This month’s Investment Outlook reflects our view that 2017 will have many themes to consider. In late 2015, the Federal Reserve (Fed) began ushering in a new era by ushering out extraordinary measures aimed at supporting the economy following the financial crisis and Great Recession. In December 2016, the Fed raised interest rates for the second time since 2006, after the first initial raise off of zero in December 2015. The Fed currently forecasts an additional three raises in 2017 and three for 2018. PNC economists expect two raises in 2017 and three raises in 2018.

Our annual review of historical trends for stocks versus bonds reflects the fourth straight year that returns of stocks have been better relative to bonds. The current 10-year trailing return of stocks relative to bonds indicates outperformance largely as a result of the stronger performance of the equity markets over the past few years.

From a macro perspective, we note 2016 was a year of surprises for markets to digest. As markets typically do not favor uncertainty, from time to time volatility spiked as markets tried to predict the ramifications of these surprises. Given headwinds from both the sharp projected decline in Energy sector profits and the stronger dollar, we were cautious on earnings becoming a catalyst for the market in 2016. Lower-for-longer oil prices were another theme of ours for 2016 as OPEC stood its ground in defending market share and oil prices continued to fall. Our Election 2016 theme posited it would be a year of increased volatility at what was at the time of our writing shaping up to be a headline-dominating election. In addition we noted the possibility of a shakeup in Congress.

We are pleased with the success of our 2016 themes. Our themes for 2017 are:

- reflation nation;
- infrastructure/fiscal policy;
- global politics;
- life or death of active management; and
- tax reform, repatriation, and earnings.

PNC expects U.S. economic growth of 2.2% in 2017. We expect markets to continue to watch the Fed for signals of additional interest-rate increases, while tracking policy actions from central banks worldwide. Markets are tuned to the dynamics in the oil industry, monitoring supply projections and price moves. Currency movements are also key factors. Finally, we believe geopolitical concerns remain on the radar as among the biggest perceived risks to markets.

While we acknowledge the difficulty for us, or anyone, to predict with great accuracy the short-term behavior of stocks, we feel investors should continue to focus on their long-term goals, working with their PNC advisors to develop an asset allocation that matches their risk and return objectives.

PNC’s six traditional asset allocation profiles are shown on the back page of this outlook.
We began our review of 2016 and preview of 2017 in the December 2016 Investment Outlook, 2017 Outlook Part I. We believe the economy will continue to expand in 2017. While the markets are enduring a tumultuous end to 2016, highlighted by the uncertainty brought on by the U.S. presidential election, the economy has shown itself resilient enough that the interest-rate hike forecasted by the futures markets came to pass on December 14, 2016. The Fed returned to normal monetary policy in December 2015 by raising interest rates for the first time since zero interest rate policy began in 2008, and after ceasing its asset purchase program in October 2015. With the economy on firmer ground than during the days following the financial crisis and Great Recession, we feel the Fed’s decision to cease extraordinary measures is in concert with this view.

We expect continued expansion of the economy; PNC forecasts U.S. economic growth of 1.5% for 2016 and 2.2% in 2017. With 2017 bringing an eighth year of economic expansion, we will be closely watching for any shifts in the outlook. In addition, as we head into 2017, the political climate in Washington will see a shift. With this stems uncertainty as to what a new administration’s intentions will be and the timing of any actions. Such actions could affect economic conditions. Following a recession, GDP growth usually accelerates as a result of pent-up consumer demand for goods and services. After the initial jump, growth tends to settle into a more sustainable level. In the last stage of an expansion, GDP growth slows further until it collapses. The current U.S. recovery is a bit unusual in that there was not an initial surge in growth. Quarter-over-quarter annualized real GDP growth has trended at about 2% since the recovery began.

While GDP growth has been far from robust, and there have been quarters of slow growth from time to time, there remains little evidence to suggest an absolute trend lower. As we noted earlier, economic growth in the first and second quarters of 2016 was slower than expected. As PNC economists expected, third-quarter 2016 GDP reflected a rebound.

With the economic recovery having recently crossed the seven-year mark, some investors may question if this is perhaps a signal of some sort that the tide could soon turn in the other direction; we intend to outline our views on this topic in this paper. In 2015 and 2016, markets certainly experienced periods of greater market volatility due to a wide variety of global risk factors.

As we have done for the past several years, it is our intent to make educated projections for the upcoming year in both the December 2016 and January 2017 Investment Outlook. Since one cannot predict the future with any great certainty, we will primarily focus on what is knowable. When determining a recommended asset allocation for our clients, we focus on their:

- goals;
- risk tolerance;
- income needs;
- investment holding period; and
- personal situation.

In addition, the PNC Investment Policy Committee (IPC) considers PNC’s general recommendations, concentrates on the intrinsic valuation of possible investments, and weighs the estimated risk versus reward.

Macro Views of the Markets

From a macro perspective, we note 2016 was a year of surprises for markets to digest. As markets typically do not favor uncertainty, from time to time volatility spiked as markets tried to predict the ramifications of said surprises. Two of the most notable events affecting market sentiment in 2016 were the so-called “Brexit” vote in the United Kingdom in June and the U.S. presidential election in November. Also early in the year, markets got off to a difficult start with wide-ranging concerns including oil prices, global economic growth, the path of interest rates here in the United States, and geopolitical tensions in various parts of the globe.
From a U.S. stock market perspective, the S&P 500® traded lower early in the year in line with the volatility surrounding global events, but despite the dips the index was able to overcome the uncertainty and ultimately rose 0.8% for the first quarter, or 1.3% including the reinvestment of dividends. The second quarter brought the market-dislocating Brexit event; again although the market dropped over 5% in the three days following the Brexit vote, for the second quarter the S&P 500 was up 1.9% (2.5% including the reinvestment of dividends). Through a relatively quiet summer, attention turned back toward the economic data and whether the Fed would move in the fall to raise interest rates. Ultimately the Fed chose to hold off. The S&P 500 was up 3.3% for the third quarter (3.9% including dividends).

The period prior to, during, and following the U.S. presidential election found the markets trying to predict both the outcome of the election and the ramifications of the outcome. In August 2016, before the election, the S&P 500 and Dow Jones Industrial Average (DJIA) set new record highs; however, markets sold off in the weeks preceding Election Day. In after-hours trading on November 8, the DJIA dropped over 900 points, and on November 9 swung back over 1,000 points. Markets were quick to recover in what typically follows a U.S. presidential election—a relief rally—and the DJIA, S&P 500, and NASDAQ have continued to set new record highs in the days following the election.

Following the U.S. presidential election, markets became all but certain that the Fed would raise interest rates at the December Federal Open Market Committee (FOMC) meeting, and this proved to be correct as the Fed announced a rate bump to the tune of 25 basis points. The Fed forecast includes three additional rate hikes in 2017 and four in 2018.

It is our top priority to help our clients reach their financial goals, and we believe this purpose is best served by keeping our focus on the relevant facts and looking for opportunities as they present themselves. In this vein, let us revisit our annual exercise of reviewing the big picture to frame the current situation.

### Historical Returns
Over the long term, stocks have been the best-performing asset class among stocks, bonds, and cash (Table 1). While the long-term total return of stocks is attractive, average annual returns have been a different story. Individual annual returns indicate performance for any given year is unpredictable. Markets can reward and punish to the extremes at times.

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Real (%)</th>
<th>Nominal (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>S&amp;P 500</td>
<td>6.92</td>
<td>10.02</td>
</tr>
<tr>
<td>Long-Term Govt</td>
<td>2.57</td>
<td>5.54</td>
</tr>
<tr>
<td>30-Day T-bill</td>
<td>0.47</td>
<td>3.38</td>
</tr>
<tr>
<td>Inflation</td>
<td>N/A</td>
<td>2.90</td>
</tr>
</tbody>
</table>

**Source:** Morningstar, Ibbotson Associates, PNC

### History of Stocks, Bonds and Cash
Average returns and differentials of returns among asset classes vary from the norm in any given calendar year. When examining performance history since 1926 we will use the following definitions:

- **stocks**—S&P 500;
- **bonds**—long-term U.S. Treasury bond; and
- **cash**—30-day Treasury bill.

In order to evaluate the returns to investors over a longer holding period, we have analyzed the 10-year cumulative total returns for each asset class updated monthly. For example, the most recent 10-year cumulative returns are for the period from November 30, 2006, to November 30, 2016. The cumulative returns were as follows:

- **stocks**—94.6%;
- **bonds**—84.0%; and
- **cash**—7.4%.
This reflects a strong recovery in stocks following the financial crisis and recession and flight to safety in a decade plagued with several severe market shocks. Cash shows a smooth upward ride, as expected, while bonds and stocks are progressively more volatile (Chart 1).

Stocks versus Bonds
The 10-year rolling data for stocks and bonds show very few negative periods for stocks and almost no losses for bonds. Stocks tend to outperform following periods of distress. Bonds do not exhibit this type of behavior to the same extent (Chart 2).

Over a set historical period, the rolling 10-year cumulative total returns of stocks less bonds shows the average outperformance of stocks has been 115% (Chart 3). The most recent data show stocks outperforming bonds by 10%. The worst underperformance of stocks versus bonds occurred during the financial crisis, with the nadir in March 2009 at 146%. Performance of stocks relative to bonds has improved steadily since then, turning from underperformance to consistent outperformance beginning in January 2013. The next-worst period of stock underperformance was in August 1939 at -107%.

Stocks versus Cash
The 10-year rolling data for cash, not surprisingly, show no negative periods (Chart 4, page 5).

However, cash has experienced times of very low returns. The rolling 10-year annualized return for November 2015 was a mere 0.07%. We would expect continued low 10-year returns on cash for some time, given our forecast for short-term interest rates, which we believe will remain at low levels with likely gradual subsequent rate increases from the Fed.

In comparing the rolling 10-year cumulative total returns of stocks less cash (Chart 5, page 5), the average outperformance of stocks has been 151%. Beginning in mid-2008 and through 2010, not surprisingly, cash outperformed stocks. With a
In late 2015 the Fed began ushering out extraordinary measures aimed at supporting the economy following the financial crisis and Great Recession, and ushering in a new era: The Fed ceased its monthly large-scale asset purchases (also known as quantitative easing) in October 2015; in December 2015 the Fed raised rates for the first time since 2006, and since zero-interest-rate policy began in 2008.

The International Monetary Fund (IMF) had voiced concerns over slowing global growth at the year’s start, forecasting 3.6% growth for 2016. China slowing was a concern, and through 2016 the pace of GDP growth did reflect slightly moderating trends. In its most recent report in October, the IMF is forecasting 2016, when all is said and done, will reflect a lower-still 3.1% growth, with only modest improvement expected for 2017.

We were cautious on earnings becoming a catalyst for the market in 2016, given headwinds including the sharp projected decline in Energy sector profits, and from the stronger dollar. At the onset of 2016, we forecasted low- to mid-single-digit earnings growth. As the year progressed, we trimmed this estimate to just about flat earnings growth versus 2015 as the hangover effect from low oil prices affected Energy earnings more than anticipated, with lower demand globally and the continued headwind of the dollar.

Oil lower for longer was another theme of ours for 2016 as OPEC stood its ground in defending market share and oil prices continued to fall. While oil prices did bounce off the bottom, the average oil price remained below $50 per barrel (year-to-date West Texas Intermediate (WTI) average is $43 per barrel through December 14, 2016) for most of 2016, until anticipation grew that OPEC was closer to working on an agreement to cut production at its November 2016 meeting. OPEC members and Russia did agree to cut production to 32.5 million barrels beginning in January 2017.

Terror and warfare is often an upsetting topic, one we don’t necessarily like to address, but we noted
an increased tone toward the possibility of targeted attacks in 2016.

Our Election 2016 theme posited it would be a year of increased volatility as we faced what was shaping up to be a headline-dominating presidential election. In addition, we noted the possibility of a shakeup in Congress.

Themes for 2017

Reflation Nation

Treasury Inflation-Protected Securities (TIPS) breakevens, which are market-based measures of inflation expectations, have risen significantly since the beginning of 2016 with over 60% of the move for the 10-year breakeven occurring after the U.S. presidential election (Chart 6). The 10-year breakeven rate increased from 1.73% at the close on November 7 to nearly 2.00% as of December 1, which has lent toward a shift higher in U.S. Treasury yields as well. There have been several influencing factors helping bring about the increase such as the strength of the labor market, improving economic data, commodity price stability, and potential fiscal measures under a Donald Trump presidency. This trend higher, to an extent, had begun prior to the election and we believe it has the propensity to continue into 2017, particularly given the inflationary fiscal policies anticipated with a Trump administration.

Labor market slack continues to diminish, as indicated by Fed officials and as evidenced by the strength in recent employment reports. Although the November employment report stated a modest decline in labor market participation, it also indicated a relatively more significant decrease in the unemployment rate to 4.6%, in line with the median Fed projection for 2017 and implying the United States is nearing full employment. Additionally, while unit labor costs increased only modestly in third-quarter 2016, this was due to healthy underlying measures—hourly compensation increased to 3.8%, which was offset by a 3.1% increase in productivity. We think these factors should translate into wage pressures in the near term and inflation should ultimately materialize as a result, as productivity has remained below compensation growth.

Commodity prices also play a major role in the rate of inflation, and oil prices have largely kept a lid on headline price growth, peaking in 2014 only to find the bottom in first-quarter 2016. As the price of oil has trended higher throughout the year, with the price of a barrel of WTI increasing by over 90% since hitting a low of $27 in February, the Consumer Price Index (CPI) has steadily improved with a 1.6% year-over-year increase in October. Core CPI, which strips out the volatility of food and gasoline, has remained stable above 2.0% for all of 2016. Given the PNC Economics team’s forecast for a roughly 15% surge in oil prices in 2017, we would expect headline inflation to increase in tandem.

Another consideration are the potential policy measures associated with a Trump presidency, including increased fiscal spending for infrastructure and defense, as well as prospective trade barriers, both of which should prove inflationary. While the actual inflationary impact would likely lag any policy implementation, we believe inflation expectations would react in kind, pushing Treasury yields higher. As such, we continue to believe that bond yields will move incrementally higher from their current levels as inflation expectations increase, the growth outlook.
improves, and the term premium rebounds from historically low levels. The short end of the yield curve remains married to Fed action, therefore lending toward the prospect of additional steepening of the Treasury curve in the near term.

From an allocation standpoint, we continue to advocate a tactical position in TIPS to hedge against our expectation for rising inflation expectations, which should provide some relative benefit as nominal yields increase. Additionally, we guide toward fixed income positions which are defensive against rises in interest rates such as leveraged loans and absolute-return-oriented strategies, as well as a global allocation for diversification. Please refer to our quarterly Three Key Levers publication for additional insight.

**Infrastructure/Fiscal Policy**

The United States, according to the American Society of Civil Engineers (ASCE), has a glaring infrastructure investment gap of $1.7 trillion over the next 10 years and the quality of public works will only get worse unless significant investment is made (Chart 7). Positive change could be on the horizon however; not only did the American president-elect campaign for fiscal stimulus, but the infrastructure opportunity set is vast on a global scale. Broadly, there are four global infrastructure categories: Water, Energy, Telecommunications, and Transportation.

Chart 7: Infrastructure Funding Gaps

<table>
<thead>
<tr>
<th>Trillions of Dollars</th>
<th>2016-2025</th>
<th>2016-2040</th>
</tr>
</thead>
<tbody>
<tr>
<td>Funded</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Unfunded</td>
<td>2</td>
<td>8</td>
</tr>
</tbody>
</table>

**Source:** American Society of Civil Engineers, PNC

Water—includes projects ranging from conventional delivery and wastewater services to smart water technology such as geographic information system mapping for precision agriculture watering. Without public-private collaboration, water shortages will remain serious but fixable issues in major cities across the globe from New Delhi to Los Angeles.

Energy—the largest source of infrastructure capital expenditures, the category includes traditional energy projects, utility distribution, and newer industries including renewable energy and energy storage. Traditional energy development and utility projects need no reintroduction, while growth in renewables and distribution technology is only expected to continue and cannibalize other segments.

Transportation—from conventional road and airport projects to new concepts involving delivery drones and autonomous vehicles which could significantly disrupt transportation practices. Across the globe, physical transportation projects generally require some form of government involvement. A discussion on virtual transportation is beyond the scope of this piece.

Telecommunications—as landlines and pay phones become distant memories, demand is evolving rapidly. While approximately 90% of the world has access to second generation (2G) broadband, most developed countries already have plans to shut down those networks to make way for new 4G and eventually 5G radio bands. Therefore, as emerging markets continue to build out broadband networks, similar to other infrastructure advancements, they will be able to leapfrog right from 2G into 4G and 5G networks.

President-Elect Trump campaigned for renewed infrastructure spending, but we feel it is imperative to recognize the complexities in raising new taxes. It took President Obama four years and two attempts for Congress to approve a watered-down infrastructure bill in 2015. Meanwhile, headlines make reference to a $1 trillion infrastructure plan; however that plan was proposed by Commerce Secretary nominee Wilbur Ross, which contrasts with the president-elect’s own website greatagain.gov, which seeks $550 billion over
10 years specific to transportation infrastructure. Based on comparable success rates for President Obama, the final stimulus amount could wind up being less than $400 billion. While still in the realm of speculation, execution could range from an infrastructure bank, public-private partnerships, or a return to Build America bonds. Regardless of stimulus from the federal government, even $550 billion would fall well short of the operating gap needed to maintain U.S. infrastructure according to ASCE estimates.

It is common to associate infrastructure with government bureaucracy and a reliance on taxes to fund projects; however globally that is not always the case (Chart 8). For example, just 15% of water projects are supported by the private sector in the United States, but that number jumps to 75% in the United Kingdom and 33% in China. So while we do expect fiscal stimulus to support public works projects in the near to medium term, disruptive private enterprise within the categories discussed has been the driving force behind global infrastructure advancements. Primarily in the form of unlisted partnerships, infrastructure opportunities deliver a complementary solution to a diversified investment portfolio.

Global Politics Front and Center

Some of the biggest surprises in 2016 were political events which were highly charged and difficult for markets to predict. The outcome of the “Brexit” vote in the United Kingdom and the presidential election in the United States had global markets reacting.

The political environment globally is highly charged for change. Growing populism is moving the needle in some cases, but not in all. As we look ahead to 2017, one thing remains certain: the rise of surprising political events.

In Europe, after the Brexit vote as well as votes in Italy, France, Austria, and elsewhere, we believe this will be an important year for the European Union (EU). Key votes in 2017 in the Eurozone include presidential elections in Germany and France as well as general elections in the Netherlands (Table 2).

<table>
<thead>
<tr>
<th>Country</th>
<th>Election Type</th>
<th>Original Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Netherlands</td>
<td>General</td>
<td>March 2017</td>
</tr>
<tr>
<td>France</td>
<td>General/Presidential</td>
<td>May/June 2017</td>
</tr>
<tr>
<td>Germany</td>
<td>Presidential</td>
<td>September 2017</td>
</tr>
<tr>
<td>Italy</td>
<td>Presidential</td>
<td>May 2018</td>
</tr>
</tbody>
</table>

Source: Strategas Research Partners, PNC

In December, the surprising constitutional referendum vote in Italy resulted in the resignation of Prime Minister Matteo Renzi. A surprising 70% of Italians voted in the election, with the “No” vote garnering over 59% of the total. The vote itself was on powers and election methods of parliament. However, the election took a different tone months ago when Mr. Renzi announced he would resign if the referendum failed.

Knowing that the prime minister planned to implement unpopular reforms likely led to the “No” decision. The path for Italy post-Renzi will lie in the next elections in either 2017 or 2018. Should the M5S (or Five Star Movement) opposition party take hold, then the possibility of an exit could be seen as a higher probability than if the Democratic party remains in power.

Whether this means a future exit of Italy from the EU remains to be seen, though markets currently are not pricing in such an event. The constitutional vote was not seen as anti-euro, as many polls and analysts conclude the general Italian population is unaligned.
still in favor of the EU and sees itself as worse off on its own. However one thing is clear: Italians voted their distaste for the reforms, asking for more leniency. Presidential elections in Italy are slated for 2018, but with Mr. Renzi stepping down, it is likely these could be pulled forward to 2017.

Not surprisingly, different countries within the EU have different sentiment. Austria’s recent presidential election was a win for the status quo. Alexander Van der Bellen won the vote by a 51.7% to 48.3% margin.

2017 will likely be a key year for the EU, as populism and other sentiment could shake things up for individual countries and, by extension, the rest of the EU (Chart 9). For Brexit, the populist sentiment was that the EU membership was more of a cost than a benefit, something that has been hard to prove as we’ve written in the past. Some EU member countries have been dealt hard reforms to implement in order to continue to gain financial backing. In those countries, like Italy and other periphery nations, there is pro-EU sentiment—with the acknowledgement that the reforms have been distasteful to many. As tensions escalate in neighboring regions, the stark reality of the influx of refugees is one that would certainly benefit from a united front, in our view.

The Brexit situation is also far from over, with the country still needing to invoke Article 50 to begin the formal exit process. Prime Minister Theresa May has stated her intention for this to happen in January.

From an economic perspective, the Eurozone appears to be on much more stable ground than in recent years. And the European Central Bank has reiterated its intention to intervene when necessary, and continues to provide quantitative easing. However, the slow rise in populism across the Eurozone, which has seen its share of difficulties over the past decade including the financial crisis, recessions, sovereign debt crisis, and influx of refugees, will not likely subside any time soon.

We have incorporated within our themes the interwoven themes brought about by a new administration. We believe 2017 may bring periods of volatility from time to time stemming from political uncertainties, media coverage, and geopolitics.

A new presidential term begins mid-month in January 2017. What normally follows in the first quarter of a presidential term is often, not surprisingly, market lows as markets try to assess the new political landscape and its impact on Washington.

In addition, by looking strictly at performance of the stock market, there is some correlation to the year of the presidential term. The first two years tend to have the lowest absolute performance. The best year for markets tends to be the third year, which is a pre-election year (Chart 10, page 10). This also tends to be the year when presidential candidates begin to focus on approval ratings ahead of campaigning.

History has shown that bonds tend to perform better in the first half of an election term than the second half. But we have seen this shift with the best being the first quarter, and the worst the third quarter.

What is certain is the new president of the United States will be faced with some large tasks. From a fiscal perspective, the next president must deal with a fiscal drag of 0.5% in 2017. Congress will be tasked with addressing fiscal policy next year, as the new fiscal policy enacted in 2016 largely
borrowed against next year; it is not surprising that in a fourth-year presidential term, Congress “kicked the can down the road.” Government spending has been a positive for GDP growth in the past seven quarters, and whether this continues will be an issue for the new government. We hope to gain greater clarity on the plans and priorities of the new administration as they become known, and certainly as the change of power occurs in January.

Life or Death of Active Management

It is no secret that active managers have had a few tough years. In particular, first-quarter 2016 marks the lowest quarterly outperformance rate ever of large cap funds versus the Russell 1000® according to Bank of America Merrill Lynch, whose database goes back to 1998. Furthermore, an October 2016 report from Citi Global Investor Sales shows that very few actively managed funds have outperformed their indexes after costs over different periods. As shown in Table 3, it is striking to see that over 80% of various groups of active managers underperformed their respective indexes over the past 10-year period.

As money chases performance as well as a few other factors, passive funds have been growing in share of assets under management (AUM) in the industry, noted by the same Citi report mentioned above—while passive accounted for 20% of AUM in the five years ending in 2008, it accounted for 30% of AUM in the five years ending in 2015. Moreover, between 2007 and 2015, investors withdrew $835 billion from actively managed U.S. equity mutual funds and put $1.2 trillion into equity passive funds. Such dramatic fund outflows from active into passive have left many investors wondering if this is really the beginning of the end of active management.

In our view, it is hardly so. For one thing, performance of active managers does bounce from quarter to quarter due to the market environment: for example, third-quarter 2016 saw over 60% of large cap managers outperforming their benchmarks (Chart 11, page 11) even though managers suffered in earlier quarters of the year.

Table 3
Percentage of Time Indexes Outperformed Active Managers

<table>
<thead>
<tr>
<th>Fund Category</th>
<th>1-Yr</th>
<th>3-Yr</th>
<th>5-Yr</th>
<th>10-Yr</th>
</tr>
</thead>
<tbody>
<tr>
<td>All Domestic U.S. Equity Funds</td>
<td>90.20%</td>
<td>87.41%</td>
<td>94.58%</td>
<td>87.47%</td>
</tr>
<tr>
<td>Global Equity Funds</td>
<td>75.35%</td>
<td>76.96%</td>
<td>82.45%</td>
<td>81.19%</td>
</tr>
<tr>
<td>Emerging Market Equity Funds</td>
<td>42.22%</td>
<td>77.42%</td>
<td>67.63%</td>
<td>81.94%</td>
</tr>
<tr>
<td>Investment Grade Long Funds</td>
<td>94.39%</td>
<td>97.32%</td>
<td>98.41%</td>
<td>98.21%</td>
</tr>
<tr>
<td>High Yield Funds</td>
<td>75.00%</td>
<td>80.47%</td>
<td>88.78%</td>
<td>96.62%</td>
</tr>
<tr>
<td>Emerging Market Debt Funds</td>
<td>74.65%</td>
<td>88.89%</td>
<td>92.31%</td>
<td>81.82%</td>
</tr>
</tbody>
</table>

Source: Citi Global Investor Sales, Standard & Poor’s, PNC
For another thing, active managers are created differently; those that do have an edge are likely to stay and grow stronger. Last but not least, there are now new options in the marketplace beyond simply passive versus active, and these choices expand the horizon to exploit active returns.

Performance of active managers changes from quarter to quarter and is linked to the macro environment. In our quarterly Active Management Performance Update, we usually present various measurements of the conditions of the macro environment that would reflect on active managers. Noticeably, those factors change from time to time and can be used to understand active managers’ relative performance. For example, we have a so-called “homerun/strike-out” chart that captures the ratio of the numbers of stocks which significantly outperform their group mean over the number of stocks which significantly underperform their group mean. A ratio greater than one usually signals an easier environment for active managers, because it means diversifications of stock returns are likely greater and, among stocks that performed significantly differently from their peers, it is more likely that they outperform rather than underperform. As shown in Chart 12, the homerun/strike-out ratio among different indexes were all greater than one in the third quarter of 2016, while they were all much below one in the first quarter. This contrast aligns with the better performance of active managers in third-quarter 2016 versus that of first-quarter 2016. Overall, we believe active managers would do better should the macro environment be more favorable. (For more information, please refer to our Third Quarter 2016 Active Management Performance Update.)

Second, active managers were not created equally. In its July 2016 report, Moody’s Investors Service argued that the fundamental driver of the poor performance of active managers is the massive size of the industry, with currently over 9,000 mutual funds and 10,000 hedge funds in the United States alone. Therefore, according to Moody’s, “overcapacity leads to investment mediocrity, since true talent is limited and size works against the investor in the form of increased transaction costs and difficulty in identifying scalable investment opportunities.” Indeed, we believe that unsustainable active funds may be eliminated in the ongoing dramatic outflow of funds, while the truly active funds that do provide an edge are likely to stay. More specifically, funds that have low tracking

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1 “From Diversified Asset Classes to Factor-Driven Index Portfolios & the Re-Packaging of Active Investment Skills—Overview of Key Findings from the 2016 Industry Evolution Survey,” October 2016, Citi Global Investor Sales.
errors and low active shares against their benchmarks (closet indexing), and those that rely solely on static factor investing are more likely to be wiped out. They can be easily replaced by the much cheaper indexing funds and smart beta funds. On the other hand, actively managed funds that deviate from benchmarks strategically, capable of delivering specific outcomes based on client needs, dynamically manage factors, and excel in their multi-asset class solutions are likely to stay and grow, in our view.

Finally, recent innovations in the marketplace can provide investors with new ways to exploit active returns. Most notable is the growing popularity of smart beta funds. According to Empirical Research Partners, smart beta exchange-traded funds (ETFs) have about $440 billion in assets, or roughly one-quarter of the total assets in ETFs, as of April 2015. Furthermore, Chart 13 shows that the percentage of funds (measured by ending total net asset values) that use smart beta strategies has seen a clear pickup since 2010.

Many of the theories behind smart beta—also known as capturing systematic sources of returns via factor investing—are not new. What is new is the recognition that sources of active returns from factors can be accessed via passive-like implementations. In our opinion, smart beta should be used to replace active managers that do not provide active returns above factor returns due to smart beta’s cheaper prices, but it also can be used in an attempt to outperform market-capitalization-based indexing in terms of performance or risk management. For more information about our view of smart beta, please refer to our January 2016 white paper Smart Beta: Strategies and Implementation and our September 2016 white paper Introduction to the PNC Smart Beta Allocation.

All in all, actively managed funds still take up the majority of the fund space. We believe their performance should improve as the macro environment becomes more favorable and as the unsustainable funds fade out while the truly active funds grow stronger. New ways of investing such as smart beta also provide investors with new options to produce active returns with the added benefit of lowered fees.

**Tax Reform, Repatriation Offer Upside to Earnings for 2017 and Beyond**

Following President-Elect Trump’s victory in November, we believe there is a possibility for an agreement on corporate tax reform and repatriation going forward. Based on several suggested proposals from the president-elect, the top corporate federal tax rate could be reduced from 35% to between 15% and 25%, while any progress to return cash held abroad would come in the form of repatriation with proposed tax rates ranging from 3.5% to 10% (Table 4, page 13).

A decrease in the federal corporate tax rate would theoretically bolster the earnings power of U.S. corporations. In fact, in several instances over the past two years, companies sought out inversion transactions to achieve a similar outcome. However, a simplification in tax law could eliminate a slew of deductions, which may offset the implied positive impact on earnings from a lower headline rate. The aggregate S&P 500 effective tax rate has ranged from 23% to 30% over the past several years; therefore a decrease in headline tax rates within this range may not be a significant uplift to earnings after deduction eliminations. However,
Trump’s stated target of 15% would be a clear driver for stocks. At the index level, we estimate that for every 1% decline in the effective tax rate, earnings per share (EPS) will commensurately increase by $1, all else equal. Given a Republican majority in the House and Senate, we believe there is a higher probability the rate will settle between the proposed 15–20% as both sides compromise in the art of the deal.

On the repatriation front, any agreement to unlock the S&P 500’s $1 trillion overseas cash hoard is likely to add value in the near term as cash returned onshore will be deployed in the form of capital expenditures, mergers and acquisitions (M&A), and share repurchases, in our opinion. Following the Homeland Investment Act of 2004, which included a repatriation tax holiday at a rate of 5.3%, U.S. multinationals repatriated $299 billion of offshore cash (Chart 14), or approximately 20% of cash held overseas. As a result, share repurchases rose by 84% in 2004 and 58% in 2005, according to Bloomberg. There were also sharp increases in dividends and M&A growth, but buybacks were clearly the preferred form of deployment. Should a repatriation tax holiday come to fruition, we expect a similar trend to develop, boosting buyback expectations for 2017-18. For example, if 20% of overseas cash is repatriated as seen in 2005 ($200 billion) and 75% of those funds are used for repurchases, this would represent an additional $136 billion in repurchases after an assumed 8.8% repatriation tax. That said, there are some notable differences in today’s environment relative to 2005. First is historically high leverage, as evidenced by the debt to earnings before interest, taxes, depreciation, and amortization (EBITDA) ratio. The current level is well above the average and approaching highs last seen in 2002 (Chart 15, page 14). Those higher debt levels may spur companies to allocate cash toward debt reduction rather than returning capital to shareholders. Another potential caveat may arise from a protectionist perspective of the holiday’s stated goal, which is to deploy capital domestically. There is potential for stricter rules and regulations regarding the use of repatriated cash, which would likely result in a higher.

### Table 4

<table>
<thead>
<tr>
<th>Corporate Tax Reform Proposals versus Current Law</th>
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</thead>
<tbody>
<tr>
<td>Domestic Corporate Tax Rate</td>
</tr>
<tr>
<td>Business Expensing</td>
</tr>
<tr>
<td>Corporate Net Interest Deductibility</td>
</tr>
<tr>
<td>Foreign Income</td>
</tr>
<tr>
<td>Repatriation</td>
</tr>
</tbody>
</table>

*Source: Tax Policy Center, Donald J. Trump, PNC*
allocation toward M&A, debt reduction, and/or capital expenditures.

To summarize, we believe incremental changes in the corporate tax code in concert with a repatriation tax holiday are likely to benefit businesses both large and small in the near term. This outcome would add upside risk to our current S&P 500 EPS estimate for 2017, which stands at $124-126 per share. Ultimately, there is still significant uncertainty around the details and timing of tax reform. However, the incoming administration’s rhetoric is one that prioritizes tax reform and with proposals already in place, it will likely remain a key topic over the coming year.

PNC Current Recommendations

PNC’s recommended allocations continue to reflect our positive view regarding the durability of the economic expansion while considering the continued downside risks inherent in the market and economic outlook:

- a baseline allocation of stocks relative to bonds;
- a preference for high-quality stocks;
- a tactical allocation of 52% value and 48% growth within U.S. large-cap stocks;
- a tactical allocation to smart beta/core strategies;
- a tactical allocation to real estate investment trusts (REITs);
- a tactical allocation to Europe focused equities—FX hedged within the international equity component;
- a tactical allocation to Japan focused equities—FX hedged within the international equity component;
- an allocation to emerging markets within the international equity component;
- a tactical allocation to global dividend-focused stocks;
- a tactical allocation to Treasury Inflation-Protected Securities (TIPS) within the bond allocation;
- a tactical allocation to leveraged loans within the bond allocation;
- a tactical allocation to absolute-return-oriented fixed-income strategies within the bond allocation;
- a tactical allocation to global bonds within the bond allocation; and
- an allocation to alternative investments for qualified investors.

Baseline Allocation of Stocks Relative to Bonds

Since one cannot accurately determine the short-term movement of stocks, we believe investors should focus on what is knowable and controllable. The one thing investors can truly control is asset allocation reflective of their needs and risk tolerance. PNC’s six baseline asset allocation models are shown on the back page of this Outlook.

Preference for High-Quality Stocks

Any relapse to stressed capital markets or to another credit crunch from a financial crisis likely poses a higher threat to lower-quality and highly leveraged companies. Companies with weak balance sheets and less-robust business models have a much higher risk to their survival. Unfortunately, the economic outlook continues to be subject to continued downside risks in the wake of the financial crisis.
We favor a preference for high-quality stocks as a method of risk control against unexpected shocks to the economic system. This is also consistent with our explicit allocation to dividend-focused stocks.

**Overweight of U.S. Large-Cap Value Stocks Relative to Growth**

We believe the majority of the seven components of our decision framework—

- earnings growth;
- interest-rate level;
- inflation;
- volatility;
- foreign growth;
- valuation; and
- yield-curve slope—continue to support an overweight to U.S. large-cap value style relative to growth.

We focus on the yield-curve slope because results of our analysis show that a steep curve is supportive of value style outperformance relative to growth. It is not a concrete rule that value always outperforms growth in a steep yield curve, but it is an indication of higher probability. Though recent Fed activities have flattened them to a degree, both the 2- to 10-year (Chart 16) and 10- to 30-year (Chart 17) Treasury slopes remain historically steep and supportive of a value overweight.

We continue to monitor the possibility that the typical impact of the steep yield curve might be derailed by:

- the credit cycle;
- capital constraints; or
- lack of loan demand.

Bank loan data seem to be past their worst levels, and we believe there are reasons for cautious optimism.

- Banks are showing a greater willingness to extend consumer loans (Chart 18, page 19).
- Bank loan quality has continued to improve, implying a tailwind to bank earnings and a possible turn in the deleveraging cycle (Chart 19, page 19).
- Bank capital ratios have more than recovered, which should allow for loan growth and likely help prevent relapse of financial crisis within the banking industry (Chart 20, page 19).

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2The March 2011 *Investment Outlook, Quest for Value*, provides details about the value style recommendation.
Our value allocation has underperformed in the market downturn, given its more cyclical exposure. We believe it will perform better as global growth concerns fade.

**Allocation to Smart Beta/Core Strategies**

See the contents of this Investment Outlook for full discussion of the smart beta/core strategies.

Within the smart beta strategies, there is the option to utilize the PNC STAR strategy, which uses exchange-traded funds to systemically apply momentum exposure to industries, size, and international factors. The PNC STAR strategy may help a portfolio increase return without increasing risk and, with small allocations, marginally reduce risk (Chart 21, page 17).

In backtests, PNC STAR has produced excess returns with a volatility level similar to the benchmark S&P 500, resulting in a higher Sharpe ratio. In addition, the analysis has shown that the strategy has handled periods of crisis better than the S&P 500 and was generally quicker to recover. While past performance is not indicative of future results, historically this model has produced outperformance of just under 0.40% per month. In addition, the drawdown analysis has shown that the strategy has handled periods of crisis better than the S&P 500 did and was generally quicker to recover.

Momentum performance has dipped since the financial crisis, but appears to be regaining some momentum (to turn a phrase). If momentum continues to work in the future as it has historically, the strategy may lead to excess returns that should help improve the tactical allocation portfolios.
Allocation to REITs

The strategic rationale for including REITs in the portfolio rests on expanding the opportunity set for income investors. REITs are required to distribute at least 90% of income to shareholders in the form of dividends. Given the nature of the dividend model, we believe REITs fare better with investors not aiming for quick capital gains but for dividend income and modest price appreciation. Over a long investment holding period, REITs have tended to outperform the S&P 500 on a total-return basis (Chart 22). The total-return perspective is unique for REITs in that it has historically kept pace with or exceeded the broader market, with the additional benefits of:

- modest correlation with stocks;
- less market price volatility; and
- higher current returns.

REITs provide steady current-income-producing dividend yields competitive with investment-grade bonds, with the potential for increases in dividend and share price.

REITs allow shareholders to invest in commercial real estate while remaining liquid and leaving the management to professionals. REITs historically have had lower correlations versus other stocks, providing diversification benefits. Given the complex nature of the interrelated economics and industry fundamentals, leaving the investment in real estate to the professionals and buying for the long term into strong companies is a standing argument for long-term investing versus market timing. We believe the asset class should bring some diversification benefits in spite of the correlation tightening with the S&P 500.

REITs are not so much interest-rate sensitive as dependent on economic growth. Dividend growth rates have outpaced inflation over the past decade (Chart 23).
International Equities

International equities offer geographic diversification and open the opportunity set to invest in firms worldwide. Beyond the benefits of diversification and exposure to many of the world’s leading companies, there are other potential benefits to investing outside U.S. borders, including unique opportunities in Asia and Europe. Within the international equity component we recommend an allocation to emerging markets.

It is reasonable to assume that the United States and other developed markets have similar long-term expected returns. Much of the difference is likely to come from currency gains or losses. We remain mindful of the currency risk inherent in international investing. While at times the weaker dollar makes international investing look more attractive than underlying fundamentals might dictate, the reverse is true when the strong dollar punishes U.S. investors’ international returns.

Allocations to Europe- and Japan-Focused Foreign-Exchange-Hedged Equities

Our tactical allocation within the international allocation focuses on Europe-based and Japan-based holdings. Stabilizing recoveries in both Europe and Japan, relative valuations, improving corporate earnings, and low energy prices are a few of the dynamics that support strength of equities in the regions. Equities in both regions have underperformed in recent years, but we believe the aggressive monetary policy actions by both the Bank of Japan and European Central Bank are supportive of financial assets (Chart 24). Our view is these asset purchases should support their economies and function to continue to make equities in their respective countries more attractive relative to fixed-income assets and to bolster equity valuations.

The hedged currency recommendations reduce currency risk for our U.S.-based investors who have most, if not all, of their liabilities denominated in dollars.

Allocation to Global Dividend-Focused Stocks

A global dividend-focused allocation expands the opportunity set to invest in high-quality dividend-paying stocks, where in some cases companies have exhibited faster dividend growth, essentially opening up the opportunity to invest in firms outside the United States, including emerging markets. In addition, focusing on the combination of dividends and dividend growth has historically been a winning combination.

The reinvestment of dividends greatly enhances an investor’s return and is a large component of the dividend-focused strategy. Over time, the compounding of dividends drives the total return. As an investor’s investment holding period increases, dividends typically comprise a larger portion of return. As a reference point, from 1926 to 1959 dividends contributed more than 50% to total returns for the S&P 500.

We believe the global dividend-focused allocation is positioned to take advantage of global opportunities and diversify across countries and sectors (Chart 25, page 19). A globally generated income stream is inherently more diverse than one from a single country or region. This can help to avoid concentration in terms of end markets, which may drive sales and revenues. A global dividend allocation may also allow an investor to invest in...
sectors perhaps underrepresented by a particular country.

**Allocation to Treasury Inflation-Protected Securities**

The Treasury yield curve is anchored at the short end due to continued accommodative U.S. monetary policy, while longer-maturity yields are being pulled lower largely by the term premium in light of global concerns and ongoing central bank easing. We think inflation expectations will rise as survey-based measures used by the Fed have remained relatively flat, commodity prices have stabilized, and wages have trended higher as the United States moves closer to full employment.

Treasury Inflation-Protected Securities (TIPS) can be a favorable alternative to conventional Treasuries; TIPS provide both a comparable yield and the credit quality of Treasury notes, while also furnishing protection against the risk of higher inflation. In addition, since TIPS return the greater of the face value or the inflation-adjusted principal at maturity, these securities would increase in real value even during a deflationary period. With commodity prices finally finding some footing following a volatile period recently, TIPS are indirect beneficiaries due to the CPI adjustment. While not our base case in the near term, we think TIPS are likely the best defense against stagflation because high inflation coupled with low growth provide the optimal environment for TIPS performance.

From both a valuation and goal-based methodology, TIPS are likely a good addition to many portfolios. In particular, tax-deferred and tax-exempt accounts are likely beneficiaries of TIPS allocations. In our opinion, TIPS provide some measure of insurance against the risk of inflation and reduced real purchasing power, while protecting against severe deflation. This seems especially true for investors holding excess cash or nominal Treasuries.

**Allocation to Leveraged Loans within Bonds**

We believe an allocation to leveraged loans within the bond portion of a portfolio should help defend against higher interest rates. Since leveraged loans are adjustable-rate instruments tied to short-term interest rates (typically the 3-month LIBOR), we believe holders should benefit from rising rates (Chart 26). If longer-term interest rates rise, we expect the shorter duration of leveraged loans should result in much better performance relative to longer-duration fixed income, such as the Barclays U.S. Aggregate Bond Index.

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3The March 2010 *Investment Outlook, Shakespeare for Primates*, provides details about leveraged loans.
This allocation could be characterized as lowering the portfolios’ interest-rate risk while raising their credit risk and correlation with equities. We believe it accomplishes this without a large impact on portfolio income. In our opinion, this correlation with equities, which we have noted since recommending the allocation, has become more apparent in the recent stock market downturn, allowing investors an attractive entry point.

### Allocation to Absolute-Return-Oriented Fixed Income within Bonds

We believe an allocation to an absolute-return-oriented fixed-income strategy within the bond portion of a portfolio has several benefits, including:

- defending against higher interest rates;
- further expanding the opportunity set for fixed income; and
- increasing exposure to credit.

Given our belief that the economy will continue to improve, strategies that help protect against the risk of rising rates will become increasingly important. While we do not believe interest rates will necessarily move markedly higher in the near term, rate volatility has certainly increased, and we expect that the downside risk to holding excessive duration will increase the longer rates remain low. We believe it makes sense to further hedge against this risk while maintaining the ability to participate in upside credit potential. This is also consistent with our current tactical allocations to global bonds and leveraged loans.

We believe the Fed will continue to support the economy as necessary until the economy can grow and function without additional monetary policy accommodation. This should lend itself to further credit spread tightening over the short to intermediate term. Even with spreads at relatively attractive levels compared with historical standards, we admit the absolute low level of yields increases the difficulty of adding alpha within spread sectors. This is one aspect in which we believe an absolute-return long-short approach can add value. Absolute-return strategies have the ability to exploit mispricing via both long and short positions and also expand the opportunity set of strategies typically not accessible to traditional long-only managers. Typical trading strategies include, but are not limited to, capital structure arbitrage, convertible arbitrage, event driven, and pairs trading.

### Allocation to Global Bonds within Bonds

The strategic rationale for including global bonds in the portfolio rests on expanding the opportunity set within the investible bond universe. The Barclays Capital Global Aggregate Index, our proxy for high-quality global bonds, contains less than 40% U.S. issues (Chart 27). (For further details of our view on global bonds, see the July 2011 Investment Outlook, Pulling the Fourth Lever.) We believe investors who decline to look outside the United States may be missing opportunities for diversification and enhanced returns.

A primary motivation for allocating to global bonds is to introduce currency exposure to a portfolio. Although currency adds another level of volatility to a portfolio’s fixed-income allocation, it provides for investors a natural hedge against devaluation of the

---

4The July 2013 Investment Outlook, Breaking the Bonds, provides details about absolute-return-oriented fixed income.
dollar, which traditional domestic fixed-income asset classes cannot offer (Chart 28).

The prospect of higher global economic growth outside the United States is another motive for allocating fixed income globally. As world economies grow more quickly, international bond investors may have the opportunity to reap the benefits of tightening global credit spreads relative to the United States. More importantly, currently investors can take advantage of higher interest rates abroad to gain higher yields. The addition of the currency exposure that comes with an unhedged global bond can act to help lower the correlation with U.S. bond returns (Chart 29).

In general, we suggest that active management makes the most sense in this allocation. Global bond index construction usually focuses on allocating more assets to countries with more outstanding debt. This may or may not be a good thing. Larger and more stable economies are likely to be able to support higher debt levels, but some fundamental analysis is likely helpful. We also believe that the current state of the global economy, with the large dichotomy between most developed and emerging economies, provides a possible opportunity for active managers for exposure to credit and foreign exchange.

In our opinion, it is likely that many managers’ allocations will differ greatly from the index. This also affects risk metrics, typically to the upside in terms of volatility, index tracking error, and historical drawdowns. This was explicitly taken into consideration by the PNC IPC when it sized the recommended allocation to global bonds.

Given the concerns regarding how the United States will handle upcoming monetary and fiscal policy decisions, as well as what effects those decisions might have on the value of the dollar, we believe an allocation outside traditional fixed-income bond sectors is prudent. We believe the advantage of higher global growth and diversification benefits, along with the ability to benefit from currency exposure outside the dollar, make investing in the global bond sector a viable complement to traditional dollar-based fixed-income assets. This allocation can be seen as adding to PNC’s defensive posture on U.S. interest rates, with 10-year Treasury rates now above 2% and our view that
yields will rise over time as the current economic soft patch and the flight to safety fade (Chart 30). We also see this as an opportunity to benefit from higher bond yields elsewhere in the world.

Table 5 illustrates the behavior of various products on the PNC platform consistent with the absolute-return-oriented fixed-income strategies during periods of rising interest rates. The strong relative performance in rising-rate environments is notable and is consistent with our expectation.

Allocation to Alternative Investments

We also believe alternative asset classes should be considered for qualified investors because they may provide an effective risk management tool for portfolios. Our argument is that if alternative and traditional investments are put on even footing with regard to expected returns, then solely by virtue of the two investments being different, the risk of the overall portfolio is reduced without altering the portfolio’s expected return. The risks may not be less, but they are in some ways different, so we believe this diversification may help manage overall portfolio risk.

Every action (or inaction) involves risk, and we believe investors should think about risk when they consider alternative investments. However, our research suggests that adding carefully selected alternative investments to a diversified portfolio of traditional investments may reduce the overall risk (as defined by the volatility of returns) of that portfolio without affecting expected returns. We believe that, for qualified investors, alternative investments should be considered as a tool for managing portfolio risk, not for adding risk to increase returns.

Table 5

<table>
<thead>
<tr>
<th>Periods of Rising Rates</th>
<th>Begin 12/30/08</th>
<th>End 6/10/09</th>
<th>Begin 2/18/11</th>
<th>End 10/27/11</th>
<th>Begin 3/19/12</th>
<th>End 8/16/12</th>
<th>Begin 3/11/13</th>
<th>End 3/12/13</th>
<th>Begin 12/6/12</th>
<th>End 12/31/13</th>
</tr>
</thead>
<tbody>
<tr>
<td>10-Yr Yield Begin</td>
<td>2.05%</td>
<td>2.39%</td>
<td>1.72%</td>
<td>1.80%</td>
<td>1.40%</td>
<td>1.59%</td>
<td>1.63%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-Yr Yield End</td>
<td>3.95%</td>
<td>3.74%</td>
<td>2.40%</td>
<td>2.38%</td>
<td>1.84%</td>
<td>2.06%</td>
<td>3.03%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Change in 10-Yr Treasury (bps)</td>
<td>190</td>
<td>135</td>
<td>68</td>
<td>58</td>
<td>44</td>
<td>47</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAA Yield Begin</td>
<td>7.97%</td>
<td>5.62%</td>
<td>5.04%</td>
<td>5.07%</td>
<td>4.73%</td>
<td>4.55%</td>
<td>4.47%</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BAA Yield End</td>
<td>7.75%</td>
<td>6.25%</td>
<td>5.46%</td>
<td>5.42%</td>
<td>5.09%</td>
<td>4.94%</td>
<td>5.37%</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Change in BAA Yield (bps)</td>
<td>-22</td>
<td>63</td>
<td>42</td>
<td>35</td>
<td>36</td>
<td>39</td>
<td>90</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Change in BAA Spread (bps)</td>
<td>-212</td>
<td>-72</td>
<td>-26</td>
<td>-23</td>
<td>-8</td>
<td>-8</td>
<td>-50</td>
<td></td>
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</tbody>
</table>

Total Return during Period:

- BarCap U.S. Aggregate: -0.47% -3.09% -1.68% -1.18% -1.21% -1.01% -3.04%
- Driehaus Active Inc (LCMAX): 13.08% 4.65% 2.26% 3.29% 0.48% 2.42% 1.27%
- Blackrock SIO (BSIIX): 10.77% 0.55% -0.20% 1.22% 0.31% 1.73% 0.63%
- MetWest Unconstrained (MWCIX): N/A N/A N/A 3.71% 1.75% 2.23% 0.70%
- Western Asset Unconstrained (WAARX): 12.01% 1.13% 0.14% 1.08% 0.32% 1.13% -0.76%

Source: Bloomberg L.P., PNC
As an example of the possible value alternatives, in particular hedge funds, can bring to a portfolio in the current environment, look at the correlation between the S&P 500 and the HFRX™ Macro Index (Chart 31). Low correlation with stocks at times when they are falling would be a distinct positive in terms of reducing the downside. While at times these two very different assets move nearly in unison, the hedge funds do have exposure to other factors than solely stocks and also might adapt to the environment by changing exposures. In fact, the HFRX Macro Index had significantly outperformed the S&P 500 during previous downturns since late April 2013 (Chart 32).

Given the current market environment, including a number of factors (such as low returns on cash and occasional spikes in macroeconomic concerns) that could continue to result in increased volatility, we believe alternative investments are worthy of consideration for qualified investors.5

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5 For more details, see our October 2009 Investment Outlook, Alternative Medicine, and our August 2009 white paper The Science of Alternative Investments.
As of market close, Friday, December 16, 2016:

**Asset Allocation Recommendations**

- **Current Tactical**
  - Preservation: 15%
  - Conservative: 30%
  - Moderate: 35%
  - Balanced: 25%
  - Growth: 65%
  - Aggressive: 100%

- **Baseline**
  - Preservation: 15%
  - Conservative: 35%
  - Moderate: 30%
  - Balanced: 25%
  - Growth: 65%
  - Aggressive: 100%

**Equity Allocation**

- **U.S. Capitalization Baseline**
  - Small-Cap: 5%
  - Mid-Cap: 10%
  - REIT: 4%
  - Large-Cap: 53%
  - Smart Beta/Core: 29%
  - (Baseline is 85LC/10MC/5SC)

- **Style: Overweight Value within U.S. Large Cap**
  - Growth: 48%
  - Value: 52%
  - (Baseline is 50/50)

**Global Positioning**

- Baseline Plus Global Dividend Focus, Europe Equities-FX Hedged, Japan Equities-FX Hedged
  - International: 20%
  - Domestic: 80%
  - (Baseline is 80/20)

**Fixed Income Allocation**

- Credit Positioning: Core, Leveraged Loans, Global, Absolute-Return Oriented and TIPS
  - Absolute-Return Oriented: 7.5%
  - Leveraged Loans: 7.5%
  - Global: 5%
  - Core: 70%
  - TIPS: 10%
  - (Baseline is 100% Core)

For qualified investors, we recommend an allotment to alternative assets of 20% of a balanced allocation to complement the traditional allocation.

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