ESTATE COUNSELORS, LLC

ASSET MANAGEMENT

Monthly Market Risk Report

For the Month of November 2015

Estate Counselors, LLC monitors a number of forward looking economic indicators in an effort to identify when the risks of a market bubble or adverse economic conditions are increasing. If those indicators suggest there is an unusually high risk that a market bubble has formed or that a recession is on the horizon, then we may recommend to our clients that they consider investing in option contracts that are intended to increase in value should either a bubble pop or a recession take hold.

The following is a list of indexes tracked by Estate Counselors, LLC and their current forecast. Based on the data below it appears that:

> Economic Risk is **MODERATE**.
>
> Market Risk is **ELEVATED**.
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> Hidden Markov Model (HMM) indicates that the equity markets are currently in a **BEAR MARKET** trend. (A more detailed discussion of HMM can be found later in this memo.)
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> Estate Counselors' Equity Hedge Index (ECHI) is signaling **HEDGE OFF**. (Please see below for a description of ECHI.)

Stocks briefly made a run to test their all-time highs in November before pulling back, only to trend higher again as the end of the month approaches. Despite terrorist attacks in Paris, ongoing geopolitical tensions in the Middle East and a less-than-stellar domestic economic backdrop, equities refused to give much ground. As a result, some stock market valuation indicators are continuing to suggest that stocks are overvalued at current levels. However, corporate profits for the third quarter of 2015 by and large beat estimates, a factor that has helped support higher equity prices as the holiday shopping hits full swing.

The allocation to equity holdings in our model portfolios is slightly underweighted in response to a recent increase in market volatility which is above historically normal levels. More recently, stock market volatility declined to more normalized levels, but the HMM component (explained below) of our VA4 strategy still indicates that stocks are in a bear market and therefore VA4 continues to target a lower allocation to equities than what would otherwise be called for.

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A. ECONOMIC INDICATORS

1. **Capital Spectator's U.S. Economic Trend Index (ETI).** ETI is a diffusion index that measures the percentage of 14 leading and coincident indicators that are trending positive for economic growth. More specifically, a diffusion index represents the percentage of the variables that are positive. Accordingly, if all of the indexes included in ETI were positive, the value of the ETI index would be 1.0 or 100%. If 7 of the 14 variables were positive, the value of the ETI index would be 0.50 or 50%.

   This index is typically released mid-month based on data for the prior month. As of November 21st, the ETI index reading was 85.7%. Higher readings equate with more indicators signaling that the economy is expanding; lower readings imply a weaker economy, with levels below 50% signaling a high probability that a recession has started. ETI rebounded since last month, and the reading remains well above the danger zone that would indicate a high probability of a recession beginning.

   One month ago: 83.3%
   Two months ago: 85.7%

2. **Capital Spectator's U.S. Economic Momentum Index (EMI**). EMI is the monthly median percentage change for the 14 indicators that comprise the ETI. EMI is based on the median rather than the average (i.e., the mean) of these indexes because the mean is subject to outlier numbers, which can mislead us as to the true average. The median, by contrast, is immune to extremes because it reflects the middle point for a batch of numbers.

   As is the case with the ETI, this index is typically released mid-month based on data for the prior month. As of November 21st, the EMI index reading decreased to 3.3%. Near zero and below zero readings are indicative of recessions, usually with a slight lead time relative to the start dates, as determined by the National Bureau of Economic Research. EMI has come down since the prior month but currently continues to indicate recession risk is low.

   One month ago: 4.2%
   Two months ago: 5.6%

3. **Capital Spectator's Macro-Markets Risk Index (MMRI).** MMRI measures the daily median change of U.S. stock, bond, and oil prices. Because this information is available in real time, with continuous updates, prices have an edge over conventional economic statistics, which are published with a lag of a month or more. In addition, unlike published indexes, the market data on which MMRI is based is not adjusted. Accordingly MMRI is intended for use

as a supplement for developing perspective on the current month's economic profile until a complete data set is published.

If MMRI falls under 0%, that would suggest that recession risk is elevated. By contrast, readings above 0% imply that the markets are anticipating/ forecasting economic growth. MMRI fell to 2.0% as of November 21st. This reading suggests business cycle risk has increased slightly since the prior month, although it is lower than it was in September.

One month ago: 3.9%
Two months ago: 0.4%

4. **Chicago Fed National Activity Index (CFNAI).** The CFNAI is a weighted average of 85 existing monthly national economic indicators. It is constructed to have an average value of zero and a standard deviation of one. Since economic activity trends toward growth over time, a positive reading corresponds to growth above trend and a negative reading corresponds to growth below trend. Research has found that the CFNAI provides a useful gauge on current and future economic activity and inflation in the U.S. The index's three month moving average provides a more consistent picture of national economic growth and is therefore used by Estate Counselors, LLC instead of the volatile monthly numbers.

When the three month moving average moves below -0.70 following a period of economic expansion, there is an increasing likelihood that a recession has begun. Conversely, when the three month moving average is above 0.70 after a period of economic contraction, there is an increasing likelihood that a recession has ended. The three-month moving average for the month of October registered -0.20. The CFNAI indicates that economic activity remains below its historic average, but it has not crossed into what we would regard as the danger zone.

One month ago: -0.09
Two months ago: 0.01

B. MARKET VALUATION INDICATORS

1. **Bullish Percent Index (BPI).** BPI is a popular market breadth indicator that is calculated by dividing the number of stocks in a given group (an exchange, an industry, etc.) that are currently trading with Point and Figure buy signals, by the total number of stocks in that group. For example, if 2,100 stocks signal buy and 700 signal sell, the value of the NYSE Bullish Percent Index is 75.

As of November 24th, the BPI for the NYSE index is 53.25%. When the percentage of bullish stocks within a particular index is 70% or higher, the index is considered to be overvalued. When the index is below 30, stocks are considered to be oversold. BPI indicates that stocks are trading at fair valuations for a third month in a row.

One month ago: 47.76%
Two months ago: 34.02%

2. **CAPE Ratio.** CAPE is a modified form of the PE ratio of the S&P 500 as determined by Robert Schiller. CAPE is simply the S&P 500 index's current price divided by the 10 year average of trailing earnings, adjusted for inflation. A high CAPE reading may be evidence that stock prices are inflated. The long term average of this ratio is 16.59, while its historical high is 44.2.

	Cape on 11/23/15	Median	Mean	High	Above Average	Neutral	Low
Cape	26.38	16.01	16.63	25.1+	22.5-25	17.5-22.4	<17.4

The CAPE ratio has increased modestly since last month as stocks have regained some of their value. The CAPE ratio increased again to a somewhat inflated level, as it has been for the majority of 2015.

One month ago: 25.53
Two months ago: 24.34

3. **Total Market Cap of the U.S. Stock Market to GDP.** This statistic is an indicator of whether the stock market is fairly valued. It compares how much money is invested in the market relative to GDP, which is closely tied to corporate profits. A high reading would be an indication that equity prices are inflated.

	Market Cap to GDP on 11-23-15	Median	Mean	High	Above Average	Neutral	Low
Market Cap to GDP %	121.0%	68.83	75.89%	115+	90.1%-115%	50.1%-90%	<50%

The Total Market Cap to GDP ratio has increased since last month and continues to suggest that U.S. stocks may be significantly overvalued. It should be noted, however, that this metric compares current market conditions to historical GDP, which is itself a lagging indicator.

One month ago: 118.7%
Two months ago: 114.7%

4. **Tobin's Q.** This statistic is calculated by dividing Total Market Value (as represented by the Wilshire 5000) by the Total Asset Value. A low Q (between 0 and 1) means the cost of the assets of companies included in the Wilshire 5000 is greater than the combined value of their stock. In that event the stock market is undervalued. Conversely, a high Q (greater than 1) implies that the stock price of all Wilshire 5000 companies exceeds the replacement cost of the assets of those companies. A Tobin's Q that significantly exceeds its historic average of 0.68 is a potential indicator of an equity market bubble.

	Tobins Q on 11/2/15	Median	Mean	High	Above Average	Neutral	Low
Tobin's Q	1.03%	0.76	0.68	0.90+	0.75-0.90	0.65-0.70	<0.65

Tobin's Q increased since the prior month after dipping below 1.0. This month's number again suggests that stock prices remain elevated, as they have been for most of 2015.

One month ago: 0.96
Two months ago: 1.02

5. **S&P Earnings Yield.** This statistic is the inverse of the S&P 500's P/E ratio (trailing 12 month earnings divided by index price). It can be used to compare equity valuations with the yield on bonds. If the S&P earning's yield is higher than the yield on high yield bonds, then that is an indication that stocks represent a better value than their closest fixed-income equivalent.

As of November 24th, the S&P 500 earnings yield is 4.54% while the yield on high yield bonds is 6.16%. This amounts to a spread of +1.62%. The spread between bond yields and stock yields was little changed in past month. This measure indicates that stock and high yield bond valuations haven't changed relative to one another since the prior month. However, high yield bonds are now trading at a 10% discount to their year-ago prices, pushing their yields higher.

	S&P	Bonds	Spread
One month ago:	4.70%	6.31%	+1.61%
Two months ago:	5.20%	6.09%	+0.89%

C. Hidden Markov Model (HMM)

A Hidden Markov Model is an econometric tool for representing probability distributions over sequences of observations. The model can be used to estimate the probability of a bull or bear market. It uses trailing S&P 500 1-year returns (calculated monthly) and the previous month's probability of a bull market as inputs and then generates the current probability of a bull or bear market as an output. HMM readings above 75% indicate a high probability of a current bull market. If the HMM reading is below 25%, it is an indicator of a high probability of a bear market. As of November 24th, the HMM output is 9.88%. The HMM increased slightly during November but continues to indicate that stocks are currently in a Bear market.

One month ago: 8.98%
Two months ago: 15.46%

D. ECHI

The Estate Counselors, LLC Hedge Index (ECHI) was developed to provide an empirical signal for when a hedge on equities should be established due to an impending market decline. ECHI is a composite risk index that draws on the output of the Stock Market Risk Index (SMRI) which is an equal-weighted mix of ten indicators developed by Jim Picerno of The Capital Spectator, drawing on a diverse range of U.S. equity and bond market factors. It provides a daily measure of risk for evaluating the potential for a near-term market correction/crash. 1 of the 10 SMRI signals are currently active. If 5 or more of the SMRI indicators signals are active, ECHI signals high market risk ("Hedge On"). Once ECHI is triggered it will continue to signal Hedge On until less than 5 SMRI signals are active and the 1 year trailing return of the S&P 500 exceeds 5% ("Hedge Off"). ECHI is currently signaling Hedge Off.

END NOTES

- The latest ETI reading can be found at http://www.capitalspectator.com/.
- The latest EMI reading can also be found at http://www.capitalspectator.com/.
- The latest MMRI reading can also be found at http://www.capitalspectator.com/.
- A reading of the bullish percent index for the NYSE can be found at http://stockcharts.com/h-sc/ui using the symbol $BPNYA.

END NOTES CONTINUED

- The most recent CAPE reading can be found at http://ycharts.com/indicators/pe10.
- A current reading of total market cap to GDP can be found at http://www.gurufocus.com/stock-market-valuations.php.
- Tobins Q can be found at http://www.advisorperspectives.com/dshort/updates/Q-Ratio-and-Market-Valuation.php.
- The current S&P earnings yield can be found at http://www.multpl.com/s-p-500-earnings-yield.
