### IPL RESEARCH PORTFOLIO COMPASS

The *Portfolio Compass* provides a snapshot of LPL Financial Research's views on equity, equity sectors, fixed income, and alternative asset classes. This monthly publication illustrates our current views and will change as needed over a 3- to 12-month time horizon.

The top down is an important part of our asset allocation process. As a result, we have a macro section including our views of the global economy and key drivers of those views, and a section on what we are watching that might change those views.

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February 15 2017

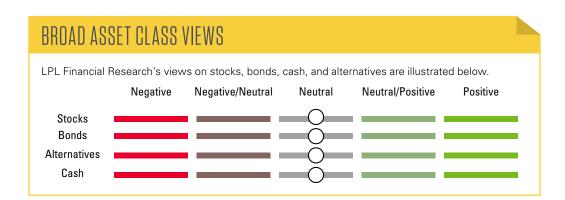
# NAVIGATING THE MARKETS

### **COMPASS CHANGES**

• Upgraded large and small foreign to neutral from negative/neutral.

### **INVESTMENT TAKEAWAYS**

- We expect mid-single-digit returns for the S&P 500 in 2017, consistent with historical midto-late economic cycle performance.\*
- Small caps may outperform near term, due to potential supportive policies under President Donald Trump, while our style views (growth/value) are generally aligned.
- More fiscal stimulus, commodity inflation, and valuations are supportive for emerging market (EM) equities, although uncertain U.S. trade policy is a risk.
- Upgrade to our large and small foreign views reflects meaningful increases in earnings growth in late 2016 and 2017 expectations.
- Expected gradual Federal Reserve (Fed) rate hikes and slow economic growth are supportive of bonds near term, though rising interest rates may be a headwind longer term as growth and inflation expectations rise.
- For fixed income allocations, we emphasize a blend of high-quality intermediate bonds and a small allocation to less interest rate-sensitive sectors, such as bank loans or highyield bonds, for suitable investors.
- From a technical perspective, the S&P 500 price continues to operate at or above all-time highs, increasing the likelihood of a sustained long-term bullish trend.



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All performance referenced herein is as of February 14, 2017, unless otherwise noted.

\*As noted in our *Outlook 2017: Gauging Market Milestones*, we expect mid-single-digit returns for the S&P 500 in 2017 and the continuation of the nearly eight-year-old bull market, consistent with historical mid-to-late economic cycle performance. We expect S&P 500 gains to be driven by: 1) a pickup in U.S. economic growth partly due to fiscal stimulus; 2) mid- to high-single-digit earnings gains; 3) an expansion in bank lending; and 4) a stable price-to-earnings ratio (PE) of 18–19. Gains will likely come with increased volatility as the economic cycle ages.



## PC MACROECONOMIC VIEWS

	Economic Factor	Outlook	Investing Impact
	U.S. GDP Growth	We expect gross domestic product (GDP) growth near 2.5% in 2017.*	Absence of a recession would likely support equity markets.
	Consumer Spending	Possible tax stimulus, strong labor market, stock gains should help.	Supports consumer cyclicals, but potential growth in business spending may be more important.
	Business Spending	Tax reform, infrastructure spending may help but uncertainty around trade.	Industrials would be most likely to benefit; upside for tech but some policy risks.
	Housing	Tight supply, years of underbuilding may help but higher rates a potential headwind.	A stronger turnaround could support housing and financials stocks.
ECONOMY	Import/Export	Dollar rise still manageable; service sector exports strong; uncertainty around trade.	Supports technology, business services; some uncertainty for multinationals.
EUUNUWIT	Labor Market	Steadily improving overall. Early signs of wage pressure appearing.	May put modest pressure on margins.
	Inflation	Wages, economic growth, election outcome have raised expectations.	Interest rates likely to rise but only gradually. May help financials.
	Business Cycle	Still mid-cycle but have likely moved into latter half.	Equity markets may have room to run, but expect more volatility.
	Dollar	Monitoring post-election strength but year-over- year gains still manageable.	Modest potential drag on earnings.
	Global GDP Growth	Some improvement likely in 2017, with help of EM growth. Trade uncertainty remains a risk.	Upside with risks for global multinationals; global diversification may provide benefits.
	Fiscal	Stimulus from infrastructure spending and tax reform likely post-election.	May provide a welcome economic lift, but government debt still a potential long-term headwind.
POLICY	Fiscal Monetary		but government debt still a potential
POLICY		reform likely post-election. Market adjusting to increased likelihood of	but government debt still a potential long-term headwind. Interest rates may be a modest headwind for
	Monetary	reform likely post-election. Market adjusting to increased likelihood of rate hikes. Republican president and Congress reduces	but government debt still a potential long-term headwind. Interest rates may be a modest headwind for quality bonds. May contribute to volatility; concerns persist
POLICY RISKS	Monetary Government	reform likely post-election. Market adjusting to increased likelihood of rate hikes. Republican president and Congress reduces gridlock but awaiting policy clarification. Election may loosen credit standards,	but government debt still a potential long-term headwind.Interest rates may be a modest headwind for quality bonds.May contribute to volatility; concerns persist around trade.Net positives in the short term, but higher volatility would still be normal for this point in
RISKS	Monetary Government Financial	reform likely post-election. Market adjusting to increased likelihood of rate hikes. Republican president and Congress reduces gridlock but avaiting policy clarification. Election may loosen credit standards, accelerate deregulation. Monitoring Chinese economy, Islamic State,	but government debt still a potential long-term headwind.Interest rates may be a modest headwind for quality bonds.May contribute to volatility; concerns persist around trade.Net positives in the short term, but higher volatility would still be normal for this point in business cycle.
	Monetary Government Financial Geopolitical & Other	reform likely post-election. Market adjusting to increased likelihood of rate hikes. Republican president and Congress reduces gridlock but avaiting policy clarification. Election may loosen credit standards, accelerate deregulation. Monitoring Chinese economy, Islamic State, trade tensions. Monetary policy supportive, but Brexit, upcoming	but government debt still a potential long-term headwind.Interest rates may be a modest headwind for quality bonds.May contribute to volatility; concerns persist around trade.Net positives in the short term, but higher volatility would still be normal for this point in business cycle.May contribute to higher stock volatility.May increase currency volatility; may favor
RISKS Overseas Financial	Monetary Government Financial Geopolitical & Other Developed Overseas	<ul> <li>reform likely post-election.</li> <li>Market adjusting to increased likelihood of rate hikes.</li> <li>Republican president and Congress reduces gridlock but awaiting policy clarification.</li> <li>Election may loosen credit standards, accelerate deregulation.</li> <li>Monitoring Chinese economy, Islamic State, trade tensions.</li> <li>Monetary policy supportive, but Brexit, upcoming elections increase uncertainty in Europe.</li> <li>Oil rebound, better policy mix in China providing</li> </ul>	but government debt still a potential long-term headwind.         Interest rates may be a modest headwind for quality bonds.         May contribute to volatility; concerns persist around trade.         Net positives in the short term, but higher volatility would still be normal for this point in business cycle.         May contribute to higher stock volatility.         May increase currency volatility; may favor U.S. equities.         Faster growth ex-China may help lift
RISKS Overseas	Monetary Government Financial Geopolitical & Other Developed Overseas Emerging Markets	<ul> <li>reform likely post-election.</li> <li>Market adjusting to increased likelihood of rate hikes.</li> <li>Republican president and Congress reduces gridlock but awaiting policy clarification.</li> <li>Election may loosen credit standards, accelerate deregulation.</li> <li>Monitoring Chinese economy, Islamic State, trade tensions.</li> <li>Monetary policy supportive, but Brexit, upcoming elections increase uncertainty in Europe.</li> <li>Oil rebound, better policy mix in China providing some relief but currency volatility may increase.</li> <li>Earnings recession ended in Q3 2016; earnings could potentially accelerate in 2017 based on better economic growth, stable profit margins,</li> </ul>	but government debt still a potential long-term headwind.Interest rates may be a modest headwind for quality bonds.May contribute to volatility; concerns persist around trade.Net positives in the short term, but higher volatility would still be normal for this point in business cycle.May contribute to higher stock volatility.May increase currency volatility; may favor U.S. equities.Faster growth ex-China may help lift low valuations.May be supportive of modest stock

Source: LPL Research, U.S. Department of Energy, Haver Analytics 02/14/17

\*Our forecast for GDP growth near 2.5% is based on the historical mid-cycle growth rate of the last 50 years. Economic growth is affected by changes to inputs such as: business and consumer spending, housing, net exports, capital investments, and government spending. Fiscal stimulus potentially offers upside.

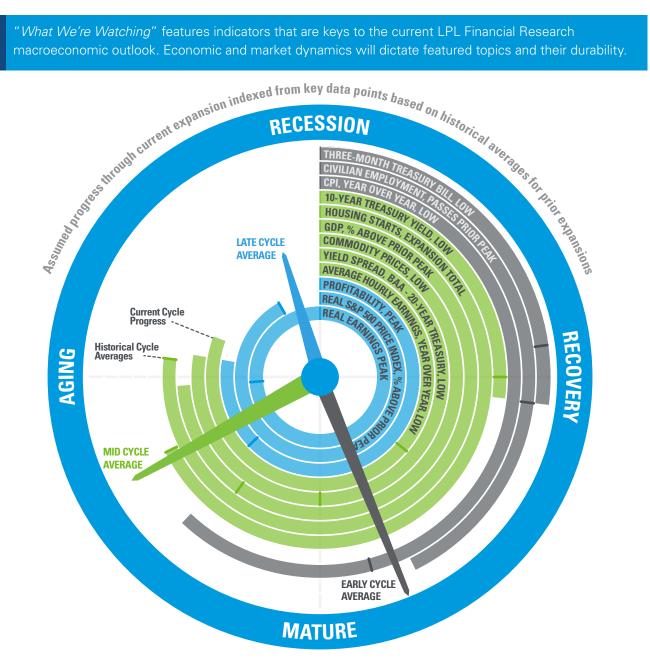
The opinions voiced in this material are for general information only and are not intended to provide or be construed as providing specific investment advice or recommendations for your clients. Any economic forecasts set forth in the presentation may not develop as predicted and there can be no guarantee that strategies promoted will be successful.



### WHAT WE'RE WATCHING

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The Cycle Clock suggests we are in the mid-to-late stage of the current expansion. Monetary policy is still exhibiting early cycle behavior, with lows from yields still relatively recent. Some items relating to corporate profits are showing late cycle behavior, although they may reset if profits improve.



Sources: LPL Research, Federal Reserve, U.S. Bureau of Economic Analysis (BEA), U.S. Bureau of Labor Statistics, U.S. Bureau of the Census, Standard & Poor's, Robert Shiller, National Bureau of Economic Research, Haver Analytics 02/14/17

The 10-year Treasury yield hit a new low for the current cycle in July 2016 (based on the daily average), shifting us to earlier in the cycle by that metric.

Data for all series are as of February 14, 2017. Starting point for all series is June 1954 except housing starts (March 1961), hourly earnings (December 1970), and commodity prices (December 1970). Real prices and real earnings determined using the Consumer Price Index for all urban consumers (CPI-U). Commodity prices are based on the GSCI Total Return Index. Profitability is based on real profit per unit value added for non-financial corporate business based on current production as calculated by the BEA.

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### **ASSET CLASS & SECTOR TOP PICKS**

Below we provide our top overall ideas across the various asset classes and sectors covered in this publication, as well as our best ideas within the three disciplines of our investment process: fundamentals, technicals, and valuations. More details on these and other investment ideas can be found in subsequent pages.

Characteristics	EQUITY ASSET CLASSES	EQUITY SECTORS	FIXED INCOME	Characteristics	ALTERNATIVE ASSET CLASSES
BEST Overall Ideas	U.S. Stocks U.S. Small Caps	Technology	Investment-Grade Corporates Mortgage-Backed Securities (MBS) Bank Loans	BEST OVERALL IDEAS	Long/Short Equity
Fundamentals	U.S. Stocks U.S. Small Caps Master Limited Partnerships	Technology Industrials Real Estate	Treasury Inflation-Protected Securities (TIPS) Bank Loans	Catalysts	Managed Futures Global Macro Long/Short Equity
Technicals	U.S. Stocks Financials U.S. Small and Mid Cap Healthcare		Bank Loans High-Yield Bonds TIPS	Trading Environment	Long/Short Equity
Valuations	Large Foreign Emerging Markets (EM)	Healthcare Technology Telecom	Investment-Grade Corporates MBS	Volatility	Global Macro Long/Short Equity Managed Futures

### READING THE PORTFOLIO COMPASS

RATING	ICO	NC		
Negative	•	•		
Negative/Neutral		•		
Neutral				
Positive/Neutral				
Positive				
Previous Position	۲			

Fundamental, technical, and valuation characteristics for each category are shown by their blue icons below, and displayed as colored squares.

Negative, neutral, or positive views are illustrated as a colored circle positioned over the scale, whereas an outlined black circle with an arrow indicates change and shows the previous view.

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Rationales for our views are provided on the right side. Negative Neutral Valuations Positive Technical Fundamentals [v] Θ 0 ⊕ S&P\* Rationale Sector China stimulus could help more, but technicals are negative and China's growth is stalling Materials 3.2 Intriguing potential contrarian opportun caution; favor MLPs. Energy 8.2

Global macro strategy is a hedge fund strategy that selects it holdings primarily on the macroeconomic and political views of various countries, and is subject to numerous risks such as: geopolitical, derivative, commodity, volatility, currency, and regulatory.

Long/short equity strategies are subject to normal alternative investment risks, including potentially higher fees; while there is additional management risk, as the manager is attempting to accurately anticipate the likely movement of both their long and short holdings. There is also the risk of "beta-mismatch," in which long positions could lose more than short positions during falling markets.

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### EQUITY ASSET CLASSES

We expect mid-single-digit returns for the S&P 500 in 2017, consistent with historical mid-to-late economic cycle performance. We forecast mid- to high-single-digit earnings growth in 2017, driven by better economic growth, energy's recovery, and our forecast of moderate U.S. dollar gains. We see similar performance between growth and value, with accelerating economic and profit growth and improved financial sector performance favoring value, while relative valuations and our favorable technology sector view favor growth. Small caps may get a policy boost from Trump, although an aging business cycle may favor larger caps later in the year. We maintain our U.S. focus while watching for opportunities in emerging markets.

	Sector	F	Т	v	Θ	$\bigcirc$	Ð	Rationale
	Large Growth					•		Mid-to-late stages of economic cycles tend to favor large caps. Potential benefit of repatriation of overseas cash at lower tax rates, which helps large caps, may be offset by risk of protectionist trade policy. Our style views have become more aligned due to our more positive views of key value sectors, particularly financials
	Large Value					•		but also energy, balanced against our positive technology view and attractive relative valuations for growth.
Style/Capitalization	Mid Growth					•		Mid caps are exhibiting strong technical momentum and valuations remain reasonable relative to large caps. Could see more merger and acquisition activity in
Style/Cap	Mid Value					2017, which may help mid caps.		
	Small Growth			•				Small caps benefit from a potentially lower corporate tax rate and are more insulated—and may even benefit—from potential protectionist trade policy. An
	Small Value							aging business cycle and above-average valuations are risks.
	U.S. Stocks							We remain U.S. focused while watching for opportunities overseas, particularly in EM, and are monitoring U.S. trade policy's impacts on multinationals.
Region	Large Foreign					•		We are seeing meaningful increases in earnings growth for the end of the year and for 2017 expectations. There have also been fundamental reforms in Japan that
	Small Foreign				÷	•		appear to be working. U.S. trade and tax policies, with their potential impact on currency, remain a major risk.
	Emerging Markets	-						Trump's election increases U.S. trade policy risk; however, earnings and economic fundamentals for the asset class have improved. Higher U.S. interest rates with attendant dollar strength also represent increased risk.
MLPs	MLPs							Trump's energy-friendly stance and higher crude prices could lift U.S. production and spark pipeline construction. Valuations are attractive and distribution growth mostly intact; watching interest rate risk.

Investing in MLPs involves additional risks as compared with the risks of investing in common stock, including risks related to cash flow, dilution, and voting rights. MLPs may trade less frequently than larger companies due to their smaller capitalizations, which may result in erratic price movement or difficulty in buying or selling. MLPs are subject to significant regulation and may be adversely affected by changes in the regulatory environment, including the risk that an MLP could lose its tax status as a partnership. Additional management fees and other expenses are associated with investing in MLP funds.

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### **EQUITY SECTORS**

We maintain our preference for cyclical sectors as the U.S. economic expansion continues and potentially picks up some speed should pro-growth policies be enacted. Better growth could help technology, which is attractively valued and is seeing earnings accelerate, and industrials, which may benefit from infrastructure spending. A steeper yield curve and deregulation boost the outlook for financials, which have produced excellent fourth quarter 2016 results. We continue to believe healthcare valuations discount an overly pessimistic regulatory climate.

	Sector	F	Т	v	Θ	0	Ð	S&P*	Rationale
Cyclical	Materials					•		2.9	Stable growth in China, prospects for infrastructure spending, and a gradual rise in inflation are supportive, although U.S. dollar strength, trade policy, and China's transition to a service economy are risks.
	Energy							7.1	We see modest near-term upside to oil prices potentially to the mid-\$50s following OPEC-led global production cuts and steady demand; maintain positive bias.
	Industrials							10.3	Valuations are above average, but positives include potential stronger growth in U.S. and EM in 2017, infrastructure spending, and oil price stability; may see long-awaited pickup in capital spending.
Cyc	Consumer Discretionary							12.2	Slowing earnings momentum and negative revisions, higher inflation, the age of the business cycle, and e-commerce disruption are among concerns.
	Technology						•	21.5	Strong fourth quarter earnings, higher business confidence (possibly lifted by corporate tax reform), technology's role as productivity enabler, and valuations all supportive; trade policy is a risk.
	Financials							14.7	Steepening yield curve, deregulation, expanded credit access, strong fourth quarter 2016 earnings, and positive revisions are all supportive; could consolidate recent gains.
Defensive	Utilities				•			3.1	Valuations in line with the S&P 500 on forward price-to-earnings ratio (PE) look expensive; we continue to favor cyclical sectors at this stage of the cycle while interest rate risk and technical weakness suggest caution.
	Healthcare							13.7	Valuations are compelling and demographics are favorable; pending Affordable Care Act overhaul introduces significant uncertainty but we continue to believe regulatory risk is being overly discounted.
	Consumer Staples				•			9.3	Interest rate risk remains high, input costs are at risk of further increases, and we favor cyclical sectors.
	Telecommunications							2.4	Sluggish sector growth outlook and interest rate risk drive caution despite rich yields, attractive valuations, and potential for deregulation.
	Real Estate							2.8	Positives include steady job gains, rich yields, lack of overbuilding, and recent addition as an S&P sector; interest rate risk remains high but has created a potential buy the dip opportunity.

#### \* S&P 500 Weight (%)

Investing in real estate/REITs involves special risks such as potential illiquidity and may not be suitable for all investors. There is no assurance that the investment objectives of this program will be attained.

Because of its narrow focus, specialty sector investing, such as healthcare, financials, or energy, will be subject to greater volatility than investing more broadly across many sectors and companies.

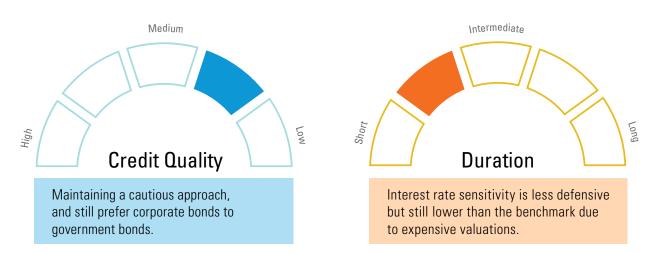
There is no guarantee that a diversified portfolio will enhance overall returns or outperform a nondiversified portfolio. Diversification does not ensure against market risk.

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### **FIXED INCOME**

Municipal bonds (as measured by the Bloomberg Barclays Municipal Bond Index) gained 0.7% in January, as a seasonal period of reduced supply boost returns. However, month-to-date returns in February have been weaker (-0.3%), which has made valuations more attractive. January and February normally see lower supply, before a spike in March that has historically led to seasonal weakness. Markets are still waiting for more details on Trump's policy plans, as the structure of his infrastructure plan will determine if it will have a meaningful impact on supply in the municipal market. Municipal bonds' credit quality remains generally good; problem issuers remain isolated and have not impacted the broader market.



Yield spread is the difference between yields on differing debt instruments, calculated by deducting the yield of one instrument from another. The higher the yield spread, the greater the difference between the yields offered by each instrument. The spread can be measured between debt instruments of differing maturities, credit ratings, and risk.

	Sector	F	Т	v	ΘΟ	œ	Rationale
Tax-Free Bonds	Munis– Short-Term						Relative valuations in line with 5-year average, but lower yields limit appeal.
	Munis– Intermediate-Term						Valuations have cheapened over the past month, though remain slightly above the 5-year average.
	Munis– Long-Term	•					Long-term yields are more attractive than short-term, though longer duration may be a headwind if rates continue to rise.
	Munis– High-Yield						Valuations remain elevated, though additional yield remains a factor.

Continued on next page.

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For the purposes of this publication, intermediate-term bonds have maturities between 3 and 10 years, and short-term bonds are those with maturities of less than 3 years.

All bonds are subject to market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise and are subject to availably and change in price.

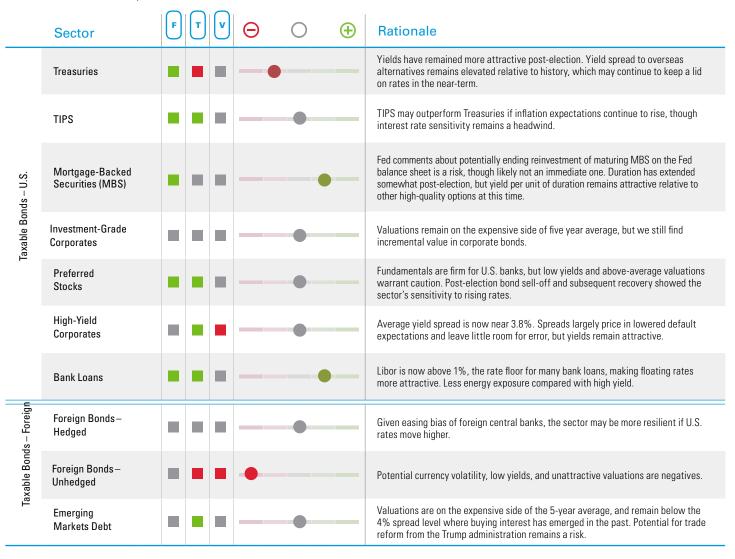
High-yield/junk bonds are not investment-grade securities, involve substantial risks, and generally should be part of the diversified portfolio of sophisticated investors.

Municipal interest income may be subject to the alternative minimum tax. Federally tax-free but other state and local taxes may apply.

Corporate bonds are considered higher risk than government bonds but normally offer a higher yield and are subject to market, interest rate, and credit risk, as well as additional risks based on the quality of issuer coupon rate, price, yield, maturity, and redemption features.

### FIXED INCOME (CONTINUED)

For fixed income allocations, we continue to emphasize a blend of high-quality intermediate bonds coupled with a small allocation to less interest rate-sensitive sectors such as bank loans or high-yield bonds for suitable investors. Expectations for pro-business policies from the incoming Trump administration, along with a sustained move above \$50/barrel for oil have led high-yield spreads to contract to 2014 levels. The current spread near 3.8% is likely pricing in most of this optimism, leaving little room for error. For bank loans, the London Interbank Offered Rate (Libor) has moved above the 1% floor that many bank loans have implemented, potentially allowing investors to take advantage of floating rates. We maintain a cautious approach with credit-sensitive areas of the market, but a "coupon-clipping" environment may still aid suitable investors.



Investing in foreign and emerging markets debt securities involves special additional risks. These risks include, but are not limited to, currency risk, geopolitical and regulatory risk, and risk associated with varying settlement standards.

Mortgage-backed securities are subject to credit, default, prepayment risk that acts much like call risk when you get your principal back sooner than the stated maturity, extension risk, the opposite of prepayment risk, market and interest rate risk.

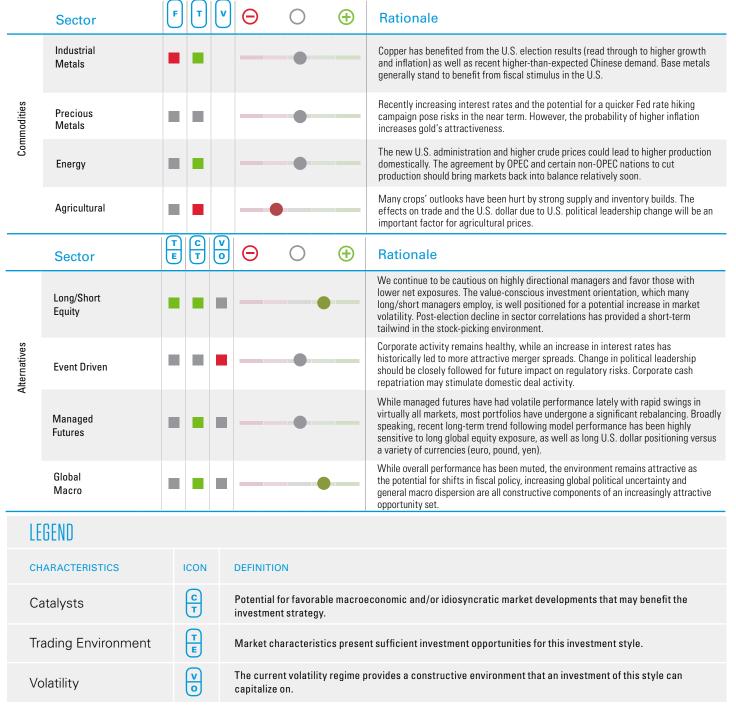
Bank loans are loans issued by below investment-grade companies for short-term funding purposes with higher yield than short-term debt and involve risk.

Treasury Inflation-Protected Securities (TIPS) help eliminate inflation risk to your portfolio, as the principal is adjusted semiannually for inflation based on the Consumer Price Index (CPI)—while providing a real rate of return guaranteed by the U.S. government. Investing in foreign and emerging markets debt securities involves special additional risks. These risks include, but are not limited to, currency risk, geopolitical, and regulatory risk, and risk associated with varying settlement standards.

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### **COMMODITIES & ALTERNATIVE ASSET CLASSES**

Commodities have continued to strengthen in a broad-based manner as the markets digest the potential impacts of a new U.S. administration. Domestic energy production has trended slightly higher as rig counts have started to rise in response to higher prices. Precious and industrial metals have seen price increases as well. Long/short equity strategies have recently benefited from increasing levels of dispersion between sectors, as well as lower asset class correlations.



Alternative strategies may not be suitable for all investors and should be considered as an investment for the risk capital portion of the investor's portfolio. The strategies employed in the management of alternative investments may accelerate the velocity of potential losses.

Commodity-linked investments may be more volatile and less liquid than the underlying instruments or measures, and their value may be affected by the performance of the overall commodities baskets as well as weather, geopolitical events, and regulatory developments.

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#### IMPORTANT DISCLOSURES

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All performance referenced is historical and is no guarantee of future results.

There is no assurance that the techniques and strategies discussed are suitable for all investors or will yield positive outcomes. The purchase of certain securities may be required to affect some of the strategies.

#### **Stock and Pooled Investment Risks**

Investing in stock includes numerous specific risks including: the fluctuation of dividend, loss of principal and potential illiquidity of the investment in a falling market.

Investing in foreign and emerging markets securities involves special additional risks. These risks include, but are not limited to, currency risk, geopolitical risk, and risk associated with varying accounting standards. Investing in emerging markets may accentuate these risks.

Investing in mutual funds involves risk, including possible loss of principal.

#### **Bond and Debt Equity Risks**

Government bonds and Treasury bills are guaranteed by the U.S. government as to the timely payment of principal and interest and, if held to maturity, offer a fixed rate of return and fixed principal value. However, the value of fund shares is not guaranteed and will fluctuate.

#### **Alternative Risks**

Currency risk is a form of risk that arises from the change in price of one currency against another. Whenever investors or companies have assets or business operations across national borders, they face currency risk if their positions are not hedged.

Global macro strategy is a hedge fund strategy that selects it holdings primarily on the macroeconomic and political views of various countries, and is subject to numerous risks such as: geopolitical, derivative, commodity, volatility, currency, and regulatory.

Event driven strategies, such as merger arbitrage, consist of buying shares of the target company in a proposed merger and fully or partially hedging the exposure to the acquirer by shorting the stock of the acquiring company or other means. This strategy involves significant risk as events may not occur as planned and disruptions to a planned merger may result in significant loss to a hedged position.

Managed futures strategies use systematic quantitative programs to find and invest in positive and negative trends in the futures markets for financials and commodities. Futures and forward trading is speculative, includes a high degree of risk that the anticipated market outcome may not occur, and may not be suitable for all investors.

#### DEFINITIONS

The simple moving average is an arithmetic moving average that is calculated by adding the closing price of the security for a number of time periods and then dividing this total by the number of time periods. Short-term averages respond quickly to changes in the price of the underlying, while long-term averages are slow to react.

The Beige Book is a commonly used name for the Federal Reserve's (Fed) report called the Summary of Commentary on Current Economic Conditions by Federal Reserve District. It is published just before the Federal Open Market Committee (FOMC) meeting on interest rates and is used to inform the members on changes in the economy since the last meeting.

Technical Analysis is a methodology for evaluating securities based on statistics generated by market activity, such as past prices, volume and momentum, and is not intended to be used as the sole mechanism for trading decisions. Technical analysts do not attempt to measure a security's intrinsic value, but instead use charts and other tools to identify patterns and trends. Technical analysis carries inherent risk, chief amongst which is that past performance is not indicative of future results. Technical Analysis should be used in conjunction with Fundamental Analysis within the decision making process and shall include but not be limited to the following considerations: investment thesis, suitability, expected time horizon, and operational factors, such as trading costs are examples.

London Interbank Offered Rate (Libor): An interest rate at which banks can borrow funds, in marketable size, from other banks in the London interbank market. The Libor is fixed on a daily basis by the British Bankers' Association. The Libor is derived from a filtered average of the world's most creditworthy banks' interbank deposit rates for larger loans with maturities between overnight and one full year.

The PE ratio (price-to-earnings ratio) is a measure of the price paid for a share relative to the annual net income or profit earned by the firm per share. It is a financial ratio used for valuation: a higher PE ratio means that investors are paying more for each unit of net income, so the stock is more expensive compared to one with lower PE ratio.

#### INDEX DEFINITIONS

All indexes are unmanaged and cannot be invested into directly.

The S&P 500 Index is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.

The Bloomberg Barclays U.S. Municipal Bond Index covers the USD-denominated long-term tax-exempt bond market. The index has four main sectors: state and local general obligation bonds, revenue bonds, insured bonds, and prerefunded bonds.

#### This research material has been prepared by LPL Financial LLC.

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