TI LPL RESEARCH PORTFOLIO COMPASS

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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All performance referenced herein is as of February 15, 2019, unless otherwise noted.

*As noted in our *Outlook 2019*, we expect an 8–10% S&P 500 Index total return in 2019, driven by near 2.5% gross domestic product (GDP) growth, 6–7% S&P 500 earnings growth, and a target price-to-earnings ratio (PE) of 17.5. February 20 2019

NAVIGATING THE MARKETS

COMPASS CHANGES

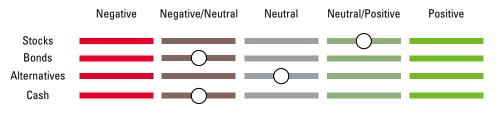
Upgraded precious metals view to neutral from negative/neutral.

INVESTMENT TAKEAWAYS

- Expectations for solid but slower growth in the U.S. economy and corporate profits support our year-end 2019 fair value target for the S&P 500 of 3000.*
- We maintain our slight preference for value due to attractive relative valuations after a sustained period of growth outperformance.
- We expect a transition to large cap market leadership and away from small cap stocks in 2019 as the economic cycle ages and trade issues ease.
- We favor emerging markets (EM) equities over developed international for their solid economic growth trajectory, favorable demographics, attractive valuations, and prospects for a U.S.-China trade agreement.
- Slower but still solid economic growth and modest inflationary pressure may be headwinds for fixed income. The pause by the Federal Reserve (Fed) reduces near-term upward pressure on interest rates, but an additional hike is still possible in the second half of 2019.
- We emphasize a blend of high-quality intermediate bonds, with a preference for investment-grade corporates (IGC) and mortgage-backed securities (MBS) over Treasuries. Yield per unit of duration remains attractive for MBS while valuations and economic growth are supportive of IGCs.
- The S&P 500 Index is off to its best start to a year since 1991, back near its 200-day moving average, and history shows that returns tend to be strong following such a start.
- In our view, the odds of a retest of the December 2018 lows have decreased given the broad participation in the rally. Lower-trending bond yields remain a potential warning sign.

BROAD ASSET CLASS VIEWS

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



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	MACROECONOMIC VIEWS

	Economic Factor	Outlook	Investing Impact
	U.S. GDP Growth	We expect GDP of near 2.5% in 2019.*	Absence of a recession would likely support equity markets.
	Consumer Spending	Fiscal stimulus, a strong labor market, and stock gains may help.	Supports consumer cyclicals, but potential growth in business spending may be more important.
	Business Spending	Tax reform and deregulation are supportive; watching trade policy.	Supports consumer cyclicals, but potential growth in business spending may be more important.
	Housing	Higher rates, labor shortages have become a headwind despite years of underbuilding.	Industrials would be most likely to benefit; upside for technology but some policy risks.
ECONOMY	Import/Export	Service sector exports strong; uncertainty around trade.	May not offer opportunities until the next cycle.
LUUNUMI	Labor Market	Unemployment near multidecade low; wage gains supporting consumer spending.	May support technology and business services; some uncertainty for multinationals.
	Inflation	Still well contained despite modest wage, input cost pressures.	May soon pressure profit margins; Federal Reserve watching closely but not at worrisome levels.
	Business Cycle	Some late cycle signs but economy not overheating.	Interest rates likely to rise further, but only gradually.
	Dollar	Upward trend has moderated despite recent strength.	May no longer be a headwind for international equities.
	Global GDP Growth	Modest slowing likely in 2019. Trade uncertainty remains a risk.	May contribute to equity volatility with added potential risk for global multinationals.
	Fiscal	Tax reform and deregulation supporting growth.	May provide an economic lift, but trade, policy uncertainty limiting some of the impact.
POLICY	Monetary	Fed on pause. May see a hike in the second half of the year.	Monetary tightening less of a risk as long as inflation stays contained.
	Government	Fiscal stimulus likely outweighs tariff impact. Shutdown impact should be small.	Policy uncertainty may be delaying capital spending decisions.
RISKS	Financial	Political environment may lead to looser credit standards and accelerate deregulation.	Short term positive; longer term may enable economic and market excesses to build.
mono	Geopolitical & Other	China, trade, Brexit remain in focus.	May contribute to higher stock volatility.
ΟΥΓΡΟΓΙΟ	Developed Overseas	Anti-Eurozone populism, Brexit uncertainty, slower growth are concerns.	Potential diversification benefits, but returns may lag U.S.
OVERSEAS	Emerging Markets (EM)	Trade risk remains; there are pockets of stress, but EM growth outlook overall still looks good.	Low valuations and strong earnings offer EM upside potential once trade situation is resolved.
FINANCIAL	Corporate Profits	We estimate 6–7% S&P 500 earnings growth in 2019.	S&P 500 may show appreciation consistent with earning gains.
CONDITIONS	Main Street	Fed Beige Book supports positive outlook, although trade concerns increasing.	Supports cyclical sector performance.

Source: LPL Research, U.S. Department of Energy, Haver Analytics 02/15/19

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 for GDP growth of near 2.5% is based on baseline potential GDP growth of 2.0%, using current trend growth and longer-term expected growth drivers, low probability of recession, and an upward adjustment due to the expected continued 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.



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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 on subsequent pages.

Characteristics	EQUITY ASSET CLASSES	EQUITY SECTORS	FIXED INCOME	Characteristics	ALTERNATIVE ASSET CLASSES
BEST Overall Ideas	EM Equities Large Value Equities U.S. Equities	Industrials Technology	Investment-Grade Corporates MBS	BEST OVERALL IDEAS	Long/Short Equity
Fundamentals	Large Value Equities U.S. Equities	Industrials Technology	Investment-Grade Corporates MBS	Catalysts	Event Driven Global Macro
Technicals	U.S. Equities	Healthcare Utilities	Preferred Securities	Trading Environment	Long/Short Equity
Valuations	EM Equities Large Value Equities Master Limited Partnerships (MLP)	Energy Financials Industrials	Investment-Grade Corporates	Volatility	Global Macro Long/Short Equity

READING THE PORTFOLIO COMPASS

RATING	ICON	Fundamental, technical, and valuation characteristics for each category are shown by their blue icons below, and displayed as colored squares.						
Negative	•	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.						
Negative/Neutral	٠	Rationales for our views are provided on the right side.						
Neutral	•	Technicals Neutral Fundamentals Positive						
Positive/Neutral	٠	Sector F T V O O O S&P Rationale						
Positive	•	Materials 3.2 China stimulus could help more, but technicals are negative and China's growth is stalling						
Previous Position	۲	Energy 8.2 Intriguing potential contrarian opportunity, but supply and technicals suggest caution; favor MLPs.						

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

Expectations for solid but slower growth in the U.S. economy and corporate profits support our year-end 2019 fair value target range for the S&P 500 of 3000, as noted in our *Outlook 2019* publication. We expect attractive relative valuations compared with growth to help buoy value stocks. We expect a transition to large cap market leadership and away from small caps in 2019 as the economic cycle ages, trade issues may be resolved, and the dollar's uptrend potentially hits resistance. Our positive emerging markets (EM) view is based on a solid economic growth trajectory, favorable demographics, attractive valuations, and a potential U.S.-China trade agreement.

	Sector	F	т	v	Θ	0	Ð	Rationale
	Large Growth							As trade issues potentially ease, the business cycle ages, and the dollar's uptrend potentially hits resistance, large caps may sustain market leadership. We maintain
	Large Value							our slight preference for value due to attractive relative valuations after a sustained period of growth outperformance and our positive financials sector view.
Style/Capitalization	Mid Growth					•		Mid cap valuations are attractive relative to large caps, and merger and acquisition activity has been robust, which is supportive. As with large caps, relative valuations
Style/Cap	Mid Value							point to value over growth.
	Small Growth							As the economic cycle ages in 2019, small caps may lag. Rising interest rates and potentially tighter financial conditions may create challenges for small cap companies
	Small Value							with higher costs of capital and a greater reliance on debt.
	U.S.							Among developed markets, we remain U.S. focused, supported by superior economic growth, fiscal stimulus, and expected steady earnings gains.
Region	Large Foreign		•					Economic growth in Europe and Japan is lackluster and weakening. GDP growth in EM is likely to more than double the pace of developed international economies in 2019,
Reç	Small Foreign					•		and we believe policy uncertainty is actually higher in Europe, notably the U.K. and Italy, than in EM.
	EM							Our positive EM view is based on a solid economic growth trajectory, favorable demographics, attractive valuations, and favorable prospects for a U.SChina trade agreement, with a bias toward emerging Asia.
MLPs	MLPs							Good yields, strong U.S. production, rebounding oil prices, acquisition activity, and a dip in interest rates help. Sensible choice for income-oriented accounts.

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.

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EQUITY SECTORS

We continue to prefer cyclical sectors as the U.S. economic expansion continues, as noted in our *Outlook 2019* publication. We expect industrials to benefit from a pickup in capital spending and a potential trade deal with China. Though financials face a headwind from a flat yield curve, we believe the sector is well positioned to benefit from deregulation, rising dividend payouts, and a potentially more favorable interest rate environment over time. Our biases toward potential near-term changes include energy (negative) and healthcare (positive).

	Sector	F	Т	•	Θ	0	Ð	S&P*	Rationale
	Materials					•		2.6	A China trade deal offers upside potential but commodity prices are lagging and any boost from a possible infrastructure deal is probably a ways off.
	Energy					•		5.5	Supply cuts overseas have helped get crude oil back closer to fair value, though U.S. supply overhang remains, capping potential upside in our view.
	Industrials		•			•		9.7	We expect a U.SChina trade deal in early 2019, which should bolster business confidence and help spur capital investment; slower growth overseas is a headwind.
Cyclical	Communication Services					•		10.2	No longer a defensive sector after 2018 revamp. Our cautious views on media and traditional telecom offset a strong growth outlook for former tech stocks.
	Consumer Discretionary	-	-					10.0	Valuations are high and the sector tends to do relatively worse late in business cycles.
	Technology							20.4	Our positive business spending outlook and the sector's productivity- enabling role are positive; lower near-term earnings expectations may enable upside.
	Financials							13.2	Valuations have become more attractive after a difficult 2018; deregulation, higher dividend payouts, and a potentially steeper yield curve may help in 2019.
	Utilities				•			3.2	The potential for higher interest rates and our preference for cyclical sectors drive caution, though recent plateau in interest rates should help.
sive	Healthcare	-	-			•		15.0	The healthcare spending outlook remains solid, demographics are positive, technicals still look relatively positive, and policy uncertainty is clearing up; positive bias.
Defensive	Consumer Staples				•			7.2	We favor cyclical sectors steering us away from staples; lackluster growth outlook offsets ebbing interest rate risk now that Fed is on hold.
	Real Estate							3.0	The group offers rich yields and fundamentals still look pretty good; still, we prefer more economically sensitive sectors.

* S&P 500 Weight (%)

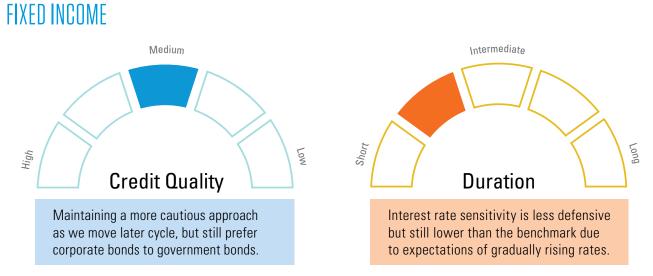
Investing in real estate/REITs involves special risks such as potential illiquidity and may not be suitable for all investors. There is no assurance that the investment objectives of this program will be attained.

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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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	Ţ	v	Θ	0	Ð	Rationale
	Munis– Short-Term							Valuations relative to Treasuries remain expensive relative to history. Upcoming supply dynamics attractive.
Bonds	Munis– Intermediate-Term							Valuations relative to Treasuries remain on the expensive side. Upcoming supply dynamics attractive.
Tax-Free Bonds	Munis– Long-Term		-			•		Valuations remain attractive relative to long-dated Treasuries. Higher duration may be a headwind if rates rise. Upcoming supply dynamics attractive.
	Munis– High-Yield							Becoming more cautious as we move later cycle. Some long-term headwinds from pension obligations. Rate sensitivity may weigh if rates rise. Upcoming supply dynamics attractive.

(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.

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FIXED INCOME (CONTINUED)

For fixed income allocations, we continue to emphasize a blend of high-quality intermediate bonds in tactically oriented portfolios. We remain concerned about rising rates putting pressure on fixed income in 2019. Slowing but still above-trend economic growth could support corporate profits, but moderate inflationary pressure may offset these benefits for fixed income investors. We maintain a cautious approach with credit-sensitive areas of the market, but a "coupon-clipping" environment may still aid suitable investors.

	Sector	F	Ţ	•	Θ	0	Ð	Rationale
-U.S.	Treasuries				-•			Yield spreads to overseas 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 has moved below Fed's 2% target. Interest rate sensitivity could be a headwind.
	MBS		-					Yield per unit of duration remains attractive relative to other high-quality options, but Fed balance sheet normalization remains a risk over time.
Taxable Bonds – U.S.	Investment-Grade Corporates						•	We still find incremental value in corporate bonds due to the economic backdrop. Valuations still attractive but moving toward fair value.
Taxal	Preferred Stocks					•		Fundamentals are firm for U.S. banks. Higher interest rate sensitivity remains a risk.
	High-Yield Corporates					•	_	Spreads near fair value for this point in the cycle. Yields remain attractive and economy supportive, but a less effective diversifier than higher-quality options.
	Bank Loans							Weaker investor protections, high issuance a concern. Still offers some protection against rising rates and economy remains supportive.
Foreign	Foreign Bonds Hedged				•			Fading easing bias of foreign central banks could lead to rising rates and pressure on performance.
Faxable Bonds – Foreign	Foreign Bonds– Unhedged	-			•			Potential currency volatility, low yields, and unattractive valuations are negatives.
Taxab	EMD					•		Valuations still attractive but moving toward fair value. Trade policy and geopolitical tensions remain a risk.

Investing in foreign and emerging market debt (EMD) 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 repayment risk; market risk; 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.

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COMMODITIES & ALTERNATIVE ASSET CLASSES

Supply adjustment has boosted WTI Crude back to near fair value, though the U.S. supply overhang remains. Demand outlook remains generally positive for industrial metals and trade tensions are ebbing, but technicals are challenged. Tariffs are also weighing on crop prices, which have broken down technically. The event-driven investing outlook remains promising as tax reform, global growth, and healthy deal flow support the corporate activity opportunity set.

Industrial Metals Image: Constraint of the second	•	Global demand outlook remains generally positive, and more U.S. infrastructure spending is still possible. Watching Chinese data, trade negotiations. Improving technicals, the Fed's pause, and potential plateau in the U.S. dollar drive our upgraded view, though we continue to favor riskier assets.
Metals		upgraded view, though we continue to favor riskier assets.
Energy		
		The market's supply adjustment has boosted WTI Crude back to near fair value, though the U.S. supply overhang remains, possibly capping further upside.
Agricultural		Trade tensions have weighed on agriculture prices, which continue to exhibit downward price momentum from a technical analysis perspective.
Sector $\begin{bmatrix} T \\ E \\ T \end{bmatrix} \begin{bmatrix} V \\ O \end{bmatrix} \begin{bmatrix} O \\ O \end{bmatrix} \\ O \end{bmatrix} \begin{bmatrix} O \\ O \end{bmatrix} \begin{bmatrix} O \\ O \end{bmatrix} \begin{bmatrix} O \\ O \end{bmatrix} \\ O \end{bmatrix} \\ O \end{bmatrix} \begin{bmatrix} O \\ O \end{bmatrix} \\ O$) 🕂	Rationale
Long/Short Equity	•	Year-to-date performance has rebounded from 2018, helped by a more balanced return profile between value and growth. Strategies with conservative or variable net exposure to globals still favored.
See Event Driven	•	Corporate deal activity remains robust; managers actively redeployed capital following large deal closings at end of 2018; strong risk-adjusted returns, limited beta profile continue.
Managed Futures		We continue to favor multimanagers or a combination of uncorrelated trading strategies to smooth and diversify return profiles. Recent rally in equity markets has led to weak performance for many strategies that remain short equity contracts across the globe.
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
	Catalysts	C T	Potential for favorable macroeconomic and/or idiosyncratic market developments that may benefit the investment strategy.
EGEND	Trading Environment	E	Market characteristics present sufficient investment opportunities for this investment style.
	Volatility	v 0	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.



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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 has been prepared by LPL Financial LLC.

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