019 is 2.958% and for 2020 is 3.25%. The nominal 2-year yield is currently 2.561%. Some simple bond math: 2.242% + 2.958% = 5.200%. Based on those numbers, this is what you can expect to receive in total interest if you are holding short T-Bills: 5.20% / 2 years = 2.60%. The two-year bond is essentially pricing in this outcome.

So, what happens to long bond yields when the yield curve is flat? They fall rapidly as the Fed eases. This brings liquidity into focus. The treasury market is deep and liquid. Long-treasuries are negatively correlated with equities as a tightening cycle ends. You should begin to consider adding duration as the rise in rates moderates. (We may well have seen the high in the 10 Year Treasury Yield in mid-May). Equity correlated fixed income is not as liquid and in a bear market it loses value, albeit to a lesser degree than most equities.

Two popular places to hide during the tightening cycle have been the high yield and floating rate loan markets. Both have short duration characteristics. While it has been very liquid for investors entering these asset classes, it remains to be seen how liquid it will be when they try to leave. Due to the substantial flows into the high yield and floating rate markets, many of the issues became what is called: covenant light, which simply means the protections for the lenders were diluted. If you choose to ride out the end game of the credit cycle, make sure that the securities you hold have strong covenants. I wouldn't recommend being an index mimic in these asset classes. Make sure your bond manager has true active share.



Source: Bloomberg L.P.; CI Investments

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Once the curve has flattened you can look at actively adding duration. As you can see from the above, in the majority of cases a falling equity market, leading into an eventual recession, came with falling long-term rates. Long-duration treasury bonds are an effective equity hedge; long duration equities (high multiple stocks) are the riskiest part of the equity market when it eventually transitions into a recessionary bear market.

But today I am actually seeing the opposite of my view happening. Investors are shunning treasury bond duration and chasing risky returns in expensive (high multiple long-duration equities) and fashionable areas of the market.

NYSE FANG+, S&P and Nasdaq Indexes

NYFANG ↓ 2955.97 +19.24 -- / --

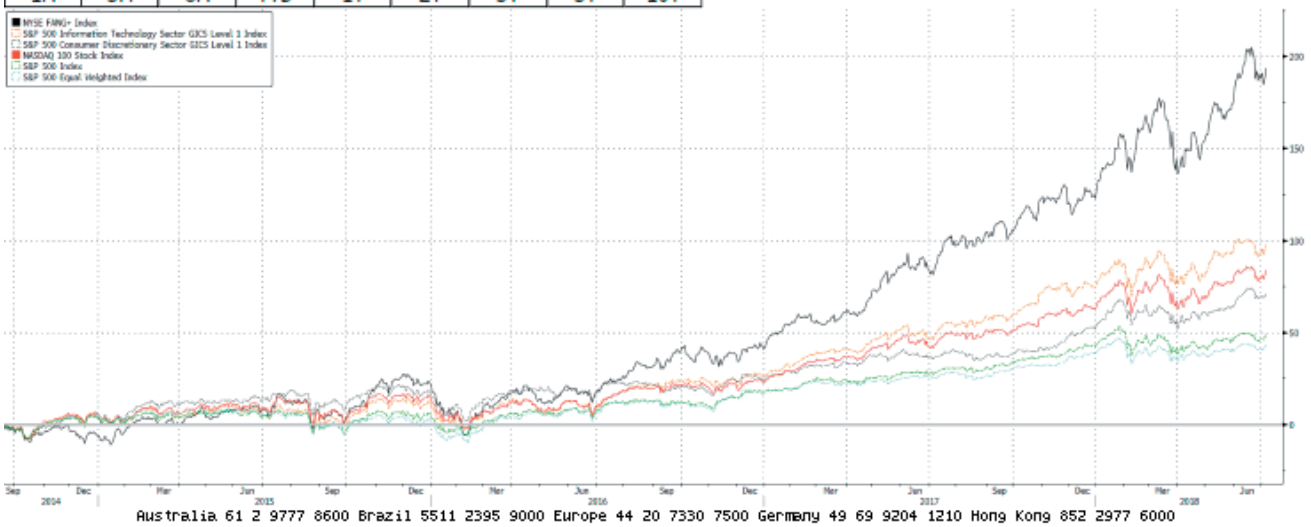
At 14:42 d O 2936.74 H 2969.79 L 2925.98 Prev 2936.74

NYFANG Index — Comparative Returns

Range 09/19/2014 - 07/06/2018 Period Daily No. of Period 1386 Day(s) Table

	Security	Currency	Price Change	Total Return	Difference	Annual Eq
1)	NYFANG Index	USD	193.67%	193.93%	96.45%	32.83%
2)	S5INFT Index	USD	86.56%	97.48%	--	19.63%
3)	S5COND Index	USD	61.53%	71.06%	-26.42%	15.19%
4)	NDX Index	USD	75.78%	83.87%	-13.62%	17.40%
5)	SPX Index	USD	37.28%	48.43%	-49.05%	10.96%
6)	SPW Index	USD	32.93%	43.04%	-54.44%	9.89%

1M 3M 6M YTD 1Y 2Y 3Y 5Y 10Y



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Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000 Copyright 2018 Bloomberg Finance L.P.
SN 548027 EDT GMT-4:00 G716-2443-0 09-Jul-2018 14:57:33

Source: Bloomberg L.P. As of July 6, 2018

Luckily the NYSE launched a index of the hot stocks on September 26, 2017: the FANG+ Index. The companies that make up the index have been pushing it to new highs ever since, as investors continue to pile into its hot names. Since 2014, the companies that make up the index have offered a total return of approximately 194%, as of July 6, 2018.

The index is dominated by the InfoTech (+97%) and Consumer Discretionary (+71%) sectors. Within InfoTech and Consumer Discretionary if you aren't a FANG, you didn't perform. The NASDAQ 100 is heavily influenced by many of the same names, and it is up 84%. While the S&P 500 has a much lower exposure to FANG names; and is only up 48% as a result. And when you adjust for the impact of capitalization, the S&P 500 Equal Weight is actually +43%. The last time I saw this degree of enthusiasm for a narrow group of stocks was in 1999-2000. We all know how that worked out.

How do the valuations look? If you use traditional valuation metrics, they are problematic.

NYSE FANG + Index

	Price	FANG+ % Weight	NASDAQ 100 % Weight	S&P 500 % Weight	P/E	Price/Book	EV/Revenue	Free Cash Flow/Share	Free Cash Flow Yield
Netflix	35.04	11.21	1.92	0.67	244.83	38.16	12.34	(4.34)	-12.4%
Apple	187.15	10.63	12.04	4.14	18.09	7.30	3.13	10.62	5.7%
Amazon	1,609.50	10.32	9.81	2.82	253.97	24.77	4.15	13.21	0.8%
Facebook	184.96	10.11	5.57	1.94	27.25	6.94	11.08	6.45	3.5%
Alibaba	197.50	10.10			54.82	8.89	12.79	38.92	19.7%
NVIDIA	247.91	10.04	1.90	0.66	42.59	19.51	13.22	6.64	2.7%
Twitter	34.07	9.82			484.50	4.39	8.94	0.84	2.5%
Alphabet Cl A	1,065.11	9.51	4.07	1.39	27.85	4.62	5.47	30.58	2.9%
Baidu	241.44	9.35	0.86		26.07	4.36	5.59	80.92	33.5%
Tesla	283.06	8.91	0.59		NA	10.80	4.60	(23.36)	-8.3%
% of Index		100.00	36.75	11.62					
			InfoTech % Weight	Consumer Discretionary % Weight					Free Cash Flow Yield
NYSE FANG+ Index	2,703.90		40.29	21.53	54.34	8.08	6.40	46.06	NA
NASDAQ 100 Index	6,905.05		62.76	22.43	25.47	5.69	3.63	4.12	4.34
S&P 500 Index	2,683.62		25.96	12.97	20.49	3.24	2.52	4.53	4.19

Source: Bloomberg L.P. As of May 29, 2018

According to Bloomberg, the FANG+ Index has current valuations as follows: Price Earnings Ratio (PE) of 60.67x, Price to Book Ratio (PB) of 8.72 and Price to Sales Ratio (PS) of 7.19. Clearly, these are not undiscovered gems. By comparison, the NASDAQ 100 Index has a PE of 26.56x, PB 5.93 and PS of 3.75, while the S&P 500 Index ratios are: PE 21.21x, PB 3.36 and PS 2.23. The equally weighted S&P 500 ratios are: PE 21.24x, PB 2.87, PS 1.70.

How bad is the concentration? The top ten names in the S&P 500 are around 21% of the index. At the peak in 2000 the top ten made up around 27% of the index and were much more extremely valued. The question of overvaluation is not a broad market problem. There is value in the S&P 500 and apart from the influence of index investors, much of this index is being ignored. In a market downturn, stock-pickers who are exposed to already unloved stocks should do okay.

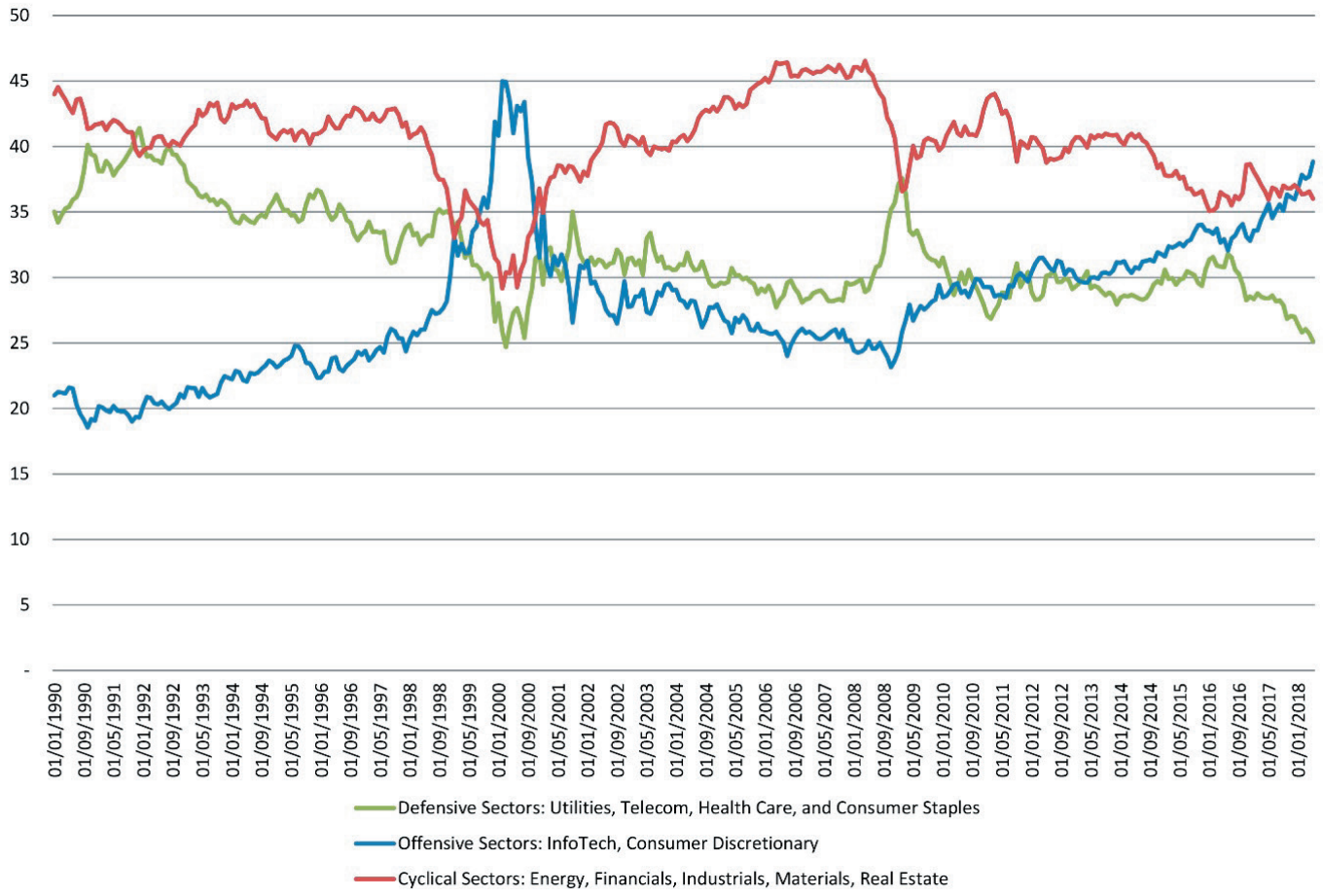
The market can be loosely divided into three groups of GICs industry sectors:

- **Defensive Sectors:** Utilities, Telecom, Health Care and Consumer Staples
- **Offensive Sectors:** InfoTech and Consumer Discretionary
- **Cyclical Sectors:** Energy, Financials, Industrials, Materials and Real Estate

There is an upcoming GICs classification change which will rename Telecom to Communication Services and move companies from Consumer Discretionary and Telecom into the new category. Amazon and Netflix will no longer dominate Consumer Discretionary. The changes will move Telecom from the Defensive group to offensive and materially increase the sector weight.

It is interesting to look at how the influence of these groupings has ebbed and flowed over the decades.

S&P 500 Index: Defensive,Offensive & Cyclical Sectors' Index Weight

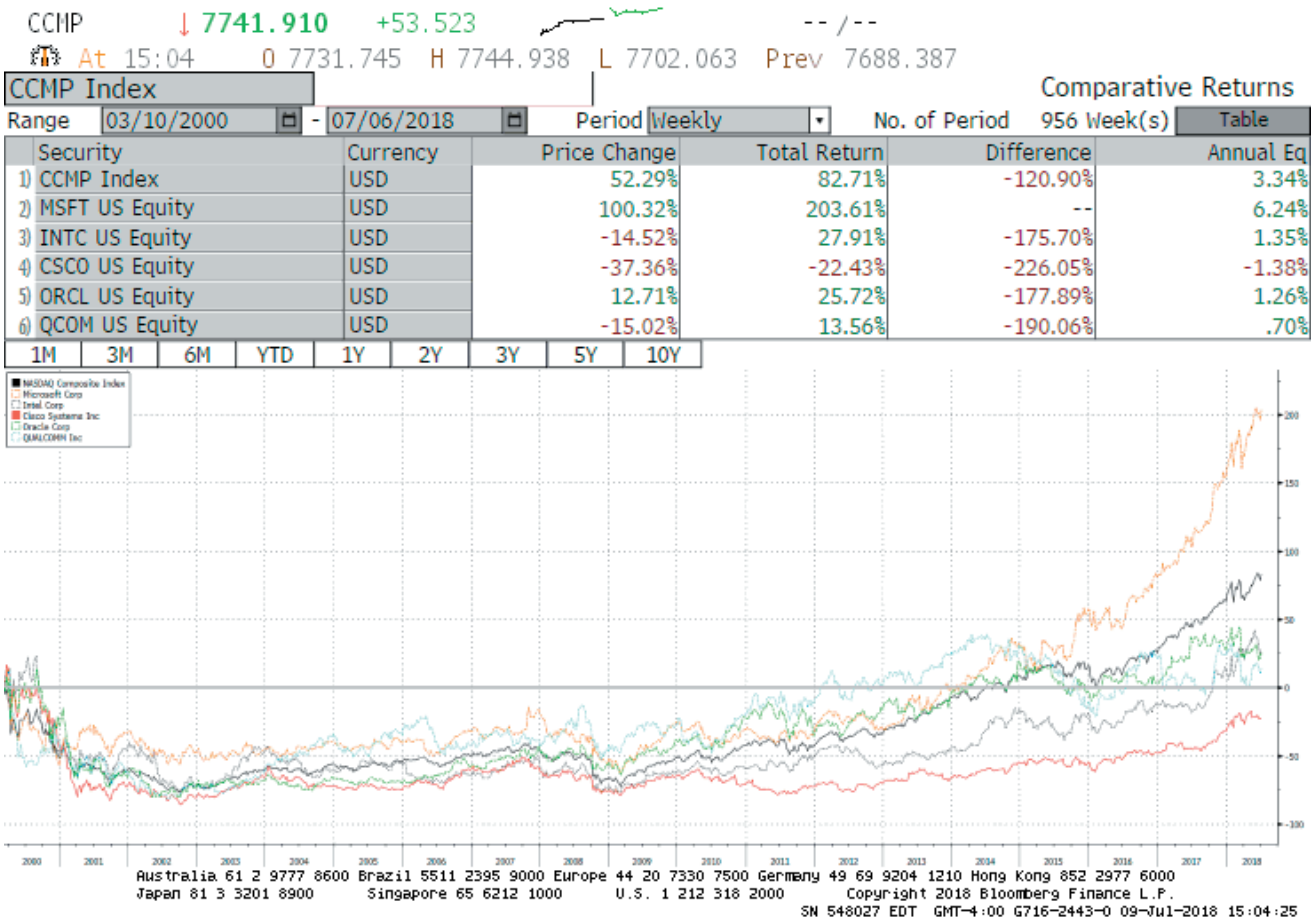


Source: Bloomberg L.P. As of June 30, 2018

This is important, if you are a passive index investor you should be aware of the risks embedded in the index you are investing in. The cyclical sectors (red line in chart above) have solidly comprised over 40% of the total, falling to 30% during the tech bubble and are currently in decline. The collapse in financials during the Financial Crisis also briefly took the cyclicals below 40%. During this crisis the defensive sectors (green line) acted as a mirror image. This is a rotation effect where money came out of the cyclicals and hid in the defensives. It is worth noting that the defensive sectors have as little influence on the index as they did at the height of the Tech Bubble. The Offensive sectors (blue line) clearly show the power of the tech bubble as they went from around 25% in 1998 to close to 45% of the total at the peak in March of 2000. They are again the dominant influence on the S&P 500 index with a weight of 38.9%.

The Nasdaq 100 has a much more serious issue. At the end of May, the top ten names comprised 56% of the Index leaving the other 90 with 44%. Considering the PE for the top ten was 70x, the other 90 must have had quite the earnings to bring the overall index multiple down to 27x. To put this in context (in an admittedly apples to oranges comparison as I do not have NASDAQ 100 data for March 2000) the top 10 Nasdaq Composite stocks in March of 2000 were 36% of the composite at a PE of 52x.

Nasdaq Composite Index (CCMP)



Security	Currency	Price Change	Total Return	Difference	Annual Eq
1) CCMP Index	USD	52.29%	82.71%	-120.90%	3.34%
2) MSFT US Equity	USD	100.32%	203.61%	--	6.24%
3) INTC US Equity	USD	-14.52%	27.91%	-175.70%	1.35%
4) CSCO US Equity	USD	-37.36%	-22.43%	-226.05%	-1.38%
5) ORCL US Equity	USD	12.71%	25.72%	-177.89%	1.26%
6) QCOM US Equity	USD	-15.02%	13.56%	-190.06%	.70%

Source: Bloomberg L.P. As of July 6, 2018

It is worth keeping in mind that the NASDAQ Composite did not break even until 2014. Four of the top ten from 2000 are no longer around due to mergers or bankruptcy. The chart above is not a pretty picture. You would have been better off in long U.S. Treasuries than in hot stocks at peak valuations. A 30-year treasury yielded 6.18% on March 10, 2000, the Nasdaq Composite peak. The 18-year return on Microsoft was essentially the same.

It could be time to start thinking about defensive measures: sell down high multiple popular stocks while the ducks are still quacking. Remember when the ducks quack, they want feeding! You can also look at improving the quality of your bond portfolio and if you outsource bond management, do correlation studies of the bond portfolio relative to equities. Yield seeking has pushed many investors into equity like bond positions. By rebalancing your neutral asset mix you can make sure you have correct exposures for your investment objective. At the same time make sure that you have adequate liquidity to meet your known cash requirements together with an emergency cash buffer. The death of portfolio performance is being forced to liquidate positions in a market downturn to meet a cash call. That is the road to insolvency. Take care, it is a complicated world out there.

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