Quarterly Investment Perspective A Tale of Two Tails



Rebecca Patterson Chief Investment Officer

Executive Summary

- Opinion polls and capital flows today both suggest a "glass-half-empty" investor mindset
- We are always considering outlier scenarios, or tail risks, both negative and positive. Looking toward 2017, potential negative shocks include a sudden rise in U.S. interest rates and a cyber attack on the financial system, while positive risks include a change in the political landscape that triggers greater business spending and material European fiscal stimulus
- We believe the combination of portfolio diversification and thoughtful analysis of tail risks is critical to successful investment management

Investing requires a view of the future. Without certainty, the best one can do is examine potential scenarios and thoughtfully assign probabilities to different outcomes. Portfolios are then constructed accordingly.

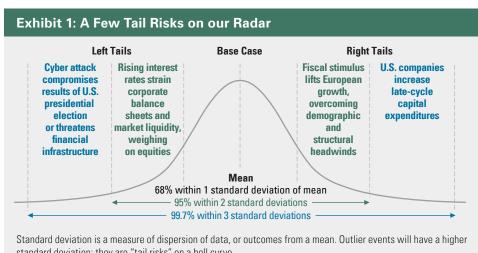
While investors must have a "base case" around which to allocate assets, they also have to consider what could surprise. Such scenarios — unlikely but not impossible — are called "tails" within a bell-curve distribution of possible outcomes (Exhibit 1).

Recent months have seen many investors focus on what is sometimes referred to as the "left tail," or the extreme negative possible catalysts. Given our focus on protecting clients' irreplaceable capital, we also spend a significant amount of energy considering left-tail outcomes — what could notably surprise us and weigh on returns?

In this edition of our *Quarterly Investment Perspective*, we suggest a few possible left-tail risks for the year ahead as well as explore the cost and complexity of hedging those risks.

We also acknowledge the "right tail" — the factors that could surprise us in a positive way (Exhibit 1). Not appreciating a positive catalyst could result in our portfolios not participating as much as we (and our clients) would like.

This tale of two tails includes — but certainly is not limited to — the coming U.S. election. When we put these tails together with our base-case scenario, we remain comfortable with our current portfolio allocation: equity exposure that is in line with strategic neutral benchmarks, and, within equities, an overweight position to the U.S. and an increasing tilt toward lower-volatility strategies.



standard deviation; they are "tail risks" on a bell curve.

Conversations with clients have felt like we were all collectively "in the left tail" already — from a financial-markets perspective but also more broadly.

Why So Negative?

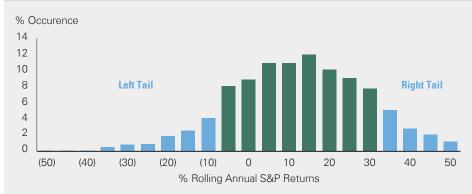
In recent months, conversations with clients have felt like we were all collectively "in the left tail" already — from a financial-markets perspective but also more broadly. Worries have been frequently voiced about the anemic pace of economic growth, the lack of enthusiasm for politicians, and challenges across social and geopolitical fronts. This gloomy tone can be illustrated in a variety of ways. Consider a few examples:

• Widespread dissatisfaction. Gallup conducted an opinion poll this August showing that fewer than 30% of Americans surveyed said they were "satisfied with the ways things are going in the United States."

Understanding Bell Curves

Historical Occurrence of Annual S&P Returns, 1871-2016

Key Takeaway: Historical returns of the S&P 500 index follow a typical bell-curve distribution, albeit with a "fatter" right tail.



As of August 31, 2016. Represents rolling annual S&P 500 composite returns. Source: Standard & Poor's, Yale University-Robert Shiller

In statistics and probability theory, a bell curve refers to the tendency of sufficiently large datasets to converge to a symmetrical shape (the "bell"), where the majority of observations gather around the average of the data.

Given this tendency, researchers and mathematicians can make assumptions about the probability of a specific event or occurrence based on smaller datasets and limited observations, since the data converge to a symmetric pattern (the data is "normally distributed").

While bell curves are used more often in physical sciences than in finance, many investors still include them in analysis. Going back to 1871, the S&P 500 has posted an average 12-month return of 10.4%, with returns between -10% to +30% roughly 80% of the time (the middle of the bell curve). The left tail shows that roughly 10% of the time, the S&P saw an annual loss of greater than 10%, while the right tail shows that the other 10% of the time, U.S. equities gained more than 30%. The distribution is lopsided (for the better) but still exhibits "tails" on either side of the bell.

That satisfaction rating has ranged between a depressed 16% and 32% over the last few years, a period when both U.S. and global GDP growth has consistently been below levels seen before the financial crisis.

- Labor force participation dropping. Despite a U.S. unemployment rate below 5%, the labor force participation rate has held below 64% since 2011, with a declining trend in place since 2000. These low levels were last seen in the 1970s.
- **Income inequality growing.** The U.S. "Gini coefficient," a measure of the distribution of income among households, suggests notably growing income inequality over the last several decades (although down slightly from pre-crisis peaks in 2007). Such inequality appears to have contributed to the unusually polarized political climate in recent years and especially during the current election campaign.
- **Investors selling equities**. Likely related in part to the above factors, investor buying of equities (mutual funds and exchange-traded funds) has lagged that of bonds for six of the last eight years, and this year, investors have been outright sellers of equities (despite most stock markets posting positive returns).

None of these facts, or investor sentiment, should be ignored. That said, information that is so well known (like slowing Chinese growth or a dysfunctional developed-economy political backdrop) can usually be assumed to be at least partially reflected in current market valuations. Financial assets tend to move more on surprises — what is *not* already priced in.

With that in mind, what negative surprises, or tails, could whip investors over the coming year? Frankly, this is a question that can take you into worrisome, Kafka-esque corners — an infinite supply of things could go wrong for the economy, companies, and markets. Interestingly, the U.S. established an institution — the Office of Financial Research — after the 2008 crisis, in part to think about risks "in the dark corners of the financial system" and how policymakers may mitigate them.

Left Tails: The Potential Negative Surprises on Our Radar

We did not even attempt to compile a comprehensive list of what keeps us up at night for this publication. However, we did want to give at least two examples of the sort of negative tail risks we have on our radar screen for the year ahead — rising rates and cyber attack.

(Before you read on, please note that while the risks ahead are pretty grim, we follow them with an exploration of how we could protect portfolios against left tails, and then discuss what we see as positive — and not impossible — scenarios.)

The rising-rate waterfall. Over the last few years, investors have positioned for an eventual U.S. monetary tightening cycle, only to be repeatedly disappointed. Over the latest quarter, the Federal Reserve curbed tightening expectations further, this time suggesting that the end point for this rate cycle may be lower than it was in

Financial assets tend to move more on surprises — what is *not* already priced in.

We would be more concerned should higher interest rates result from an unexpected inflation increase without commensurate growth improvements.

the past. As of mid-September, consensus estimates for the U.S. 10-year bond yield at the end of 2017 were 2.2%; only four out of 54 analysts polled by Bloomberg had end-2017 targets at 3% or higher (a yield level last seen in early 2014).

We see a few possible triggers for higher U.S. interest rates. In a relatively more benign scenario, stronger-than-expected growth in Europe and Japan lifting local yields could in turn lessen overseas demand for longer-dated U.S. bonds. Similarly, an improving U.S. growth trend could allow for slightly faster Fed tightening and higher yields. In contrast, we would be more concerned should higher interest rates result from an unexpected inflation increase without commensurate growth improvements — such inflation could occur via an energy supply shock, for instance. Separately, a U.S. election outcome that, for whatever reason, sharply reduces foreign governments' desire to hold U.S. debt instruments could push U.S. rates higher. In this instance, our focus would be mainly on China, holding approximately \$1.2 trillion of outstanding U.S. Treasury and Agency bonds.

What could make rising U.S. interest rates a "tail risk" for equities? There are at least three factors we would highlight.

• Corporate debt. Last year saw record-high U.S. corporate debt issuance, with the stock of nonfinancial corporate debt also reaching a record as a percentage of GDP. Corporations had been using unusually low interest rates immediately after the 2008 crisis to refinance existing debt at lower levels, improving their balance sheets. However, starting in 2013, debt issuance migrated more toward a means for merger-and-acquisition (M&A) activity. At the same time, new corporate debt has had less creditor protection; these lower-quality loans are often called "covenant-lite" (Exhibits 2 and 3). Overall, the last few years have seen more U.S. balance sheets deteriorate — higher interest rates and higher debt payments could occur at a time when corporations are relatively more vulnerable.







As of September 14, 2016, for covenant-lite loans, and as of August 31, 2016, for the index. Covenant-Lite Loans as a Share of Total Institutional Leveraged Loans is based on the sum of loan tranche size and includes both loans that have matured and are still outstanding by issuance year. Moody's Covenant Quality Index Score is the average of monthly scores for each year and includes all high-yield bonds. A higher index score represents weaker covenant protections. Source: Bloomberg, Moody's

In periods of investor risk aversion, not only can fixed income instruments see large price changes because of illiquid conditions, but other asset classes, including equities, can see immediate and intense contagion.

- Exchange-traded funds (ETFs) and passive quantitative trading strategies. The universe of passive strategies has grown rapidly in recent years. Investors like these strategies for their daily liquidity and, at least in some cases, their low fees. In a world starved for yield, some of these strategies have stretched to include less-liquid, higher-yielding financial instruments. In a scenario where rising interest rates lead investors to want to sell these passive investments, selling of more-liquid holdings may be needed to compensate for the inability to reduce less-liquid assets. At the same time, some quantitative strategies simply react to short-term yield movements, feeding into momentum and again exacerbating selling in liquid fixed income and credit instruments, even if those instruments have attractive fundamentals.
- Liquidity. Following the 2008 crisis, regulatory changes and an increased focus on managing trading risks contributed to a broadly less-liquid fixed income and credit market, particularly in periods of market stress. Indeed, the lack of liquidity has led some investors to hedge risk across bond and credit markets with more-liquid equity instruments. In periods of investor risk aversion, not only can fixed income instruments see large price changes because of these illiquid conditions, but other asset classes, including equities, can see more immediate and intense contagion.

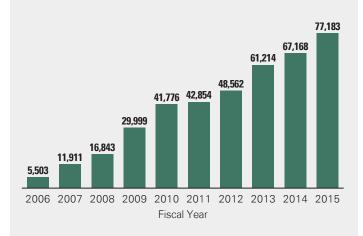
Cyber attack. Recent years have seen a material increase in reported cyber attacks of various sorts against public- and private-sector institutions, both in the U.S. and globally. According to the U.S. Government Accountability Office report on information security, U.S. federal agencies fell victim to

more than 77,000 cyber security incidents, including data theft and security breaches, last year — a 15% increase from 2014 (Exhibit 4). Some of this likely reflects an actual uptick in cyber activity, though we would assume another piece simply reflects greater reporting of attacks by institutions. As we look at the near term and into 2017, we could see cyber attacks as a left-tail risk from a number of angles: here we highlight two — this year's election and our financial infrastructure.

This November's U.S. election is already being influenced to a degree by cyber warfare. Just before the July Democratic National Convention, emails obtained and released by WikiLeaks suggested that party officials were helping Hillary Clinton over Vermont Senator Bernie Sanders, in violation of party guidelines. Federal authorities were already investigating hacks revealed this summer against the Democratic National Committee and the Democratic Congressional Campaign Committee. (Officials have hinted in the press that some of these hacks were likely carried out by Russian intelligence agents who may have interest in embarrassing the U.S. or, worse, impacting the actual

Exhibit 4: Number of Information Security Incidents Reported by Federal Agencies

Key Takeaway: The U.S. government was the victim of over 77,000 cyber incidents in 2015, a sharp rise from just 5,500 incidents in 2006.



As of May 2016.

Source: The Office of Management and Budget, U.S. Computer Emergency Readiness Team, and U.S. Government Accountability Office.

election.) More recently, the U.S. Federal Bureau of Investigation has said it has found evidence that at least two state voter registration databases were hacked (the focus here has been on Illinois and Arizona).

Our tail risk would be that, in a very close election between Hillary Clinton and Donald Trump, the legitimacy of the results could be questioned or challenged by possible cyber tampering of electronic voting systems in some way. Recall what transpired in 2000, after a very close race between Republican George W. Bush and Democrat Al Gore. The vote in Florida decided the outcome, but a recount was required. Subsequent litigation — including around the election process and details of the ballots and voter databases — eventually took the decision to the United States Supreme Court, which effectively ruled on December 12 that Bush had won the race. The uncertainty triggered on Election Day led the S&P 500 to drop 12% between November 7 and December 20, while the VIX Index, the Chicago Board Options Exchange Volatility Index, rose some 30% over the same period.

Should a questionable outcome occur this November with cyber attacks the cause of the uncertainty, we could again have an extended period without knowing who will lead the country for the coming years. Indeed, resolving such a scenario could prove more complicated than what we experienced in 2000.

Changing gears from public to private sector, another cyber tail risk on our minds stems from the financial system itself. The 2008 failure of Lehman Brothers and its fallout contributed to greater interest in and usage of organizations called central counterparty clearing houses, or CCPs, in particular for the trading of derivative instruments. These firms become the counterpart to the buyer and seller of a financial transaction, sitting in the middle. They collect collateral to cover losses should either side of a trade default. They channel trading and settlement of trades, which in turn can aid market efficiency. CCPs today have become intricately linked with major global banks.

U.S. Fed Governor Daniel Tarullo said in January that CCPs may not have adequate plans in place to protect the broader financial system in the event of stress — including,

we think, cyber-related stress. Unsurprisingly, private financial institutions are spending heavily to thwart future cyber attacks. But what if one or more CCPs were attacked, with transaction data stolen, systems frozen or corrupted, files deleted? One CCP that clears U.S. commodity options may not easily be able to quickly shift its critical services onto another CCP that focuses on a different asset class and/or different type of financial instrument. Contagion could emerge between a CCP and its banks as well as between CCPs, undermining investor confidence and, in a worst-case scenario, freezing some part of the financial system for a period of time.

Cutting Off the Left Tail: Protecting Portfolios Against Negative Events

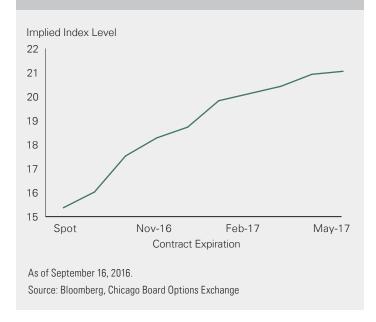
Is there an effective way for investors to protect themselves against left-tail risks? Certainly, portfolio diversification can help — having capital not just in riskier, cyclical assets such as stocks but also holding more defensive assets such as cash, bonds, and even gold. Another tactic that was highlighted this last quarter was taking positions on the VIX. This measure of expected near-term S&P 500 volatility was trading at extremely low levels for much of the third quarter. Someone who wanted protection in a portfolio could consider exposure to the VIX, hoping to benefit from a rise in this volatility index that might accompany an equity selloff.

But is buying portfolio insurance that easy? Unfortunately, today it is not. While the VIX "spot price," reflecting the next month's expected volatility, was trading at average levels of 16 in mid-September, volatility implied by VIX contracts further into the future was higher (Exhibit 5). Per usual, investors had already bid up the cost of this equity "insurance," particularly looking at the end of the year and start of 2017.

What about options — buying a "put" on an equity index that would increase in value as the equity market fell? The cost of an option, the premium you pay for the potential benefit of the call or put as a percent of the notional capital amount invested, is

Exhibit 5: CBOE VIX Futures Curve

Key Takeaway: Investors are expecting higher S&P 500 volatility into 2017.



a reflection of supply and demand. More demand for puts often reflects investor anxiety. The more anxious the investors, the costlier the option "insurance." Investors are generally willing to pay more for protection than upside market exposure.

Beyond the cost of options, which will tend to rise ahead of major events such as Brexit or the U.S. November election, effective hedging requires that the investor get the timing of the hedge right. A three-month put is money wasted if the market selloff occurs in month four, for instance.

At Bessemer, the Strategic Opportunities mandate regularly takes long and short positions in equity options both to limit downside risk as well as to opportunistically position across different regions and sectors. The portfolio team focuses on building option positions with different maturities and at attractive entry levels to make any "insurance" as effective as possible. As of mid-September, nearly 40% of that mandate (representing 4%-5% of a Balanced Growth portfolio) was in equity options, including positions that could benefit in the event of an election-related U.S. equity selloff.

In Search of Right Tails: Potential Positive "Shocks" to the System

While we concern ourselves with potential negative surprises, we also do not want to lose sight of what could go right, the positive tail on our bell curve.

Not many of us imagined 20 years ago that today we could ask our phone for the fastest way to drive from A to B, instantly getting maps with traffic highlights and spoken directions. Nearly half of the world today is online, with internet access allowing for greater education, dissemination of information, and a "flatter planet." Global extreme poverty, according to United Nations data, is nearing a record low, below 10%.

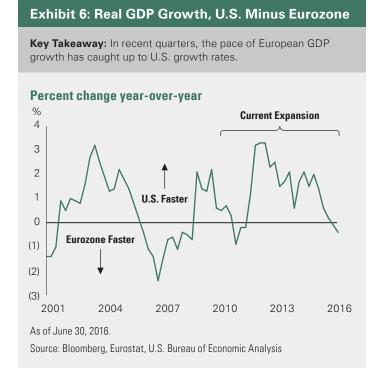
As we look toward 2017 and beyond, what else could go right that would positively impact our clients' portfolios and is not expected?

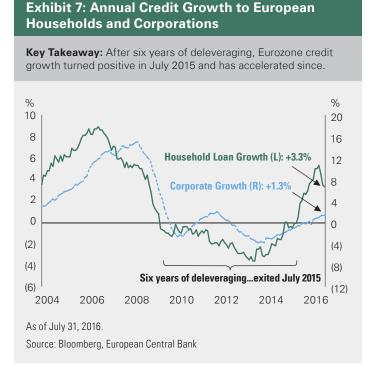
Again here, we share a few items that, while not our base case, we also think are not impossible: growth in Europe and increased U.S. capital spending.

Europe shines. One potential area of positive tail risk could be an unexpected growth bounce in Europe, an idea that currently is met with "eye rolls" by many

investors. Much of the cynicism is warranted — since the U.S. expansion began in the second quarter of 2009, U.S. real GDP growth has outpaced its European counterparts by an average of 1.4% per quarter, almost tripling Europe's cumulative output over the entire period. Further, structurally fragile governments, increasing euro-skeptic political bias and intra- as well as intercountry policy tensions have created an unrivaled and highly unpredictable "landmine" environment of binary risks to growth in the years ahead.

However, perhaps not all is gloom and doom in Europe. Over the past year, the Eurozone has closed the "growth gap" on the U.S. for the first time since the monetary union exited its second recession three years ago; in the two most recent quarters, European growth has even outpaced that of the U.S. (Exhibit 6). While economic output has many catalysts, Exhibit 7 provides some insight. After six years of household and private business deleveraging — a difficult environment in which to grow, let alone invest in — Eurozone credit growth turned positive in July 2015 and has accelerated since. Not coincidentally, economic growth has firmed over the same period.





Is this sustainable? Sadly, we do not think so. While the Eurozone remains in the earlier stages of its economic expansion versus other developed regions, many headwinds remain. In addition to the drags discussed above, aging demographics, rigid labor markets, and slow-moving structural reform should continue to limit growth. Further, the aging of the U.S. business cycle and increased risk of a U.S. recession in the years ahead will have global spillovers, especially for the more fragile expansions, as in Europe.

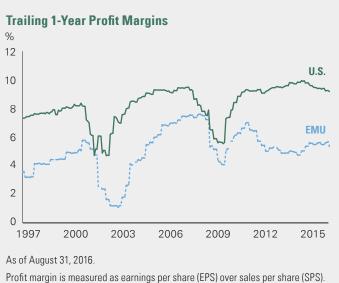
Still, from a tail-risk perspective, we acknowledge that European growth finally has some momentum; a low-probability but impactful "shock" (fiscal stimulus, labor and political reform, etc.) could have greater growth spillover effects than in years past. On this front, we are watching Germany carefully. German Chancellor Angela Merkel will likely run next year for her fourth consecutive term (elections are slated for September). She is entering the campaign season on a back foot: her Christian Democratic Union and Social Democrat partners are both polling significantly below their 2013 election results (though still maintaining their majority) while the newer, anti-immigration Alternative für Deutschland has seen surprising strength.

Partly because of spending on refugees, fiscal policy in Germany turned stimulative in 2016 for the first time since the financial crisis. Government support for growth could increase further into 2017 and 2018. Indeed, the normally austerity-focused German Finance Minister, Wolfgang Schauble, suggested in early September that the coming year's budget should include more spending and tax breaks. A loosening of German purse strings could easily be mirrored by similar actions in other Eurozone countries where incumbent parties are fighting to hold control: France and the Netherlands also have major elections in 2017, while Spain and Italy have struggling governments seeking greater voter support. With the Eurozone's overall fiscal balance having shrunk in recent years (from a deficit of 6.2% of GDP in 2010 to an estimated 2% this year), politicians could be more comfortable with a bit more stimulus.

This right-tail risk has important investment implications. As Exhibit 8 shows, European profit margins typically lag their U.S. counterparts, but have done so to a greater degree in the current expansion.

Exhibit 8: Global Profit Margins

Key Takeaway: European profit margins have lagged the U.S. to a greater degree in the current expansion; higher-than-expected European growth could lift profitability in the region.



Profit margin is measured as earnings per share (EPS) over sales per share (SPS). EMU stands for European Monetary Union.

Source: MSCI

While we would consider this a low-probability event, a positive growth "shock" continuing to support the cyclical recovery in Europe could lift European profitability as well.

Missing link for U.S. growth: capex. Another potential right-tail risk for financial markets could develop domestically. By multiple metrics, the current U.S. expansion has fallen short. Probably the easiest identifiable and most worrisome "black eye" over the last seven years has been business spending on capital expenditures (capex), or private fixed investment in economic parlance. While there has been lively debate this election year around government infrastructure spending, private investment in the form of equipment, structures, machinery, software, research and development, etc. could prove far more economically significant. To be sure, at the end of the second quarter of 2016, total real government investment — including federal, defense, and state — totaled \$561 billion; the private sector created five times that amount at \$2.8 trillion.

If private sector investment is so large, what makes it a positive tail risk? While it is important to analyze total capex, the pace at which the U.S. economy has added to its capital base has remained at historic lows. Exhibit 9 depicts the current growth in the inflation-adjusted private capital stock. Not only are current growth rates the lowest during the later stages of an expansion in over 50 years, they remain below levels experienced during previous recessions. Importantly, from an economic perspective, sustained low capex levels can have serious long-run consequences, notably lowering an economy's potential GDP as well as overall prosperity.

Given the importance of private investment to the long-run growth of a nation, there may be catalysts on the horizon that could prove helpful in stimulating business spending. Again, we highlight these points only as positive tail risks; rarely do firms begin to spend money on investment this late into an expansion, especially after business profitability has already peaked.

One factor that could trigger greater capex: a functioning government — that is, a White House and Congress that together could agree on and pass key legislation. As we noted in our September

Exhibit 9: Annual Net Stock of Private Fixed Assets

Key Takeaway: Current growth rates in U.S. private capital stock are very low relative to historical expansion levels. Real Dollars, Percent Change Year-Over-Year % 5.0 4.5 4.0 3.5 3.0 2.5 2.0 1.5 1.0 0.5 0.0 1960 1971 1982 1993 2004 2015

A Closer Look, "2016 Elections: Five Questions," both presidential candidates have offered business-friendly tax plans to varying degrees, which could provide company executives with the incentives and clarity needed to move forward on greater capex. The total economic impact of such proposals — for example, repatriation or accelerated depreciation of business investment — is dependent on too many variables to forecast. However, as a very rough guide to the potential stimulus of increased business spending, if capex matched its average growth rate over the later years of the last expansion (2004-2007), real GDP growth could accelerate by almost a full percentage point, all else equal. Notably, by this measure, business spending could be the "missing percent" when comparing previous average U.S. growth rates (2.8%) to the current expansion's average (2.1%).

Tying Together the Tails

Every year, financial markets digest plenty of surprises — both good and bad. Sometimes, the surprises provide attractive entry levels in a particular security or asset class. Other times, surprises fundamentally change the economic backdrop and require broader asset allocation shifts.

Heading toward 2017, we see tail risks that could take portfolios in both directions. There are unlikely but not impossible paths toward notably stronger growth in Europe and the U.S. At the same time, we cannot rule out catalysts such as unexpectedly rapid U.S. interest-rate increases or a cyber event, both of which could quickly undermine investor sentiment and hurt cyclical assets, at least on a short-term basis.

We constantly consider such tails, thinking through what each might do to portfolios and how we could prepare and position around it. Given that tails, by definition, have low probabilities, our portfolio construction hones in more on what we think is most likely to actually occur, but we do consider outliers.

Currently, that means most client portfolios have equity exposure neutral compared to longer-term strategic benchmarks. That neutral stance is based on our view that the U.S. economic recovery is getting

As of December 31, 2015.

Source: U.S. Bureau of Economic Analysis

"long in the tooth." Along with what we now see as increasingly expensive valuations, we see further equity upside as more limited and greater market volatility along the way.

Within equities, our U.S. overweight, as noted in our July 1 *Quarterly Investment Perspective*, "America the Beautiful," is meant in part to capture what we believe would be a relatively supportive U.S. market backdrop (versus peers overseas) in the event of a left-tail event. Left tails are also hedged in part through equity option strategies in our Strategic Opportunities mandate, lower-volatility equity strategies held in both large- and small/mid-cap equity mandates, and via portfolio diversification more generally.

That said, a tilt toward U.S.-denominated assets should also benefit, in our view, if this year's election results in a much-awaited political climate that allows for passage of legislation to provide clarity and potentially some incentives for greater business spending.

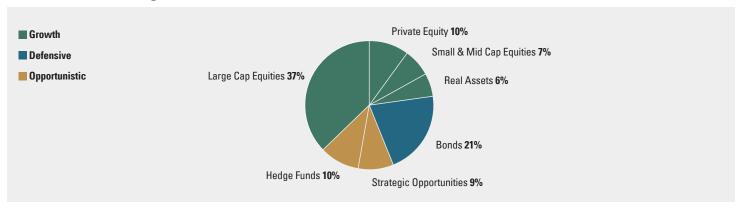
Meanwhile, going into 2017, we remain modestly underweight developed European equities. Additional evidence of an extended U.S. economic cycle coupled with an unexpected increase in European fiscal stimulus would likely lead us to at least consider more tactical regional exposure, as such a shift could materially help European corporate profits.

A Final Word on Performance

Over the course of the third quarter, our portfolio managers incrementally reduced portfolio risk further, specifically by adding to managed-volatility strategies in the Small & Mid-Cap equity mandate. As noted in our August *Investment Insights*, "What We Believe," our goal in today's environment is to strike a balance. We appreciate right-tail risks as well as the potential for the current economic expansion to persist, in turn supporting equities. We want to ensure our clients can at least participate in those potential gains and feel comfortable with our current equity exposure. At the same time, we see left-tail catalysts as posing relatively more risk as the end of the cycle draws closer and against a backdrop of more richly valued stock markets.

For the quarter, our Balanced Growth portfolio (reflecting a 70% global equity and 30% U.S. bond risk profile) trailed the benchmark by approximately 30 basis points due to our slightly more defensive positioning, leaving our absolute year-to-date returns up about 5%. We are comfortable with our portfolios being positioned a little defensively versus their benchmarks. While we know our timing will never be perfect, our teams are deliberately taking portfolio risk down in small incremental steps to better position for the eventual downturn as well as for any left tails that may become reality.

Bessemer's Positioning (70/30 Risk Profile with Alternatives)



Positioning as of September 30, 2016. This model displays Bessemer's Balanced Growth with Hedge Funds and Private Assets target portfolio allocation guidelines. Each client situation is unique and may be subject to special circumstances, including but not limited to greater or less risk tolerance, classes, and concentrations of assets not managed by Bessemer, and investment limitations imposed under applicable governing documents and other limitations that may require adjustments to the suggested allocations. Model asset allocation guidelines may be adjusted from time to time on the basis of the foregoing or other factors. Alternative investments, including Bessemer private equity, real assets, and hedge funds of funds, are not suitable for all clients and are available only to qualified investors.

Fourth Quarter 2016

Our Recent Insights

2016 Elections: Five Questions — A Closer Look (September 2016)

What We Believe — Investment Insights (August 2016)

The Latest From Japan — Investment Insights (July 2016)

Setting the Stage: 2016 Elections — Investment Insights (July 2016)

What Inventories May Tell Us About Oil Prices — A Closer Look (July 2016)

Inflation Checkpoint — Investment Insights (July 2016)

What Do Collapsing Global Bond Yields Mean? — Investment Insights (July 2016)

America the Beautiful — Quarterly Investment Perspective (Third Quarter 2016)

To view these and other recent insights, please visit www.bessemer.com.

About Bessemer Trust

Privately owned and independent, Bessemer Trust is a multifamily office that has served individuals and families of substantial wealth for more than 100 years. Through comprehensive investment management, wealth planning, and family office services, we help clients achieve peace of mind for generations.

Past performance is no guarantee of future results. This material is provided for your general information. It does not take into account the particular investment objectives, financial situations, or needs of individual clients. This material has been prepared based on information that Bessemer Trust believes to be reliable, but Bessemer makes no representation or warranty with respect to the accuracy or completeness of such information. This presentation does not include a complete description of any portfolio mentioned herein and is not an offer to sell any securities. Investors should carefully consider the investment objectives, risks, charges, and expenses of each fund or portfolio before investing. Views expressed herein are current only as of the date indicated, and are subject to change without notice. Forecasts may not be realized due to a variety of factors, including changes in economic growth, corporate profitability, geopolitical conditions, and inflation. The mention of a particular security is not intended to represent a stock-specific or other investment recommendation, and our view of these holdings may change at any time based on stock price movements, new research conclusions, or changes in risk preference. Index information is included herein to show the general trend in the securities markets during the periods indicated and is not intended to imply that any referenced portfolio is similar to the indices in either composition or volatility. Index returns are not an exact representation of any particular investment, as you cannot invest directly in an index.

ATLANTA • BOSTON • CHICAGO • DALLAS • DENVER • GRAND CAYMAN • GREENWICH
HOUSTON • LONDON • LOS ANGELES • MIAMI • NAPLES • NEW YORK • PALM BEACH • SAN FRANCISCO
SEATTLE • WASHINGTON, D.C. • WILMINGTON • WOODBRIDGE

Visit us at bessemer.com