GLOSSARY
ACTUARIAL TERMS

Actuarial Accrued Liability. Computed differently under different funding methods, the actuarial accrued liability generally represents the portion of the Present Value of Fully Projected Benefits attributable to service credit earned (or accrued) as of the valuation date. (i.e., the difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost). Sometimes referred to as “accrued liability” or “past service liability.”

Actuarial Cost Methods. An actuarial method which defines the allocation of pension costs (and contributions) over a member's working career. All standard actuarial cost methods are comprised of two components: normal cost and the actuarial accrued liability. An actuarial cost method determines the incidence of pension costs, not the ultimate cost of a pension plan; that cost is determined by the actual benefits paid less the actual investment income.

Actuarial Equivalent. A benefit having the same present value as the benefit it replaces. (i.e., a single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan). Also, the amount of annuity that can be provided at the same present value cost as a specified annuity of a different type or a specified annuity payable from a different age.

Actuarial Gain or Loss. Experience of the plan, from one year to the next, which differs from that assumed results in an actuarial gain or loss. For example, an actuarial gain would occur if assets earned 10 percent for a given year if the assumed interest rate in the valuation is 7 percent.

Actuarial Present Value. The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of actuarial assumptions (i.e. interest rate, rate of salary increases, mortality, etc).

Actuarial Valuation Report (AVR). Actuarial valuations are technical reports providing full disclosure of the financial and funding status of public retirement systems.

Actuarial Value of Assets. The value of pension plan investments and other property used by the actuary for the purpose of an actuarial valuation (sometimes referred to as valuation assets). Actuaries often select an asset valuation method that smoothes the effects of short-term volatility in the market value of assets.

Actuarially Reduced. The method of adjusting a benefit received at an early date so that the expected totalcost to the retirement system is equivalent to the cost if the benefit did not begin until later.

Age (Retirement). Normal retirement dependent upon attainment of a specified age.

Aggregate Funding Method. The aggregate funding method is a standard actuarial funding method. The annual cost of benefits under the aggregate method is equal to the normal cost. The method does not produce an unfunded liability. The normal cost is determined for the entire group rather than on an individual basis.

Amortization. Paying off an interest bearing liability by gradual reduction through a series of installments,as opposed to paying it off by one lump sum payment.

Annuitant. One who receives periodic payments from the retirement system. This term includes service and disability retirees, and their survivors.

Annuity. A series of periodic payments, usually for life, payable monthly or at other specified intervals. The term is frequently used to describe the part of a retirement allowance derived from a participant's contributions. Compare with "pension".

Anti-Selection. The tendency of a person to recognize his/her health status in selecting the option under aretirement system which is most favorable to him or herself.

Beneficiary. The person designated to receive benefits under an employee benefit plan in the event of the death of the person covered by the plan.

Cash Balance Pension Plan. A hybrid defined benefit plan that has some of the features of a defined contribution plan. The most distinguishing feature of a cash balance pension plan is the use of a hypothetical account for each participant. Investment risk is borne by the Employer (plan sponsor), not the participant.

Cash-Out. A lump sum payment of the member's contributions prior to retirement.

Contributory Plan. A plan to which participants, as well as the employer, contribute. Under certain contributory plans participants may be required to contribute as a condition of eligibility.

Credited Service. A period of employment which is recognized as service for purposes of determining eligibility to receive pension payments and/or determining the amount of such payments.

Death Benefit. A benefit payable by reason of a member's death. The benefit can be in the form of a lumpsum, an annuity or a refund of the member's contributions.

Deferred Annuity. An annuity for which payments do not commence until a designated time in the future.

Deferred Compensation. Considerations for employment that are not payable until after the regular pay period.

Defined Benefit Plan (DB). A pension plan providing a definite benefit formula for calculating benefit amounts - such as a flat amount per year of service; a percentage of salary; or a percentage of salary, timesyears of service.

Defined Contribution Plan (DC). A pension plan in which the contributions are made to an individual account for each employee. The retirement benefit is dependent upon the account balance at retirement. The balance depends upon amounts contributed during the employee's participation in the plan and the investment experience on those contributions.

Disability Retirement. A termination of employment involving the payment of a retirement allowance as a result of an accident or sickness occurring before a participant is eligible for normal retirement.

Early Retirement. A termination of employment involving the payment of a retirement allowance before a participant is eligible for normal retirement. The retirement allowance payable in the event of early retirement is often lower than the accrued portion of the normal retirement allowance.

Entry Age Normal Cost Method (EANC). The EANC method is a standard actuarial funding method. The annual cost of benefits under EANC is comprised of two components:

> (1) Normal cost. The normal cost is determined on an individual basis, from a member’s age at plan entry, and is designed to be a level percentage of pay throughout a member’s career, and (2) Amortization of the unfunded liability.

ERISA. Employee Retirement Income Security Act acronym. This federal legislation sets minimum standards for pension design to increase the security of private sector employees' benefits. Not applicable to public retirement systems.

401(k), 403(b), and 457 Plans. These defined contribution plans allow employees to save for retirement on a tax-deferred basis. 401(k) plans are found in the private sector and the public sector in some states. 403(b) plans are for employees of public educational institutions and certain non-profit tax-exempt organization. 457 plans (also known as deferred compensation plans) are for governmental employees and non-church-controlled tax-exempt organizations.

Fiduciary. (1) Indicates the relationship of trust and confidence where one person (the fiduciary) holds or controls property for the benefit of another person; (2) anyone who exercises power and control, management or disposition with regard to a fund's assets, or who has authority to do so or who has authority or responsibility in the plan's administration. Fiduciaries must discharge their duties solely in the interest of the participants and their beneficiaries, and are accountable for any actions which may be construed by the courts as breaching that trust.

Funded Ratio. The ratio of a plan’s current assets to the present value of earned pensions. There are several acceptable methods of measuring a plan’s assets and liabilities. In financial reporting of public pension plans, funded status is reported using consistent measures by all governmental entities. According to the Government Accounting Standards Board (GASB), the funded ratio equals the actuarial value of assets divided by the actuarial accrued liability calculated under the Projected Unit Credit cost method.

General Accounting Standards Board (GASB). This governmental agency sets the accounting standards for state and local government operations.

Individual Retirement Account (IRA). A retirement account to which an individual can make annual tax-deductible contributions according to annual limits that are specified by the Internal Revenue Service.

Integrated Pension Plan. So as not to be duplicative of Social Security benefits, defined benefit plans often provide that part of the Social Security pension be subtracted from the member's annuity. Defined benefit or defined contribution plans can provide that lower pension accruals be applied to employee's earnings below a specified level, generally the Social Security taxable wage base. Employees earning more than the social security taxable wage base receive greater contributions to reflect that social security benefits are not provided on pay over that amount.

Joint and Survivor Annuity. A provision that enables a plan participant to take annuity payments with continuing payments of all or part of the benefits after his or her death going to a designated beneficiary. The annual pension benefits of the participant electing to have such a survivor annuity are generally reduced toprovide for the survivor.

Life Annuity. A monthly benefit payable as long as the annuitant is alive (straight life benefit). There are no residual payments to survivors.

Life Expectancy. The average number of years a person of a given age might be expected to live.

Lump Sum Distribution. Payment within one taxable year of the entire balance payable to the participantfrom a qualified pension or employee annuity plan.

Money Purchase Plan. A type of pension plan where the employer agrees to make a fixed contribution each year for each eligible employee. The contribution is typically expressed as a percentage of the employee's pay and the contribution constitutes a non-discretionary commitment on the part of the employer. The contribution must be made each year, regardless of employer profits, and can only be varied by plan amendment. Although treated differently under federal tax law, money purchase plans are fundamentally defined contribution plans.

Non-Contributory Plan. A retirement system in which no contributions are required of its members to aid in its financing.

Normal Cost. Computed differently under different funding methods, the normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year. The employer normal cost equals the total normal cost of the plan reduced by employee contributions.

Normal Retirement Age. The age, as established by a plan, when unreduced benefits can be received.
Pay-As-You-Go. A method of recognizing the costs of a retirement system only as benefits are paid. Alsoknown as the current disbursement cost method.

Pension. A series of periodic payments, usually for life, payable monthly or at other specified intervals. The term is frequently used to describe the part of a retirement allowance financed by employer contributions. Compare with "annuity".

Pension Benefit Obligation (PBO). The portion of the Actuarial Present Value of future benefits attributable to service credit that has been earned to date (past service).

Plan Termination Liability. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a “going concern” basis and is not normally determined in a routine actuarial valuation.

Pop-Up Option. A type of joint and survivor option. If the retiree's named beneficiary predeceases him or her, the amount of the retirement benefit increases (pops up), to the amount payable for a life-only paymentoption.

Pre-Funding. To accumulate a reserve fund in advance of paying benefits. This is the opposite of "pay-as-you-go."

Present Value. The current worth of an amount or series of amounts payable in the future, after discounting each amount at an assumed rate of interest and adjusting for the probability of its payment or receipt.

Present Value of Fully Projected Benefits (PVFB). Computed by projecting the total future benefit payments from the plan, using actuarial assumptions (i.e. probability of death or retirement, salary increase, etc.), and discounting the payments to the valuation date using the valuation interest rate to determine the present value (today’s value).

Projected Benefits. Pension benefit amounts which are expected to be paid in the future taking into account such items as the effect of advancement in age as well as past and anticipated future compensation and service credits.

Qualified Plan. An employee benefit plan approved by the Internal Revenue Service, meeting requirements set forth in IRS Code Section 401. Contributions to such plans are subject to favorable tax treatment.

Replacement Ratio. A calculation of the degree to which retirement income supplants a pre-retirement member's "take home" pay, less working expenses. To determine this ratio, several factors must be taken into account: a retiree's pre-retirement earnings; changes in tax liabilities after retirement; changes in Social Security tax liability; the elimination of work-related expenses - including contributions to the retirement system; and savings.

Reserve. A collection of assets set aside to meet future liabilities. Account used to indicate that funds havebeen set-aside for a specific purpose and is not generally available for other uses.

Roth IRA. A retirement account which an individual can make after-tax contributions according to annuallimits that are specified by the IRS.

Service Retirement. Retirement dependent upon completion of a specified period of service. In some usages, the term has the same meaning as "normal retirement".

Supplemental Cost. A separate element of actuarial cost which results from future normal costs having a present value less than the present value of the total prospective benefits of the system. Such supplemental cost is generally the result of assuming actuarial costs accrued before the establishment of the retirement system. A supplemental cost may also arise after inception of the system because of benefit changes, changes in actuarial assumptions, actuarial losses, or failure to fund or otherwise recognize normal cost accruals orinterest.

Thirteenth Check. An annual supplemental retirement payment arising from earnings on investments of the system in excess of those determined as needed.

Unfunded Actuarial Accrued Liability (UAAL). The excess, if any, of the Actuarial Accrued Liability over the Actuarial Value of Assets. In other words, the present value of benefits earned to date that are notcovered by current plan assets.

Unfunded Liability or Unfunded PBO. The excess, if any, of the pension benefit obligation over the valuation assets. This is the portion of all benefits earned to date that are not covered by plan assets.

Valuation Assets. The value of current plan assets recognized for valuation purposes.
Variable Annuity. A benefit whose payments vary from year to year depending upon the value of a portfolio of securities (usually common stocks).

Vesting. The right of an employee to the benefits he or she has accrued, or some portion of them, even if employment under the plan is terminated. An employee who has met the vesting requirements of a pension plan is said to have a vested right. Voluntary and mandatory employee contributions are always fully vested.

Withdrawal. The termination of employment prior to becoming eligible for any benefits. The term sometimes refers to subsequent termination of membership in a system by withdrawal of the employee's accumulated contributions from the system.

INVESTMENT TERMS

Accrual Basis: Accounting method whereby income and expense items are recognized as they are earned or incurred, even though they may not have been received or actually paid in cash. The alternative is a 'cashbasis' accounting.

Accrued Interest: Interest that has accumulated between the most recent payment and sale of a bond or other fixed income security. At the time of sale, the buyer pays the seller the bond's price plus accrued interest, calculated by multiplying the coupon rate by the number of days that have elapsed since the last payment.

Actuary: Mathematician employed by an insurance company to calculate premiums, reserves, dividends, and insurance, pension, and annuity rates, using risk factors obtained from experience tables.

After Tax Basis: basis for comparing the returns on a corporate taxable bond and a municipal tax-free bond. For example, a corporate bond paying 10% would have an after-tax return of 7.2% for someone in the 28% tax bracket. Therefore, any municipal bond paying higher than 7.2% would yield a higher after-tax return.

After Tax Real Rate of Return: The amount of money, adjusted for inflation that an investor can keep, out of the income and capital gains earned from investments.

American Depository Receipts (ADRs): Foreign stocks, denominated in American dollars that are traded on a US stock exchange. ADRs are typically sponsored by a financial institution that buys a large block of aforeign security and resells it in a domestic market and in domestic currencies.

Alpha: Synonym of 'value added', linearly similar to the way beta is computed, alpha is the incremental return on a manager when the market is stationary. In other words, it is the extra expected return due to non- market factors. This risk-adjusted measurement takes into account both the performance of the market as a
whole and the volatility of a manager. A positive alpha indicates that a selected portfolio has produced returns above the expected level at that level of risk, and vice versa for a negative alpha.

Appreciation: An increase in the market value of an asset such as a stock, bond, commodity or real estate.

Asset Allocation: How a portfolio is apportioned among different types of investments. The goal of an asset allocation is to achieve for the portfolio the highest expected return without taking on more risk than the investor wants to accept.

Asset Allocator – Market Timing: Managers who capitalize on the cyclical behavior of the economy and of market price trends by altering the level of equity exposure in anticipation of these cycles. The characteristics may be consistent with those of any style group; however, the asset allocation decision (tactical or market timing) should be the dominant factor in long-term performance. Market timers may be 100% invested at any
time in stocks, bonds, or cash. The manager's stock selection is of secondary importance compared to theasset allocation decision. Often, large company stocks are chosen to ensure liquidity.

Asset Backed Security: A fixed income security that has specifically pledged collateral, such as car loans,credit card receivables, lease loans, etc.

Average Compound Return: The geometric mean is the monthly average return that assumes the same rate of return every period to arrive at the equivalent compound growth rate reflected in the actual return data. In other words, the geometric mean is the monthly average return that, if applied each period, would give you a final Vami (growth) index that is equivalent to the actual final Vami index for the return stream you are considering. (Vami - The Value Added Monthly Index that is simply the growth of $1000 index)

Average Deviation: Returns the average of the absolute deviations of data points from their mean. This is a measure of the variability in a data set.

Average Gain: This is an arithmetic average of the periods with a gain. It is calculated by summing the returns for gain periods where rates of return are >= 0 and then dividing the total by the number of gain periods.

Average Loss (Loss Mean): This is an arithmetic average of the periods with a loss. It is calculated by summing the returns for loss periods where rates of return < 0 and then dividing the total by the number ofloss periods.

Average Rate of Return: It is a tool for indicating and measuring performance, including appreciation (or depreciation), realized capital gains (or losses), and income. Indices are computed and then forward-linked to calculate a rate of return for the period under study, for any type of weighting, i.e. time weighted, dollar
weighted, etc. In PSN, returns can be calculated for any time period with a quarterly multiple factor. Most recent quarter represents three fiscal months. The average rate of return is simply the arithmetic mean of areturn series.

Balanced Portfolio: Balanced managers diversify portfolio risk by investing in a combination of common stocks, bonds and cash equivalents. This is an appropriate style for investors seeking a combination of modest capital appreciation and income and less volatility by using high quality investments.

Balloon Maturity: A bond issue with larger dollar amounts of bonds or payments falling due in the lateryears of the obligation.

Barbell Portfolio: A portfolio made of short and long term bonds with no intermediate bonds in between.

Basis Point: The smallest measure used in quoting yields or percentages – one basis point equals 0.01%. For example, a change in a bond's yield from 10.67% to 11.57% would be a move of 90 basis points.

Bear Market: A period during which stock prices are declining.

Beta: A measurement indicating the volatility of a manager relative to a chosen market. A beta of 1 means a manager has about the same volatility as the market. A beta higher than 1 means the manager is to that extent more volatile than the market, while a beta lower than 1 means less volatile, i.e., a beta of 1.7 would indicatethat, historically speaking, as the market has risen 1%, the manager has risen 1.7%. Vice Versa.

Bond: A security issued by a borrower that obligates him to make specified payments to the holder over a specific time period. A coupon bond obligates the issuer to make interest payments called coupon payments over the life of the bond, then to repay the principal loan amount at maturity.

Book Value: An accounting measure describing the net worth of common equity according to a firm's balance sheet. It is also the value at which an asset is carried on a balance sheet.

Bottom Up Approach: Bottom up managers are primarily concerned with a stock's fundamental attributes, and in the most extreme case, a bottom up manager will not care what products the company produces. Frequently, a pecking order of attractive balance sheet characteristics is used to weed out favorable and unfavorable candidates from a large universe of stocks. From this, only the top percentile of candidates will make the grade for actual purchasing. It is not uncommon to see proprietary, computer driven models responsible for bottom-up portfolios.

Bull Market: A period during which stock prices are rising.

Call Option: The contractual right (not obligation) for the holder to buy a security from another individual at a predetermined price and quantity within a certain time period.

Callable Bond: A bond that can be 'called' or redeemed by the issuer at a date prior to the stated maturity date. If interest rates drop significantly below a callable bond's coupon rate, the issuer will call the bond and refinance the debt at a lower interest rate.

Capital Appreciation: Increase in the price of an investment; also known as growth.

Capital Gain/Loss: The profit (loss) that results from a change in the price of an asset. A realized gain (loss) occurs when an investment security is sold at a price above (below) its cost.

Capital Market Line: Represents all securities available in the market place and all possible risk and return combinations.

Capital Markets: A term encompassing all the securities markets in which stock, bonds and money market instruments are traded.

Capital Preservation: An investment objective in which protecting the investor's initial investment fromloss is the primary goal.

Capitalization: Mathematically refers to a company's stock price per share multiplied by the total number of shares outstanding. A Company's capitalization gives an idea of the size of a company, which in turn givesinsight into the liquidity value of a stock position in a company.

Small Cap: stocks with less than $2.0 billion in market capitalization.
Mid Cap: stocks with market capitalization between $2.0 billion and $10.0 billion.
Large Cap: stocks with market capitalization larger than $10.0 billion.

Cash Equivalents: Investments in short-term debt obligations issued by governments, banks and corporations. The obligations mature less than one year from issuance.

Collateralized – Mortgage Backed: A security where a group of mortgage pass-through securities have been put together, and the cash flows are paid out in a specific order to different buyers. Created to give structure to the uncertain cash flows of mortgage pass-through securities. Managers generally purchase these instruments when the primary investment objective is high current income with a secondary objective of
capital appreciation.

Commercial Paper: Unsecured debt generally issued by companies to meet short-term financing needs. Commercial paper represents a large portion of the so-called money market.

Common Stock: Equities, or equity securities, issued as ownership shares in a publicly held corporation. Shareholders have voting rights and may receive dividends based on their proportionate ownership.

Consumer Price Index (CPI): A measure of inflation. The CPI is equal to the sum of prices of a number of goods purchased by consumers and weighted by the proportion each represents in a typical consumer's budget.

Contrarian: An investor who does the opposite of what most investors are doing. A contrarian investor often selects securities that are out of favor with the market.

Contrarian: often called an extreme form of 'value' investing. Portfolio characteristics include low price to book values, high dividend yields, low to negative earnings per share growth rates and low portfolio turnover. Generally, managers are buying securities that everyone else hates.

Convertible Bond: Convertible bonds are fixed income corporate securities; either bonds or preferred stock that can be exchanged for a specified number of the issuing company's common stock at a specified price. Convertible bonds offer the downside floor price of a straight bond while potentially allowing the holder toshare in price appreciation of the underlying stock.

Convexity (Negative): Portfolio rise in price move slowly in bull market than it declines in price in a bearmarket.

Convexity (Positive): Term used to describe a portfolio whose price rises more rapidly than an index in a bull market (rate declining) and falls more slowly in a bear market (rates rising) than an index. For example, if the index is up 10% and the bond is up 20%, and if the index is down 20% and the bond is down 15%.

Core Equity: Managers whose portfolio characteristics are similar to the S&P 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. Portfolios may exhibit growth and value characteristics similar to the broad market but with no consistent preference.

Corporate Bonds: A debt instrument issued by a private corporation.

Correlation Coefficient: Correlation measures the extent of linear association of two variables. The Coefficient of Determination (R2) is a measure of how well the regression line fits the data (variation explained by the regression line). Tracking Error (unexplained variation) is simply 1- R2.

Coupon / Coupon Rate: Feature stated on the bond that defines the amount of interest the bondholder will receive from the issuer of the bond. The coupon rate is the amount of interest expressed as a percentage ofthe face value. Interest payments pay and/or accrue semiannually.

Credit Quality: A measure of the likelihood that a company will be able to make interest and principal payments on its bonds or other debt securities. Standard & Poor's Corporation and Moody's Investors Service rate the credit quality of publicly traded debt securities. Bonds with the highest credit quality ratings are known as "investment grade," and bonds with poor credit quality ratings are known as "speculative."

Cumulative Rate of Return: This is an internal measurement indicative of performance being cumulatedover a specific time period. This measurement is unannualized.

Cumulative Excess Rate of Return: An internal measurement indicative of performance being cumulated over a specific time period in excess of a benchmark. This measurement is un-annualized.

Current Income: Cash interest regularly received on fixed income investments and cash dividends regularly received on stocks.

Current Yield: Coupon percentage divided by the current price of the bond.

Custodian: An institution where the assets of a portfolio are 'held' such as a bank or brokerage firm.

Debenture: An unsecured bond issued by a corporation – a bond that is not backed by specific collateral.Subordinated debentures have secondary claim on income to other debenture bonds.

Dedicated Portfolio: A portfolio where the (monthly) cash flows are matched to a known set of monthlycash requirements to eliminate a liability or interest rate risk.

Diversification: The process of investing in a number of different types of investments to reduce the risk of poor performance by any one type of investment having a big impact on overall portfolio results.

Dividend Yield: An equity characteristic commonly used as a value indicator. Calculated by dividing the indicated dividend rate for next 12 months by the current price.

Dividend: Cash payment made by a company to stockholders.**Dollars:** A numerical representation of asset gain and loss based on a return series. Generally, an initial investment of $1, $100, or $10,000 is assumed. The sub-sequent 'dollar' amount will be derived using a rateof return for the period and the 'dollar' amount for current period. Dollars provide a presentation of asset value over time for ease of investment analysis.

Downside Capture Return: A measure of the manager's performance in down markets relative to the market itself. This is an annualized semi-variance rate of return that represents a gain or loss generated during the market down periods. The return for the market for each quarter is considered a down market quarter if it is less than zero. Using those down quarters, the returns for the manager for all down quarters are linked and annualized to get this number. Please note that just because the market performance is down does not meanthat the performance of the manager is down as well.

Duration: It is the weighted average time it takes to receive all interest and principal payments. It is the sum of the present value of each payment weighted by the time period in which the payment is received, with the result divided by the price of the bond. This is a method for which bonds can be standardized and compared on an equal basis. Bonds with the same duration will experience similar price fluctuations. The higher (longer) the duration – the more risk. Bonds with longer maturities have greater risk and potential rewards.

Downside Probability: The probability that a manager will not achieve a target return. For Example: Assume 20 quarterly rates of return, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20 and a target return of 8 percent. Downside probability = (return 1 through 7) t 20 = 7/20 = 0.35 or 35 percent of not achieving an 8 percent return.

Downside Risk: A statistic to measure the risk associated with achieving a specific target return. This statistic separates portfolio volatility into downside risk and upside uncertainty. The downside considers all returns below the target return, while the upside considers all returns equal to or above the target return. Downside risk has certain similarities with the traditional standard deviation statistic. However, it differs as
follows:

- Only returns below the target return are considered.
- The mean value in the standard deviation is replaced by the target return.
- Instead of a division by N – 1, downside risk requires a division by N.

This statistic may be used in the same manner as standard deviation.

Drawdown: A Drawdown is any losing period during an investment record. It is defined as the percent retrenchment from an equity peak to an equity valley. A Drawdown is in effect from the time an equity retrenchment begins until a new equity high is reached. (i.e. In terms of time, a drawdown encompasses both the period from equity peak to equity valley (Length) and the time from the equity valley to a new equity high (Recovery).

EAFE Index: An abbreviation for the Morgan Stanley Capital International Europe, Australia and Far EastIndex, an index of overseas stock performance.

Efficient Frontier: A graph representing a set of portfolios that maximize expected return at each level ofportfolio risk.

EPS: Earnings per share; a company's net income divided by the total number of outstanding shares. Investment managers use it as a measure of the firm's profitability.

Equity: The ownership interest of common and preferred stockholders in a company. Also see COMMONSTOCKS.

Excess Rate of Return: The Excess rate of return is calculated by taking the difference between the quarterly return of a portfolio minus the quarterly return of a benchmark. The quarterly excess is then linked and annualized to get the number.

Expected Return: The return investors anticipate they will receive on an investment over some future period. The expected return often differs from the investors' realized return.

Fiduciary: An individual who has discretionary authority or control over a qualified plan trust, its assets, or its administration, or who for compensation provides investment advice regarding plan assets. A fiduciary is charged with the responsibility of investing the money wisely for the beneficiary's benefit.

Fixed Income Investments: Debt securities, such as bonds and money market instruments, with specifiedinterest and principal payment dates and amounts. Can also include preferred stock.

Floater Bond: A bond with an interest rate float at a spread off of an index – it has qualities of a short-term,high-grade security.

Fundamental Analysis: Rest on the belief that the value of a stock is influenced by the performance and balance sheet of the company itself. It is an analysis of the company's historical financial performance, along with the future economic industry outlook.

General Obligation Bond: Municipal bonds backed by the full faith and taxing ability of the municipality.

Global Equity: Managers who invest in both foreign and domestic equity markets (US and non-US equitysecurities).

Growth Stocks: Stocks of companies whose earnings are expected to grow rapidly.

Growth: Managers who invest in companies that are expected to have above average prospects for long-term growth in earnings and profitability. Portfolio characteristics typical of this style are: dividend yield that is frequently below market averages, valuation levels frequently above market averages, and volatility of returns above that of the market. The earnings per share growth is typically higher than average with the emphasis on earnings and specific stock selection. Portfolios on average generate a relatively higher amount of portfolioturnover.

Guaranteed Insurance Contracts (GIC): GIC's are a contract issued by an insurance company promising a stated nominal interest rate over a specified period of time. (It is similar to a zero coupon that is issued by an insurance company).

Hedge Position: A way for an individual to protect a position in a financial institution, product or commodity for the purpose of reducing risk. There are many ways to hedge; including out and call options,futures contracts, stock index options, interest rate options and currency options.

High Yield Bonds: Debt issued by a company whose credit rating is below investment grade. Because there is a considerable amount of risk associated with high yield bonds, the company must make them attractive to investors by offering a high coupon (yield). The risk of default with high yield bonds is much greater thanthat with investment grade bonds.

Immunization: A fixed income strategy that matches durations of assets and liabilities so as to make the net worth of the assets unaffected by interest rate movements. This is intended to lock in a fixed rate of returnover a specified time period irrespective of rate changes.

Income: See CURRENT INCOME.

Index Funds: A mutual fund holding shares in proportion to their representation in a market index such asthe S&P 500.

Index: Statistical composite that measures changes in the economy or in financial markets, often expressed in percentage changes from a base year or from the previous month.

Information Ratio: The information ratio is an efficiency measure calculated by dividing the Excess Rate of Return by the Standard Deviation of the Excess Rate of Return stream (Tracking Error). Please refer to thedefinition of Excess Rate of Return or Tracking Error for further details.

Institutional Investor: An organization that trades large volumes of securities. Some examples are mutual funds, banks, insurance companies, pension funds, labor union funds or corporate profit-sharing plans.

Interest Rate Risk: The risk associated with a change in market interest rates and the associated change inthe price of a security.

Intermediate Term: Bonds that mature in approximately 5-15 years with a duration of approximately 3-6years.

International Equity: Managers who invest in non-US equity securities.

International/Global Bonds: Managers who invest some or all of their assets in non-US fixed income securities, and the remainder, if any, in domestic fixed income securities. These managers seek to take advantage of international currency and interest rate movements, bond yields and/or international diversification.

Investment Discipline: How an investment manager implements an investment style.

Investment Grade: Fixed income investments receiving high credit quality ratings. Bonds are investment grade if they have a BBB or better rating by Standard & Poor's Corp. or a Baa or better rating by Moody'sInvestors Service.

Investment Manager: The individual or firm responsible for the day-to-day decisions involving an investment portfolio. The manager decides which stocks or bonds to buy or sell and when. Investment managers must be registered with the Securities Exchange Commission and usually with the state where they do business.

Investment Objective: The investment strategy followed by an investor or investment manager. Investment objectives can be designed to generate long-term growth, current income or a combination of both.

Investment Policy Statement: A summary of an individual's or institution's investment objectives that serves as a guide for all investment decisions.

Investment Style: The investment philosophy and strategy an investment follows in buying and selling investments.

Kurtosis: This statistical measure characterizes the relative peakedness or flatness of a distribution compared with the normal distribution. Positive kurtosis indicates a relatively peaked distribution. Negative kurtosisindicates a relatively flat distribution.

Ladder Portfolio: A portfolio made up of securities that mature in equal amounts each year.

Liquidity: The ease with which investments can be bought or sold quickly without having a major impact on the price of those investments.

Long Position: Buying a contract or owning an asset for its income and possible price appreciation

Long Term Bonds: Bonds with a maturity of greater than 15 years and a duration of 6+ years.

Losing Return: Any negative return.

Managed Account: Investment account consisting of money that one or more clients entrust to a manager, who decides when and where to invest it. Clients are charged a 'management fee', which is a fixed percentage of the fund's asset value.

Margin: An investor buys a security using a combination of cash and borrowed funds.

Market Capitalization: The market value of a company. It equals the current stock price of a company multiplied by the total number of outstanding shares.

Market Cycle: Generally regarded as a time period of 5 to 10 years.

Market Timing: The act of selling investments before they decrease in value and buying them when they are about to increase in value. Market timer investors will move their money among stocks, bonds and money market instruments based upon their expectations of short-term price changes in the capital markets.

Maturity: The date of when a bond expires.

Maximum Return: Highest return achieved in any specified time period, i.e. single best month's return.

Median: Returns the median of the given numbers. The median is the number in the middle of a set of numbers; that is, half the numbers have values that are greater than the median, and half have values that areless.

Median Absolute Deviation: The distribution of the returns around the median

Minimum Return: Lowest return achieved in any specified time period, i.e. single worst month's return.

Money Manager: See INVESTMENT MANAGER.

Money Market: The market in which short-term, highly liquid, low-risk assets such as Treasury bills, bank certificates of deposit (CDs), corporate commercial paper and bankers' acceptances are traded.

Mortgage-Back Securities: Ownership claim in a pool of mortgages or an obligation that is secured by such a pool. Also called a pass-through because payments are passed along from the mortgage originator to thepurchaser of the mortgage-backed security.

Municipal Bond: Tax-exempt bonds issued by the state and local governments, generally to finance capital improvement projects.

Mutual Fund: Fund operated by an investment company that raises money from shareholders and invests it in stocks, bonds, options, commodities, or money market securities.

Nominal Return: The return on an investment, not adjusted for the effect of inflation.

Number of Down Quarters: The number of quarters that the benchmark was less than zero in the periodbeing measured.

Number of Up Quarters: The number of quarters that the benchmark was greater than zero in the periodbeing measured.

P/E Ratio: Stock price divided by the earnings per share (EPS). It represents the amount stock investors are willing to pay for $1 of the company's earnings. Investment managers use it as a measure of the firm's relative value.

Par Value: Par value is equal to the nominal or face value (amount) of the security.

Performance: The change in value of an investment or portfolio over a specific period of time. The overall performance of an investment includes any income and capital gains/losses.

Portfolio: The combined securities held by an investor.

Preferred Stock: Nonvoting shares in a corporation, paying a fixed or variable stream of dividends. Preferred stock has features similar to both equity and fixed income instruments. Like a bond, preferred stock promises to pay the holder a fixed dividend each year and the holder has no voting power. Preferred dividends must be paid (cumulative) in full before common shareholders are paid.

Premium Bond: One that is selling for more than its par value. When market interest rates decrease, theprice of existing bonds must increase and sell for a premium.

Present Value: The value today of a future payment, or a stream of payments, discounted at some appropriate compound interest – or discount – rate. For example, the present value of $100 to be received 10 years from now is about $38.55, using a discount rate equal to 10% interest compounded annually.

Principal: The amount of money borrowed by a company in issuing a bond or other fixed income security.It represents the amount that must be repaid by the borrower upon maturity.

R-Squared: It is used to show how much a manager's variability can be accounted for by the market. For example, if a portfolio's R-Squared is 0.79, then 79% of the manager's variability is due to market conditions. As R-Squared approaches 100, the portfolio is more closely correlated with the market.

Rate of Return: It is a tool for indicating and measuring performance, including appreciation (or depreciation), realized capital gains (or losses), and income. Indices are computed and then forward-linked to calculate a rate of return for the period under study, for any type of weighting, i.e. time weighted, dollar weighted, etc. In PSN, returns can be calculated for any time period with a quarterly multiple factor. Most recent quarter represents three fiscal months.

Real Return: The return on an investment minus the effects of inflation.

Reinvestment Risk: The risk of being unable to invest the proceeds of a fixed income investment upon maturity into other fixed income securities having comparable interest rate. The risk is created by the possibility of a future drop in market interest rates.

Relative Risk: It is the uncertainty of future returns. It is the standard deviation of the portfolio divided bythe standard deviation of the market.

Return in an Up and Down Market: A measurement indicating the rate of return for a manager portfolio or a chosen market index. If the proxy or market index return greater than or equal to zero, the market is said to be 'up.' When the return for the proxy or market index is below zero, it is considered to be a 'down' market.

Risk: The possibility that the actual return on an investment will be different from the expected return. Typically, the greater the risk, the greater the possible return on an investment.

Risk-free Investment: A riskless investment; U.S. Treasury securities are considered risk-free investments.

S&P 500: Market value index of stock market activity. Measure the performance of 500 widely held common stocks and is often used as a proxy for the stock market.

Sector Rotators: Managers who take advantage of expected changes in performance of sectors of the economy – managers will consistently overweight sectors of the market that they feel will be better performers. This style is typically the result of a top down stock selection approach with the focus on industry selection rather than specific stock selection.

Securities and Exchange Commission (SEC): A federal government agency, which was created by the Securities and Exchange Act of 1934, which regulates the securities industry and administers federal securities laws.

Sharpe Ratio (Ex Ante): A return/risk measure developed by William Sharpe. It is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and standard deviation. High Sharpe Ratio measures good performance (efficiency). Therefore, a Sharpe Ratio of 1 is better than a ratio of .05.

Sharpe Ratio (Ex Post): A return/risk measure developed by William Sharpe. It is a measurement of efficiency utilizing the HISTORICAL relationship between risk-adjusted return and standard deviation. High Sharpe Ratio measures good performance (efficiency). Therefore, a Sharpe Ratio of 1 is better than a ratio of .05.

Sharpe Ratio – Sample: See definition for Sharpe Ratio. In the "sample" method of calculation, the Sharpe Ratio formula is divided by n-1.

Short Position: Act of selling a contract or an asset without actually owning it in the first place with anticipation of a price decrease.

Skewness – This statistical measure characterizes the degree of asymmetry of a distribution around its mean. Positive skewness indicates a distribution with an asymmetric tail extending toward more positive values. Negative skewness indicates a distribution with an asymmetric tail extending toward more negative values.

Specialty: Managers who invest in a specific niche of the market, which cannot be classified in any particular category. Example would be stock picking contrarians, or managers who run concentrated portfolios, or firms that do not rigidly stick to wither a growth or value discipline.

Sortino Ratio: It is analogous to William Sharpe's Sharpe ratio. Introduced by Dr. Frank Sortino from the world of academia into the practice of finance. The only difference here is that only returns below the target return are considered. It is basically a ratio of excess returns of the target return versus the downside deviation of the manager. Thus, Sortino ratio has a Max, Min, Average, etc… Maximum Sortino ratio places managers at their peak efficiency while minimum Sortino points out their strongest defect.

Standard Deviation: A measure of dispersion about an average in applied statistics. It is a good measure of the historical variability of the return earned by an investment manager. The assumption is the greater variability in the rate of return connotes greater risk undertaken in achieving the return. For example, one would prefer a portfolio that earns 5% each period to one that alternates between a return of zero in one period and 10% the next. A general rule is that, for any given rate of return, the lower the standard deviation the better; similarly, for any given standard deviation, the manager who provides the highest rate of return is best.

Standard Deviation – Sample: See definition for Standard Deviation. In the "sample" method of calculation, the formula for standard deviation is divided by n-1.

Time Horizon: The amount of time investors allot to achieve the expected return on their investments. Generally, the longer the time horizon, the more risk the investor can accept.

Top Down: Security selection process whose first concern is to identify attractive macroeconomic features of the equity markets. A top down manager might tilt a portfolio towards newly expanding industry groups or perhaps to a recently depressed economic sector. Raw fundamentals such as P/E, price/book and earnings per share are secondary in nature to the manager's decision-making process. The primary concern is asset allocation and sector analysis.

Total Return: Managers whose investment objective is to obtain total return consisting of current income and appreciation of capital through investments in fixed income securities without regard to remaining maturity.

Total Return: The total amount a given investment returns to investors, including any capital gains or losses and stock dividends or interest from bonds or other interest bearing securities.

Tracking Error: A measurement that indicates the standard deviation of the difference between a selected market index and a manager's quarterly returns. For example, a manager selects an index as a benchmark for comparison against his/her portfolio. Each quarter generates new returns for both the manager and the selected index. The returns for the manager are then compared to the indexes to determine the amount of excess return, which produces a tracking error. A low tracking error indicates that the manager is tracking the selected index closely or has roughly the same returns as the index.

Tracking Error – Sample: See definition for Tracking Error. In the "sample" method of calculation, the formula for Tracking Error is divided by n-1.

Treasury Bills: A short-term money market instrument regularly sold by the U.S. government. Issued inminimum denominations of $10,000, T-bills have maturities of 13, 26 and 52 weeks.

Treasury Bonds: U.S. Treasury obligations that mature in more than ten years.

Treasury Notes: U.S. Treasury obligations that mature in two to ten years.

Treynor Ratio: Similar to Sharpe ratio, Treynor ratio is a measurement of efficiency utilizing the relationship between annualized risk-adjusted return and risk. Unlike Sharpe ratio, Treynor ratio utilizes market risk (beta) instead of total risk (standard deviation). Good performance (efficiency) is measured byhigh ratio; i.e., a Treynor ratio of 1 is better than a ratio of 0.5.

Value: Managers who invest in companies believed to be undervalued on an absolute basis or relative to the market and/or historical levels. Portfolios typically possess lower than average price/earnings ratios, price/sales ratios, price/book value ratios and/or high dividend yields. Stocks generally also have lower earnings per share growth, low debt (debt/equity ratio) and higher quality. Most value managers often exhibit lower than average portfolio turnover.

Volatility: Fluctuations in a security or portfolio's value. Volatility is viewed as a measurement of an investment's risk.

Upside Market Capture Ratio: A measure of the manager's performance in up markets relative to the market itself. A value of 110 suggests the manager performs ten percent better than the market when the market is up. During the selected time period (for example: 3 years), the return for the market for each quarter is considered an up market quarter if it is greater than zero. The returns for the manager and the market for all up quarters are calculated. The Upside Market Capture Ratio is calculated by dividing the return of the manager during the up market quarters by the return of the market during the same quarters.

Upside Capture Return: A measure of the manager's performance in up markets relative to the market itself. This is an annualized semi-variance rate of return that represents a gain or loss generated during the market up periods. The return for the market for each quarter is considered an up market quarter if it is greater than zero. Using those up quarters, the returns for the manager for all down quarters are linked and
annualized to get this number. Please note that just because the market performance is up does not mean that the performance of the manager is up as well.

Upside Potential and Downside Risk: A measurement that separates standard deviation into upside uncertainty and downside risk. Instead of having only one risk factor, managers can dissect the variability of returns into uncertainty (upside) and risk (downside). Downside theory states that managers should be evaluated only in terms of their downside risk. On the other hand, upside uncertainty may reward managers
because of positive returns and should not be considered when discussing risk.

Upside Probability: It is the probability that a manager will achieve the target return. Of course, the greater the chance the more likely they are to succeed.

Upside Uncertainty: Conversely used to verify all downside risk results. However, show the importance of upside probability.

Upturn: The best possible return which could have been calculated during a given time interval. It is expressed as a percentage value.

Warrant: A security giving its holder the option to purchase stock from the firm at a specified price up until the warrant's expiration date.

Yankee Bonds: Issued by foreign entities who register with the SEC and issue in US dollars, underwritten by a US syndicate and sold to US investors.

Yield Curve: Interest rates available for each maturity from today out to 30 years. It is frequently plotted on a single line graph as an easy way to look at the relationship between yield and maturity. Normally, the longer the time to the maturity of a security, the higher its yield – this gives the yield an 'upward slope'.

Yield to Maturity: The discount rate that equates the present value of the future cash flows to the market price. Stated in another way, it is the average rate of return earned if a bond is purchased at a market price and held until maturity. It is the internal rate of return of the cash flows provided by the bond.

Winning Return: Any positive return.
