Economic Review

U.S. economic conditions moderated, market volatility returned and international markets outperformed U.S. markets for the first time all year.

During the fourth quarter, equity markets reversed the steady climb experienced in the second and third quarters amid increased volatility, continued trade concerns and mixed economic data. Although GDP slowed (3.4% in Q3 vs. 4.2% in Q2), it remains the second highest reading in 4 years. The U.S. enjoyed continued job growth with the latest jobs report beating expectations, adding 312,000 nonfarm payroll jobs, the most since February and well above the consensus expectation of 180,000. Unemployment ticked slightly higher to 3.9% from 3.7% in November. Signs that trade tensions might be affecting the economy were apparent in U.S. manufacturing PMI data, as new business and production slowed. Likewise, global manufacturing lost steam during the quarter.

Despite trade uncertainties and the mixed bag of broader economic data, corporate earnings growth and revenue growth remained strong. The S&P 500 saw an earnings growth rate of nearly 26%, marking the fourth consecutive quarter of accelerating earnings growth, with every sector generating positive results. Under the new Global Industry Classification Standard format, the Communication Services sector was a significant contributor to both earnings and revenue growth; however, revenue upside surprise was among the lowest of any sector. Highlighting the recent challenges in internet-based stock prices, third-quarter earnings marked the first time Alphabet Inc. (GOOG), Amazon.com, Inc. (AMZN), and Facebook, Inc. (FB) all missed sales estimates in the same quarter since Facebook went public in 2012.

The National Federation of Independent Business’s Small Business Optimism Index remains strong despite dropping to 104.4 at the end of the quarter, its lowest reading since October 2017. This index, based on a survey of small and independent business owners, measures expectations for compensation, profits, sales, inventory levels, and employment, among others. Fortunately, this optimism has persisted in spite of ongoing international trade tariff disputes, which escalated further during the quarter, particularly between the U.S. and China.

During the quarter, the Fed, as expected, raised its target interest rate range for the fourth time this year. It’s the Fed’s ninth move since it embarked on policy normalization initiatives in late 2015. In its most recent statement following the rate increase, the Fed said that “the Committee judges that some further gradual increases in the target range for the federal funds rate will be consistent with sustained expansion of economic activity, strong labor market conditions, and inflation near the Committee’s symmetric 2 percent objective over the medium term.” The addition of the word “some” to the statement in December suggests that while the Federal Open Market Committee (FOMC) expects to continue raising the fed funds rate in 2019, it may be approaching the end of its tightening cycle. The language on current economic conditions was unchanged from the previous statement, on November 8, and was quite positive, despite recent stock market volatility.

Other key central banks, including the European Central Bank (ECB), the Bank of England (BOE), and the Bank of Japan (BOJ) remain less aggressive in pursuing monetary policy tightening, as economic growth among their markets is not on as solid a footing as the U.S. The ECB confirmed it would continue to taper by slowing the expansion of its quantitative easing program and reducing monthly bond purchases. After raising rates in the third quarter for only the second time in the last 10 years, the BOE voted unanimously at its December meeting to maintain its Bank Rate at 0.75%. Since its previous meeting, the near-term outlook for global growth has softened and downside risks to growth have increased while uncertainties surrounding Brexit have intensified.
At its October meeting, the BOJ stated its intent to maintain the current extremely low levels of short- and long-term interest rates for an extended period of time. However, for the first time ever, the central bank warned of threats to banks’ balance sheets from prolonged low interest rates in its published financial system report leading some to wonder if this was an early signal of a potential change in the not-too-distant future.

**Equity Market Review**

Domestic equities drop sharply; international equities outperform U.S.; emerging markets outperform both by over 500 basis points.

The fourth quarter saw a reversal of previous trends with the S&P 500 dropping sharply, international equities outperforming U.S. equities for the first time all year and emerging markets outperforming both U.S. equities and international developed markets. Fears of a slowing global economy, escalating trade tensions and tightening central banks sent all markets sharply lower.

For the first time in 9 years, the S&P 500 posted a negative return for the year. A sharp -13.5% fourth quarter drop reversed the steady gains of the two previous quarters putting the index’s performance at -4.4% for 2018. The fourth quarter S&P 500 decline was greater than that experienced by international developed markets, down -12.5%, and emerging markets, down -7.5% for the quarter.

On a market capitalization basis, large-cap equities held up better than small- and mid-cap stocks during the volatile quarter and for the year. In the fourth quarter, large cap equities fell nearly 14% while small-cap equities fell over 20% (as measured by the Russell 1000 and Russell 2000 indexes, respectively). On the year, large-cap outperformed small-cap by over 600 bps. With oil prices down 40% since September, Energy was the worst performing sector, falling 24% during the fourth quarter. Industrials and Information Technology also suffered, falling 17% during the quarter. Investors sought the safe haven of Utilities — the lone sector posting a positive return (1.4%) in the fourth quarter. Other defensive sectors, including Real Estate (-4%) and Consumer Staples (-5%) held up in the choppy market environment. For the year, Utilities (4.1%) was joined in positive territory by Consumer Discretionary (0.8%) and Health Care (6.5%) with all other sectors ending the year in negative territory.

<table>
<thead>
<tr>
<th>U.S. Equity Index Returns by Size and Style</th>
<th>2018</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Q1</td>
</tr>
<tr>
<td>Russell 1000 Index</td>
<td>(0.69)</td>
</tr>
<tr>
<td>Growth</td>
<td>1.42</td>
</tr>
<tr>
<td>Value</td>
<td>(2.83)</td>
</tr>
<tr>
<td>Russell 2000 Index</td>
<td>(0.08)</td>
</tr>
<tr>
<td>Growth</td>
<td>2.30</td>
</tr>
<tr>
<td>Value</td>
<td>(2.64)</td>
</tr>
</tbody>
</table>

Source: FactSet

Growth stocks underperformed value stocks across large-, mid- and small-cap names for the fourth quarter. Despite the underperformance of growth across the market capitalization spectrum in the quarter, growth held on to outperform on a year-to-date basis. Large cap growth stocks ended the year down -1.5% compared to large cap value stocks which were down -8.3% for 2018. The gap was narrower among small cap stocks with growth ending the year down -9.3% and value ending the year down -12.9%.

Looking overseas, economic growth momentum continues to slow in developed markets: Developed equity markets (as measured by the MSCI EAFE Index) declined -12.5%, while emerging markets (as measured by the MSCI Emerging Markets Index) which suffered for much of 2018, closed the quarter down -7.5%. The standout performer in EM was Brazil, which climbed nearly 14% on prospects for a more business friendly government. The unresolved tariff dispute between the U.S. and China, the tightening Fed and the slowing global economy put pressure on a number of markets...
including China, France, Germany, Japan, and the UK, which all suffered double digit losses during the quarter.

**Fixed Income Market Review**

**Yields declined and credit spreads widened.**

The broad U.S. bond market, as measured by the Bloomberg Barclays U.S. Aggregate Index, returned 164 basis points to investors in the fourth quarter and ended in positive territory for the year. During the quarter, yields declined and credit spreads widened as investors faced increasing uncertainty. Pressures behind fourth quarter performance included slowing economic growth, stalled trade war negotiations, and a Fed that was persistent about continued rate hikes and balance sheet tapering. As looming concerns related to economic growth spilled over to corporations, investment grade and high yield spreads widened by the highest level in almost two years. Elsewhere, a significant reversal took place in emerging market and non-U.S. fixed income markets, which delivered positive returns this quarter. Geopolitical risk and excessive volatility came to a rest during the quarter as the market reassessed oversold regions like Turkey and Argentina. A less hawkish Fed and dollar weakness also contributed to positive performance abroad.

Risk assets and commodity prices performed poorly as concerns grew about a more pronounced slowdown in global economic activity. Spread sectors accounted for negative 102 bps of excess return during the period but this was more than offset by the impact of declining Treasury rates. U.S. Credit produced a negative 285 bps of excess return during the quarter, as the Option-Adjusted Spread (OAS) of the Bloomberg Barclays U.S. Corporate High Yield index rose by 43 bps. High yield underperformed investment grade considerably, as the OAS of the Bloomberg Barclays U.S. Corporate High Yield index rose by 210 bps, leading to a dismal negative 675 bps of excess return in the quarter. Fund flows and related selling pressure worsened market technicals and exacerbated the risk-off sentiment, resulting in poor liquidity through much of December. High yield produced over 350 bps of negative excess return in just the second half of the month! The relative performance of both investment grade and high yield was the worst since 3Q11, when S&P downgraded the U.S. credit rating to AA+. While still underperforming U.S. Treasuries, Agency Mortgage-Backed (MBS) and Asset-Backed Securities (ABS) were more resilient during a choppy quarter.

- **Sector**
  - **U.S. Agency**: 16.00 (0.16) (0.06)
  - **U.S. Credit**: 143.00 (2.85) (2.80)
  - **Industrial Utility**: 157.00 (3.50) (3.34)
  - **Financial Institutions Non-Corporate Non-Corporate Investment Grade**: 144.00 (3.25) (3.05)
  - **Investment Grade**: 147.00 (2.33) (2.09)
  - **U.S. Mortgage Backed Securities**: 90.00 (1.52) (1.01)
  - **Asset-Backed Securities**: 86.00 (1.12) (0.39)
  - **CMBS: Erisa Eligible**: 526.00 (6.75) (3.58)

Source: Bloomberg Barclays
As the pace of domestic growth moderated in the fourth quarter, investor confidence in credit markets was increasingly tested. As seen in previous quarters fleeting liquidity in the corporate market has exacerbated spread movement during periods of volatility. Despite a reduction in new issue supply, market technicals remained weak as outflows in both investment grade and high yield funds led to a surge in related selling by investment managers.

Further pressuring credit markets were growing concerns related to the continued deteriorating credit quality of U.S. corporate debt. The fourth quarter saw the downgrade of both General Electric and Anheuser-Busch Inbev from single A to BBB. Both of these issuers have significant amounts of debt outstanding, leading to a volatile repricing of their credit spreads as investors contended with each of these companies prospects to stabilize their credit fundamentals and appease the ratings agencies.

High quality structured products outperformed credit in the fourth quarter as spread movement in this sector was considerably less volatile. While the MBS market continues to deal with episodic interest rate volatility and weakened technical demand given the reduction in Fed reinvestments, investor demand for high quality liquid assets continues to support the asset class. Similarly, consumer Asset Backed Securities continue to benefit from a robust labor market which has helped keep the positive fundamental backdrop in place.

Looking Forward
Navigating the current monetary tightening cycle.

Over the past two decades, the correlation between stocks and interest rates (10-year Treasury yield) has typically been positive. As interest rates rise, equity markets normally respond positively, with yields increasing in reaction to improving domestic growth (positive correlation between stocks and interest rates). However, at some point interest rates reach a level that constrains business activity and forward expectations for growth. Equity markets then struggle in reaction to restrictively higher interest rates (correlation between stocks and interest rates turns negative).

As this correlation currently approaches negative territory, it suggests to us that interest rates may have reached a level high enough to weigh on future economic activity. This 52-week correlation has turned negative only three times over the past two decades: 1999, 2006 and 2014. Each of these periods preceded a decline in growth prospects, to varying degrees, as interest rates trended lower and corporate bond spreads widened during the following 12 to 24 months. The outcomes for equities were more mixed, with a wide degree of variability and direction. Though we acknowledge recessions followed two of the previous three
negative correlation readings, our opinion is that expecting an economic slowdown of similar magnitude may be overly pessimistic. We expect the domestic economic expansion to continue, and point to the 1994-95 interest rate hiking cycle as an example that not all monetary tightening cycles must end in an economic recession.

Bottom line, a nonrecessionary moderation in domestic growth appears increasingly likely in 2019, which may also limit the ability of long-term interest rates to rise further. Should the trajectory of interest rate hikes moderate, looser financial conditions may result in an extension of what has already been the second longest economic expansion in U.S. history.

<table>
<thead>
<tr>
<th>Negative Correlation Between Stocks and Interest Rates</th>
<th>As of 11/29/2018</th>
<th>2014</th>
<th>2006</th>
<th>1999</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>12-Month Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-Year Treasury Yields</td>
<td>-0.9%</td>
<td>-0.5%</td>
<td>0.9%</td>
<td>-0.2%</td>
<td></td>
</tr>
<tr>
<td>Investment Grade Spread</td>
<td>0.2%</td>
<td>0.1%</td>
<td>0.6%</td>
<td>0.3%</td>
<td></td>
</tr>
<tr>
<td>High Yield Spread</td>
<td>1.1%</td>
<td>-0.2%</td>
<td>1.5%</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>S&amp;P 500 Index (% Change)</td>
<td>12.4%</td>
<td>16.7%</td>
<td>12.6%</td>
<td>13.9%</td>
<td></td>
</tr>
<tr>
<td><strong>24-Month Change</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-Year Treasury Yields</td>
<td>-0.7%</td>
<td>-1.4%</td>
<td>-0.7%</td>
<td>-0.9%</td>
<td></td>
</tr>
<tr>
<td>Investment Grade Spread</td>
<td>0.5%</td>
<td>1.6%</td>
<td>0.5%</td>
<td>0.8%</td>
<td></td>
</tr>
<tr>
<td>High Yield Spread</td>
<td>2.8%</td>
<td>3.8%</td>
<td>1.9%</td>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>S&amp;P 500 Index (% Change)</td>
<td>11.6%</td>
<td>7.5%</td>
<td>-2.2%</td>
<td>5.6%</td>
<td></td>
</tr>
</tbody>
</table>

Source: Bloomberg L.P., PNC Capital Advisors Analysis

Although imperfect, history often provides investors with a reasonable road map when trying to navigate the markets. What transpired following the mid-1990s monetary tightening cycle may provide a reasonable expectation for what could occur following the current interest rate hiking cycle. Starting in 1994, the FOMC raised the benchmark rate from 3.0% to 6.0% over a 14-month period, which tightened financial conditions and resulted in a moderation in domestic growth rather than a recession. After initially moderating, the Institute for Supply Management (ISM) Manufacturing Index, which serves as a barometer of economic growth, stabilized for approximately seven years before the economy contracted. Concurrently, long-term interest rates initially declined, then were relatively steady for the remainder of that business cycle.
Indexes

The ISM Manufacturing Index is based on surveys of 400 purchasing managers nationwide regarding manufacturing in 20 industries. The ISM manufacturing survey is a diffusion index, calculated as the percent of responses that are positive plus one-half of those describing conditions as "same." Except for inventories, the main components of the index are seasonally adjusted for variations within the year, differences due to holidays, and institutional changes.

The ICE BofAML High Yield Master II Option Adjusted Spreads (OASs) are the calculated spreads between a computed OAS index of all bonds in a given rating category and a spot Treasury curve. An OAS index is constructed using each constituent bond's OAS, weighted by market capitalization. The ICE BofAML High Yield Master II OAS uses an index of bonds that are below investment grade (those rated BB or below).

The MSCI EAFE Index is designed to represent the performance of large and mid-cap securities across 21 developed markets, including countries in Europe, Australasia and the Far East, excluding the U.S. and Canada. The Index is available for a number of regions, market segments/sizes and covers approximately 85% of the free float-adjusted market capitalization in each of the 21 countries.

The MSCI Emerging Markets Index is an unmanaged standard emerging markets index that captures large and mid cap representation across 24 Emerging Market (EM) countries. With 846 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

The National Federation of Independent Business (NFIB) Small Business Optimism Index is compiled from a survey that is conducted each month by the NFIB of its members.

The Russell 1000 Index measures the performance of the large-cap segment of the U.S. equity universe. It includes approximately 1000 of the largest securities based on a combination of their market cap and is constructed to provide a comprehensive and unbiased large-cap barometer.

The Russell 1000 Growth Index measures the performance of the large-cap growth segment of the U.S. equity universe. It includes companies with higher price-to-book ratios and higher forecasted growth values and is constructed to provide a comprehensive and unbiased barometer for the large-cap growth segment.

The Russell 1000 Value Index measures the performance of the large-cap value segment of the U.S. equity universe. It includes companies with lower price-to-book ratios and lower expected growth values and is constructed to provide a comprehensive and unbiased barometer for the large-cap value segment.

The Russell 2000 Index is an unmanaged index that tracks the common stock price movement of the 2000 smallest companies of the Russell 3000 Index, which measures the performance of the 3000 largest US companies based on total market capitalization.

The Russell 2000 Growth Index measures the performance of the small-cap growth segment of the U.S. equity universe. It includes those Russell 2000 Index companies with higher price-to-value ratios and higher forecasted growth values.

The Russell 2000 Value Index measures the performance of small-cap value segment of the U.S. equity universe. It includes those Russell 2000® Index companies with lower price-to-book ratios and lower forecasted growth values. The Russell 2000® Value Index is constructed to provide a comprehensive and unbiased barometer for the small-cap value segment.

The Russell 3000 Index is a market-capitalization-weighted equity index maintained by the FTSE Russell that provides exposure to the entire U.S. stock market. The index tracks the performance of the 3,000 largest U.S.-traded stocks which represent about 98% of all U.S incorporated equity securities.

The S&P 500 Index is an unmanaged cap-weighted index of 500 publicly traded stocks generally representative of the large-cap U.S. stock market performance and includes a representative sample of leading companies in leading industries. An investor cannot invest in the S&P 500 Index.

Indexes are unmanaged and not available for direct investment.
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