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MARKET REVIEW
JUNE 2018

TRUST COMPANY of NORTH CAROLINA

MARKET BRIEF

BASEBALL AND THE ECONOMY

Early summer may be the best time of year for sports fans. From hockey and basketball championships to baseball, sports fans have plenty of options from which to choose. Baseball has no time limit, rather a minimum of innings to be played, and sometimes dawdles in comparison to the race against the clock of other sports.

Like baseball, the economy and markets have their own pace. Economists identify the ups and downs of the economic business cycle, while rallies and pullbacks in stocks receive the titles "bull" or "bear" market. Both cycles are similar to baseball as they occur without a clock. Both also have data stretching back more than 100 years. With this much data, investors have plenty of opportunities to understand how the game is played and how it may have changed. This Market Brief examines long-term phenomena in the economy using baseball as a reference.

SAME NUMBER OF INNINGS, LONGER GAME

Baseball fans lament that the game seems to be taking longer. Whether the extended length is due to scheduled advertising breaks or one too many conferences at the pitcher's mound, today's games are about 30 minutes longer than those of 30 years ago[1]. As baseball games have lengthened, so too have economic expansions as shown by the official records of the National Bureau of Economic Research (NBER)[2].

AVERAGE NUMBER OF MONTHS

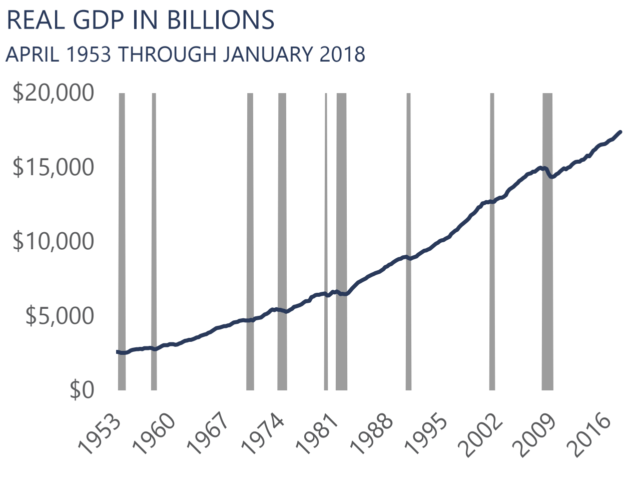
	RECESSION	EXPANSION
1854 - 1919	21.6	26.6
1919 - 1945	18.2	35.0
1945 - 2009	11.1	58.4
1854 - 2009 (ALL YEARS)	17.5	38.7

Comparing the post-World War II era (1945-2009) to the complete data set, recessions are shorter and expansions are longer. The pattern of shrinking recessions and lengthening expansions is also visible in the chart of real GDP since the 1950s, shown at the top left of page three. Notice how the shaded recessionary periods appear more frequently on the left side of the chart than the right. The NBER's tally above does not yet include the duration of the current expansion, which will make the average expansion in the 1945-2009 period increase as the current expansion is the second longest on record, at 110 months. The longest was the 120-month expansion from March 1991 through February 2001.

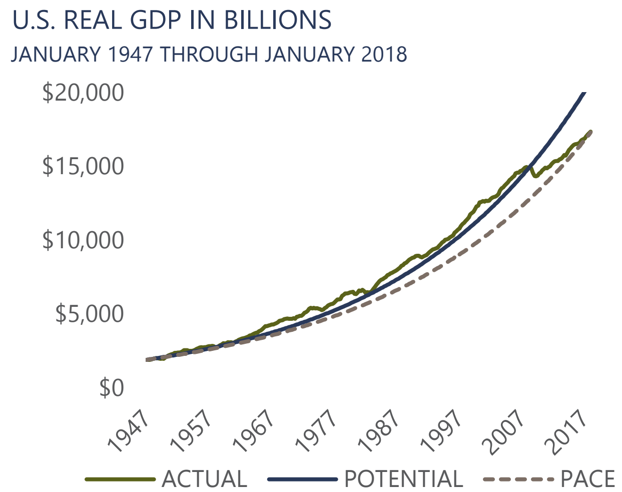
THE OUTPUT GAP

In baseball, the "gap" refers to the amount of space between each of the outfielders. A gap in the outfield can be the result of an inattentive outfielder or quirks in a stadium's shape. Skilled hitters aim for the gap. From dugouts, coaches might yell at players to shift over and shrink the outfield gap.

The difference between potential and actual gross domestic product (GDP) is called the output gap.



Shaded bars indicate economic recessions. Source: Bloomberg. Past performance does not guarantee future results.



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

Potential GDP is the growth rate of aggregate output that reflects the economic capacity of a country just prior to turning inflationary. A good proxy for potential GDP is the average GDP over a long enough time to have sufficient data that swings from deflation to inflation are smoothed. Put simply, potential GDP is roughly equivalent to long-run historical GDP.

The chart above right shows real, or inflation adjusted, GDP beginning in 1947 alongside two other measures: potential and pace. For this analysis, potential GDP grows at a rate which would take GDP from the 1947 level to that prior to the peak of the most recent expansion, October 2007, or 3.35%. Pace GDP grows at a rate which takes GDP from 1947 to the most recent reading, January 2018, or 3.10%. Just as a baseball manager notices a gap between his left and center fields and knows he has a weakness, the GDP output gap is cause for concern. That 0.25% difference between potential and pace GDP growth rates equates to $3.7 trillion in foregone production. Investors, business owners and policy makers yearn for a solution to earn back this cumulative 20% shortfall in activity.

Though many reasons exist for the output gap, none emerge as an easy fix to get back to potential. Reasons for the gap include the after-effects of the sub-prime mortgage crisis, increasing bank regulation, an aging U.S. workforce, and the unintended consequences of rising global trade, to name just a few.

An assumption of an economy that is performing below potential is the existence of sufficient slack which can serve as a shock absorber for inflation. If this asssumption holds true, then the current business cycle may have longer to go and could reach activity levels beyond what have been considered inflationary during other cycles.

CONCLUSIONS AND INVESTMENT IMPLICATIONS

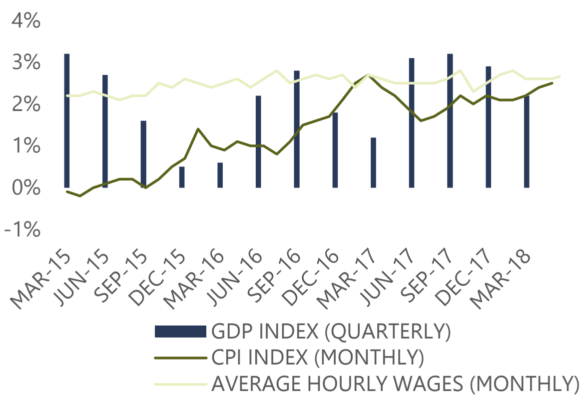
If our economic expansion and bull market are like a baseball game, it may seem like we are in the eighth or ninth inning; however, since these cycles have lengthened, we may actually be in the fifth or sixth inning which suggests we may have further room to run. Considering the economy had significantly slowed from potential GDP growth rates in this expansion, it may actually be able to grow at what previously would have been considered inflationary levels. Unemployment may reach lower lows, interest rates may remain lower for longer, and capacity utilization at factories may reach greater proportions compared to previous late-cycle periods because of the remaining slack in the economy. For these reasons, investors are cautioned not to use the calendar to time the markets. Lastly, it is important to remember that baseball is played over a season. Today's game will end (we hope not early in a rain out), but tomorrow's game is just a day away. As such, being fully invested according to your goals remains a key to long-term success.

1https://www.sbnation.com/a/mlb-2017-season-preview/game-length
2 http://www.nber.org/cycles.html

ECONOMY

GDP, CONSUMER PRICES AND WAGE INFLATION

MARCH 2015 THROUGH MAY 2018

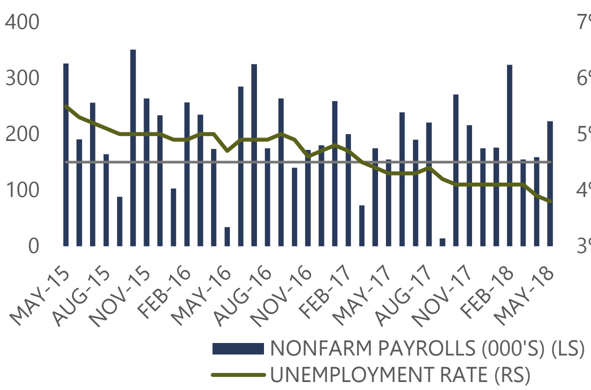


Source: Bloomberg

- First quarter U.S. annualized GDP growth was revised downward to 2.2%, below the initial 2.3% estimate. Downward revisions to inventories and consumer spending lowered the second estimate of GDP. The third and final reading for 1Q18 GDP growth will be released on June 28.
- The Core Personal Consumption Expenditure (PCE) price index, the Fed's preferred inflation measure, increased in April by 0.2% for the third straight month driven by strong consumer spending. The year-over-year reading for Core PCE was 1.8%, below the Fed's 2.0% target.
- Core CPI, which excludes volatile food and energy costs, rose 2.1% year over year in April, matching March's increase.

LABOR MARKET

MAY 2015 THROUGH MAY 2018

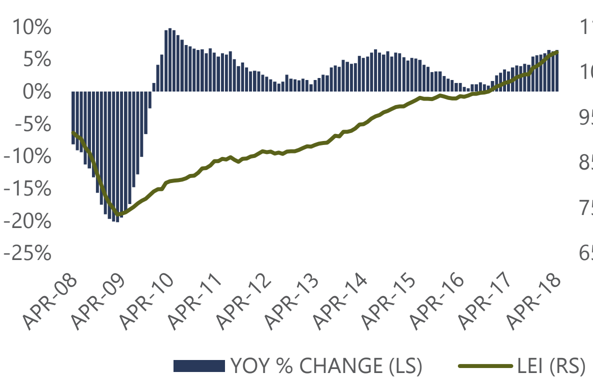


Source: Bloomberg

- U.S. nonfarm payroll employment increased by a seasonally adjusted 223,000 in May, a significant jump from a downward revised figure of 159,000 in April. Monthly additions to U.S. payrolls averaged 182,000 in 2017 and 207,000 for the first five months of 2018.
- The unemployment rate ticked down a tenth of a percentage point to 3.8%, tying April 2000 as the lowest headline unemployment reading since 1969.
- Labor force participation edged down to 62.7%, remaining slightly higher than a recent low in 2015 and low on a historical basis. The participation rate for prime-age workers between the ages of 25 and 54 declined to 81.8% from 82.0%.

LEADING ECONOMIC INDICATORS

APRIL 2008 THROUGH APRIL 2018



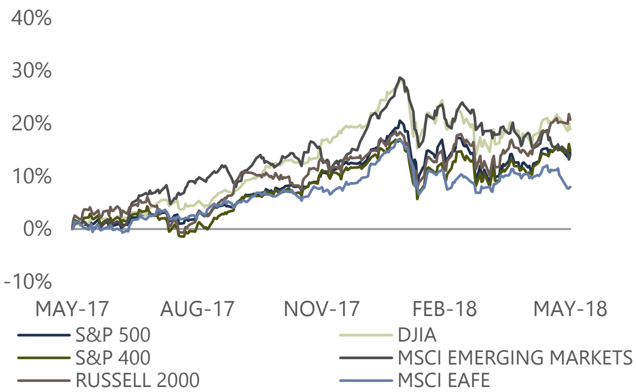
Source: Bloomberg

- The Conference Board LEI Index 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 increased 0.4% in April to 109.4, following an increase of 0.4% in March.
- The increase in the LEI cited positive contributions from the yield spread, weekly hours in manufacturing, new orders, initial claims for unemployment insurance (inverted), and consumer expectations.
- The six-month growth rate of the LEI has somewhat moderated in recent months, suggesting that a strong breakout in growth to the upside may be unlikely.

EQUITY

TRAILING 12-MONTH EQUITY RETURNS

PRICE APPRECIATION, MAY 2017 THROUGH MAY 2018

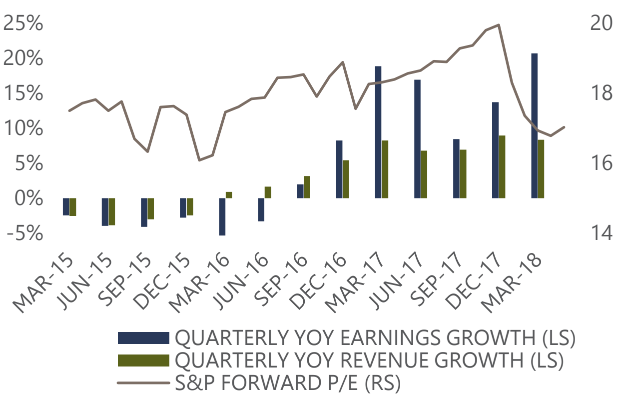


Source: Bloomberg

- U.S. and foreign stocks experienced a wide disparity in performance during May. The S&P 500 gained 2.4% amid improved investor sentiment due to a decrease in trade tensions between the U.S. and China.
- The MSCI EAFE and MSCI EM indexes fell in May 2.1% and 3.5%, respectively. Political turmoil in Italy and Spain weighed on European stocks, while emerging markets were pressured by a 3.0% rise in the dollar and economic disruption in Brazil due to a trucker strike.
- The Russell 2000 led U.S. stocks with a gain of 6.1%. Small caps have outperformed large caps in recent months, partly because they are less exposed to international trade disputes.

S&P 500 YOY EARNINGS & REVENUE GROWTH

BY QUARTER, MARCH 2015 THROUGH MAY 2018

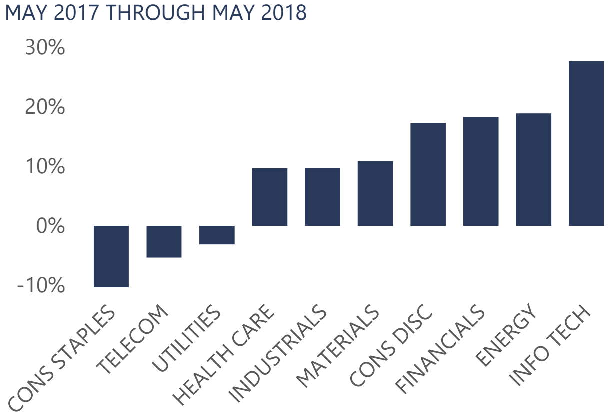


Source: Bloomberg

- S&P 500 earnings increased 23.6% in the first quarter, the highest growth rate since 2010. Healthy profit growth is receiving a boost from lower taxes and strong sales growth of 8.1% which is near a multi-year high.
- Strong results are broad based with 10 of the 11 sectors reporting double-digit earnings growth and five sectors reporting growth above 25%.
- Analysts are forecasting a continuation in robust earnings growth for the rest of the year with growth above 25% in each of the next three quarters. This is a large improvement from the 6.7% average quarterly earnings growth from 2011 through 2017.

S&P 500 SECTORS 12-MONTH RETURNS (PRICE)

MAY 2017 THROUGH MAY 2018



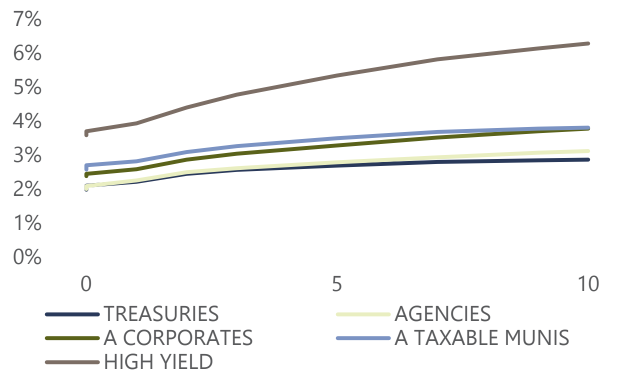
Source: Bloomberg

- Solid first quarter results helped the Technology sector regain its momentum last month for a 7.4% gain. According to Bloomberg data, analysts expect the sector's strong earnings momentum to continue with growth around 30% or better for the next three quarters.
- The Energy sector extended its rally by another 3.0% last month following its 9.4% increase in April. The sector is benefitting from a 12% rise in oil prices over the last two months and a decline in oil inventories to a three-year low.
- Consumer Staples stocks remain under pressure amid rising bond yields and concerns surrounding business model disruption for major household product and consumer goods firms.

FIXED INCOME

CURRENT YIELD CURVES

YIELD CURVES AS OF MAY 2018

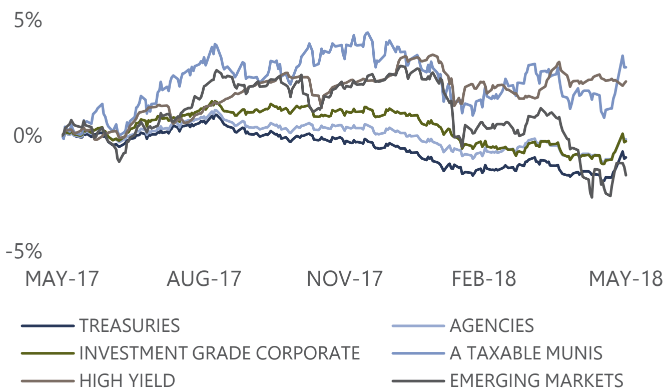


Source: Bloomberg

- After steepening through the first half of May, the U.S. Treasury yield curve spent the latter half of the month flattening due to geopolitical news flow and trade spats.
- The difference between the 2-year U.S. Treasury Note yield and the 10-year U.S. Treasury Note yield finished May at 0.43%, its narrowest level in more than a decade.
- While the 10-year U.S. Treasury Note yield only declined roughly 10 basis points in May, it traded in a range as wide as 35 basis points, and saw an intraday decline of 18 basis points on May 29, as political turmoil in Italy sparked a global flight to safety.

12-MONTH RETURNS, TAXABLE BOND SEGMENTS

MAY 2017 THROUGH MAY 2018

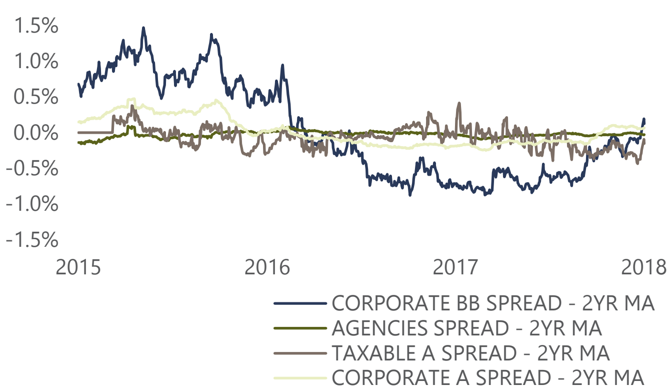


Source: Bloomberg

- High yield and taxable municipal bonds continue to display strength over the rest of the market. Both segments outpaced the other taxable bond segments shown at left by greater than 2.5% over the past 12-month period ending May 31.
- U.S. Treasuries, agencies, investment grade corporate bonds and emerging market bonds all have posted negative total returns over the past 12-month period ending May 31.
- Among the more traditional bond sectors, taxable municipal bonds have outpaced both investment grade and high yield corporate bonds over the past twelve months.

SPREAD VS. TREASURY LESS 2-YEAR MOVING AVERAGE

MAY 2015 THROUGH MAY 2018

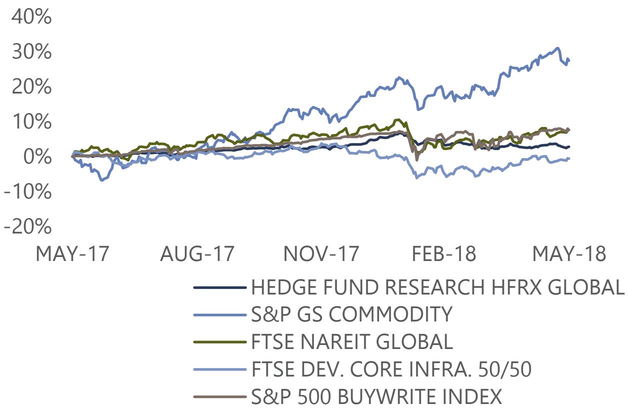


Source: Bloomberg

- After widening somewhat in March and taking a slight breather in April, high-yield corporate bond spreads widened in May, with much of the move coming near the back half of the month as investors sought safe havens.
- Agencies appear fairly valued compared to their spreads over the last two years, while investment grade taxable municipals appear slightly rich.
- Since the beginning of 2017, high yield spreads have traded in a narrow range of 83 bps, having tightened 22 bps over that period. While spreads widened a bit during May, they have not yet cheapened enough to be considered historically attractive by most investors.

ALTERNATIVES

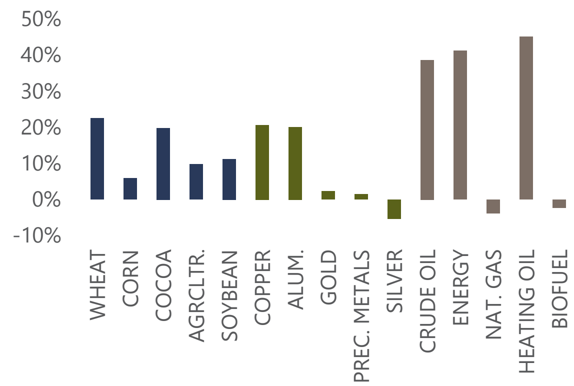
ALTERNATIVES, 12-MONTH RETURNS
MAY 2017 THROUGH MAY 2018



Source: Bloomberg

- The broad commodities asset class gave back some ground in the second half of May, pressured by declines in U.S. oil prices in the final days of the month.
- The average of two-year correlation of weekly returns and beta for each of the five alternative strategy indexes shown at left compared to the MSCI All Country World Index as of May 31, 2018 was 0.66 and 0.56, respectively.
- All five alternative asset class indexes tracked in the chart at left outpaced the Bloomberg Barclays Aggregate Bond Index's -1.5% year-to-date total return through May 31. Two of five (commodities and buy-write) outperformed the MSCI All Country World Index's 0.4% total return for the period.

COMMODITIES, 12-MONTH SPOT RETURNS
MAY 2017 THROUGH MAY 2018



Source: Bloomberg

- Preliminary reports that Saudi Arabia-led OPEC and Russia will roll back strict compliance with production cuts in place for over a year pushed U.S. crude oil futures prices down by 7.5% over a three-day period ending May 28.
- Amid the back-and-forth threats and discussions of trade tariffs, aluminum futures prices have climbed approximately 19.7% over the twelve-month period ending May 31, highlighted by a roughly 30% surge to above $2,500 per metric ton in the first two weeks of April.
- Several consecutive years of record harvests in major grain-based agricultural commodities have created a significant imbalance between heightened supply of and demand for wheat, corn and soybeans.