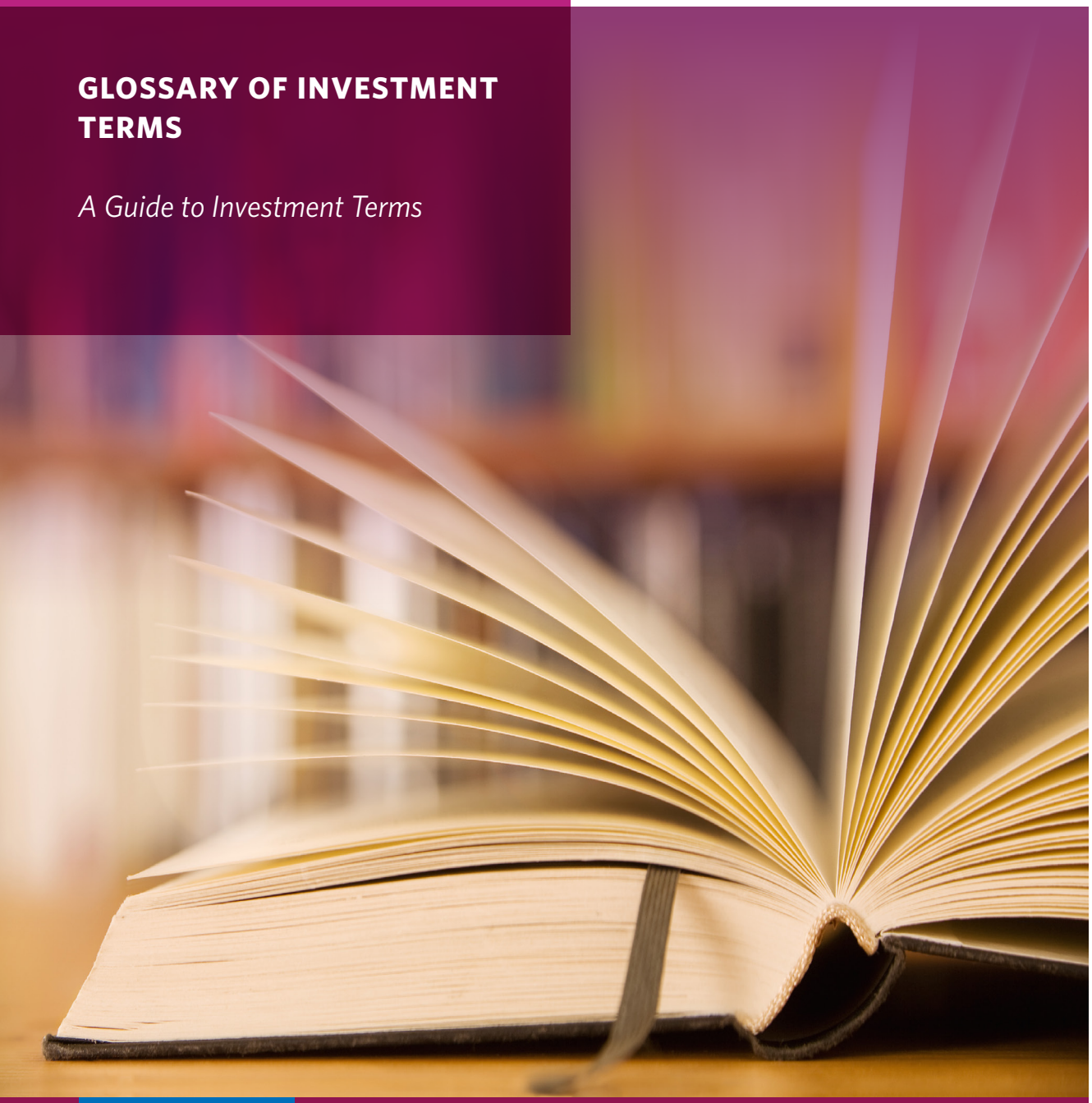
GLOSSARY OF INVESTMENT TERMS

A Guide to Investment Terms



Strategic Investment Group®

Glossary of Investment Terms

THIS GLOSSARY OF INVESTMENT TERMS features common investment and financial terms that Strategic uses in publications and reporting. We invite you to explore what some commonly used investment terms mean in practice.

Glossary Of Investment Terms

Active Risk – Active risk is a measure of the increase in return volatility attributable to active management calculated as the standard deviation of the difference between the returns of the investment and those of the benchmark. Tracking error is an often-used synonym for active risk. Low active risk or tracking error indicates that an investment closely tracks its benchmark, while a high active risk or tracking error indicates that the two returns diverge substantially. *See tracking error and information ratio.*

Alpha – Alpha is a measure of investment performance relative to a benchmark or market used to assess the value added or subtracted by an investment manager. A positive alpha connotes outperformance, a negative alpha indicates underperformance. *See alpha overlay and beta.*

Alpha Overlay (Portable Alpha) – These strategies separate the alpha, or excess return, generated by an asset class from beta, or market return, and overlay the alpha on a passive market index, such as a stock or bond index. Alpha overlay involves transferring alpha from asset classes that are highly favorable for alpha generation to asset classes that are highly efficient and offer little scope for added value, while still maintaining the beta returns of the receiving class. Low-beta hedge fund portfolios that have been constructed to generate returns that are largely independent of market movements are typically used as the alpha engine in an alpha overlay strategy. Large-cap U.S. equities are an example of an efficient market that is often used as the receiving asset class. An alpha overlay on the S&P 500 index would, for example, offer the opportunity to enhance the return of the index while broadly maintaining its beta. *See alpha, beta, and efficient market hypothesis.*

Arbitrage – Arbitrage is an attempt to exploit price discrepancies of the same or related assets in different markets. These strategies seek to profit from market inefficiencies by buying the underpriced asset in one market and selling the overpriced asset in another market with the goal of benefiting from a convergence in prices across markets.

Asset-Backed Securities (ABS) – ABS are bonds collateralized by a pool of illiquid receivables, including mortgages, auto loans, student loans, and credit card receivables originated mainly by banks. ABS issuers bundle together receivables into a bond to sell to investors. The principal and interest payments of the bond are backed by the cash flows generated by the underlying receivables. Securitized structures have the benefits of freeing up bank capital, broadening the sources of financing available for housing, student, and credit card lending, and offering investors access to cash flows that would not otherwise be available. *See mortgage-backed security.*

Asset Class – An asset class represents a group of financial instruments that have similar risk and return characteristics and are traded in the same markets, such as equities and bonds. Investors allocate portfolios across assets to achieve diversification and manage risk.

Basis Point – A basis point is 1/100 of 1%, or seen another way, 100 basis points equal 1%. Basis points are frequently used as a measure of bond yields, or the incremental changes in the Federal Reserve's policy rate.

Basis Risk – Basis risk represents the divergence between the price movements of a security and a derivative security on that security. It arises from the imperfect correlation of the derivative security and its underlying asset. For example, a long position on S&P 500 index futures may not fully match the price movements of the S&P 500 index, resulting in basis risk. A degree of basis risk is inescapable. There are no perfect hedges in finance. *See correlation, tracking error, and Japanese garden.*

Benchmark – A benchmark is a reference standard, usually a market index, that serves as a basis to measure the performance of active investment managers. Ideally, a benchmark should be representative of the investment opportunity set, replicable, investable, and widely recognized as an industry standard. Benchmarks are typically established for each individual manager, asset class, and the total portfolio.

Beta – Beta measures an investment's sensitivity to market movements. Beta is calculated as the correlation coefficient of an investment's returns with the market. Alpha is the unexplained residual of the regression of an investment's returns against the market's return (*see alpha*). A beta of 1 indicates that the investment's return moves in line with the market. A beta of more than one is more volatile than the market, while an investment with a beta of less than one is less volatile. *See alpha and beta.*

Callable Bond – A callable bond gives the issuer the right to repay the bond early. A callable bond specifies the call price and earliest date the call can be exercised. This gives the issuer the option to refinance the bond at a lower rate of interest if market rates decline after issuance. In return for that option, callable bonds typically offer a higher yield than non-callable bonds.

Capital Market Assumptions – Capital market assumptions for the return, risk, and correlation of different assets are the main building blocks of portfolio construction. These assumptions are typically derived from historical relationships and financial theory. The goal of portfolio construction is to design a portfolio that combines assets optimally in the sense that there is no other combination of assets that achieves a higher return for any level or risk. *See efficient frontier, return, risk, and correlation.*

Carried Interest – Carried interest represents the share of returns above a specified hurdle rate of return that are retained by investment managers as an incentive fee. It is expressed as percentage of net portfolio returns above a specified hurdle. The share is typically 20% in the case of private equity but can be higher. Carried interest is considered as a capital gain for tax purposes and taxed accordingly, making it especially attractive to general partners of private equity funds. *See hurdle rate, general partner, and limited partner.*

Certificate of Deposit – A certificate of deposit (CD) is a fixed-term instrument issued by banks mainly to retail customers. CDs are issued at a discount, pay a fixed rate of interest, carry an early withdrawal penalty, and are guaranteed by the FDIC in amounts of up to $250,000.

Co-Investment – In the context of private equity, the participation of limited partners of private equity funds alongside the general partner in a specific investment opportunity is termed a co-investment. Limited partners gain exposure to the investment without incurring all of the fees associated with other fund investments. As co-investment is voluntary, limited partners also gain some increased control over their exposure.

Collateralized Loan Obligation (CLO) – CLOs are a type of asset-backed security collateralized by sub-investment grade syndicated bank loans. *See asset-backed security.*

Commitment Period – In private equity investments, the commitment period is the period during which investments will be made. During this period, limited partners in a private equity fund are committed to meet capital calls up to the amount of their committed capital.

Convexity – Convexity measures the change in duration as interest rates change. It takes into account that the inverse relationship between interest rate changes and changes in a bond's price is not linear. In the case of positive convexity, the increase in a bond's price for a fall in interest rates is greater than the decline in its price for an increase in rates. Some bonds, such as mortgage-backed securities, typically have negative convexity because they allow borrowers to prepay when interest rates fall. In this case, the bond's price will fall more than it rises for a given change in interest rates. *See duration and MBS.*

Corporate (or Commercial) Paper (CP) – CP is a short-term, unsecured obligation issued at a discount by a corporation.

Correlation – Correlation is a statistical measure used to express the relationship between two variables. The sign of the correlation coefficient indicates the direction of the relationship between two variables, while the absolute value indicates the extent of the relationship. For example, a correlation coefficient of 1 indicates that the two variables move together in lockstep, while a correlation coefficient of -1 indicates an inverse relationship. The correlation of an investment's return to the return of a market index is the beta of the investment. *See beta, capital market assumptions, and efficient frontier.*

Coupon Bonds – Coupon bonds make periodic payments (coupons) at a rate set as a percent of the face value or par value of the bond. Coupon payments are typically paid semi-annually. At the bond's maturity, the buyer of the bond receives the last coupon payment plus the par value of the bond. The original coupon bonds had coupons attached to the bond instrument. These coupons specified the amount of interest due at each coupon payment date. *See discount bond.*

Credit Risk – Also called default risk, credit risk is the risk that the issuer of a bond may fail to make the bond's contractual payments. *See credit rating.*

Credit/Distressed – Credit/distressed hedge fund strategies make investments in securities of companies that are experiencing a liquidity crisis, have defaulted on their debt obligations, have filed for Chapter 11 bankruptcy protection, or are otherwise financially distressed. The typical strategy involves long positions with attractively priced high-yield credits and short positions in overvalued high-yield credits. Returns are derived primarily from idiosyncratic distressed opportunities, not market beta.

Credit Rating – A credit rating is a measure of the credit quality of bonds ranging from AAA to D (default). Bonds rated BBB or higher are considered to be "investment grade," while unrated or lower-rated issuers are often referred to as "high yield" or "junk" bonds. Rating agencies assign ratings to bonds based on their assessment of the probability of default by the issuer of the bond.

Curve Risk – Curve risk or yield curve risk refers to the impact of changes in the shape of the yield curve on a bond's price or on the price of a bond portfolio. *See yield curve.*

Derivative Securities – Derivative securities are financial instruments whose price is based on an underlying asset. Derivative securities come in many varieties. Forward contracts specify customized terms to buy or sell an asset at a certain price and date. Futures contracts are similar to forward contracts except that futures have standard terms, are traded on an exchange, and involve the posting of margin, or collateral. Option contracts give the buyer the right (not the obligation) to buy or sell a security at a specified price and within a specified time. Because they involve the right but not the obligation to transact on the specified terms, options have an asymmetrical payoff pattern. Swaps are yet another derivative security that entails the exchange of cash flows for a specified period. The cash flows exchanged are based on an interest rate, exchange rate, or some other index. In addition, there are several permutations and combinations of these four basic derivative securities.

Discount Bond – Unlike a coupon bond, a discount bond does not make periodic interest payments. Instead, a discount bond pays accrued interest to the buyer at maturity. The price of a discount bond is below the bond's par or face value with the difference between the price and par value representing the interest on the bond. *See coupon bond.*

Duration – Duration is a measure of interest rate sensitivity that is used as an indicator of the risk of a bond. The higher the duration, the greater the impact of a change in interest rates on the bond's price. Duration is an increasing function of the maturity of the bond and a decreasing function of the coupon of the instrument. *See convexity, the rate of change of duration.*

Efficient Frontier – The efficient frontier is a curve representing the risk and return of portfolios of assets. Portfolios on the curve contain assets that are combined in a way that achieves an optimal tradeoff between risk and return. These portfolios are optimal in the sense that they generate the highest possible return for a given level of risk. Points within the efficient frontier curve are suboptimal in that it would be possible to achieve a higher return at a given level or risk, or conversely, achieve the same return with lower risk.

Equity/Statistical Arbitrage – Equity/statistical arbitrage is a hedge fund strategy that seeks to exploit temporary price disparities among assets that have historically maintained a statistically significant, stable relationship. This strategy is more dependent on technical variables than fundamental analysis.

Equity Long/Short – Equity long/short hedge fund strategies invest in equities and equity derivatives on the long and short side using a combination of fundamental and quantitative analysis. The beta of equity long/short strategies is high relative to many other hedge fund strategies, including equity market neutral strategies.

Equity Market-Neutral – An equity market-neutral hedge fund strategy seeks to exploit temporary pricing anomalies. In this strategy, an inexpensive stock is purchased while a related expensive stock is simultaneously sold short with the objective of exploiting price inefficiencies while neutralizing market beta.

Extension Strategy – Extension strategies, often called 130/30 or limited shorting strategies, are typically constructed as a long portfolio representing 130% of total assets and a short position representing 30%. The long and short positions are structured to have a beta of one with the short portfolio offsetting the additional long positions. These strategies increase the opportunity set open to active managers. In particular, these strategies ease the zero-bound constraint on underweighting stocks, thus allowing managers to take better advantage of their insights into which stocks are likely to underperform the market.

Fisher Equation – Named after Irving Fisher, the Fisher equation defines the nominal yield as the sum of the real yield plus the rate of inflation. *See nominal yield and real yield.*

Fixed Income Relative Value – Fixed income relative value hedge fund strategies involve levered long and short positions in related fixed income securities designed to exploit pricing inefficiencies while minimizing market beta.

Fixed Interest Rate Bond – A fixed interest rate bond pays a constant interest rate over its life. *See coupon bond and floating interest rate bond.*

Floating Interest Rate Bond – The interest rate paid by a floating interest rate bond is indexed to a short-term interest rate, such as a three-month U.S. Treasury bill. Indexation to a short-term yield reduces the risk of capital loss to the bondholder in the event market interest rates rise. *See fixed interest rate bond.*

Fundamental vs. Quantitative Strategies – Active investment strategies are often divided into two different approaches: fundamental and quantitative. While the distinction between the two is not clear cut, fundamental strategies involve the analysis of the financial statements and other characteristics of a firm to determine the relative attractiveness of investing in the firm's securities. Quantitative strategies, in contrast, are more data driven and model based. They usually involve less subjective discretion than fundamental strategies and exclude qualitative judgments.

General Partner – A general partner is the legal entity sponsoring and performing day-to-day operations of a fund organized as a limited partnership, which is often formed under Delaware or Cayman Island law. General partners manage the fund's operations and direct its investments on behalf of the limited partners. General partners receive base and performance fees. *See carried interest and limited partner.*

Geometric Return – Geometric return measures investment return that takes into account the impact of compounding. In contrast to the simple arithmetic average return on an investment, the geometric return adjusts for the impact of return variability on compounded returns, often referred to as the volatility drag. If the periodic return were constant at each period, the average and geometric returns would be identical. However, if the returns are not linear, with positive and negative returns at different times, the two return measures will differ, and the geometric return will be below the average return. The difference between the two measures is the volatility drag. The geometric return provides a more accurate calculation of the cumulative return over time than the average return.

Global Macro – A hedge fund strategy that seeks to capture macro trends using derivative securities on currencies, commodities, bond indices and equity indices rather than focusing on the securities issued by individual firms. Global macro strategies generally rely on both fundamental and technical analysis and combine long and short positions with leverage to optimize returns. The beta of this strategy can vary widely across interest rate, credit, equity, commodity, and currency markets.

Hurdle Rate – A base rate used as a minimum to judge an investment, often representing the minimum return needed for the investment to be profitable. In the case of private equity funds, it is the rate compounded annually to be earned on capital drawn for investment or expenses before the general partner of a private equity fund becomes entitled to carried interest. *See general partner and carried interest.*

Immunization – An investment strategy typically used by pension funds to manage exposure to interest rate risk. The strategy involves matching the interest rate sensitivity, or duration, of the pension's assets with that of its liabilities. This strategy is effective because a pension's liability stream of benefit payments closely resembles a short position in a bond with a known duration. By matching the interest rate sensitivity of each, interest rate risk is neutralized. Changes in the value of the pension's assets and liabilities as a result of interest rate movements will be offsetting. *See liability driven investments (LDI).*

Implied Volatility – A measure of volatility derived from option prices that is used to gauge market expectations for future price fluctuations. The most widely used indicator of implied volatility for equities is the VIX, an index that measures the implied volatility of options on the S&P 500 index. It is popularly referred to as the "fear gauge" and used as a broad measure of investor risk sentiment. *See derivative security and volatility.*

Index – A number calculated by weighting a number of prices or rates according to predetermined rules. Examples in finance include indices on particular segments of global stock, bond, and commodity markets. The purpose of the index calculation is usually to provide a single number whose behavior is representative of the movements of a variety of prices or rates indicative of a market. An investable index is one in which an investor can purchase securities that match the underlying market's performance, less transactions costs.

Information Ratio – A measure that assesses manager skill relative to the risk taken by the manager. The ratio is calculated as the manager's alpha relative to the benchmark divided by the manager's tracking error. Tracking error is a measure of the active risk taken by the manager to generate alpha. Tracking error is calculated as the standard deviation of the difference between the returns of the investment and those of the benchmark. *See active risk and tracking error.*

Japanese Garden – The only place known to the world of finance where perfect hedges exist. *See basis risk and tracking error.*

Kurtosis – A measure of whether a distribution is more or less "peaked" than a normal distribution. Higher kurtosis means that more of the variance is due to infrequent extreme deviations (positive or negative) as opposed to frequent modest-sized deviations. The normal distribution has a kurtosis of zero. Thus, positive kurtosis implies that outcomes are more likely to be at the tail ends of the distribution than predicted by the normal distribution. In the presence of kurtosis, the distribution is commonly said to have "fat tails." *See probability distribution.*

Leverage – Leverage is a term for the degree of indebtedness used to finance investment activity. For example, a leverage ratio of 2:1 indicates that $2 dollars is borrowed against each dollar invested. Since leveraging enhances both positive and negative returns, it increases volatility but also profit potential.

Liability Driven Investment (LDI) – LDI strategies are used in the management of pension portfolios to manage the volatility of the pension's funded status. The intuition behind LDI strategies is that a pension's stream of benefit payments resembles a bond. The pension is in effect short a bond. That short bond position is best hedged by a long bond portfolio with the same interest rate sensitivity or duration. In this way, the volatility of the pension's funded status as measured as the ratio of its assets to liabilities is reduced, thus reducing the risk that the sponsor of the pension will need to make further payments into the pension. *See immunization.*

Liquidity Premium - The liquidity premium is the extra component of yield or return required to compensate the investor for the possibility that an adequate resale market may not be available. In the case of highly illiquid investments, such as private equity, the liquidity premium is relatively high in view of the long-term commitment of capital inherent to such investments.

Liquidity Risk - Liquidity risk is the risk that a financial market may be closed to trading, or trade inefficiently or at higher-than-usual cost. Liquidity risk is most prevalent in periods of market turmoil, although technical factors can disrupt trading on markets that are normally quite liquid.

Liquidity Score – Liquidity score is an estimate of the share of an investment that can be liquidated in a specified period. For example, the three-month liquidity scores for assets range from 0% for private equity to 100% for cash and represent an estimate of the percentage of assets that could be liquidated in that period without material market impact.

Monte Carlo Simulation – A Monte Carlo simulation measures uncertainty and variability using a large number (10,000+) of random samples to simulate different outcomes and generate probability distributions of these outcomes.

Mortgage-Backed Security (MBS) – MBS are bonds collateralized by pools of mortgage loans originated by banks whose cash flows are used to make the bond's coupon and principal payments. MBS are a type of asset-backed security (ABS) and represent the bulk of the ABS. Like other ABS, MBS increase the resources available for lending and spread the risk of lending across a broad investor base. *See ABS and convexity.*

Municipal Bond – A municipal bond is issued by a state, municipality or county to finance public works projects. Many municipal bonds are exempt from Federal taxation. Residents of the state issuing the municipal bond are in many cases also exempt from state taxes.

Nominal Return – The expected average annual return of the portfolio before adjusting for inflation. *See geometric return and real return.*

Nominal Yield or Interest Rate – The nominal yield includes the real yield plus the rate of inflation. *See real yield and Fisher equation.*

Option Contract – An option contract gives the holder of the option the right to buy (call option) or sell (put option) a security at a specified price over a specified period. The price of an option is mainly a function of the price volatility of the underlying security, the maturity of the option, and the difference between the market price of the underlying security and the (strike) price at which the option holder may buy or sell the security. *See VIX index and MOVE index.*

Policy Benchmark – A benchmark that represents the strategic asset allocation (SAA) whose expected return and risk are aligned with the investor's objectives. The policy benchmark is calculated as the weighted average of the benchmark returns of each asset class included in the SAA.

Policy Portfolio – The policy portfolio embodies the long-term strategic asset allocation expected to achieve the desired tradeoff between risk and return. *See policy benchmark and strategic asset allocation.*

Prepayment Risk – Prepayment risk stems from the possibility that a borrower may repay a loan or bond earlier than expected, thus changing the expected timing of the bond's cash flows. This risk is most prevalent in mortgage-backed securities (MBS) given the ability of mortgage borrowers to repay their loans early. For example, if interest rates fall, mortgage borrowers may repay their loans early to refinance at a more advantageous rate. This reduces the maturity of the MBS below its expected maturity, thus eroding the price gain to the MBS from the decline in market yields. *See mortgage-backed security, callable bond, duration, and convexity.*

Private Equity – Private equity investments are investments made in companies that are not publicly traded usually structured as a limited partnership with a general partner that manages investments and limited partners that supply capital. Private equity funds have an expected life of 10 or more years during which the committed capital of investors is called by the general partner to fund investments in private firms that are then sold when the general partner deems the sale advantageous. There are different private equity strategies. **Growth equity** strategies invest in established companies that are in a phase of rapid expansion and need an infusion of private equity capital to grow. **Venture capital** strategies invest in early stage and start-up companies in the hope that these firms will become going concerns. **Mid-market buyouts** involve investments in

established firms that need capital to implement operational improvements or changes in strategic direction to boost the firm's value.

Probability Distribution – A probability distribution describes the range of likely outcomes around a calculated mean. The archetypical probability distribution is the normal distribution, or bell curve. The **normal probability distribution** is symmetrical. The mean, median, and mode of the distribution are identical. In a normal distribution, 68%, 95%, and 99.7% of the distribution fall within 1-, 2-, and 3-standard deviations away from the mean. *See kurtosis.*

Puttable Bond – A puttable bond gives the bondholder the right to sell the bond back to the issuer at a specified price (typically par value) and dates. Puttable bonds protect investors from increases in market interest rates. Given this investor protection, puttable bonds typically carry a lower yield than comparable non-puttable bonds.

Rate of Return – There are three different frequently used measures of rate of return. The **average rate of return** is the simple average of the periodic returns. The **dollar-weighted rate of return** (also referred to as the **internal rate of return**) is the rate of return that discounts a portfolio's terminal value and the timing and amount of interim cash flows back to its initial value. It is the true rate of return that an investor receives on initial and subsequent periodic investments. The **time-weighted rate of return** is a geometric average that measures the compound rate of growth of an investment over time.

Real Geometric Return – The real geometric return measures the compound growth rate in excess of inflation. The geometric return is often estimated by subtracting one-half the portfolio variance from the arithmetic, or average return. *See geometric return and volatility drag.*

Real Return (average or arithmetic) – The real return is the return of the portfolio in excess of inflation.

Real Yield – The real yield is the yield after netting out inflation calculated as the nominal yield minus the inflation rate. *See Fisher equation and nominal yield.*

Risk – Investing to meet a return objective necessarily involves price fluctuations (**market risk**), possible weaknesses in the investment decision-making process (**governance risk**), potential difficulties in the sale of investments (**liquidity risk**), trading with others who might not fulfill their obligations (**counterparty risk**), losses arising from errors or fraud (**operational risk**), the possibility that some investments will generate adverse publicity for the investor (**reputation risk**), and the likelihood of misaligned incentives either within the investor's institution or between the investor and third parties (**conflicts of interest risk**). Investors typically focus on market risk as measured by the annualized standard deviation of monthly returns. The calculation can either be based on past performance or forward-looking in which case the expected volatility is model based and mainly driven by the risk factors that are typically characteristic of the asset or strategy being analyzed.

Risk Factor – Portfolios can be deconstructed into a range of underlying factor exposures that drive returns. At the highest level, factor exposures include premiums associated with equity risk, duration risk, credit risk, and currency risk. Factor analysis generally goes several layers deeper to identify whether investments have style biases, for example value or growth, small- or large-cap stocks, quality stocks, and momentum strategies. Factor exposures also include industries, sectors, geographical regions, currencies, and financial ratios. Focusing on factor exposures helps to understand the sources of return, manage risk by avoiding unwanted concentrations to a particular factor, diversify a portfolio, and evaluate investment managers. Analyses of factor exposures can be returns-based or based on the features of each security included in the portfolio. Multivariate regression is the workhorses of risk factor analyses. These regressions aim to disentangle the underlying sources of return by regressing a portfolio's returns against the returns of individual factors to determine the explanatory power of each risk factor in the portfolio's return.

Risk Premium – The risk premium is the additional required rate of return due to the extra risk incurred from investing in an asset. The **equity risk premium** measures the expected stock market return minus a risk-free rate. The equity risk premium is often measured as the difference between the equity earnings yield (measured as the inverse of the price/earnings ratio) and the real yield on 10-year U.S. Treasuries. The **term premium** measures the difference in yield between holding a long-term bond versus a series of short-term bonds over the same holding period.

Risk Versus Uncertainty – Risk is quantifiable and measures the range of outcomes when the probabilities of different outcomes are either known or can be estimated. Uncertainty is not quantifiable. Uncertainty exists when the probability of different outcomes cannot be known ex ante and the outcomes themselves may not even be imagined.

R-Squared – In a regression model, the R-squared is the proportion of a dependent variable that is explained by the independent variable. An r-squared of 0 means that the model does not explain any part of the dependent variable's fluctuation. An r-squared of 1 suggests that all of the variability of the dependent variable is explained. In investments, this measure is used to ascertain the proportion of the manager's return that can be explained by an index return. For example, an R-squared of 0.93 means that 93% of the variation of the manager's return is explained by the index, and the residual is explained by other influences such as stock selection.

Sharpe Ratio – The Sharpe ratio is a risk adjusted measure of return. It is calculated as the average of the periodic portfolio returns minus the periodic risk-free rate divided by the portfolio's standard deviation.

Short Sales – Short sales are a sell high, buy low strategy that involves the sale of a borrowed security deemed to be overpriced and selling that security when it falls in price, thus generating a profit. Short selling can be used as a hedging technique or for speculation. *See extension strategies*

Skewness – Skewness is a measure of symmetry in the distribution of returns. Positive skew implies that the right tail of the distribution is more pronounced than the left. In other words, relative to a symmetric distribution, the return series has some extreme high values. For a positively skewed distribution, the mean is higher than the median.

Sortino Ratio – The Sortino ratio is a measure of excess return per unit of risk based on downside semi-variance, instead of total risk. While similar to the Sharpe Ratio, this ratio focuses only on downside volatility because investors are most concerned about the risk of loss. *See Sharpe ratio.*

Standard Deviation – Standard deviation is a measurement of variation around a mean. It is calculated as the square root of the mean of the squared deviation of members of a population from the mean of the population. The standard deviation is the most widely used proxy for risk. It is useful when the observations are normally distributed around the mean but can be misleading if they are not. In a normal probability distribution, 68% of the distribution falls within 1 standard deviation of the mean, 95% within 2 standard deviations, and 99.7% within 3 standard deviations

Strategic Asset Allocation – The strategic asset allocation (SAA) represents the mix of assets that an investor judges is best aligned with his investment objective and risk tolerance. The weighted average of the benchmark returns of each asset class included in the SAA is used as the policy benchmark. The SAA represents the long-term target allocation across assets. Investors often make active tactical asset allocation changes in an attempt to add value when the prices of asset classes included in the SAA diverge from fair value. The success of these active asset allocation changes is judged relative to the portfolio benchmark. *See policy benchmark.*

Tracking Error – Tracking error is a measure of how much a portfolio deviates from its benchmark calculated as the standard deviation of the value added by the manager. A tracking error below 2% indicates a close fit, and above 5% indicates a loose fit.

Treasury Inflation-Protected Security (TIPS)
TIPs are securities issued by the U.S. Treasury that are structured to protect investors from the risk of inflation by indexing the par value of the bond to inflation. TIPS make

semi-annual coupon payments with the coupon payment calculated using the indexed par value adjusted for inflation. On maturity, the buyer of the TIPS receives the last coupon payment plus the bond's par value adjusted for inflation. As a result of this structure, TIPS provide a real yield and an inflation hedge to investors.

Value Added Attribution – Value added attribution is an analysis of the sources of return of an investment that involves decomposing returns into specific active decisions. These decisions include, at the macro level, active allocations across asset classes (referred to as **active asset allocation**) or across segments within an asset class (referred to as **asset class structuring**). At the micro level, these decisions focus on security selection. By providing an insight into the main drivers of an investment manager's returns, investors are better able to assess the skill of the manager and the types of active risk taken by the manager.

VIX Index – The CBOE volatility index (VIX) is a measure of short-term expectations for equity market volatility. It is constructed using short-term options on the S&P 500 index. Although the focus of the VIX is the U.S. equity market, it has come to be seen as a more general barometer of investor sentiment and in this capacity is called the "fear gauge". The VIX has a bond market counterpart – the MOVE Index – that measures expectations for short-term volatility in the U.S. Treasury market. *See MOVE index and options.*

Volatility – Volatility is a measure of the dispersion or spread of observations around the mean calculated as the annualized standard deviation of returns, or mathematically, the square root of the variance. The words volatility and risk are often used interchangeably, although return volatility is only one of several investment risks. *See implied volatility, risk, and uncertainty.*

Volatility Drag – Volatility drag is a measure of the negative impact of return volatility on compounded returns. It is the difference between the arithmetic average return over a period and the geometric, or compounded return over that period. The negative impact on geometric returns is a positive function of volatility – the higher the volatility the greater the drag. *See geometric return.*

Yield Curve – The yield curve depicts the yield on bonds (most often U.S. Treasury securities) of different maturities. Yields are shown on the vertical axis and maturities on the horizontal axis. The yield curve is typically upward or positively sloped with yields rising as maturities lengthen. The yield curve is said to be inverted when it has a downward slope with yields on shorter term bonds exceeding those of bonds with longer maturities.

Strategic Investment Group

Strategic, a pioneer in dedicated Outsourced CIO (OCIO) solutions since 1987, offers a comprehensive service platform for managing customized portfolios for institutional and private investors. Our proprietary process combines active portfolio management, rigorous risk management, and open architecture manager selection.

Strategic functions as our clients' investment partner and co-fiduciary, effectively becoming an extension of their resources. Clients are then free to focus on their core businesses, while we focus on providing the highly specialized portfolio management expertise that clients need to meet their investment goals. Depending on a client's needs and preferences, Strategic can orchestrate the management of an entire portfolio comprising multiple asset classes, focus on specific asset classes, such as alternatives (e.g., venture capital/private equity, real estate, and/or hedge funds) or international investments, or manage strategies with high potential for adding value. Customized liability-driven investing (LDI) solutions, whether through an integrated total portfolio approach or a targeted long-duration strategy, are also available, as are solutions that address mission-related investment objectives.

We strive to build enduring partnerships with our clients by strengthening their investment programs through a dynamic, value-enhancing investment process, sound governance framework, and world class client service. **Our mission is to empower clients to achieve transformational impact through inspired investing.**

For more information, please email us at inquiries@strategicgroup.com.

Strategic Investment Group®

1001 Nineteenth Street North
17th Floor
Arlington, VA 22209 USA

+1 703.243.4433 tel
+1 703.243.2266 fax

strategicgroup.com