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MARKET REVIEW
NOVEMBER 2017



ALL-TIME HIGHS VS. RELATIVE VALUATIONS

21,000. 22,000. 23,000. 24,000? With the Dow Jones Industrial Average hitting a series of all-time highs recently, many investors have experienced strong emotional responses. These feelings certainly could be reinforced by both the NASDAQ and S&P 500 also sitting at record highs.

Emotions can run at opposite extremes when markets hit all-time highs. Feelings of excitement as retirement and investment accounts have grown are displayed by some. Fears that recent highs could be setting the markets up for a steep decline are indeed felt by others. Though both sentiments are valid, at least according to their devotees, most successful investors tend to keep their emotions in check. The trite advice to make investment decisions without emotions might not be fashionable these days. Yet, this Market Brief attempts to analyze the latest few months of stock market advances and offers an alternate assessment devoid of emotion.

AN EMOTIONAL VIEW

The chart on the top of page three tracks the index levels of the Dow Jones Industrial Average (DJIA) and the S&P 500 from the summer of 2015 through the end of October.

Recently, investors have become almost giddy with excitement that stocks have rallied more than 20% since the lows of this past summer and nearly 50% since early 2016. Other investors now have become fearful that a sharp rally in the span of just about a year means a reversal is due. With a stock market that seems to steadily rise without as much as a 5-10% pullback, even some

long-time skittish investors who have shunned stocks are now beginning to warm up to them. Similarly, some investors may be letting their equity allocation drift higher, unknowingly or unwittingly making their portfolios more risky by choosing to not take profits and rebalance. Considering the emotional nature of investing, each of these investors could have a strong case to support their view.

AN OBJECTIVE VIEW

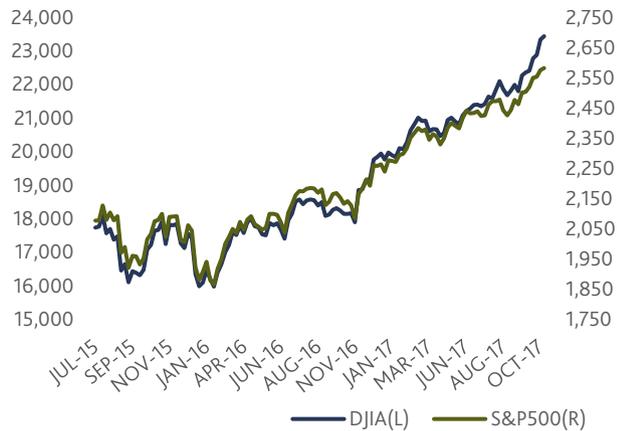
Though price is easily observed in the securities markets, value requires a bit more effort. A readily available source of valuation for stocks is the price-to-earnings ratio (P/E). P/E ratios are a dynamic measurement which reflect both the value of historical earnings as well as opportunities for future growth. These insights change over time, over a business cycle, as well as during bull and bear markets. P/E ratios vary from company to company and industry to industry, but aggregating these at the index level can serve as a broad relative value measure that is consistent over time. (Note: for this publication, P/E has been calculated on trailing twelve months of earnings, rather than forecasts of the current year.)

One common technique to determine how expensive or cheap stocks are is to compare the latest P/E ratio to the average P/E over time. Since the early 1970s the average P/E ratio has been around 13-15 depending on how it is calculated. For the past few years, P/E ratios have been at or above this measure, indicating to many investors that the market is expensive.

Another way to look at P/E ratios is to observe how they evolve over time during a bull market. Defining a bull market as a rally that continues until a 20% peak-to-trough

RECORD HIGHS

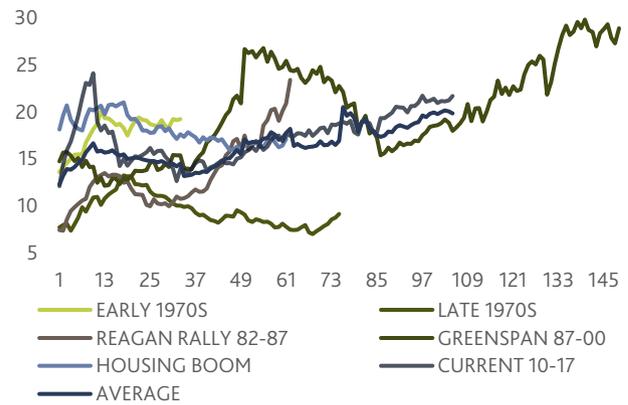
JULY 2015 THROUGH OCTOBER 2017



Source: Bloomberg. Past performance does not guarantee future results.

P/E DURING BULL MARKETS

IN MONTHS



Source: Bloomberg. Past performance does not guarantee future results.

decline has occurred allows us to identify six bull markets from the early 1970s to the present. These are labelled and graphed in the chart "P/E During Bull Markets" (above right).

A general rule that stocks get increasingly expensive during a bull market isn't exactly true. Though investors can be forgiven for adhering to this belief as the "Average" follows this pattern, there have been notable exceptions and our sample size of only six is rather small. In the Current, late 1970s, early 1970s and Greenspan bull markets, there are distinct periods where P/Es actually declined. In these bull markets, the P/E declined as earnings (the "E") were rising faster than prices (the "P") and/or the market fell, but not by more than 15%.

Considering the above, the pattern now appears to be that P/E rises modestly at the beginning of a bull market, has little change during the middle and then rises even more strongly until the end. Intuitively, what may be happening at the onset of a bull market is that earnings are still falling, yet share prices are rising as investors are reacting to monetary stimulus and bid up share prices in the anticipation of earnings growth due to a faster growing economy. After some time, both the economy and markets are growing in tandem, and P/E can remain stable. At the later stages of a bull market, P/E can reach uncomfortably high levels.

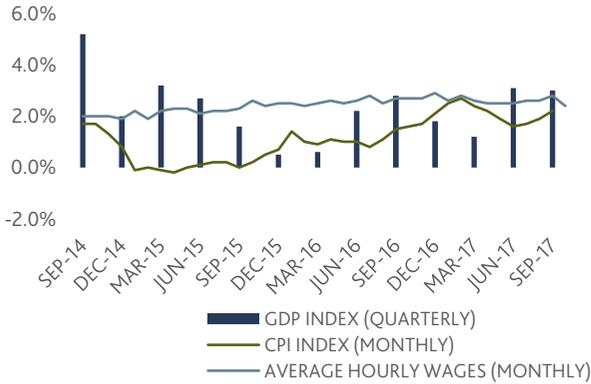
CONCLUSION AND INVESTMENT IMPLICATIONS

P/E currently stands around 21, roughly 30% higher than the average since the early 1970s, but about the same level based on the length of time of previous cycles. Considering the historical path of P/E expansion over time, this bull market has the potential to endure.

Whether investors in stocks should buy more or sell out is better considered in a portfolio context, rather than in isolation. Considering an investment horizon sufficiently long enough to own stocks, seasoned investors already in a diversified portfolio might find themselves with higher levels of equity than they might otherwise prefer and could consider taking profits by rebalancing. On the other hand, those newer investors experiencing trepidation ought to work with their investment advisors to first set an appropriate long-term strategy, next determine targets and ranges for stocks and bonds, and then finally, set a plan to build up to these prescribed levels. Those who become overly swayed by index highs risk unsatisfactory results when their portfolios drift too far away from preferred asset allocation ranges and targets. Calmly remaining true to plan is one of the keys to investing success.

ECONOMY

GDP, CONSUMER PRICES AND WAGE INFLATION SEPTEMBER 2014 THROUGH OCTOBER 2017

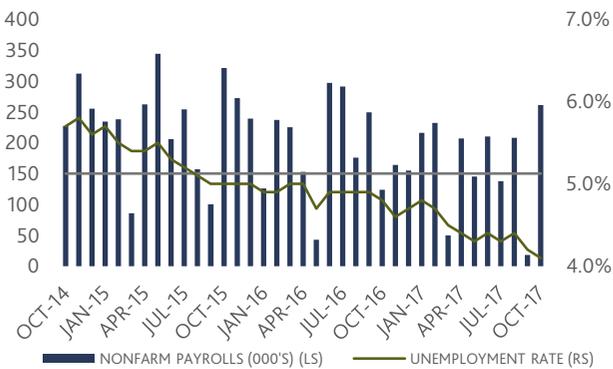


Source: Bloomberg

- The U.S. economy grew faster than expected in the third quarter even after hurricanes altered output in some areas of the country. GDP rose by 3.0%, driven by strong consumer and business spending. This is the second consecutive quarter GDP has hit 3.0% growth.
- The core Personal Consumption Expenditure (PCE) price index rose 0.1% in September. The YoY reading for Core PCE was unchanged at 1.3%, below the Fed's 2.0% target.
- Core CPI, which excludes volatile food and energy costs, rose by 0.1%, compared to expectations for 0.2%. Core CPI held steady at an annualized rate of 1.7% for September.

LABOR MARKET

OCTOBER 2014 THROUGH OCTOBER 2017

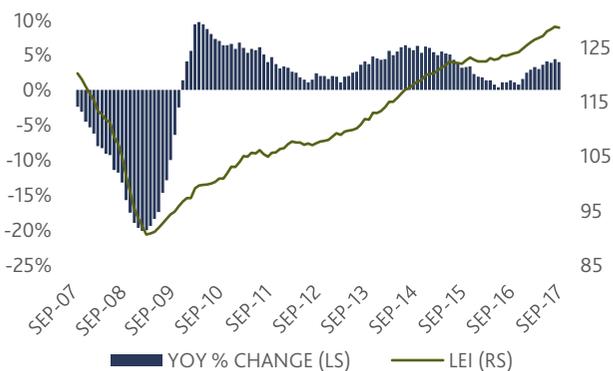


Source: Bloomberg

- The U.S. nonfarm payroll employment increased in the month of October, adding 261,000 new jobs, and coming in 49,000 jobs below the consensus estimate for the month. However, August and September payrolls were each revised up adding a combined total of 90,000 additional jobs than were previously reported.
- The unemployment rate decreased 10 basis points to 4.1% from September. The unemployment rate started the year at 4.8% and has steadily decreased to its lowest level since December of 2000.
- Employment in the food services and drinking places subsector rebounded from the impact of the hurricanes creating 89,000 new jobs in October after a 98,000 decrease in September.

LEADING ECONOMIC INDICATORS

SEPTEMBER 2007 THROUGH SEPTEMBER 2017

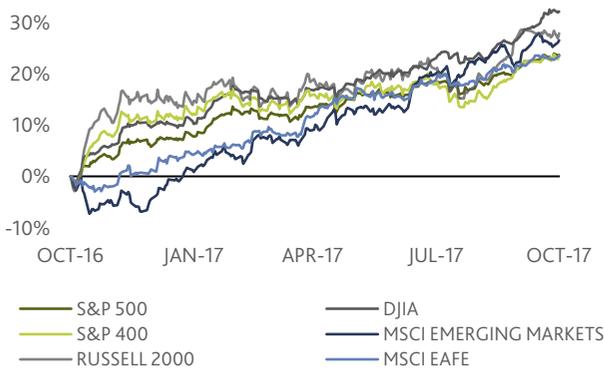


Source: Bloomberg

- The LEI Index, published by the Conference Board, is comprised of ten economic components, and is considered a helpful gauge for estimating economic activity for the subsequent three to six months. The LEI Index decreased 0.2% in September to 128.6, following increases of 0.3% and 0.4% in July and August, respectively.
- The first decline in the LEI Index in the past twelve months can partially be attributed to the effects of the recent hurricanes. This was evidenced by concentrated weakness in residential construction and the labor market.
- Despite the slight pullback of the LEI Index in September, six of the ten components of the index increased during the month. The largest positive contributors for the month were ISM new orders and interest rate spreads.

EQUITY

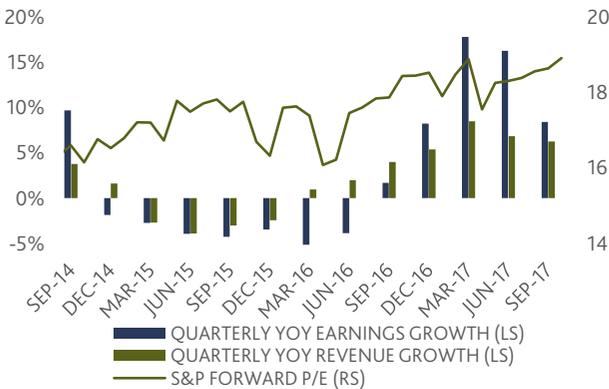
TRAILING 12-MONTH EQUITY RETURNS
PRICE APPRECIATION, OCTOBER 2016 THROUGH OCTOBER 2017



Source: Bloomberg

- This year is the first time the S&P 500 has had positive total returns in each of the first ten months of a year. Also, the index has experienced 12 consecutive months of positive total returns, tying the longest streak in history.
- The Russell 2000 started off strong in October on hopes of a corporate tax cut, but lost momentum after reports the cut could be implemented in phases over several years.
- South Korea and India led emerging markets to another strong month as MSCI EM gained 3.5%. Strong GDP growth and an agreement with China to end the boycott of Korean goods supported Korea's 8.4% gain. India's 7.4% gain was supported by the government's announcement to provide banks with \$32.5 billion to boost credit growth.

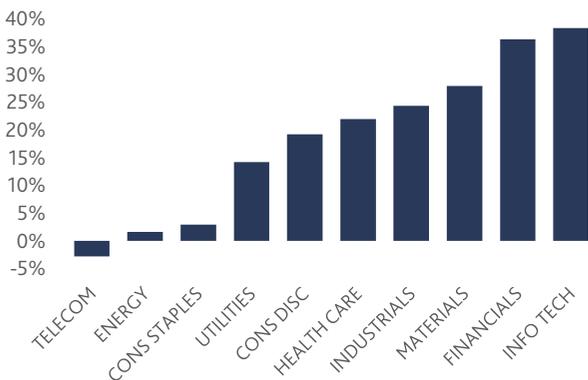
S&P 500 YOY EARNINGS & REVENUE GROWTH
BY QUARTER, SEPTEMBER 2014 THROUGH OCTOBER 2017



Source: Bloomberg

- Year over year earnings growth is on pace to decelerate in the third quarter to between 5% and 7% after growing by double digits in the first two quarters of 2017. Around two-thirds of S&P 500 companies have reported third quarter results through the end of October.
- The technology and energy sectors were the largest contributors to S&P 500 earnings growth while financials were the largest detractor. Hurricane-related losses are weighing on earnings growth for the financials sector.
- Moody's Analytics estimates Hurricane Harvey was the second most costly natural disaster in U.S. history after Hurricane Katrina, with \$73.5 billion in economic loss. Parts of the petrochemical, property insurance, and cruise line industries were the most affected by the recent hurricanes.

S&P 500 SECTORS 12-MONTH RETURNS (PRICE)
OCTOBER 2016 THROUGH OCTOBER 2017



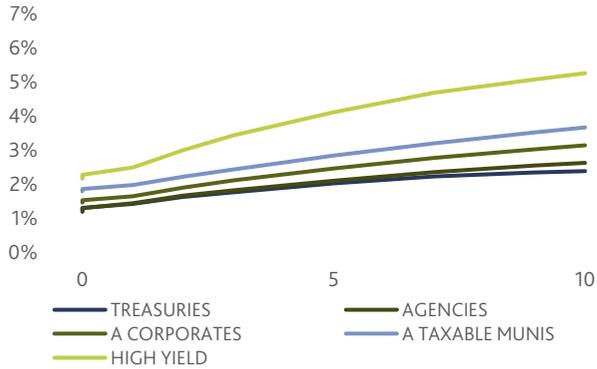
Source: Bloomberg

- Technology was the best performing sector in October with a 7.8% gain. Five of the sector's seven industries have reported strong double-digit third quarter earnings growth.
- Despite negative earnings growth this quarter, the utilities sector was the second best performing sector last month with a gain of 3.9%. The sector received a boost from news the EPA plans to withdraw limits on carbon emissions at power plants.
- A 7.6% decline made telecom the worst performing sector in October. Telecom is the only sector with a negative return over the last year. Negative Q3 earnings growth, increasing TV subscriber losses, and uncertainty surrounding AT&T's acquisition of Time Warner and the Sprint/T-Mobile merger have weighed on the sector.

FIXED INCOME

CURRENT YIELD CURVES

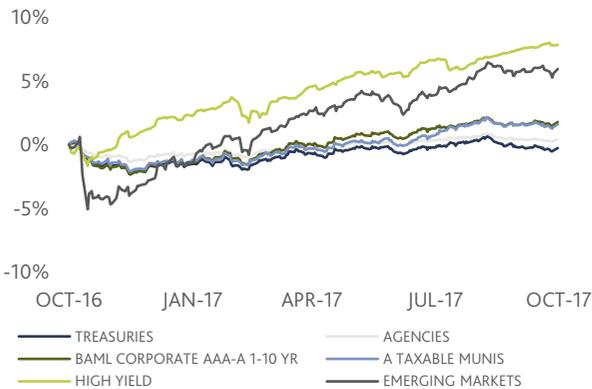
YIELD CURVES AS OF OCTOBER 2017



Source: Bloomberg

- The yield curve continued to flatten during the month of October, with the yield differential between the 2-year U.S. Treasury note and the 10-year note ending the month at 78 basis points.
- Despite strong consumer confidence measures and economic data releases throughout most of October, the yield curve still flattened as investors paid close attention to the tax plan discussions in Congress.
- While some investors suggest recent curve-flattening is due to international investors seeking higher yield in the U.S., others propose that it is happening due to low inflation expectations and concerns that the tax cuts are unlikely to drive much change in economic growth in the U.S., given the current strength of the labor market.

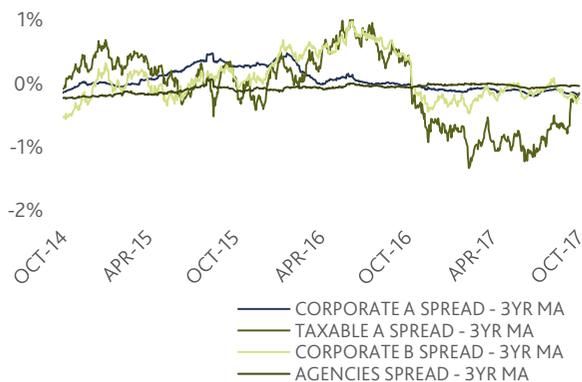
12-MONTH RETURNS, TAXABLE BOND SEGMENTS OCTOBER 2016 THROUGH OCTOBER 2017



Source: Bloomberg

- High yield and emerging market bonds continued their dominance over the rest of the market, with EM significantly outperforming high yield on a one-month basis, following a blip in performance due to concerns around September's hurricanes.
- U.S. Treasuries and agencies are in danger of posting a negative return in 2017 as investors continue to show preference toward higher yielding securities.
- Among the other less speculative asset classes, corporate bonds surpassed taxable municipal bonds for the strongest twelve-month total return among the investment grade sector, continuing a flip flopping between the two.

SPREAD VS. TREASURY LESS 3-YEAR MOVING AVERAGE OCTOBER 2014 THROUGH OCTOBER 2017

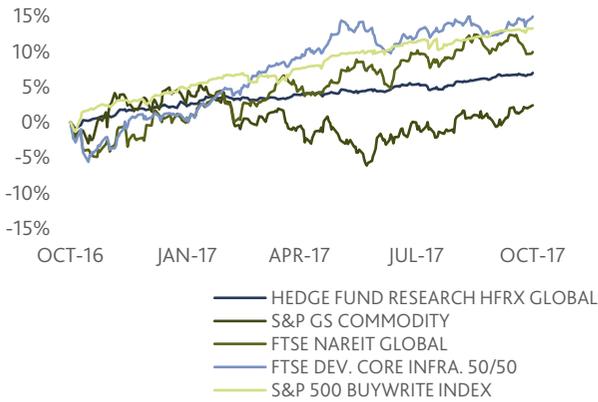


Source: Bloomberg

- Most asset class spreads remain at tighter-than-average levels to U.S. Treasuries, though corporate high yield bond yields may have finished tightening for the moment.
- Tight spreads, particularly in riskier asset classes, tend to signal turning points in the credit cycle. While spreads did widen slightly this month, defaults remain below their historical norms, meaning this cycle may still have legs.
- While other sectors have gotten slightly less expensive relative to their historical averages, taxable municipal bonds have tightened, indicating they may be fairly valued or even expensive at this point.

ALTERNATIVES

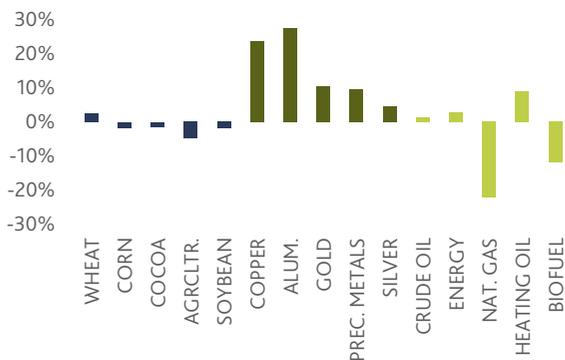
ALTERNATIVES, 12-MONTH RETURNS OCTOBER 2016 THROUGH OCTOBER 2017



Source: Bloomberg

- The global developed market infrastructure and broad commodities asset classes both posted about 2.0% gains in October which, along with a 6.7% rally in global crude oil prices during the month, suggests signs of synchronized global growth.
- An allocation to alternative strategies would have benefited fixed income investors for the 12-month period ending October 31, as all five of the broad alternative investment indexes shown in the graph to left outperformed the 0.9% total return of the Bloomberg Barclays U.S. Aggregate Total Return Index.
- U.S. wheat prices fell 6.6% in October, weighed down by oversupply rooted in several years of bumper harvests. U.S. winter wheat acreage in 2018 could fall further from 2017's 15-year production low, resulting in future supply shortages.

COMMODITIES, 12-MONTH SPOT RETURNS OCTOBER 2016 THROUGH OCTOBER 2017



Source: Bloomberg

- U.S. crude oil prices pulled out of a summer bear market and sidestepped production and refining disruptions in Texas related to Hurricane Harvey. Crude oil prices advanced 5.2% in October to over \$54 per barrel, as reports emerged suggesting the Saudi-led Organization of Petroleum Exporting Countries (OPEC) may extend its production cut past March 2018.
- U.S. crude oil prices have not closed above \$55 per barrel since early July 2015; any price action above that level could suggest a new price trend.
- Gold prices fell fractionally in October, but have declined 5.8% since their closing level peak of \$1,349/oz. in early September. Reduced tensions on the Korean peninsula and a slightly stronger dollar in recent months have likely weighed on prices over the last eight weeks.



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