

September 18, 2019

# NAVIGATING THE MARKETS

The *Portfolio Compass* provides a snapshot of LPL 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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## COMPASS CHANGES

- Upgraded short-maturity municipal bonds from neutral/negative to neutral

## INVESTMENT TAKEAWAYS

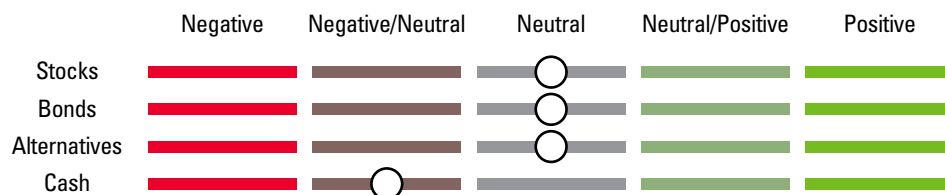
- We have maintained our S&P 500 Index year-end fair value target of 3,000, even after the index broached that target September 17.\*
- We favor large caps as the business cycle ages, though recent small cap strength suggests large cap leadership may have been stretched.
- We recommend balanced style exposure. Relative valuations, higher interest rates, and rising oil prices favor value stocks, but the Federal Reserve (Fed) rate-cutting environment and slowing economic growth favor growth.
- We expect a U.S.-China trade deal late this year or in early 2020, but the risk of a more prolonged conflict has risen. Still, valuations and economic growth favor emerging markets over developed foreign markets.
- Slower but still solid economic growth and modest inflation may put upward pressure on yields, but trade uncertainty and the global appetite for U.S. Treasuries increase the likelihood they remain range bound.
- We emphasize a blend of high-quality intermediate bonds, with a preference for investment-grade corporates and mortgage-backed securities (MBS) over Treasuries, in suitable strategies. MBS provides a diversifying source of yield within the investment-grade space, while economic growth is supportive of investment-grade corporates. High-yield corporates could become an alternative to equities on a risk-adjusted basis.
- Following a strong month, the S&P 500 is back near all-time highs and importantly has seen strong participation from cyclicals and small caps, two areas of the market that have struggled for much of the past year. Breadth has been strong, and sentiment remains restrained, supporting a bullish technical bias for U.S. equities.

All performance referenced herein is as of September 16, 2019, unless otherwise noted.

\*As noted in our *Weekly Market Commentary* from August 19, 2019, our year-end fair value target on the S&P 500 in the range of 3,000 is based on our forecast for \$165 in earnings per share and a price-to-earnings ratio (P/E) slightly over 18.

## BROAD ASSET CLASS VIEWS

LPL Research’s views on stocks, bonds, cash, and alternatives are illustrated below.



# MACROECONOMIC VIEWS

	Economic Factor	Outlook	Investing Impact
ECONOMY	<b>U.S. GDP Growth</b>	We have revised our GDP forecast for 2019 down to near 2%.*	Absence of a recession would likely support equity markets despite slower growth.
	<b>Consumer Spending</b>	Fiscal stimulus, a strong labor market, and stock gains may help.	Consumer spending is sustaining growth during business spending soft patch.
	<b>Business Spending</b>	Support from fiscal stimulus still in place, but trade uncertainty an offset.	Likely to improve with progress on trade, with industrials the potential beneficiary.
	<b>Housing</b>	Lower rates, growing inventory are helping, but home prices limiting upside.	Demographic pressures building, but may be delayed until next cycle.
	<b>Import/Export</b>	Service sector exports strong; uncertainty around trade.	May support technology and business services; some uncertainty for multinationals.
	<b>Labor Market</b>	Unemployment near multidecade low; wage gains support consumer spending.	Wages may start to pressure profit margins; Fed watching closely but not at worrisome levels.
	<b>Inflation</b>	Still contained despite modest wage, input cost pressures.	Interest rates may rise if trade picture clears up, but only gradually.
	<b>Business Cycle</b>	Some late cycle signs but economy not overheating.	Equity markets may have room to run, but volatility may continue.
	<b>Dollar</b>	Upward trend has continued.	Trend may flatten, but for now still a headwind for international equities.
	<b>Global GDP Growth</b>	Slowing increasingly apparent. Trade uncertainty remains a risk.	May contribute to equity volatility with added potential risk for global multinationals.
POLICY	<b>Fiscal</b>	Impact of tax reform and deregulation limited by trade policy.	Fiscal policy still market friendly, but expecting continued bouts of volatility.
	<b>Monetary</b>	"Insurance" rate cuts in play, but unclear how far the Fed will go.	May support markets as long as inflation remains contained.
	<b>Government</b>	Potential for monetary or fiscal policy mistake increasing as economy slows.	Markets may have room to run, but important to monitor target risk levels.
RISKS	<b>Financial</b>	Targeted deregulation reasonable with systematic risk lower than prior cycle.	Short term positive; longer term may enable economic and market excesses to build.
	<b>Geopolitical &amp; Other</b>	China, trade, Brexit remain in focus.	May contribute to higher stock volatility.
OVERSEAS	<b>Developed Overseas</b>	Anti-Eurozone populism, Brexit uncertainty, slower growth are concerns.	Potential diversification benefits, but returns may lag United States.
	<b>Emerging Markets</b>	Trade risk remains; there are pockets of stress, but emerging markets growth outlook overall still looks good.	Low valuations and strong growth offer emerging markets upside potential once trade situation is resolved.
FINANCIAL CONDITIONS	<b>Corporate Profits</b>	We have lowered our 2019 earnings forecast to 2%.	Low inflation, interest rates may support S&P 500 appreciation in excess of earnings gains.
	<b>Main Street</b>	Policy uncertainty impacting sentiment, but may be starting to rebound.	Supports cyclical sector performance.

Source: LPL Research

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.

\*Our forecast of GDP growth of near 2% is in line with our baseline view of potential growth based on long-term labor force and productivity trends, with the frictional impact of trade policy and slower global growth now offsetting the ongoing positive impact of fiscal stimulus. Economic growth is affected by changes to inputs such as business and consumer spending, housing, net exports, capital investments, and government spending.

## 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 on subsequent pages.

Characteristics	EQUITY ASSET CLASSES	EQUITY SECTORS	FIXED INCOME	Characteristics	ALTERNATIVE ASSET CLASSES
<b>BEST OVERALL IDEAS</b>	Emerging Markets Equities Large Cap Equities	Industrials Technology	Investment-Grade Corporates Mortgage-Backed Securities	<b>BEST OVERALL IDEAS</b>	Event Driven
<b>Fundamentals</b>	Large Cap Equities	Industrials Technology	Investment-Grade Corporates Mortgage-Backed Securities	<b>Catalysts</b>	Event Driven Global Macro
<b>Technicals</b>	U.S. Equities	Consumer Discretionary Technology	Investment-Grade Corporates	<b>Trading Environment</b>	Long/Short Equity
<b>Valuations</b>	Emerging Markets Equities Large Value Equities Master Limited Partnerships (MLP)	Financials Healthcare Industrials	Emerging Markets Debt	<b>Volatility</b>	Global Macro Long/Short Equity

## READING THE PORTFOLIO COMPASS

RATING	ICON	DESCRIPTION
Negative	Red square, Red circle	Fundamental, technical, and valuation characteristics for each category are shown by their blue icons below, and displayed as colored squares.
Negative/Neutral	Red square, Red circle with outline	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.
Neutral	Grey square, Grey circle	Rationales for our views are provided on the right side.
Positive/Neutral	Green square, Green circle	
Positive	Green square, Green circle	
Previous Position	Circle with arrow	

Valuations (blue square), Technicals (green square), Fundamentals (red square)

Negative (red circle), Neutral (grey circle), Positive (green circle)

**Materials** (S&P 3.2): China stimulus could help steel, but technicals are negative and China's growth is slowing.

**Energy** (S&P 0.2): Emerging potential commodity opportunity, but supply and technicals suggest caution; lower MLPs.

Global macro strategy is a hedge fund strategy that selects its 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.

## EQUITY ASSET CLASSES

We have maintained our S&P 500 year-end fair value target of 3,000 even as the index breached that level September 17. We favor large caps as the business cycle ages, though recent small cap strength suggests large cap leadership may have been stretched. We recommend balanced exposure between the growth and value styles. Relative valuations, higher interest rates, and rising oil prices favor value stocks, but the Fed rate-cutting environment and slowing economic growth favor growth. Our positive emerging markets view is based on solid, but slowing, economic growth, favorable demographics, attractive valuations, and our expectation that the United States and China will reach a trade agreement later this year or in early 2020.

Asset Class		F	T	V	⊖	○	⊕	Rationale
Style/Capitalization	Large Growth	■	■	■				We favor large caps over small as the business cycle ages. Easing U.S.-China trade tensions could help large caps, though recent small cap strength suggests large cap leadership may have been stretched. Relative valuations, the recent oil shock, and the latest move higher in interest rates favor value stocks, but multiple potential Fed rate cuts and slowing economic growth favor growth.
	Large Value	■	■	■				
	Mid Growth	■	■	■				Mid cap valuations are attractive relative to large caps, but earnings growth doesn't stand out. Slower growth and Fed rate cuts offset rich valuations for growth stocks.
	Mid Value	■	■	■				
	Small Growth	■	■	■				As the economic cycle ages in 2019 and financial conditions potentially tighten, small caps may lag. Progress on trade may benefit larger cap companies relatively more than their smaller counterparts. Recent small cap strength suggests large cap leadership may have been stretched.
	Small Value	■	■	■				
Region	United States	■	■	■				Among developed markets, we remain U.S. focused, supported by relatively stronger—albeit slower—economic growth, low inflation, modest earnings growth, and Fed rate cuts.
	Large Foreign	■	■	■				Our concerns about global policies, economies, and interest rates translate into our preference for EM stocks over international developed-market stocks. Fiscal deficits, populism, and exhausted monetary policies could weigh on sentiment, spending, and investment in Europe, while structural reforms and the looming VAT increase may pressure sentiment in Japan.
	Small Foreign	■	■	■				
	Emerging Markets	■	■	■				We continue to expect a U.S.-China trade deal late this year or in early 2020; however, the risk of a more prolonged conflict has risen. Still, attractive valuations, demographics, and relatively strong economic growth favor emerging markets over developed foreign markets.
MLPs	Master Limited Partnership	■	■	■				Rich yields, strong U.S. energy production outlook, acquisition activity, and the latest spike in oil prices help, but partnership-specific issues challenged performance in recent months.

Investing in master limited partnerships (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.

## EQUITY SECTORS

We continue to prefer cyclical sectors as the U.S. economic expansion continues. Recent sector view changes reflected our desire for balance across the growth and value styles. Technology continues to lead this bull market. We expect industrials to benefit from a potential pickup in capital spending, contingent on U.S.-China trade progress. Portfolio considerations and alignment of growth and value styles underpin our modestly positive view of the real estate sector. The Saudi oil supply disruption makes energy a potential short-term trade, but impacts are likely temporary, and the medium-term supply-demand balance still tilts negative in our view.

	Sector	F	T	V	⊖	○	+	S&P*	Rationale
Cyclical	Materials	■	■	■				2.7	Low valuations, slight improvement in performance, and easing trade tensions help offset lack of infrastructure spending, slower China growth.
	Energy	■	■	■				4.6	Saudi supply disruption makes energy a potential short-term trade, but impacts are likely temporary. Medium-term supply-demand balance still tilts negative in our view.
	Industrials	■	■	■				9.4	Attractive valuations and a potential U.S.-China trade deal, though delayed, keep us positive given potential for more business investment; slower global growth is a risk.
	Communication Services	■	■	■				10.5	Our cautious media and telecom views offset a strong growth outlook for internet stocks. Importantly, this is not a defensive sector after the 2018 revamp.
	Consumer Discretionary	■	■	■				10.2	Though valuations are rich, and rising energy costs are a new risk, robust consumer spending and still-low interest rates are beneficial.
	Technology	■	■	■				21.9	Solid spending in areas targeting productivity enhancements, focusing on mobile, cloud computing, automation, and artificial intelligence (AI).
	Financials	■	■	■				13.2	Difficult interest rate environment remains but recent backup in yields and steepening yield curve help; valuations and dividend payouts are supportive.
Defensive	Utilities	■	■	■				3.4	Although the near-term interest rate outlook may be more balanced after the latest rise, valuations are high, and we continue to favor cyclical sectors.
	Healthcare	■	■	■				13.6	Sector has struggled with policy risks in Washington, D.C. With a solid healthcare spending outlook, favorable demographics, and attractive valuations, the sector looks more interesting.
	Consumer Staples	■	■	■				7.4	Our preference for cyclical sectors, a sluggish growth outlook, and rich valuations offset the potential tailwind from falling interest rates and Fed rate cuts.
	Real Estate	■	■	■				3.1	Sound fundamentals, rich yields, our recent alignment of the growth-value styles, and portfolio considerations underpin our modestly positive view.

\* 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.

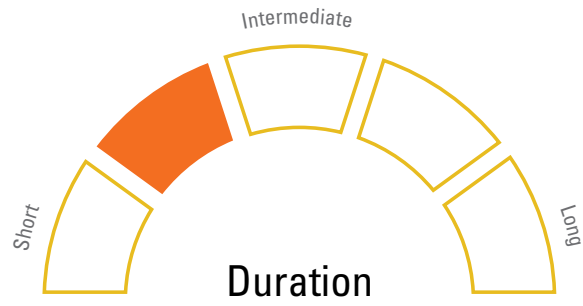
Because of its narrow focus, specialty sector investing, such as healthcare, financials, or energy, will be subject to greater volatility than investing more broadly across many sectors and companies.

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

# FIXED INCOME



Maintaining a more cautious approach as we move later cycle, but still prefer corporate bonds to government bonds.



Recommended interest rate sensitivity is still lower than the benchmark due to a modest bias toward rates rising, relatively attractive shorter-term yields.

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	T	V	⊖	○	⊕	Rationale
Munis–Short-Term	■	■	■	▶	●		Severe overvaluation relative to Treasuries unwound quickly, supporting a neutral outlook.
Munis–Intermediate-Term	■	■	■		●		Valuations relative to Treasuries remain on the expensive side. Supply dynamics remain attractive.
Munis–Long-Term	■	■	■		●		Valuations neutral relative to Treasuries, but absolute levels looking more expensive. Higher rate sensitivity may be a headwind if rates rise. Supply dynamics remain attractive.
Munis–High-Yield	■	■	■		●		Becoming more cautious as we move later cycle. Some long-term headwinds from pension obligations. Supply dynamics remain attractive. Low yields for sector on an absolute basis.

(Continued on next page)

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 availability 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 bonds are subject to availability, price, and market and interest rate risk if sold prior to maturity. Bond values will decline as interest rates rise. 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 in tactically oriented portfolios. Rates look appropriate for the environment; compensation for longer-maturity bonds remains unattractive. Continuing to watch inflation closely for added rate risk, but inflation is well contained for now. Slowing but still above-trend economic growth could support corporate profits. We maintain a cautious approach with credit-sensitive areas of the market, but a “coupon-clipping” environment may still aid suitable investors.

Asset Class	F	T	V	⊖	○	⊕	Rationale
Taxable Bonds – U.S.	Treasuries	■	■	■	●		Yield spreads to international sovereigns remain elevated but hedging costs lower attractiveness. Supply, economic growth, and inflation normalization could be headwinds. Other options look more attractive.
	TIPS	■	■	■		●	Break-even inflation rates still appear attractive, but slower growth, low yield limit upside.
	Mortgage-Backed Security	■	■	■		●	Diversifying source of yield among high-quality options.
	Investment-Grade Corporates	■	■	■		●	We still find incremental value in corporate bonds due to the economic backdrop.
	Preferred Stocks	■	■	■		●	Fundamentals are firm for U.S. banks. Higher interest rate sensitivity remains a risk.
	High-Yield Corporates	■	■	■		●	Yields remain attractive and economy supportive, but a less effective diversifier than higher-quality options. Risk-adjusted returns could be attractive relative to equities.
	Bank Loans	■	■	■	●		Weaker investor protections and potential for Fed to lower rates decrease attractiveness. Economy remains supportive.
Taxable Bonds – Foreign	Foreign Bonds– Hedged	■	■	■	●		Rich valuations, risk from rising rates may pressure performance.
	Foreign Bonds– Unhedged	■	■	■	●		Potential currency volatility, low yields, and unattractive valuations are negatives.
	Emerging Markets Debt	■	■	■		●	Dovish central banks improve the valuation picture. Trade policy and geopolitical tensions remain risks.

Investing in foreign and emerging market 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 (MBS) 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, or TIPS, are subject to market risk and significant interest rate risk as their longer duration makes them more sensitive to price declines associated with higher interest rates.

## COMMODITIES & ALTERNATIVE ASSET CLASSES

Slowing global growth has been a drag, but easing U.S.-China trade tensions has provided some growth for industrial metals recently. Potential Fed rate cuts, trade uncertainty, geopolitical risk, and technical momentum are all supportive of precious metals. Saudi supply disruption makes energy a potential short-term trade, but impacts are likely temporary. The event-driven investing outlook remains promising as tax reform and healthy deal flow support the corporate activity opportunity set.

	Asset Class	F	T	V	⊖	○	⊕	Rationale
Commodities	Industrial Metals	■	■					Slowing global growth has been a drag, but easing U.S.-China trade tensions have provided some support recently. Watching trade progress and possible U.S. infrastructure bill.
	Precious Metals	■	■					Potential Fed rate cuts, trade uncertainty, geopolitical risk, and technical momentum are supportive.
	Energy	■	■					Saudi supply disruption makes energy a potential short-term trade, but impacts are likely temporary. Medium-term supply-demand balance still tilts negative in our view. Negative bias.
	Agricultural	■	■					Easing trade tensions and risks to harvests/yields have driven the latest rebound in grain prices.

	Sector	T	C	V	⊖	○	⊕	Rationale
Alternatives	Long/Short Equity	■	■	■				A recent reversal in the value and momentum factors provided a reminder of the inherent bias across many long/short strategies. We continue to prefer strategies with balanced risk profiles, as well as those that have flexible net exposure mandates to capitalize on any market imbalances.
	Event Driven	■	■	■				Merger arbitrage continues to provide attractive risk-adjusted returns with limited directional equity exposure. Deal flow remains healthy with high management confidence, low interest rates, and significant private equity capital available for deployment.
	Managed Futures	■	■	■				While recent performance has been negatively impacted by the increase in U.S. Treasury yields, year-to-date gains have been strong. We favor multi-managers or combinations of uncorrelated trading strategies to smooth, diversify return profiles.
	Global Macro	■	■	■				Global macro strategies continue to provide diverse exposure sets and have provided attractive downside protection during equity sell-offs. Shifts in fiscal policy, global political uncertainty, and economic divergences provide an attractive opportunity set.

	CHARACTERISTICS	ICON	DEFINITION
LEGEND	Catalysts		Potential for favorable macroeconomic and/or idiosyncratic market developments that may benefit the investment strategy.
	Trading Environment		Market characteristics present sufficient investment opportunities for this investment style.
	Volatility		The current volatility regime provides a constructive environment that an investment of this style can capitalize on.

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.



## IMPORTANT DISCLOSURES

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 effect some of the strategies.

All indexes are unmanaged and cannot be invested into directly. Unmanaged index returns do not reflect fees, expenses, or sales charges. Index performance is not indicative of the performance of any investment.

### Stock and Pooled Investment Risks

The payment of dividends is not guaranteed. Companies may reduce or eliminate the payment of dividends at any given time.

Value investments can perform differently from the market as a whole. They can remain undervalued by the market for long periods of time.

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.

The prices of small and mid cap stocks are generally more volatile than large cap stocks.

### 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

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.

## INDEX DEFINITIONS

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 U.S. dollar-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.

The Russell 1000 Growth Index measures the performance of those Russell 1000 companies with higher price-to-book ratios and higher forecasted growth values. Russell 1000 Value Index measures the performance of those Russell 1000 companies with lower price-to-book ratios and lower forecasted growth values.

## DEFINITIONS

A cyclical stock is an equity security whose price is affected by ups and downs in the overall economy. Cyclical stocks typically relate to companies that sell discretionary items that consumers can afford to buy more of in a booming economy and will cut back on during a recession.

Duration is a measure of the sensitivity of the price (the value of principal) of a fixed-income investment to a change in interest rates. It is expressed as a number of years. Rising interest rates mean falling bond prices, while declining interest rates mean rising bond prices. The bigger the duration number, the greater the interest rate risk or reward for bond prices.

Credit ratings are published rankings based on detailed financial analyses by a credit bureau specifically as it relates to the bond issue's ability to meet debt obligations. The highest rating is AAA, and the lowest is D. Securities with credit ratings of BBB and above are considered investment grade.

Gross domestic product (GDP) is the monetary value of all the finished goods and services produced within a country's borders in a specific time period, though GDP is usually calculated on an annual basis. It includes all of private and public consumption, government outlays, investments and exports less imports that occur within a defined territory.

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.

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.

Alpha measures the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by Beta. A positive (negative) Alpha indicates the portfolio has performed better (worse) than its Beta would predict.

Beta measures a portfolio's volatility relative to its benchmark. A Beta greater than 1 suggests the portfolio has historically been more volatile than its benchmark. A Beta less than 1 suggests the portfolio has historically been less volatile than its benchmark.

Idiosyncratic risk can be thought of as the factors that affect an asset such as a stock and its underlying company at the microeconomic level. Idiosyncratic risk has little or no correlation with market risk, and can therefore be substantially mitigated or eliminated from a portfolio by using adequate diversification.

This Research material was prepared by LPL Financial, LLC.

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