Fright or Flight

Nothing in life is to be feared, it is only to be understood. Now is the time to understand more, so that we may fear less.
—Marie Curie

Marie Curie (1867–1934) was a physicist and chemist of Polish descent and a naturalized citizen of France. Curie was the first female to win the Nobel Prize, the only woman to have won twice, and the only person ever to have won the award in two distinct sciences. She is known for her work on radioactivity and the discoveries of polonium and radium.

As we enter October, a month that historically has been notable for markets, a confluence of factors greet us: geopolitical tensions, politics, central bank policy, and the implications of severe weather. In this month's *Investment Outlook* we discuss:

- October market anomalies;
- Federal Reserve (Fed) policy and the balance sheet taper;
- the economy, environmental impacts, and fiscal policy; and
- a summary and market considerations.

See your PNC advisor to discuss best positioning your portfolio and revisit our September 2017 *Investment Outlook, A (Re)Balancing Act,* where we discuss the benefits of rebalancing.

We head into fourth-quarter 2017 with perhaps more questions than we had in each of the first three quarters, including a troublesome uptick in geopolitical concerns, notably from North Korea; politics in both Washington and in key elections around the world; a particularly severe summer storm season; and a shift in policy from the Fed. At the same time, the U.S. economy appears to be continuing on the path of expansion, while equity markets test new highs. Strong fundamentals are helping support higher prices, and corporations will soon begin reporting third-quarter earnings results, perhaps providing insight into second-half performance. The low interest rate environment and continued support from economic data will likely also factor into valuations.

With the higher headline risks, we've seen an uptick in volatility, but not markedly so. In this outlook, we review past market performance in October and note this key month can be one to watch for investors. In last month's *Investment Outlook*, we discussed how the convergence of key issues, headline risks, and market moves can be a good time for investors to reassess their portfolios to better align them with the appropriate risk/reward mix for their goals and objectives.

Returning to what is knowable in times where much is unknowable is at the basis of rebalancing.

PNC expects the economic expansion to continue throughout 2017 and into 2018, forecasting 2.2% growth this year and 2.7% for 2018. The job market should be close to full employment later this year; job and wage gains are helping boost personal incomes; consumer spending should continue to lead economic growth; and the housing market will probably continue to gradually recover. The short-term impact from Hurricanes Harvey and Irma is likely to be offset by rebuilding efforts in late 2017 and early 2018.

We expect markets to continue to watch the Fed and other central banks worldwide for shifts in monetary policy. Movements in inflation and currencies are key factors to watch this year. We believe unforeseen outcomes in global politics could continue to surprise.

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.

Stocks and the October Fright

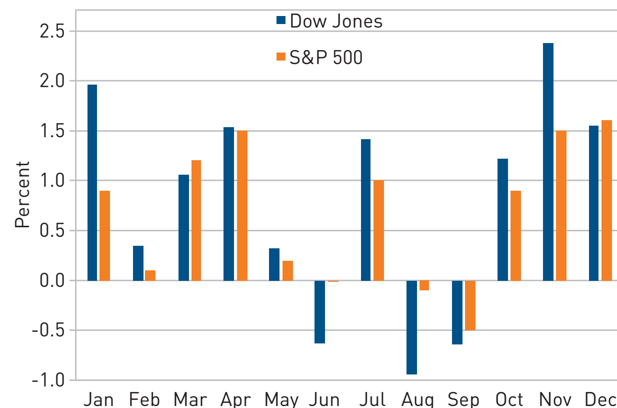
October can be a frightening time for markets. History shows that some of the toughest months on record for financial markets have fallen in October—specifically, the stock market crashes of 1929 and 1987. In addition, October 1997 witnessed an over-500-point drop in markets, and the Lehman Brothers crisis in September 2008 set a financial crisis in motion, causing stocks to fall more than 16% in October.

Consequently, according to the *Stock Trader's Almanac 2017,* October has also proven to be a good time to buy stocks (Table 1). After particularly rough Septembers in 1999 to 2003, the Octobers of those years delivered strong gains.

So what's the bottom line? Precedent has given October a scary aura, which is somewhat justified. We are making no predictions about October 2017; we only acknowledge that, for reasons unknown, things seem to come to a head in this month in particular. Equally, if not more so, as we noted last month, September has also proven to be a month with a higher-than-normal number of market-moving events. Wild swings in the market during October have been known to happen, as have some good buying opportunities (Chart 1).

Volatility historically has risen in the month of October for a number of different reasons. These wild swings are not a cue to panic, in our view; rather, we recommend taking the opportunity to revisit risk tolerance levels. And, as history has shown, markets tend to self-correct over time.

Chart 1
Dow Jones/S&P 500 Average Monthly Performance
1950-Present



Source: Strategas Research Group, PNC

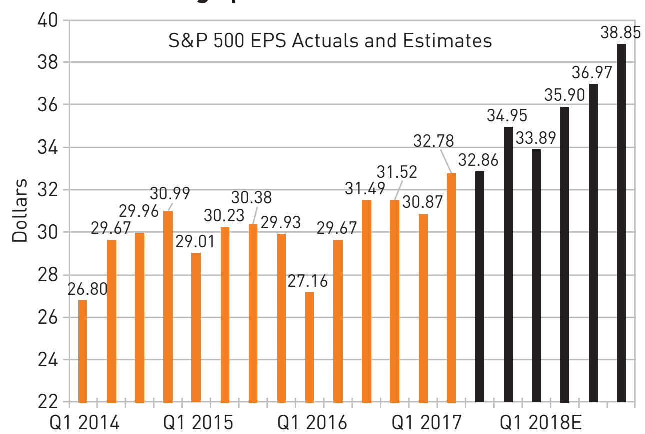
Fundamentals have supported stock prices, with first-quarter and second-quarter earnings for S&P 500® companies growing at a double-digit pace versus the prior year (Chart 2, page 3). As of September 22, 2017, third-quarter earnings estimates for the S&P 500 are expected to reflect 4.2% growth year over year, with eight sectors, led by Energy, expecting positive profits. Revenues are forecast to grow 5.0% year over year. For full-year 2017, the current consensus estimate for earnings growth for the S&P 500 is 9.6%, with revenues forecast to increase 5.7%. We will be closely watching the third-quarter earnings season for additional changes to forecasts and for rhetoric from management surrounding key issues, including impacts from the hurricanes and tax reform. The reporting season begins in earnest during the second week of October.

Table 1
Best and Worst October

		Dow Jones Index		S&P 500		NASDAQ	
Best	October month	1982	11%	1974	16%	1974	17%
Worst	October month	1987	-23%	1987	-22%	1987	-27%
Best	October week	10/11/1974	13%	10/11/1974	14%	10/31/2008	11%
Worst	October week	10/10/2008	-18%	10/10/2008	-18%	10/23/1987	-19%
Best	October day	10/13/2008	11%	10/31/2008	12%	10/13/2008	12%
Worst	October day	10/19/1987	-23%	10/19/1987	-21%	10/19/1987	-11%

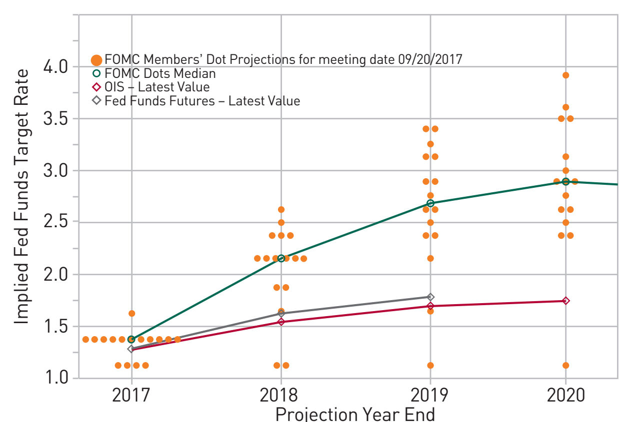
Source: Stock Trader's Almanac 2017, PNC

Chart 2
S&P 500 Earnings per Share Actuals and Estimates



Source: FactSet Research Systems Inc., PNC

Chart 3
FOMC Dot Plot
As of 9/20/17



Source: Bloomberg L.P., PNC

The Fed Moves Forward

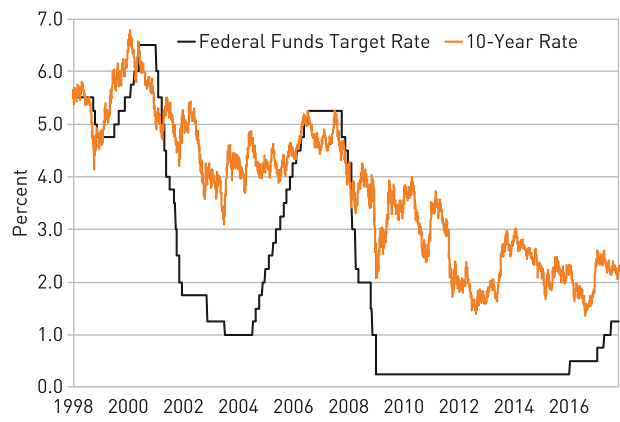
As was expected, at the Fed's September meeting, the Federal Open Market Committee (FOMC) voted not to raise interest rates. The Committee also unanimously voted to begin to taper its balance sheet beginning October 1. In addition, the Fed's statement indicated continued moderate growth of the U.S. economy and jobs, and accelerated business investment growth. The impact of the hurricane season is expected to be limited, and should be offset as we move through the end of the year as rebuilding efforts begin. Inflation is forecast to remain below the Fed's 2% target in the near term, but could accelerate in the medium term.

Interest Rates

The Fed chose to keep interest rates within a range of 1.00% to 1.25%. After an extended period of zero interest rates following the financial crisis—the federal funds rate was close to zero from 2009 until December 2015—the FOMC has since increased the rate four times.

The so called "dot plot" or Summary of Economic Projections suggests most members are in favor of one more interest rate increases by the end of the year (Chart 3). Eleven members expect the federal funds rate to range between 1.25% and 1.50% by year end, equating to one or more interest rate increases of 25 basis points this year. Four members believe no increase is necessary.

Chart 4
10-Year Rate versus Federal Funds Rate
As of 9/27/17



Source: Bloomberg L.P., PNC

Just one member appears to forecast two increases as a preference.

The dot plot implies there will be one more rate hike in 2017, three hikes in 2018, and two in 2019. The terminal rate is set for 2.75% in the longer term. Cornerstone Macro maintains through their research that the terminal rate could be too high, and reaching it would be a stretch given current market dynamics. The opinion is that it will take far longer than the dot plot is implying.

Further, the 10-year Treasury yield is equating the average of the expected short-term rate, or federal funds rate over the next 10 years, plus a term premium (Chart 4). Typically the federal funds

rate at peak converges with this rate, which at this writing implies topping out below the current dot plot's terminal rate of 2.75%. This is a lower terminal rate than the previous dot plot, which at the time was 3.00%.

Fed Chair Janet Yellen has indicated the federal funds rate is approaching its neutral level. The Fed itself has estimated the neutral rate around 2%, a level it has maintained since around 2009. The only need the Fed would have to go above this rate is to slow the economy down, which it shouldn't need to do absent a desire to push inflation lower.

In line with the dot plot, PNC Economics expects the Fed will raise rates at the December 13-14 meeting, and not sooner. Supporting this expectation is the fact that Ms. Yellen has scheduled a press conference following the December meeting, while there is no postmeeting conference scheduled for the October 31-November 1 meeting. Waiting until December also gives the Fed a few months to assess how the tapering is going. In addition, the Fed will likely have a better sense of what the hurricane season impact could be on the economy. Inflation trends will also play a factor, and the earlier year assessment of "transitory factors" affecting inflation could turn. By the end of the year, it will be more evident whether inflation picks up or not.

PNC forecasts three additional rate increases in 2018, at the June, September, and December meetings. This forecast brings the federal funds rate to a range of 2.00% to 2.25% by the end of 2018. In 2019, PNC expects the federal funds rate to reach its terminal/long-term run level of 2.5% by mid-year. This is slightly below the Fed's terminal rate of 2.75%.

One wildcard to any forecast is inflation. With little inflationary pressure over the past few years, Fed committee members have lowered expectations for inflation for next year from the previous forecast, now expecting both Consumer Price Index (CPI) inflation in 2018 and Core CPI to be at 1.9% in 2018, both lower than the prior forecast of 2.0%. Using the Personal Consumption Expenditures Price Index, members continue to expect inflation will reach the Fed's 2% goal over the next few years. PNC expects inflation to accelerate, owing largely to a tighter labor market which will likely boost wage pressures.

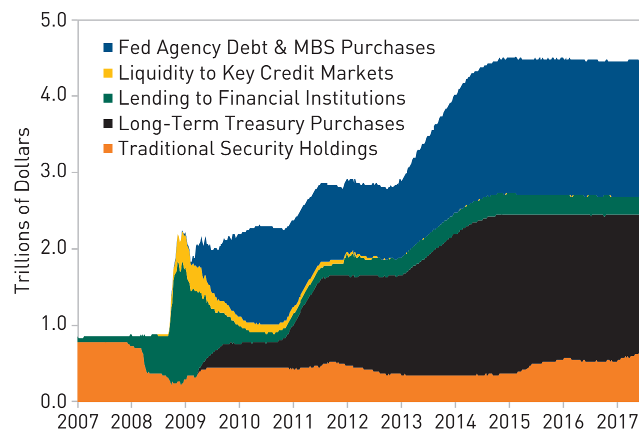
Current federal funds futures are pricing in 70% odds that the Fed will hike again in December, barring any significant changes in its outlook or to inflation.

The yield curve itself has flattened, with the short end steepening and the long end staying close to the same as it was in December 2015. History shows that the yield curve normally becomes flatter and often inverts when the Fed raises rates. This is simply because the rate on the short end is more sensitive to changes in the federal funds rate, while the long end is less so. Further, contrary to what some may believe, an inverted yield curve is not a reliable predictor of recession.

Balance Sheet

The Fed's intervention in the financial crisis caused its balance sheet to grow from less than $1 trillion in early 2009 to its current $4.5 trillion (Chart 5). In order to promote economic growth and keep a lid on long-term interest rates, the Fed purchased long-term dated Treasuries and mortgage-backed securities (MBS). The recovery has shown that quantitative easing by the Fed has largely been positive for the financial markets and from an economic perspective. As the economy is reflecting a labor market close to full employment, the Fed has made the decision to begin to allow these securities to run off its balance sheet. This will likely take a considerable amount of time, well

Chart 5
Fed Balance Sheet
As of 6/28/17



Source: Cornerstone Macro Research, PNC

into the next decade, to accomplish, resulting in a modest upward pressure on longer-term rates.

The balance sheet itself will shrink, but at a slower pace than it expanded. Through the end of this year, the Fed will ease off $6 billion per month of longer-dated Treasuries and $4 billion per month of MBS and other debt, totaling $10 billion per month. The monthly run-off level will increase approximately $10 billion per month every three months until reaching approximately $30 billion per month (Table 2).

Banks are the likely biggest purchasers of this debt, absorbing much or all of what the Fed puts back into the market (Chart 6). Banks are in need of reserves to support their liquidity requirements, therefore shifting ownership in large part to U.S. banks.

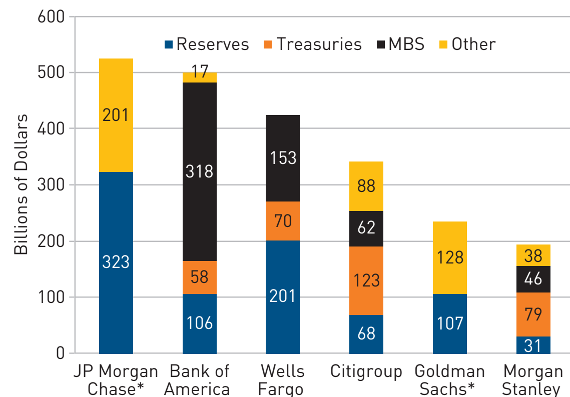
Table 2
Balance Sheet Runoff*

	Yearly Flows ($ billions)	Effect on 10-Year Rate (bps)
2017	30	0.8
2018	394.2	10.7
2019	423	11.5
2020	283.2	7.7
2021	268.8	7.3
2022	216.3	5.9

*Cornerstone estimates

Source: Cornerstone Macro Research, PNC

Chart 6
Bank Reserve Holdings



*Note: JP Morgan Chase and Goldman Sachs do not disclose securities breakdown.

Source: Cornerstone Macro Research, PNC

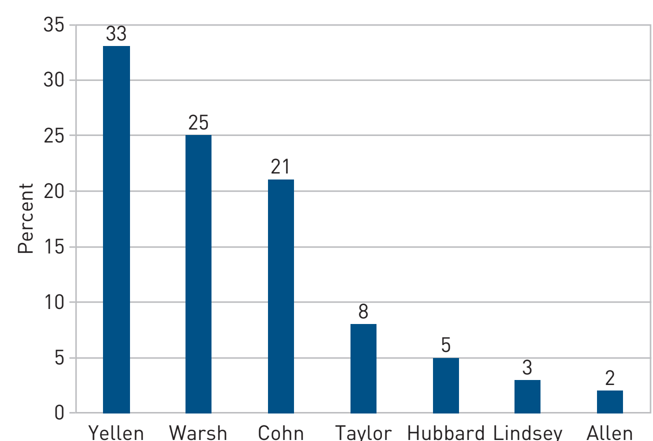
Fed Leadership

There is some uncertainty facing the Fed as far as its leadership is concerned. Current Fed Chair Janet Yellen's term is up in January 2018 and speculation continues as to if she will be replaced and by whom (Chart 7). Since President Reagan, every Fed chair has been renominated by the incoming president. Currently, Ms. Yellen has the highest odds of renomination, and President Trump has not ruled her out. All other rumored replacements—including Fed Governors Kevin Warsh and Larry Lindsey, as well as Gary Cohn and others—are seasoned candidates who are not viewed as likely to swing dramatically away from the current Fed policy stance.

In addition to Ms. Yellen, the recent resignation of Stanley Fischer along with three additional vacant seats on the board reveals the Fed has seen quite a bit of turnover. Randal Quarles is the first board appointment who is likely to be accepted by the full Senate, as his nomination was approved by the Senate Banking Committee. With these changes, the board and its monetary policy have the potential to look quite different next year.

The Fed's job is a big one: setting monetary policy and getting it right. The Fed's scorecard is complicated, extending into economic forecasts that are beyond the scope of this paper. Looking at the markets, a simple yet telling

Chart 7
Odds of Being Next Fed Chair



Source: Cornerstone Macro Research, Predictit, PNC

Table 3
Fed Chairs and Market Returns

	Term of Office			Real Equity Returns	
	Start	End	Years	% Annualized	
William M. Martin	4/2/51	2/1/70	18.8	9.5	-1.8
Arthur Burns	2/1/70	1/31/78	8	-1.9	-1.2
G. William Miller	3/8/78	8/6/79	1.4	6.1	-6.2
Paul Volcker	8/6/79	8/11/87	8	13.9	5.9
Alan Greenspan	8/11/87	1/31/06	18.5	7.1	7.3
Ben Bernanke	2/1/06	1/31/14	8	4.3	3.5
Janet Yellen	2/1/14	?	3.6	10.3	6.7

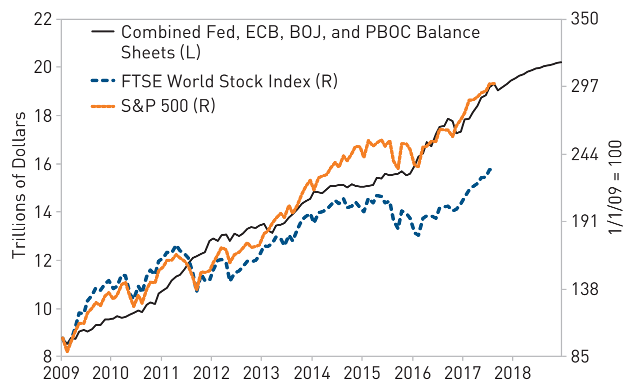
Source: BCA Research, PNC

table shows us how the Fed fared under each of its leaders (Table 3). According to the data, bonds underperformed during periods of rising inflation. A healthy economy helped returns under Mr. Martin. Stocks performed strongest, not surprisingly, under Mr. Volcker. And under Ms. Yellen, we see how quantitative easing and low interest rates favored asset returns.

Other Central Banks

Outlook for major central bank balance sheets includes a taper from the Fed and a leveling off and eventual taper from the European Central Bank (ECB), likely beginning next year. The Bank of Japan (BOJ) is likely to continue to expand its balance sheet through 2018, offsetting the tapering by both the Fed and ECB. The pace of People's Bank of China purchases will likely remain steady.

Chart 8
Central Banks Balance Sheets



Source: Cornerstone Macro, PNC

There should still be plenty of liquidity, with combined efforts showing balance sheet growth of 12% in 2017 and over 5% in 2018 (Chart 8).

Germany net issuance was slightly negative for the past several years. Therefore, the impact of ECB purchases on German rates is stronger than the Fed's effect on U.S. rates, since the Fed has traditionally issued debt. It seems markets likely have a better sense of global central bankers' plans, yet they may be overestimating the Fed's impact.

Economic and Market Outlooks

The U.S. economy is continuing along a path of economic expansion. The August jobs report had job growth slowing slightly, with 156,000 jobs added. However the average monthly jobs pace so far in 2017 is still 176,000, not far off from last year's pace of 187,000.

The unemployment rate is 4.4%, a 0.1-percentage-point uptick from July as the number of those looking for work rose, while the number of jobs in the survey declined. Wage growth has not accelerated, with average hourly earnings remaining at a 2.5% year-over-year pace in August, and at a similar trend for the year.

Inflation slowed early in the year due to what the Fed has called "transitory factors," which included lower energy prices on the top line, and in core inflation, lower prices for pharmaceuticals and cellular phone plans. Inflation was 1.9% year over year in August, up from 1.7% in July. Core inflation was 1.7%, the same level it has held since May.

Fright or Flight

The particularly heavy storm season continues as we write this outlook. The hurricanes which hit Texas and Florida primarily have affected economic activity in the third quarter. Hurricane Maria will also be a factor as aid has begun to flow to Puerto Rico; however, estimates of the economic impact of Maria are yet to be determined.

Initial property damage estimates for Hurricanes Harvey and Irma are approximately $140 billion, which roughly equates to those of Hurricane Katrina. These estimates, however, do not take into account economic output, which factors into GDP. Together, the heavily affected cities of Tampa and Houston account for approximately 3% of U.S. employment and just over 3% of economic output. Gas prices rose in the wake of the forced closures of many refineries along the Gulf coast, but have already receded some.

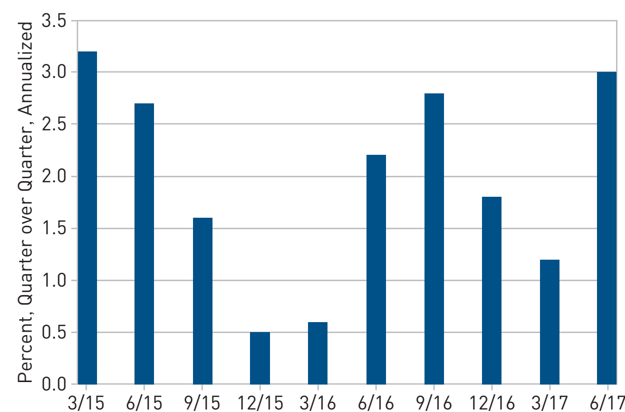
PNC economists expect the U.S. economy will bounce back from these setbacks, with rebuilding adding to growth in late 2017 and early 2018. Government aid and insurance payments will assist in the efforts to rebuild. Vehicle sales are likely to rise as cars lost in the storms will need to be replaced. Home building will probably rise as well late in 2017 and into next year. Workers needed to aid in construction should add to job growth.

PNC has lowered its third-quarter GDP estimate to 2.7% from 3.2% in light of the economic impacts from the storms. However, forward quarters should benefit from rebuilding efforts and PNC expects growth to be back to prehurricane pace by mid-2018. Supporting growth further into next year are continued solid fundamentals in consumer spending, business investment, and housing (Chart 9).

Market volatility has risen through the summer, and we enter the fall facing potentially market-moving headline risks. We will be closely watching the geopolitical front and ongoing tensions with North Korea. The Fed's October meeting is not expected to bring any new announcements, but ongoing commentary from Ms. Yellen and members, both after the meeting and in speeches throughout the fall, have the potential to affect markets. We are also keeping a sharp eye on Congress, as they take up tax reform—a key topic with far-reaching implications.

U.S. stocks have gone longer than normal since a marked pullback. We note that market corrections do occur from time to time. A pullback could be warranted, and with the rise in yields we would not be surprised to see a correction (Table 4). However, 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 5).

Chart 9
U.S. Real GDP
As of 6/30/17



Source: Bloomberg L.P., PNC

Table 4
S&P 500: Market Days without a Correction
1/3/28 through 9/20/17

Decline	5%	10%	20%
Current Case	312	406	2151
Average	50	167	635
Multiple of Avg.	6.2	2.4	3.4

Source: Ned Davis Research, PNC

Table 5
Historical Average Annualized Returns
1/1/26 through 8/31/17

	Real	Nominal
S&P 500	7.00	10.10
IT Govt Bond	2.19	5.14
30-Day TBill	0.46	3.36
Inflation	n/a	2.89

Source: Ibbotson Associates, MorningStar, PNC

Markets appear to be pricing in optimism in fiscal policy, with tax reform as the main component, which would be supportive to stocks. It is unlikely that any tax reform legislation would go into effect until 2018. According to Strategas Research, markets appear optimistic that federal spending could be additive this year as geopolitical concerns have risen, but cautions that this is not a sustainable long-term stimulus. We are watching the outcome of congressional actions as we head to print on this *Investment Outlook* and will update investors through the fall as warranted.

As we noted in our September 2017 *Investment Outlook, A (Re) Balancing Act*, rebalancing has been proven to lower risk and should thus increase the likelihood of investors reaching their investment goals. This simple process allows investors to buy low and sell high via a mechanical process which also retains their intended risk target. Further, using alternatives has shown to be beneficial in capturing upside and, perhaps more acutely, in limiting downside in difficult markets. We believe it is important to build portfolios that perform well in different market conditions. In addition to liquid alternatives, we also believe qualified investors should consider the traditional limited-partnership (L.P.)-style alternatives to implement an allocation. PNC has a robust due diligence effort for both liquid and L.P.-style alternatives to serve client needs. Please speak to your investment advisor to discuss rebalancing.

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—

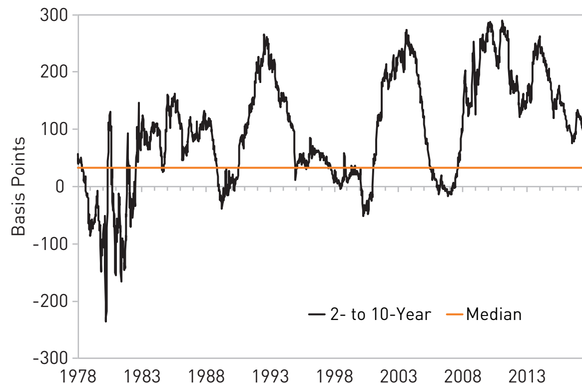
continue to support an overweight to U.S. large-cap value style relative to growth.

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 10) and 10- to 30-year (Chart 11) 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:

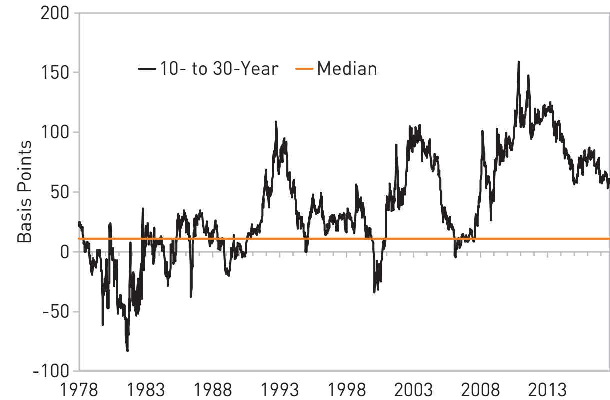
- the credit cycle;
- capital constraints; or
- lack of loan demand.

Chart 10
2-Year to 10-Year Treasury Yield Spread
Weekly, 1/6/78 through 9/22/17



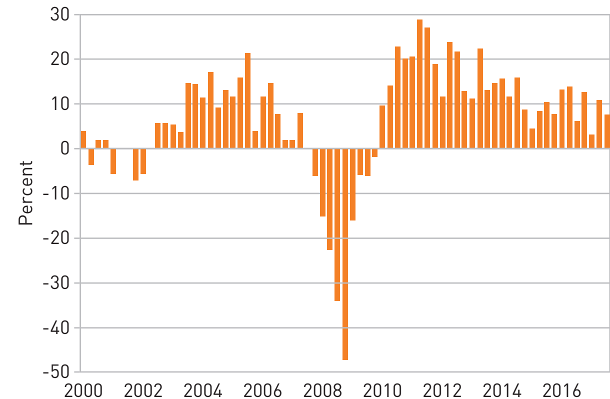
Source: Bloomberg L.P., PNC

Chart 11
10-Year to 30-Year Treasury Yield Spread
Weekly, 1/6/78 through 9/22/17



Source: Bloomberg L.P., PNC

Chart 12
U.S. Banks' Willingness to Make Consumer Loans
(percentage more willing minus percentage less willing) Quarterly, 1Q00 through 3Q17



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

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

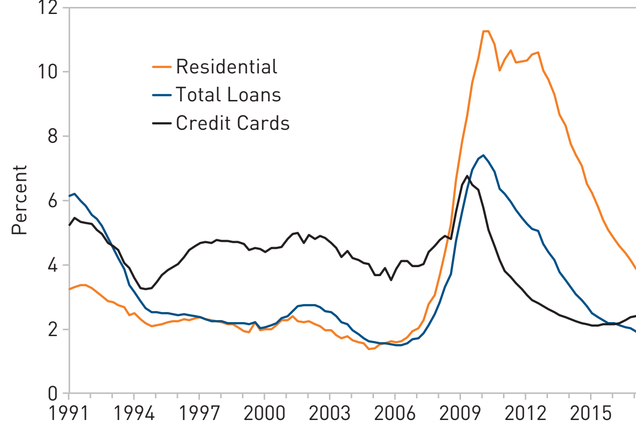
- Banks are showing a greater willingness to extend consumer loans (Chart 12).
- Bank loan quality has continued to improve, implying a tailwind to bank earnings and a possible turn in the deleveraging cycle (Chart 13, page 10).
- Bank capital ratios have more than recovered, which should allow for loan growth and likely help prevent relapse of financial crisis within the banking industry (Chart 14, page 10).

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

Chart 13

U.S. Delinquency Rates for Loans

Quarterly, 1Q91 through 2Q17

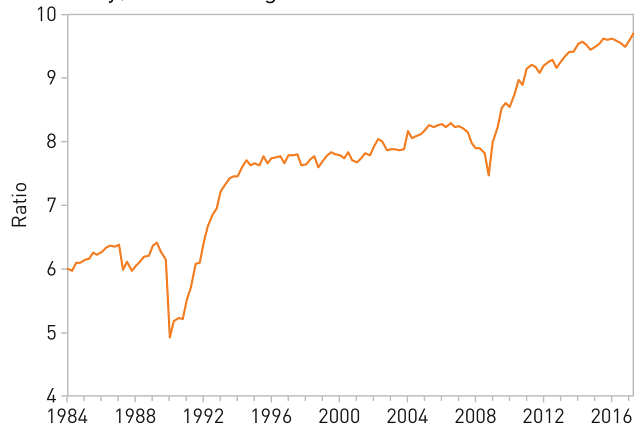


Source: Federal Reserve, Bloomberg L.P., PNC

Chart 14

U.S. Bank Core Capital Ratio

Quarterly, 1Q84 through 2Q17



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

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.

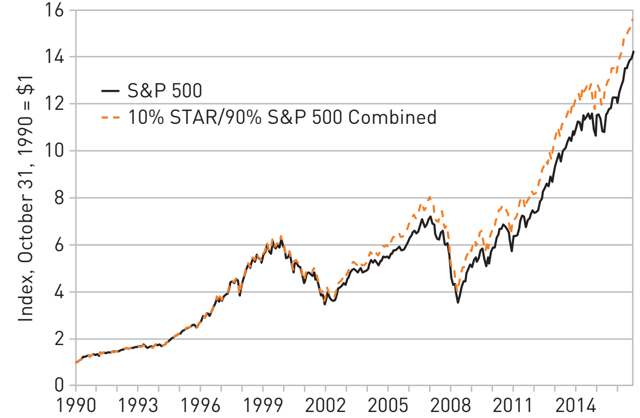
Allocation to Smart Beta/Core Strategies

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 15).

Chart 15

10% PNC STAR/90% S&P 500 Combination Total Return

Monthly, 10/31/90 through 8/31/17



Source: Bloomberg L.P., PNC

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.

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 16). 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.

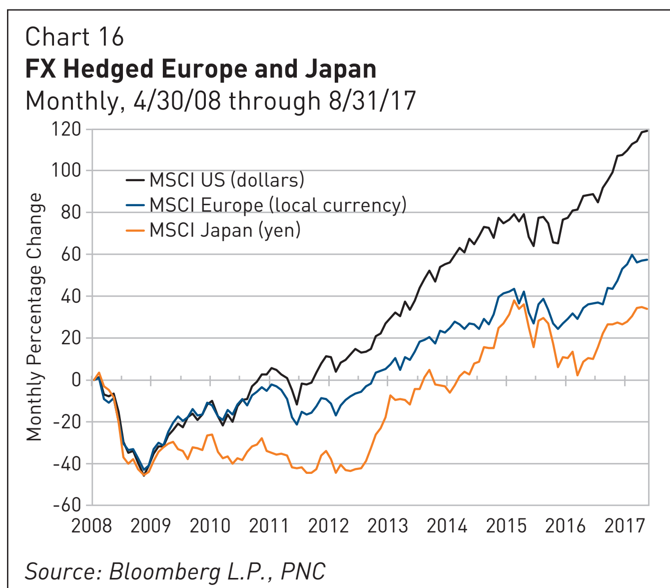
Allocation to Global Dividend-Focused Stocks

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.

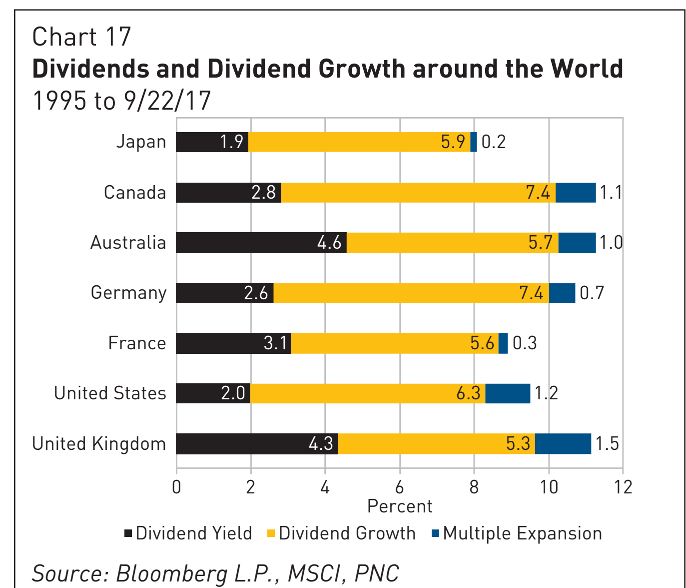
We believe the global dividend-focused allocation is positioned to take advantage of global opportunities and diversify across countries and sectors (Chart 17). A globally generated income stream is inherently more diverse than one from a single country or region. This can help to avoid concentration 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.

Chart 16
FX Hedged Europe and Japan
Monthly, 4/30/08 through 8/31/17



Source: Bloomberg L.P., PNC

Chart 17
Dividends and Dividend Growth around the World
1995 to 9/22/17



Source: Bloomberg L.P., MSCI, PNC

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.

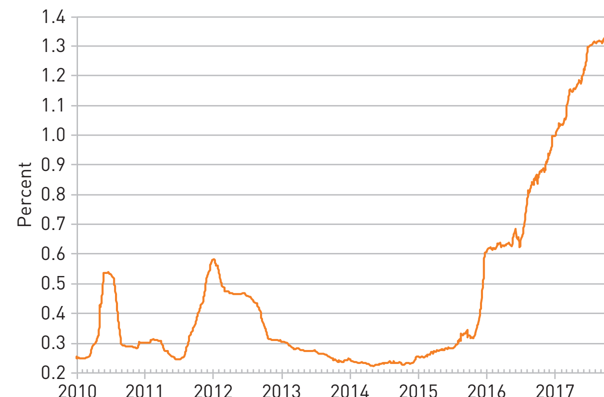
TIPS can be a favorable alternative to conventional Treasuries; TIPS provide both a comparable yield and the credit quality of Treasury notes, while also furnishing protection against the risk of higher inflation. In addition, since TIPS return the greater of the face value or the inflation-adjusted 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 18). 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.

Chart 18
3-Month LIBOR
Daily, 1/1/10 through 9/22/17



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 Bonds[3]

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

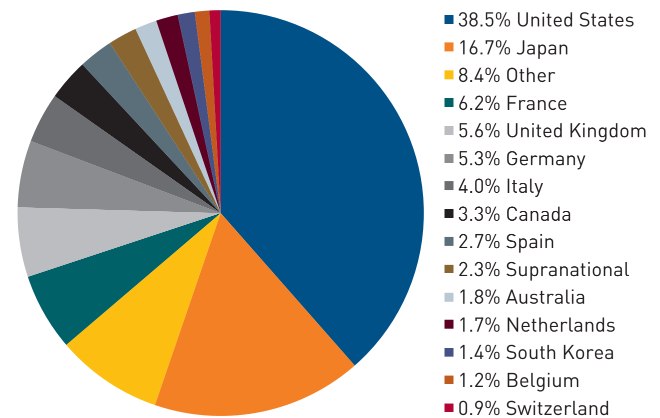
- defending against higher interest rates;
- further expanding the opportunity set for fixed income; and
- increasing exposure to credit.

Given our belief that the economy will continue to improve, strategies that help protect against

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

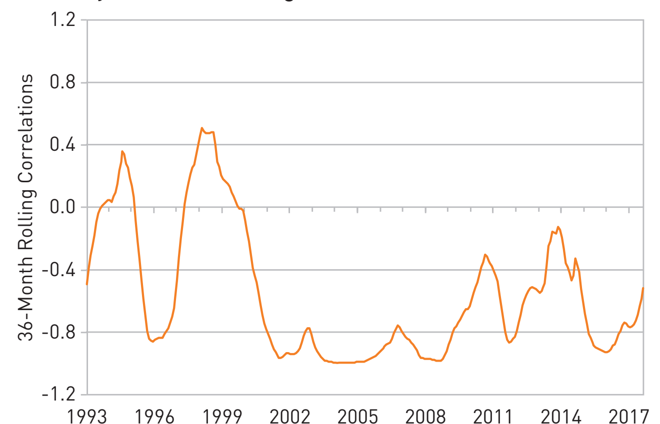
[3] The July 2013 *Investment Outlook, Breaking the Bonds*, provides details about absolute-return-oriented fixed income.

Chart 19
Barclays Capital Global Aggregate by Country
As of 9/22/17



Source: Barclays Capital, PNC

Chart 20
Barclays Capital Global Aggregate Excluding United States, Unhedged, Correlation with Dollar
Monthly, 1/29/93 through 8/31/17



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

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.

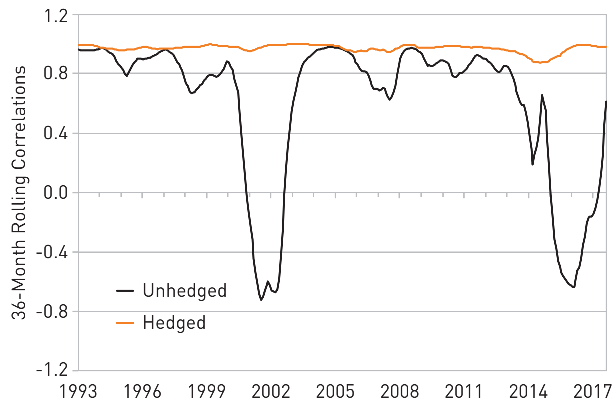
Allocation to Global Bonds within Bonds

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 19). (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 20).

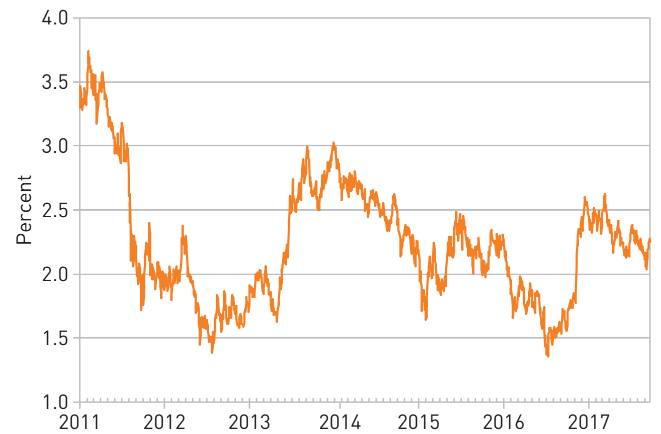
The prospect of higher global economic growth outside the United States is another motive for allocating fixed income globally. As world economies grow more quickly, international bond investors may have the opportunity to reap the benefits of tightening global credit spreads relative to the United States. 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

Chart 21
Barclays Capital Global Aggregate Excluding United States, Correlation with U.S. Aggregate
Monthly, 1/29/93 through 8/21/17



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

Chart 22
10-Year Treasury Yields
Daily, 1/3/11 through 9/22/17



Source: Bloomberg L.P., PNC

an unhedged global bond can act to help lower the correlation with U.S. bond returns (Chart 21).

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.

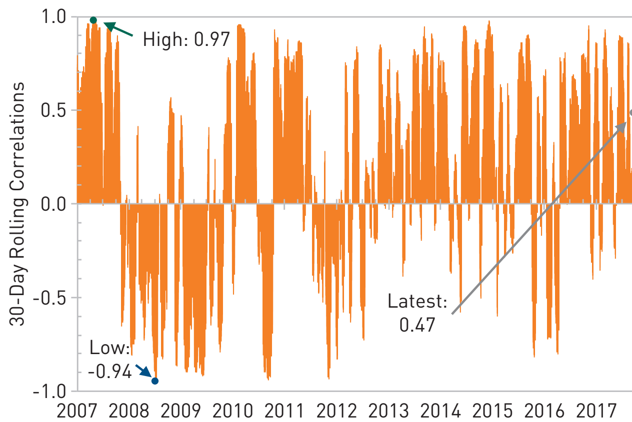
Given the concerns regarding how the United States will handle upcoming monetary and fiscal policy decisions, as well as what effects those decisions might have on the value of the dollar, we believe an allocation outside traditional fixed-income bond sectors is prudent. We believe the advantage of higher 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 22). 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 consider alternative investments. However, our research suggests that adding carefully selected alternative investments to a diversified portfolio of traditional investments may reduce the overall

Chart 23
HFRX Macro Index and S&P 500 Correlations
Daily 1/2/07 through 9/21/17

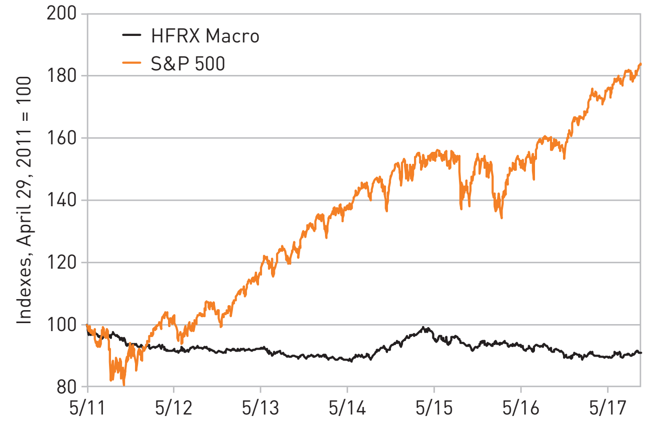


Source: HFR Asset Management, LLC; Bloomberg L.P.; PNC

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 (Chart 23). 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 24).

Chart 24
HFRX Macro Index and S&P 500
Daily 5/1/11 through 9/21/17



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

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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Marsella Martino
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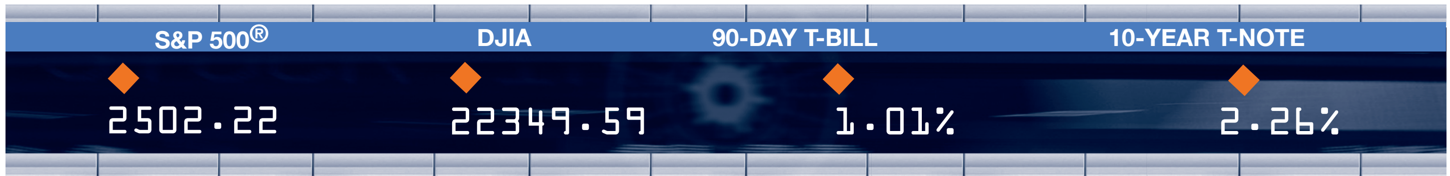
Rebekah M. McCahan
Investment Strategist

Paul J. White, PhD, CAIA®
Director of Portfolio Strategy

Michael Zoller
Investment Strategist

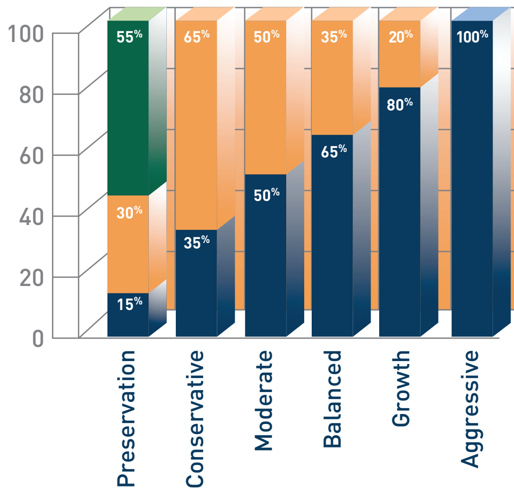
[4] For more details, see our October 2009 *Investment Outlook*, *Alternative Medicine*, and our August 2009 white paper *The Science of Alternative Investments*.

As of market close, Friday, September 22, 2017:

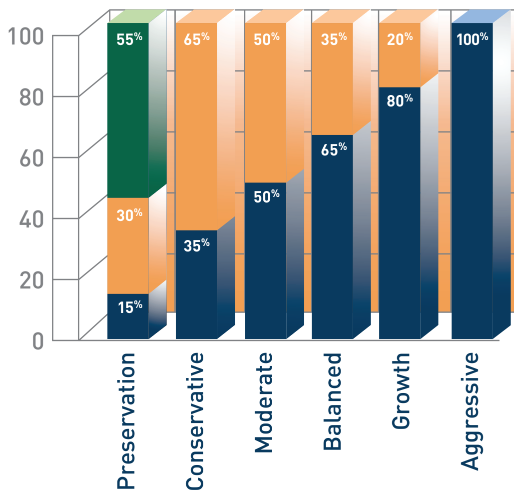


Asset Allocation Recommendations

Current Tactical



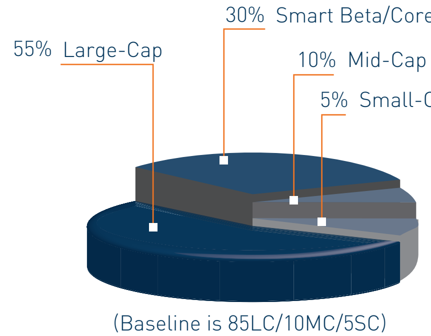
Baseline



Stocks Bonds Cash

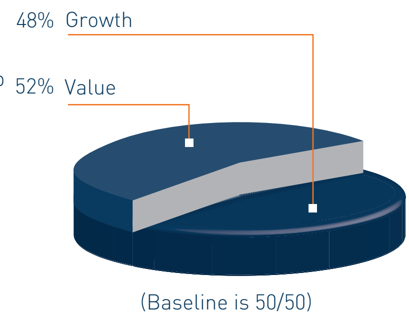
Equity Allocation

U.S. Capitalization Baseline



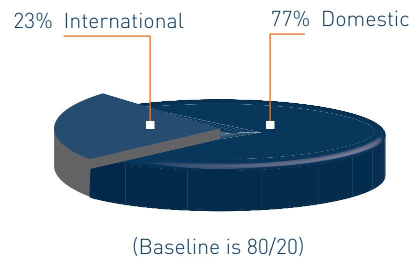
(Baseline is 85LC/10MC/5SC)

Style: Overweight Value within U.S. Large Cap



(Baseline is 50/50)

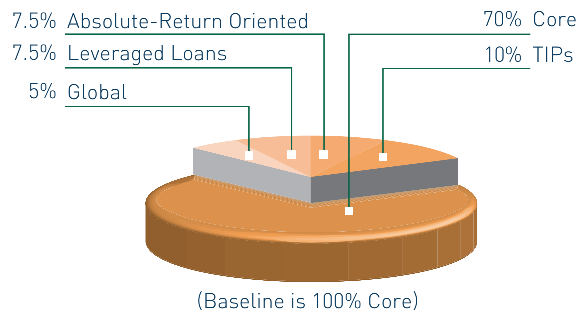
Global Positioning: Baseline Plus Global Dividend Focus, Europe Equities-FX Hedged, Japan Equities-FX Hedged



(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.

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