Fast Out of the Gate

Life is largely a matter of expectation. —*Horace*

Quintus Horatius Flaccus (6527 BC), known as Horace, was considered the leading Roman lyric poet during the time of Emperor Augustus. Themes in his works include politics, love, philosophy, ethics, and poetry itself. Horace is sometimes considered the first autobiographer, having written often about his own life and character.

In this month's *Investment Outlook* we address the breakneck start for equity markets in 2018 on the heels of tax reform legislation passed in late 2017. We discuss:

- markets out of the gate in 2018 and what this may portend for the rest of the year;
- possible tax reform legislation effects on corporate earnings and the economy; and
- market considerations and the importance of rebalancing.

Markets have been in a strong bull pattern since the dark days of 2009 and were strengthened by the Tax Cuts and Jobs Act of 2017. U.S. stocks have gotten off to a quick start in the first weeks of 2018 with the S&P 500® up over 6% in the first four trading weeks of the year. The S&P 500, Dow Jones Industrial Average (DJIA), and NASDAQ indexes all have set record highs. While this level of performance has emboldened some investors to become more aggressive, we think it is worth remembering that even good markets have pullbacks and corrections. U.S. stocks have gone longer than normal since a marked pullback.

Tax cuts and the repatriation of foreign earnings have the potential to unlock significant cash for U.S. corporations which can be used to fund buybacks, increase capital spending, conduct merger and acquisition activity, and return capital to shareholders. Companies may also use the cash to reduce leverage. Earnings estimates for 2018 have begun to climb higher with the commencement of the fourth-quarter 2017 earnings season in mid-January, as forward forecasts attempt to quantify the upside potential for 2018 corporate profits. This has helped add momentum to equities. We also believe continued global growth will be supportive of earnings from a macro perspective, in addition to stability in oil prices and a generally accommodative environment.

Markets mostly shrugged off the short-lived government shutdown as strong earnings reports, which were released at the same time, overrode most concerns. It was also expected that this shutdown, as has been the case historically, would be short.

We believe a well-planned investment strategy, tailored to the needs and risk appetite of the individual, remains the best roadmap for superior long-term performance. It is our view that a systematic approach to asset allocation includes a regular rebalancing process, whereby a periodic readjustment to a portfolio is necessary to maintain the targeted asset allocation. Over time, one asset class may outperform another in a meaningful way, moving the allocation away from intended targets.

PNC expects the economic expansion to continue in 2018, forecasting GDP growth of 2.7%. The recently enacted tax reform legislation is helping boost stock prices and disposable incomes, and a tighter labor market is supporting wage gains. Collectively, these developments are favorable for another solid increase in consumer spending in 2018. Business capital expenditures, energy production, and exports are also improving, supported by higher oil prices and a weaker dollar.

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.

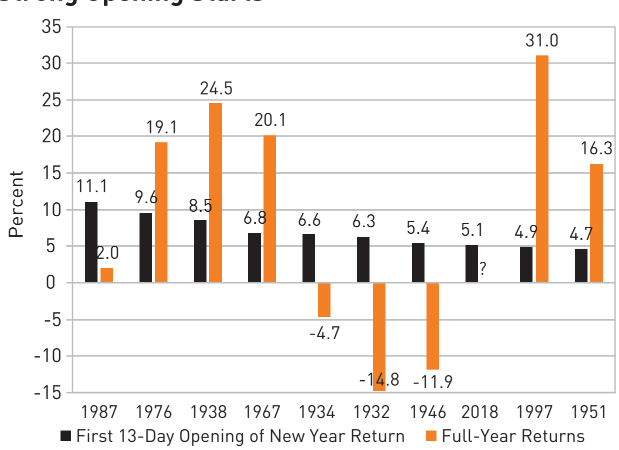
Markets Start 2018 Strong

Markets have been in a strong bull pattern since the dark days of 2009 and were strengthened by the Tax Cuts and Jobs Act of 2017. U.S. stocks have gotten off to a quick start in the first weeks of 2018 with the S&P 500 up over 6% in the first four trading weeks of the year. The S&P 500, DJIA, and NASDAQ indexes all have set all-time record highs. U.S. stocks were strong out of the gate in 2018, and now they are off to the races. According to Evercore ISI, this is the eighth best start in the past 90 years. And in most cases, markets went on to post a solid return in those years (Chart 1).

While this level of performance has emboldened some investors to become more aggressive, we think it is worth remembering that even good markets have pullbacks and corrections. U.S. stocks have gone longer than normal since a marked pullback.

Strong markets such as these tend to be accompanied by a strong economy, ease of credit availability, and often new technology. With the United States entering its ninth year of an economic expansion, and global economic indicators strong as well, risk assets tend to benefit. In addition, interest rates are still low by historical standards, and the Federal Reserve (Fed) maintains its guidance for slow and gradual increases in the federal funds rate. Optimism leading up to and following the recent enactment of federal tax reform legislation has pushed up stocks considerably.

Chart 1
Strong Opening Starts



Source: Evercore ISI, PNC

A market melt-up (versus a meltdown) occurs when there is a large and unexpected improvement in the performance of an asset class mostly brought about by a rush of investors rather than by fundamental improvements in the economy. According to technical analysis provided by Strategas Research, the current market environment is not yet in a melt up when compared with similar events in the past; per Strategas, a melt up occurs when a market rally ranks in the 95th percentile of all such rallies in a six-month period. Over the last 75 years there have been approximately 25 of these events. Looking at the current run up, the market has not been quite as hot (yet). Further, the study shows that after such markups, more often than not stocks continued to run in the following six-month period (Table 1).

Momentum tends to be positively correlated with forward returns. However, in the short-term there are often pullbacks; but in the following 3-, 6-, and 12-month periods, returns tend to be positive.

Table 1
Market Melt-Up Indicator
As of 1/22/18

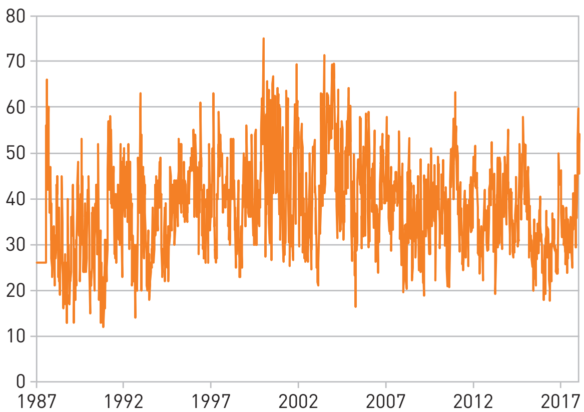
S&P 500 6-Month % Change in 95th Percentile & S&P 500 at New High

Date of Signal	Trailing 6-Month % Change	Forward 6-Month % Change
3/11/86	25.2	7.1
3/12/87	26.2	7.8
6/15/87	22.1	-22.9
8/24/89	22.1	-7.3
4/4/91	21.5	2.5
7/12/95	21.5	8.7
1/14/97	21.3	19.4
6/12/97	21.1	10.4
10/2/97	26	16.6
6/26/98	21	8.4
3/8/99	31.7	2.8
5/17/13	23.2	6.9
1/22/18	**14.3**	**?**

Source: Strategas Research Partners, PNC

In terms of market views, bullish sentiment is at a 15-year high (Chart 2). The American Association of Individual Investors (AAII) Bullish/Bearish sentiment is at levels last seen in 1987. Yet according to BCA Research, market returns have not kept pace with sentiment in years of higher investor bullishness (1987, 2005, and 2014), in part because of a lack of retail investor flows. A meaningful move in funds from fixed income to equities could provide a tailwind to stocks (to the detriment of bonds). This is particularly possible given the reduced demand for bonds due to Fed unwinding, in addition to unwinding by other global central banks. Preliminary research from the Investment Company Institute, according to BCA, reflects that this could be starting to happen.

Chart 2
AAII Bullish Index
As of 1/25/18

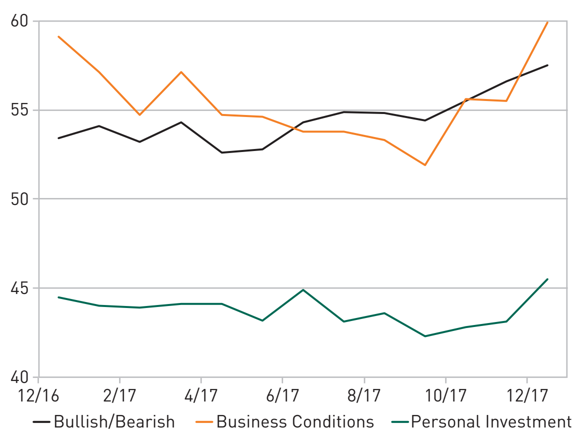


Source: Bloomberg L.P., PNC

PNC's own proprietary survey reflects a similar view. The PNC-CivicScience Investor Sentiment Index (PNC-CS ISI) strengthened for the third month in a row in December 2017, and reflects a sharp turn higher in the latter months of the year, indicating growing optimism. As measured by the survey, investor confidence strengthened in the final quarter of 2017, after a downward softening trend had prevailed during the first nine months of the year.

The PNC-CS ISI Bullish/Bearish sentiment currently suggests that more survey participants are bullish than bearish about U.S. stock markets, more so in December than in any previous month in 2017 (Chart 3).

Chart 3
PNC-CS Investor Sentiment
As of 12/31/17



Source: CivicScience, PNC

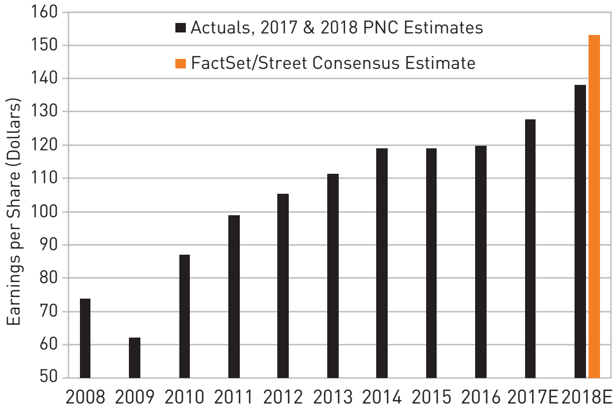
We've written in the past about behavior playing a key role in shifting markets, possibly causing markets to turn if expectations are too lofty. According to Cornerstone Macro, when leading indicators are elevated, it is easy for investors to follow, wanting to believe in the best case scenario. And the opposite can be true as well; investors often believe the worst when indicators are at lows. Back in 2016, the scenario was different from today's, with strong bearish sentiment and one of the worst starts to the year for the market. We believe it is important to take note of the extremes: Two years ago, the AAII was at a 30-year low, while today it's at a 15-year high. Sentiment can cloud the fundamental story, and it is always our recommendation that when markets move too far in either direction, it is time to consider rebalancing your portfolio.

Fundamentally Speaking

As we are in the early stages of reporting fourth-quarter 2017 earnings, companies are understandably adjusting expectations due to tax reform legislation. At the outset, we are seeing companies, notably Financials, take big charges to fourth-quarter earnings for expenses related to compliance with the new tax reform legislation. However, forward forecasts are rapidly moving higher.

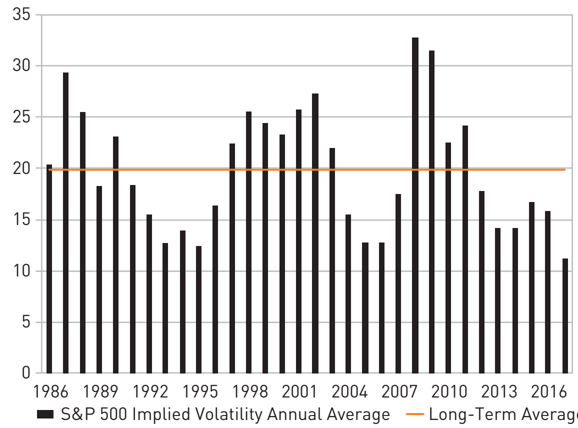
As of January 25, 2018, with just 24% of S&P 500 companies having posted results, the blended earnings growth rate rose to 12.0% year over year

Chart 4
S&P 500 Earnings Growth
As of 1/26/18



Source: FactSet Research Systems Inc., PNC

Chart 5
Implied Volatility at Record Lows in 2017
As of 12/31/17



Source: Evercore ISI, PNC

from 10.8% at the end of the quarter (Chart 4). Most analysts have adjusted earnings to exclude one-time charges related to tax reform compliance.

Revenue estimates rose slightly to 7.0%. All 11 sectors are reporting or are expected to report earnings growth for the quarter.

2018 estimates continue to rise and are now 15.3%, up from 12.3% at the start of the year. Credit Suisse said in a research note that a majority of the reporters thus far (about 80%) are providing guidance on future tax burdens. It pointed out that the companies which are providing tax guidance are seeing their 2018 earnings-per-share (EPS) estimates rise by approximately 7.0% versus levels before the tax bill was signed into law, compared with estimates of only 1.2% for those which have not provided guidance.

A Word on Volatility

We just experienced a year in which many financial market records were broken due to the peculiar absence of market fluctuations, otherwise known as volatility, which we identified as one of our 2018 themes. Market volatility was at record lows in 2017, and we believe that is not likely to continue (Chart 5). Empirical Research notes that third-quarter 2017 volatility registered in the bottom 2.5% of outcomes noted in the past 90-plus years. Empirical also notes that the steepness of futures trading indicates the markets expect that volatility will revert closer to the mean. A recent paper published by the Federal Reserve Bank of New York and cited by Empirical Research illustrates the economists' conclusion that while volatility is mean reverting over time, low volatility typically begets more low volatility until something occurs to change this pattern quickly, like some sort of market shock. Further, when considering the term structure for volatility in the futures market, it appears to indicate that most investors expect volatility to return to median levels, and do not expect low volatility to be the "new normal" at all.

We acknowledge the likelihood that volatility in 2018 will rise from the low levels of 2017. However, volatility in and of itself does not provide any indication of what will happen to equity markets. We note that following low volatility years, there is often an expected uptick in volatility, with a less-correlated performance of the market (Table 2, page 5).

From a fundamental perspective, corporate earnings are supportive of stocks. Currently, we believe 2017 earnings will end the year in a range of $126–129 per share for the S&P 500. As we look forward to 2018, we believe continued global growth will be supportive of earnings, in addition to stability in oil prices and a generally accommodative environment. Margins are likely to be somewhat flat, noting that 2017 margins are currently estimated at over 10.5%, a record high. On a fundamental basis, however, excluding tax reform we expect mid- to high-single-digit earnings growth in 2018 based on our forecast for global

Table 2
Historical S&P Performance after Low-Volatility Years (since 1945)

Year	S&P Intra-Year Drawdown	Performance	Next Year Drawdown	Next Year Performance
1995	-3%	34%	-8%	20%
2017	-3%	16%	?	?
1964	-4%	13%	-10%	9%
1958	-4%	38%	-9%	8%
1954	-4%	45%	-11%	26%
1961	-4%	23%	-26%	-12%
1993	-5%	7%	-9%	-2%
1972	-5%	16%	-23%	-17%
1991	-6%	26%	-6%	4%
2013	-6%	30%	-7%	11%
Average	-4%	25%	-12%	5%

Source: Strategas Research Partners, PNC

nominal growth of 5-7%. We will be revisiting our earnings estimates throughout the quarter.

The Tax Cuts and Jobs Act of 2017

In late 2017, Congress passed, and the president signed into law, the Tax Cuts and Jobs Act of 2017. The tax package is the second largest tax cut in U.S. history, second only to President Ronald Reagan's 1981 tax cut. Our PNC economists view the tax legislation as a positive near-term boost for the U.S. economy, and PNC is estimating 2.7% GDP growth in 2018.

The majority of the tax cuts begin in 2018, and the total amount of the cuts will be roughly 1% of 2018 calendar-year GDP. The tax package provides both personal and corporate tax reform.

The Tax Cuts and Jobs Act of 2017 is generally supportive of the broader economy, to both markets and shareholders as well as consumers. Tax cuts and potential repatriation could unlock significant cash for U.S. corporations which can be used to fund buybacks, increase capital spending, to conduct merger and acquisition activity, and to return capital to shareholders. Companies may also use the cash to reduce leverage. Larger companies tend to benefit more than smaller firms due to their larger tax base and, in some cases, more multinational presence. The last significant tax cut in 2003, along with the last repatriation holiday in 2004, illustrated how many companies primarily returned capital to shareholders. According to BCA Research and a study from the National Bureau of Economic Research, every $1 increase in repatriation was associated with just about a $1 increase in return to shareholders. BCA expects companies will use funds to spend on capital expenditures (capex), return capital to shareholders, and increase wages. There is also room for capex to rise further, which we included as one of our 2018 themes. See our January 2018 *Investment Outlook, Back to Normal* for more of our themes and a discussion of this topic.

Individual Tax Summary

While seven tax brackets remain, five of the seven brackets will see a lower tax rate with the top rate falling to 37% (Table 3). The standard deduction was roughly doubled from previous levels and the alternative minimum tax (AMT) exemption amount was increased. Strategas Research Partners estimates that 95% of federal income tax filers will experience a tax cut. For example, a household with a median income of $75,000 with two children will experience a $2,000 tax cut on average. The new law provides for a 20% deduction to qualified pass-through businesses, with limitations and caps above $157,500 ($315,000 for married taxpayers filing jointly).

The offsets for the rates for some taxpayers is the capping of the state and local tax exemption at $10,000. In addition, the mortgage interest deduction is lowered from $1 million to $750,000, and the interest on home equity loans is only deductible in cases where proceeds were used to acquire or significantly improve a residence subject to said limitations (see your tax advisor for personal tax guidance and more information). The

Table 3
Income Brackets

2018 Income Brackets		2017 Income Brackets	
Tax Rates	Income Thresholds	Tax Rates	Income Thresholds
10%	$0 - 19,050	10%	$0 - 18,650
12%	19,051 - 77,400	15%	18,651 - 75,900
22%	77,401 - 165,000	25%	75,901 - 153,100
24%	165,001 - 315,000	28%	153,101 - 233,350
32%	315,001 - 400,000	33%	233,351 - 416,700
35%	400,001 - 600,000	35%	416,701 - 470,700
37%	> 600,000	39.6%	> 470,700

estate tax exemption is doubled from $5.5 million to $11.2 million for single filers ($22.4 million for married taxpayers filing jointly).

Corporate Tax Summary

Through the new legislation, the federal corporate tax rate declines to 21%, and the corporate AMT was repealed. The business-friendly nature of this measure is apparent, as now, according to Strategas Research Partners, the estimated corporate tax rate including state taxes will be 25.75%, which is higher than the Organisation for Economic Co-operation and Development (OECD) average of 23%, but lower than all Group of Seven (G7) countries except the United Kingdom. The G7 is an informal organization of industrialized countries, including Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States, that holds an annual meeting to discuss global economic issues, along with international security and energy policy. Before the enactment of the Tax Cuts and Jobs Act, the United States had the highest corporate tax rate in the industrialized world.

As part of a transition from a world tax system to a territorial system, a mandatory tax of 15.5% on cash and 8% on plant and equipment for unremitted foreign earnings was implemented. Previously, the United States taxed foreign earnings twice, so many companies left those earnings overseas. The new territorial system will allow companies to return their foreign profits to the United States tax free.

Companies can now expense 100% of their capital equipment purchases for five years. There will be limits on the amount of corporate interest expense that can now be deducted. Net interest costs are limited to 30% of earnings before interest, taxes, depreciation, and amortization through 2020, and 30% of earnings before interest and taxes thereafter.

Economic and Financial Market Implications

Our 2018 outlook already expected higher 10-year Treasury yields, but the tax package should raise the probability that this is correct. The 2003 tax cut was smaller than this one, but yields moved significantly higher following its passage.

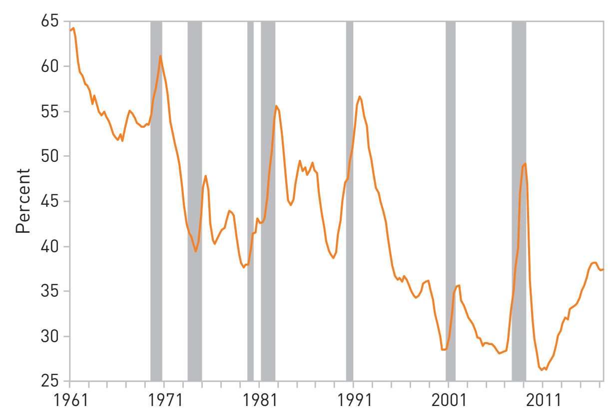
The size of the tax cuts for individuals, combined with good consumer balance sheets and a strong labor market, could provide a significant boost to consumer spending, in our view. As we noted earlier in this outlook, corporate earnings in the United States should see a significant boost as well. Our initial estimates of 2018 S&P 500 earnings growth was about 9%, but the substantial decline in corporate tax rates likely lifts that estimate to around 15% growth or higher. In general, companies with more domestic earnings benefit more from the lower statutory corporate tax rate.

Corporate capital expenditures should be boosted by better economic growth, improved earnings, 100% expensing, and repatriation. All other things being equal, the Information Technology sector should be the beneficiary of significant capital spending.

Based on better earnings and repatriation, corporate share repurchases and dividends should increase. In addition, the effective tax on dividends falls from 50% to 40%. Dividends are taxed both at the corporate and individual level, so the sharp decline in the corporate rate has a large impact on the taxation level. More companies may also decide to pay a dividend based on the lower tax burden.

There appears to be some room for dividends to rise as we can see by looking at payouts historically (Chart 6). While payout ratios have improved since the financial crisis, there is still room for dividend payouts to increase, as they remain below the peak levels of the 1990s. As we've discussed in the past, corporations have high levels of cash on hand to begin with, and should see an additional boost from tax cuts and repatriation.

Chart 6
Dividend Payout Ratio
As of 12/1/17



Source: BCA Research, PNC

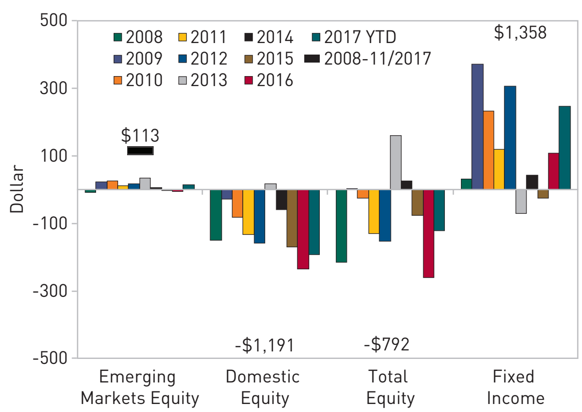
Mergers and acquisitions are likely to increase with the additional cash returning to the United States due to repatriation. This may open up more opportunities for event-driven alternative investment strategies. In addition, companies may decide to pay down some debt, especially with the new leverage limits noted earlier, in order to retain the interest deduction.

Final Thoughts, Market Considerations, and Rebalancing

Global economic growth does not seem to be slowing down any time soon. Financial conditions remain accommodative, and most major economies are operating at or near full employment. The International Monetary Fund recently raised its global growth forecast to 3.9% for 2018 (from 3.7%). The forecast for 2019 was set at 3.9%, the strongest pace since 2011, basing the increase on tax cuts in the United States coupled with faster growth than was initially expected in Europe.

Global bond markets, conversely, have gotten off to a rougher start, with higher U.S. Treasury yields fueling some of the selloff. Germany and France yields have also risen in Europe, while periphery debt yields have eased. Less demand may also push up yields, with the Fed reducing its purchases of maturing securities and the European Central Bank reducing its pace of asset purchases. Since the financial crisis, investors have been more risk averse, with flows mostly heading towards fixed income (Chart 7). BCA Research notes that global interest rates are still not at levels that would sway investors to draw money from the strong equity markets into bonds. Continued economic growth and minimal volatility continues to support equity markets.

Chart 7
Fund Flows
As of 11/30/17



Source: Investment Company Institute, PNC

Table 4
S&P 500: Market Days without a Correction
1/3/28 through 1/26/18

Decline	5%	10%	20%
Current Case	400	494	2239
Average	50	167	635
Multiple of Avg.	8.0	3.0	3.5

Source: Ned Davis Research, PNC

Markets tend to correct, which can cause and be caused by investor unease. Typically, corrections occur in response to a market-moving condition. Depending on the nature of the event, market conditions can be perceived as a telltale sign of investor unease. Because markets do not run in straight lines, investors should be mindful of the likelihood of corrections when planning long-term investment goals. A pullback could be warranted, and with the rise in yields, we would not be surprised to see a correction (Table 4).

Investors sometimes look to market corrections as a harbinger of economic conditions. Our research has shown this is not the case, however. Using data from 1900 to 2014, we analyzed whether stock market corrections (in this case bear markets) can accurately predict a recession. Our results show that stock price declines do not do a good job of forecasting recessions. We used the DJIA in this example rather than the S&P 500, to take advantage of the longer history of data available, but we would not expect the results to change materially if we were to use the other index.

In this example, we are defining a bear market as a 20% market correction over a several-month period. Since 1900, there have been 33 bear markets and 22 recessions. Overall, bear markets have predicted 5 of 22 recessions—a less than 23% success rate. Most often, bear markets have been false alarms. Using a less-stringent 15% decline in stock market prices does not improve the predictive power and significantly increases the number of false alarms.

Further, there is little evidence that a bear market has any lasting consequence for economic growth.

Table 5
Recession Declines

Recession of:	S&P 500 Peak	S&P 500 Trough	% Change
1948-49	17	14	-20.6
1953-54	27	23	-14.8
1957-58	50	39	-21.6
1960-61	61	52	-13.9
1969-70	108	69	-36.1
1974-75	111	62	-44.1
1980	118	98	-17.1
1981-82	141	102	-27.1
1990-91	369	295	-19.9
2001	1527	777	-49.1
2007-09	1565	677	-56.8
Mean			-29.2
Median			-21.6
Ex Outliers (3)			-21.4

Source: National Bureau of Economic Research, Bloomberg L.P., PNC

GDP growth during the quarter when the 20% threshold is crossed and in the following two quarters does not show any definitive movement in either direction across recessions. Looking at it another way, we consider the effect of economic contractions on the stock market not to predict the economic cycle, but to better understand market moves under economic duress. What we find by looking at data for the S&P 500 dating back to the 1940s and calculating peak-to-trough declines is that the median decline through all recessions was 21-22% (Table 5).

Tailwinds for stocks include solid earnings and growth both domestically and globally, along with continued stable fundamentals in the economy. We do know that over the long term, stocks have tended to produce significant positive real returns after inflation (Table 6).

When dissecting market returns based on cycles of markets, early on the price-to-earnings ratio tends to drive returns; this switches to earnings in mid-to-late cycles for stocks. When returns are low or negative, dividends tend to drive returns. We have long been an advocate for including dividend stocks as part of an asset allocation. For further information, see our September 2013 *Investment Outlook, Dividends without Borders*. Despite the many headlines in 2017, volatility was kept mostly at bay while equities traded higher. Support for stocks in the form of continued domestic and global growth, solid corporate earnings, and tax reform optimism offset risk factors through the year.

Table 6
Historical Average Annualized Returns
1/1/26 through 12/31/17

	Real	Nominal
S&P 500	7.06	10.16
IT Govt Bond	2.16	5.10
LT Govt Bond	2.58	5.54
30 Day TBill	0.45	3.35
Inflation	NA	2.89

Source: Ibbotson Associates, Morningstar, PNC

We think a well-planned investment strategy, tailored to the needs and risk appetite of the individual, remains the best roadmap for superior long-term performance. In our view, a systematic approach to asset allocation includes a periodic rebalancing process, whereby a periodic readjustment to a portfolio is necessary to maintain the targeted asset allocation. Over time, one asset class may outperform another in a meaningful way, moving the allocation away from intended targets.

Rebalancing has been proven to lower risk and should thus increase the likelihood of investors reaching their investment goals. This simple process can allow investors to buy low and sell high via a mechanical process which also retains their intended risk target. Our research shows, for a traditional portfolio of stocks and bonds, there is some performance improvement with the rebalancing, but the reduction in risk is quite significant. Taking this a step further, we believe the current market environment may warrant investors to consider a "New Simple Rule" might be in order—adding alternative investments to the simple periodic rebalancing process. The risk levels for traditional assets like stocks and bonds have almost certainly risen. Historically, after a significant bull market such as the one we have experienced, we think investors would be correct to rebalance some of these profits back to the relative safety of bonds. Please see our September 2017 *Investment Outlook, A (Re) Balancing Act*, for further discussion of our research.

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 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 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[1]

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 8, page 10) and 10- to 30-year (Chart 9, page 10) Treasury slopes remain historically steep and supportive of a value overweight.

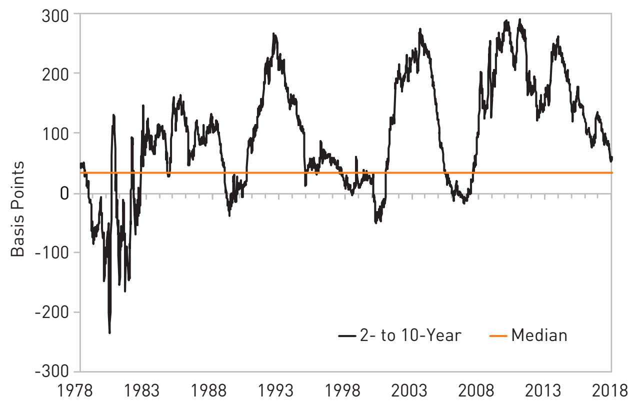
We continue to monitor the possibility that the typical impact of the steep yield curve might be derailed by:

- 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.

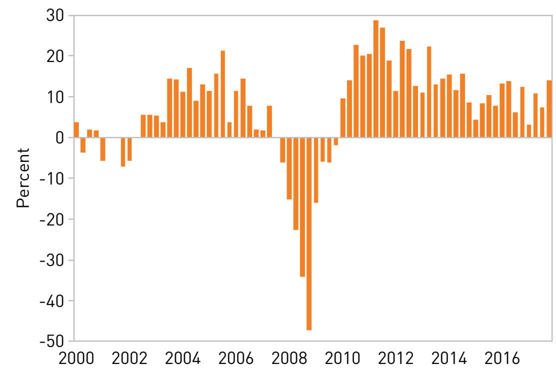
[1] The March 2011 *Investment Outlook*, *Quest for Value*, provides details about the value style recommendation.

Chart 8
2-Year to 10-Year Treasury Yield Spread
Weekly, 1/6/78 through 1/19/18



Source: Bloomberg L.P., PNC

Chart 10
U.S. Banks' Willingness to Make Consumer Loans
(percentage more willing minus percentage less willing)
Quarterly, 1Q00 through 4Q17



Source: Federal Reserve, Bloomberg L.P., PNC

- Banks are showing a greater willingness to extend consumer loans (Chart 10).
- Bank loan quality has continued to improve, implying a tailwind to bank earnings and a possible turn in the deleveraging cycle.
- 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 11).

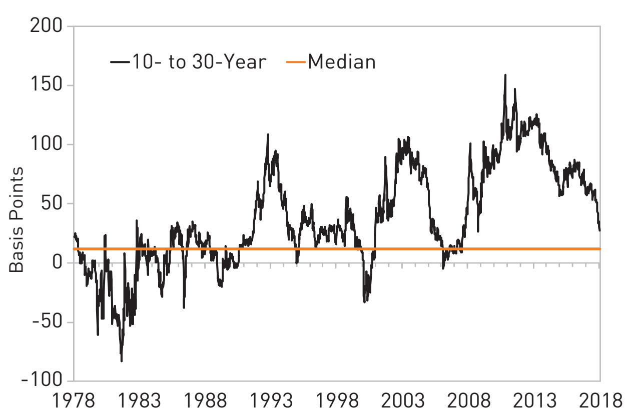
Our value allocation has underperformed in the market downturn, given its more cyclical exposure. We believe it will perform better as global growth concerns fade.

Allocation to Smart Beta/Core Strategies

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 12, page 11).

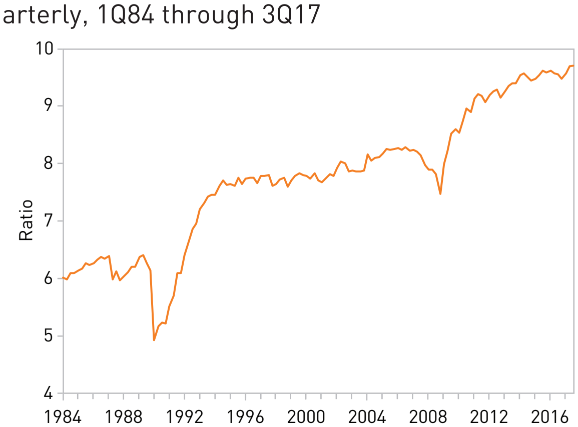
In backtests, PNC STAR has produced excess returns with a volatility level similar to the benchmark S&P 500, resulting in a higher Sharpe ratio. In addition, the analysis has shown that the

Chart 9
10-Year to 30-Year Treasury Yield Spread
Weekly, 1/6/78 through 1/19/18



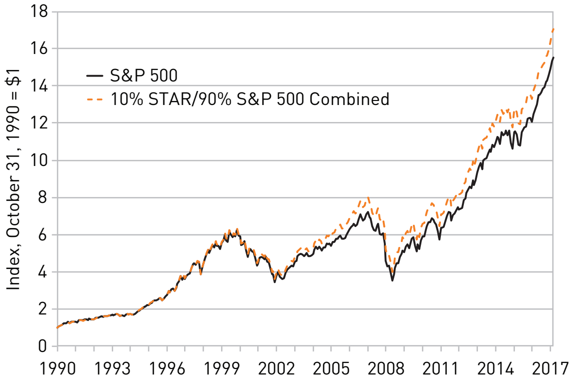
Source: Bloomberg L.P., PNC

Chart 11
U.S. Bank Core Capital Ratio
Quarterly, 1Q84 through 3Q17



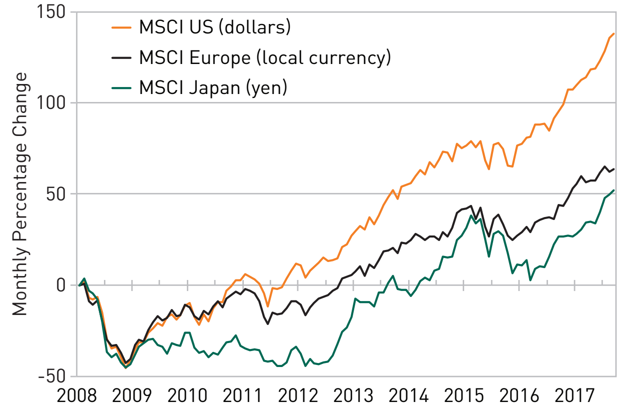
Source: Federal Deposit Insurance Corporation, Bloomberg L.P., PNC

Chart 12
10% PNC STAR/90% S&P 500 Combination Total Return
Monthly, 10/31/90 through 12/29/17



Source: Bloomberg L.P., PNC

Chart 13
FX Hedged Europe and Japan
Monthly, 4/30/08 through 12/31/17



Source: Bloomberg L.P., PNC

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.

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

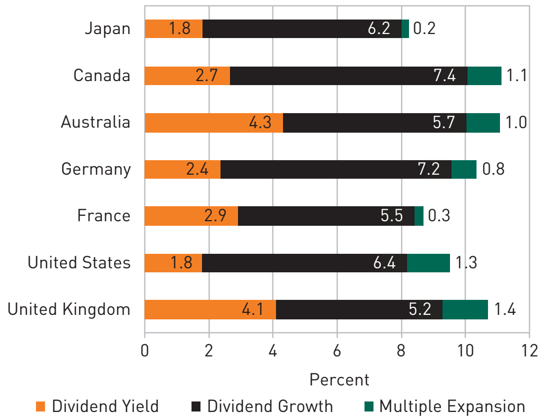
Our tactical allocation within the international allocation focuses on Europe-based and Japan-based holdings. Stabilizing recoveries in both Europe and Japan, relative valuations, improving corporate earnings, and low energy prices are a few of the dynamics that support strength of equities in the regions. 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 13). 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

Chart 14
Dividends and Dividend Growth around the World
12/31/96 to 1/24/18



Source: Bloomberg L.P., MSCI, PNC

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 14). 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.

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.

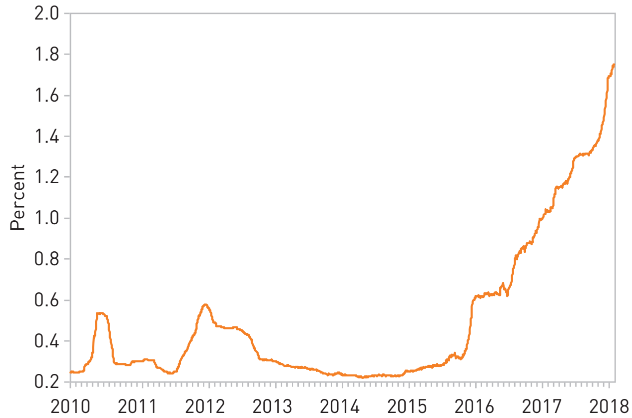
From both a valuation and goal-based methodology, TIPS are likely a good addition to many portfolios. In particular, tax-deferred and tax-exempt accounts are likely beneficiaries of TIPS allocations. In our opinion, TIPS provide some measure of insurance against the risk of inflation and reduced real 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[2]

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 adjustablerate instruments tied to short-term interest rates (typically the 3-month LIBOR), we believe holders should benefit from rising rates (Chart 15, page 13). 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.

[2] The March 2010 *Investment Outlook*, *Shakespeare for Primates*, provides details about leveraged loans.

Chart 15
3-Month LIBOR
Daily, 1/1/10 through 1/25/18



Source: British Bankers' Association, Bloomberg L.P., PNC

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 Bond[3]

We believe an allocation to an absolute-return-oriented fixedincome 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

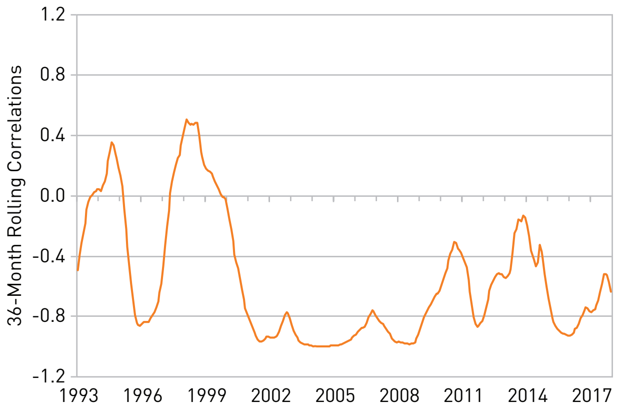
The strategic rationale for including global bonds in the portfolio rests on expanding the opportunity set within the investible bond universe. The Barclays Capital Global Aggregate Index, our proxy for highquality global bonds, contains less than 40% U.S. issues. (For further details of our view on 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 dollar, which traditional domestic fixed-income asset classes cannot offer (Chart 16, page 14).

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

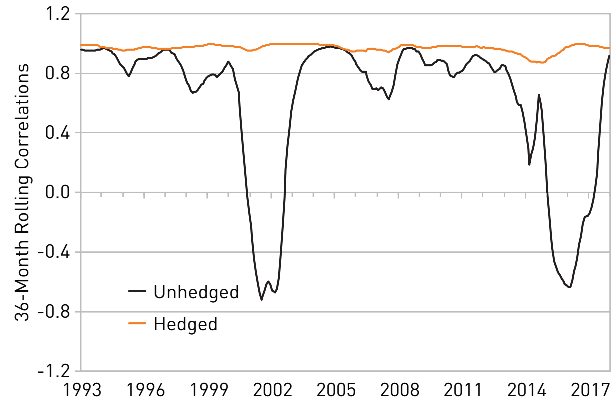
[3] The July 2013 *Investment Outlook*, *Breaking the Bonds*, provides details about absolute-return-oriented fixed income.

Chart 16
Barclays Capital Global Aggregate Excluding United States, Unhedged, Correlation with Dollar
Monthly, 1/29/93 through 12/29/17



Source: Bloomberg L.P., Barclays Capital, PNC

Chart 17
Barclays Capital Global Aggregate Excluding United States, Correlation with U.S. Aggregate
Monthly, 1/29/93 through 12/29/17



Source: Bloomberg L.P., Barclays Capital, PNC

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 17).

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.

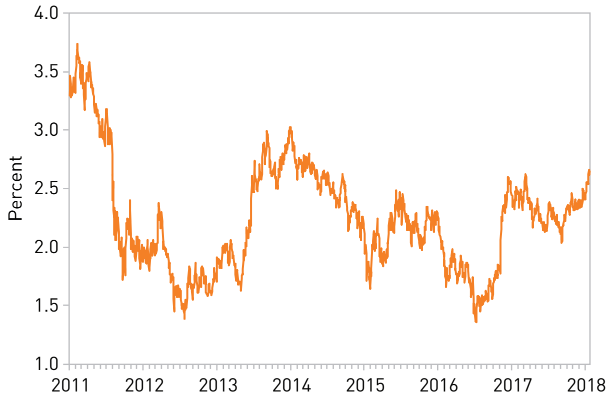
Given the concerns regarding how the United States will handle upcoming monetary and fiscal policy decisions, as well as what effects those decisions might have on the value of the dollar, we believe an allocation outside traditional fixed-income bond sectors is prudent. We believe the advantage of higher 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 18, page 15). We also see this as an opportunity to benefit from higher bond yields elsewhere in the world.

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.

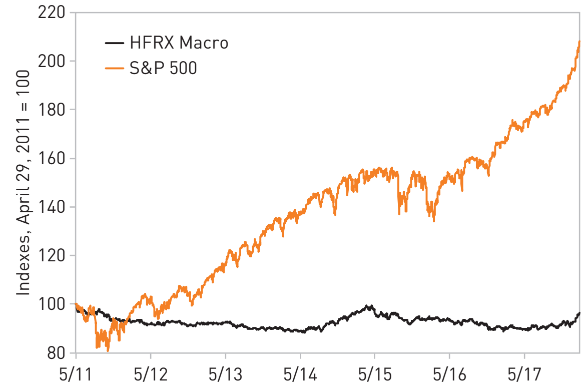
Every action (or inaction) involves risk, and we believe investors should think about risk when they

Chart 18
10-Year Treasury Yields
Daily, 1/3/11 through 1/25/18



Source: Bloomberg L.P., PNC

Chart 19
HFRX Macro Index and S&P 500 Correlations
Daily, 1/2/07 through 1/23/18



Source: HFR Asset Management, LLC; Bloomberg L.P.; PNC

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.

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. 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 19).

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.[4]

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Investment Strategist

Paul J. White, PhD, CAIA®
Senior Portfolio Strategist

Michael Zoller
Investment Strategist

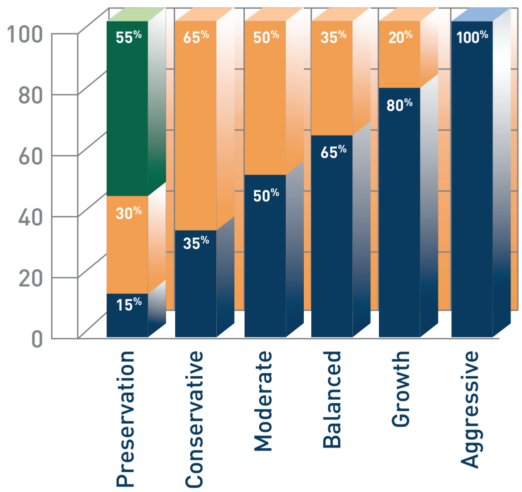
[4] For more details, see our October 2009 *Investment Outlook, Alternative Medicine*, and our August 2009 white paper *The Science of Alternative Investments*.

Closing prices as of Wednesday, January 24, 2018:

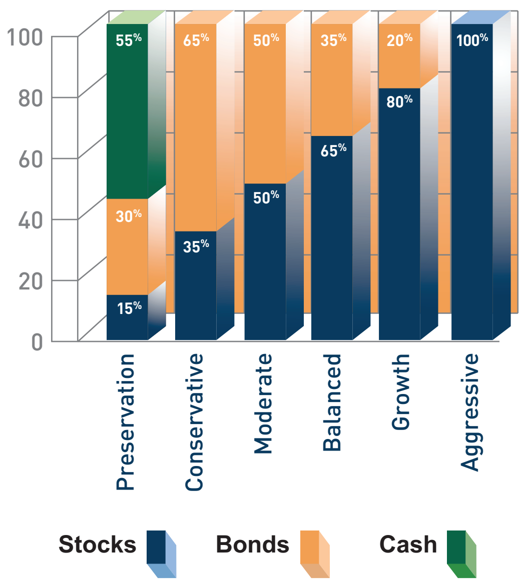
S&P 500®	DJIA	90-DAY T-BILL	10-YEAR T-NOTE
2837.54	26252.12	1.41%	2.65%

Asset Allocation Recommendations

Current Tactical

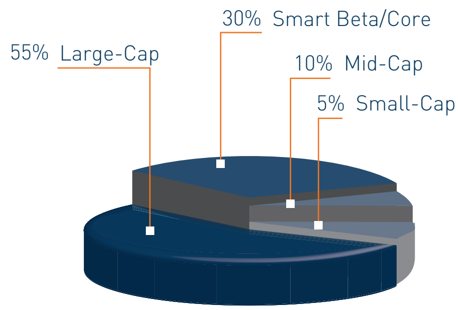


Baseline



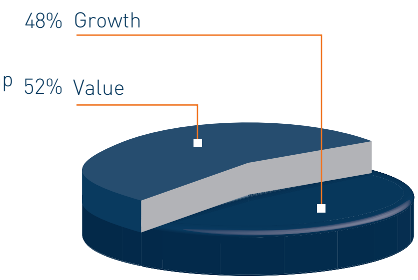
Equity Allocation

U.S. Capitalization Baseline



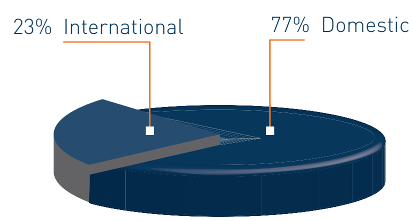
(Baseline is 85LC/10MC/5SC)

Style: Overweight Value within U.S. Large Cap



(Baseline is 50/50)

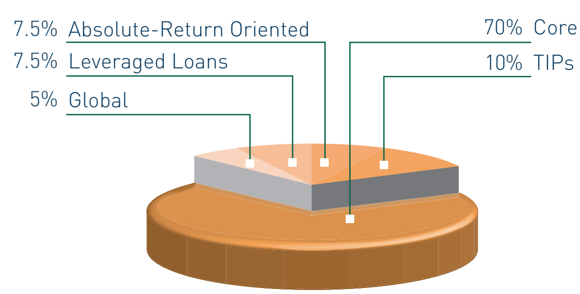
Global Positioning: Baseline Plus Global Dividend Focus, Europe Equities-FX Hedged, Japan Equities-FX Hedged



(Baseline is 80/20)

Fixed Income Allocation

Credit Positioning: Core, Leveraged Loans, Global, Absolute-Return Oriented and TIPs



(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.