American Radio Relay League

Treasurer's Report
Rick Niswander, K7GM
For the six months ended June 30, 2018

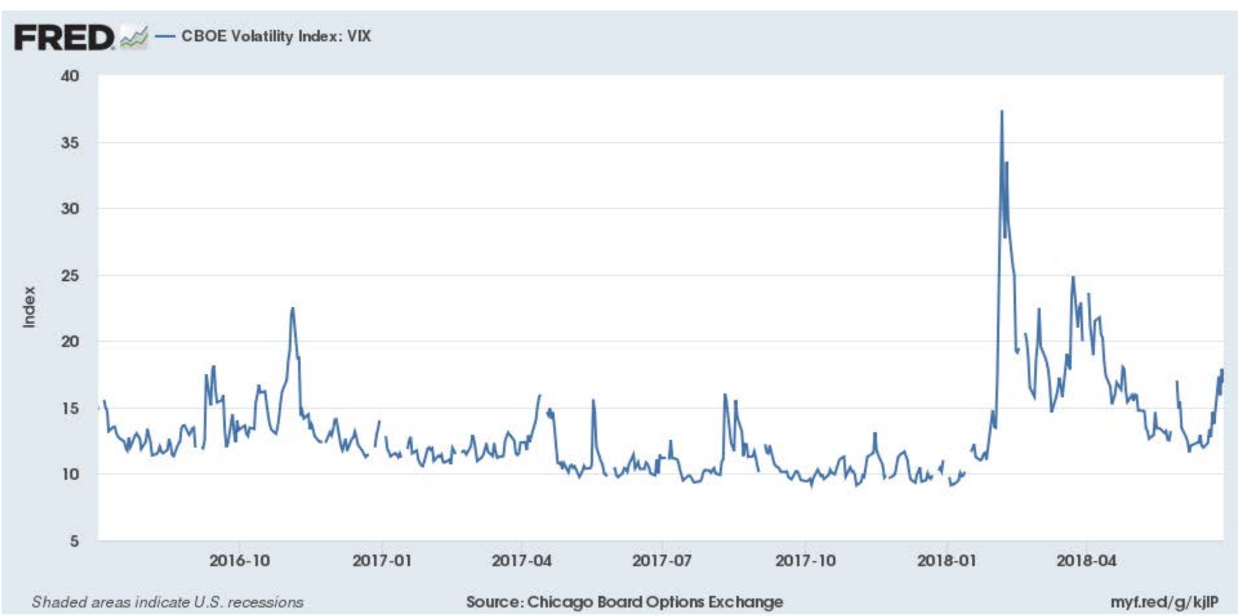
To paraphrase Jack Nicholson: "It's baaaaaack." The "it" in this case is market volatility.

For about 19 months we experienced equity and debt markets that were much more benign on a daily basis than has historically been the case. On a percentage-change basis markets did not go up or down very much. I will illustrate using the S&P 500 index. From July 1, 2016 to January 31, 2018 (19 months), the market was open 384 days. During that period, the market was up more than 1% in a day only 12 times and was down more than 1% only 8 times. So, in that 19-month period, the market had a move outside of a 1% +/- band only 5% of the trading days, on average about one time in a month.

From February to the end of June 2018, the market traded a total of 101 days. In that period, it went up more than 1% in a day 19 times and down more than 1% in a day 13 times. So, since January 31, the market has been outside of the 1% +/- band almost 32% of the time, on average of 6.5 times a month.

Another indicator of greater volatility is the increase in the Volatility Index, known as VIX. In technical terms, VIX is the market's expectation of price volatility based on stock index option prices. In effect, the more volatile the stock market, the more option prices swing up and down. The VIX measures that options price swing – the more swing, the higher the index.

Here is a chart of the VIX Index since July 1, 2016. [The line is not completely continuous because of holidays.]



VIX started around 15 and, with the exception of a couple little blips, it slowly worked its way down to 10 for much of 2017. May not sound like much, but that is a 1/3 reduction in volatility. Equity markets were very calm. Then at the end of January 2018, the markets started to go a bit crazy as noted above and the VIX peaked at 37 before settling down to about 13. In the last 3 or 4 weeks it has risen again, in part because of market concern over the uncertainty about tariffs and other trade issues.

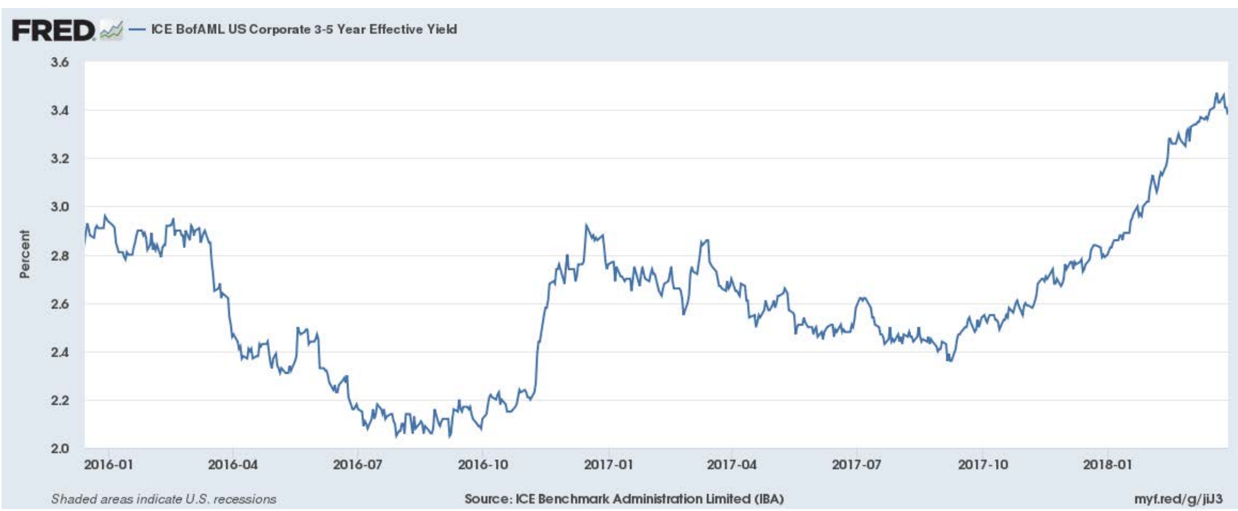
The two biggest down days for the S&P 500 in 2018 (-4.1% and -3.8%) occurred in the first 8 days of February, the time when the VIX spiked over 30.

Volatility is back, at least for now. What does that mean? When volatility increases, market risk increases. Research shows that higher volatility corresponds to a higher probability of market declines and vice versa. It is a probability, not a certainty. While it doesn't happen every time, increasing volatility is a concerning factor to a stock market in an economic expansion that is the second-longest ever (only 1991-2001 is longer). Nothing goes up forever and the apogee may not be terribly far away.

Bonds

In the bond markets, short-term rates are rising (long-term, not so much). Short-term rates have been on a pretty steady climb since Fall 2017. It was not that long ago (mid-2016) that I was getting yields on individual bonds in the 1.5%-1.8% range for good credits. Now, it is in the 3% range.

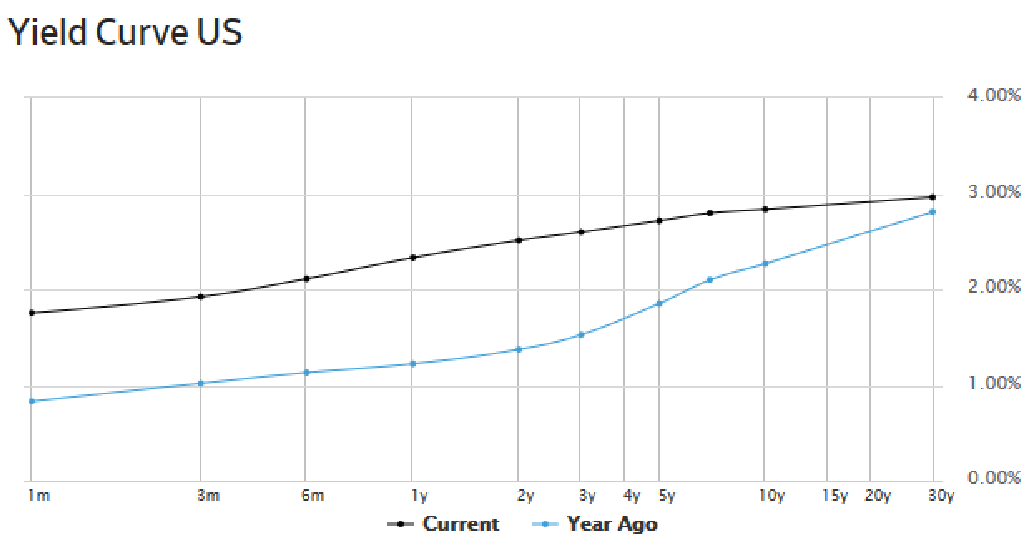
The chart below shows effective yields for 3-5-year corporate bonds. The chart includes all corporate credit levels. We don't buy the lower-rated credits that pay higher interest rates. Thus, the effective yield of what we buy is lower so the chart is indicative of movement, not precise yields for us.



The picture for corporate rates is similar when we look at Treasury prices. The chart below is the yield on 2-year US Treasuries for the past 12-months (July 1, 2017 to June 30, 2018).

In the case of both 3-5 year corporate bonds and short-term Treasuries, rates have been on a fairly steady increase since about September 2017.

Interest rates on all maturities have increased in the last 12 months, more so for short maturities. The chart below is a yield curve for US Treasuries. It shows the rates on various maturities as of a common date. The top black line shows the rates as of June 30, 2018. So, 3 month Treasury bills earned just a bit under 2% and 30 year bonds yielded 3%. The light blue bottom line is where rates were on July 1, 2017. For all maturities, the rates today are higher than the rates a year ago. It is clear that shorter maturities increased much more than longer maturities. This means that the yield curve has flattened. As the yield curve flattens and then inverts, the probability of recession increases. The indicator is not right 100% of the time (and the curve has not yet inverted), but it is a metric that bears watching.



When market interest rates rise, bond prices go down and that has been true for our portfolio. At the end of June, we held bonds of 66 different corporations and only 4 holdings had a gain (the accumulated gain over those 4 holdings was a whopping $854). As a result, our bond portfolio has an accumulated unrealized loss of $251K. However, since we hold all our bonds to maturity, the individual bonds with losses will recover fully and we will realize market gains of $340K on our individual bond portfolio by the time they mature. In addition, as bonds mature, we can reinvest the proceeds in bonds that earn a higher rate of interest, increasing our interest income over time.

Highlights of 2018 First Half

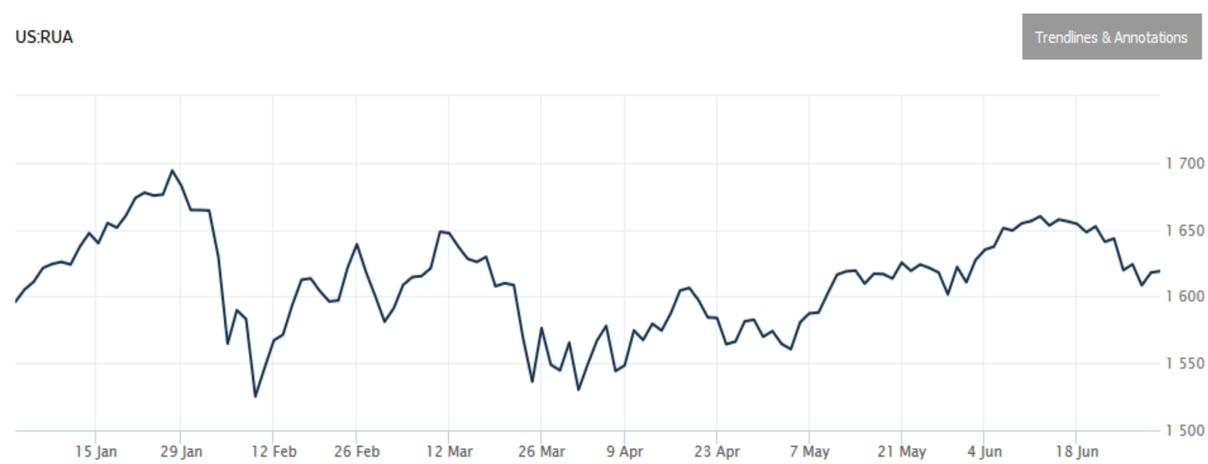
After a stellar 2017, and a good January 2018, markets went off the rails a bit.

In the stock market, January was good with domestic markets up 7%-8% and international markets up between 5%-10%. But after that, almost nothing was safe in the first quarter. All of our investable asset classes, except for cash, were down in Q1 of 2018. The total return for the broad US market was (0.63%), the broad international market was (1.12%), and the 1-5 year bond market was (0.52%). Granted, all the losses were small, but it represents the first time that all three metrics were negative in the same quarter since Q3 of 2008 – over nine years ago when the markets were in the midst of the Great Recession. [That's another disquieting sign, by the way.]

The second quarter was reasonable for domestic equities with the Russell 3000 increasing 3.89%. International stocks continued their slow slide with a 2.54% drop in the second quarter. The bond market squeaked out a small gain of 0.17%.

In total for the first half, the Russell 3000 (including dividends) was up 3.22%, the international index fell 3.65%, and the 1-5 year maturity bond market was down 0.35%. The weakness in international markets is due, in part, to the strength of the dollar, particularly in the second quarter.

Below is a chart of the Russell 3000 index for the first half of 2018



Particularly in March and towards the end of the second quarter, the markets negatively reacted to uncertainty over tariffs and a possible trade war. I expect that uncertainty to continue for a spell. It is hard to envision any case in which a trade war is good for almost anyone and the markets are confirming that. There are not too many things that can blow up the equity markets and the economy at the same time, but a broad trade war is one of them.

Having said all that, the overall economy is doing well entering the 10th year of expansion. Since 2010, we have had only two quarters of negative GDP. Second quarter 2018 GDP is estimated to have expanded at a 4%+ annual rate after a 2% annual rate increase in Q1. Unemployment is very low, corporate profits are up (the 2017 Tax Act having something to do with that), and consumption and investment spending by consumers, businesses, and government appears to have been solid so far this year. For the economy, that is good news for the remainder of 2018 and maybe beyond. However, an aging population, a $1 trillion federal deficit, gigantic debt loads across the globe, and trade uncertainty all contribute to a longer-term unease.

Markets anticipate the future. Sometimes they get it right and sometimes they do not. As I say at the end of each of my economic talks: Take a deep breath, don't hyperventilate, and turn off the screaming heads on TV.

ARRL Portfolio

In Q1 2018, our portfolio recorded a total return (price changes plus interest and dividends) of ($313,833) or a 1.13% decrease. The portfolio benchmark (45% US stocks, 5% international stocks, 45% bonds, 5% money market) fell by 0.57%. So, we underperformed the benchmark by 0.56% for the quarter.

In the second quarter, our portfolio had a total return of $376,607 or 1.36%. The benchmark was 1.70% so we underperformed by 0.34%. In both quarters, most of the underperformance was related to our bias towards value stocks which did not perform as well as growth stocks.

When comparing benchmark return to actual return, variability from quarter-to-quarter or year-to-year should be expected. Comparisons should be made with caution over three-to-five-year time horizon. Further, comparison indexes do not include any transaction/holding costs (trading commissions and annual fees). While our transaction/holding costs are low, they are not zero.

The top of Appendix B provides detail concerning the dispersion of investment portfolio assets across investment classes. The composition of the investment portfolio conforms to the asset allocation policy.

We started 2018 with $27,478,256, had net profits (dividends, interest and market gains/losses) of $62,774, added contributions of $573,741, transferred zero to the general account, and ended the first half with $28,114,771.

Appendix A

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Portfolio Flow de K7GM

	Investment Portfolio Market Value
Balance, June 30, 2016	23,274,151
Additions from contributions	340,124
Subtractions	(500,000)
Total Return	297,996
Balance, September 30, 2016	23,412,271
Balance, September 30, 2016	23,412,271
Additions from contributions	161,700
Subtractions	0
Total Return	200,294
Balance, December 30, 2016	23,774,265
Balance, December 30, 2016	23,774,265
Additions from contributions	177,307
Subtractions	0
Total Return	675,202
Balance, March 31, 2017	24,626,774
Balance, March 31, 2016	24,626,774
Additions from contributions	100,293
Subtractions	0
Total Return	454,172
Balance, June 30, 2017	25,181,239
Balance, June 30, 2017	25,181,239
Additions from contributions	712,899
Subtractions	0
Total Return	527,319
Balance, September 30, 2017	26,421,457
Balance, September 30, 2017	26,421,457
Additions from contributions	298,327
Subtractions	0
Total Return	758,472
Balance, December 31, 2017	27,478,256
Balance, December 30, 2017	27,478,256
Additions from contributions	555,282
Subtractions	0
Total Return	(313,833)
Balance, March 31, 2018	27,719,705
Balance, March 31, 2018	27,719,705
Additions from contributions	18,459
Subtractions	0
Total Return	376,607
Balance, June 30, 2018	28,114,771

Two-Year Summary	
Beginning Balance, June 30, 2016	23,274,151
Cumulative Additions from contributions	2,364,391
Cumulative Subtractions	(500,000)
Cumulative Market Returns	2,976,229
Ending Balance, June 30, 2018	28,114,771

Appendix B

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Portfolio Composition as of June 30, 2018

	Fair Value	Percentage	Amortized Cost
Investment Portfolio			
Stock (of which $1,086,468 is international)	12,973,079	46.1%	8,413,167
Bond	13,757,365	48.9%	14,009,046
Cash	1,384,327	4.9%	1,384,327
Total Investment Portfolio	28,114,771	100.0%	23,806,540

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Portfolio Return and Total Return Metrics

	2018 1st Quarter	2018 2nd Quarter	Calendar Year 2017	Calendar Year 2016	Calendar Year 2015	Calendar Year 2014	Calendar Year 2013	Calendar Year 2012
Applicable Total Return Indices								
US Stock - Russell 3000 TR	-0.63%	3.89%	21.13%	12.74%	0.48%	12.56%	33.55%	16.42%
Foreign Stock - FTSE AW Ex US TR	-1.12%	-2.54%	27.47%	5.12%	-4.46%	-3.04%	15.63%	17.80%
Bonds - Barclays US Agg 1-5Yr TR	-0.52%	0.17%	1.30%	1.65%	1.07%	1.69%	0.25%	2.21%
VG Federal Money Market	0.01%	0.02%	0.04%	0.04%	0.04%	0.04%	0.04%	0.04%
Benchmark Blended Total Return (45% us, 5% intl, 45% bonds, 5% mmkt)	-0.57%	1.70%	11.11%	6.66%	0.48%	6.26%	15.99%	9.28%
Benchmark Bended Total Return (above)	-0.57%	1.70%	11.11%	6.66%	0.48%	6.26%	15.99%	9.28%
Actual Total Return								
In Percent	-1.13%	1.36%	10.11%	6.49%	-0.74%	5.77%	14.66%	11.04%
In Dollars (from page 1)	(313,833)	376,607	675,202	1,424,271	(160,892)	1,220,626	2,654,016	1,769,299

Notes:

Returns for greater than one quarter will be different than the sum of the quarterly returns because of compounding

The Russell 3000 Index is a measure of the total US stock market.
The FTSE index measures the World (All World) stock market, minus the US market
The Barclays index measures the aggregate US bond market for maturities of 1-5 years (the type of bonds in which we invest)
The Vanguard Prime Money Market is a proxy for the overall US money market

The Benchmark Blended Total Return is calculated from the above indexes in the proportions noted. It represents the expected return on the portfolio.
The Actual Total Return is calculated based on the dollar amount of Total Return relative to the original principal amount for the period calculated.
If there are significant increases or decreases to the investment portfolio in the period, the calculated Actual Total Return is adjusted accordingly.