GLOSSARY

Abnormal return Return on a stock beyond what would be predicted by market movements alone. Cumulative abnormal return (CAR) is the total abnormal return for the period surrounding an announcement or the release of information.

Accounting earnings Earnings of a firm as reported on its income statement.

Acid test ratio See quick ratio.

Active management Attempts to achieve portfolio returns more than commensurate with risk, either by forecasting broad market trends or by identifying particular mispriced sectors of a market or securities in a market.

Active portfolio In the context of the Treynor-Black model, the portfolio formed by mixing analyzed stocks of perceived nonzero alpha values. This portfolio is ultimately mixed with the passive market index portfolio.

Adjusted alphas Forecasts for alpha that are modulated to account for statistical imprecision in the analyst's estimate.

Agency problem Conflicts of interest among stockholders, bondholders, and managers.

Alpha The abnormal rate of return on a security in excess of what would be predicted by an equilibrium model like CAPM or APT.

American depository receipts (ADRs) Domestically traded securities representing claims to shares of foreign stocks.

American option An American option can be exercised before and up to its expiration date. Compare with a *European option*, which can be exercised only on the expiration date.

Announcement date Date on which particular news concerning a given company is announced to the public. Used in *event studies*, which researchers use to evaluate the economic impact of events of interest.

Annual percentage rate (APR) Interest rate is annualized using simple rather than compound interest.

Anomalies Patterns of returns that seem to contradict the efficient market hypothesis.

Appraisal ratio The signal-to-noise ratio of an analyst's forecasts. The ratio of alpha to residual standard deviation.

Arbitrage A zero-risk, zero-net investment strategy that still generates profits.

Arbitrage pricing theory An asset pricing theory that is derived from a factor model, using diversification and arbitrage arguments. The theory describes the relationship between expected returns on securities, given that there are no opportunities to create wealth through risk-free arbitrage investments.

Asked price The price at which a dealer will sell a security.

Asset allocation decision Choosing among broad asset classes such as stocks versus bonds.

At the money When the exercise price and asset price of an option are equal.

Auction market A market where all traders in a good meet at one place to buy or sell an asset. The NYSE is an example.

Average collection period, or **days' receivables** The ratio of accounts receivable to sales, or the total amount of credit extended per dollar of daily sales (average AR/sales × 365).

Balance sheet An accounting statement of a firm's financial position at a specified time.

Bank discount yield An annualized interest rate assuming simple interest, a 360-day year, and using the face value of the security rather than purchase price to compute return per dollar invested.

Banker's acceptance A money market asset consisting of an order to a bank by a customer to pay a sum of money at a future date.

Baseline forecasts Forecast of security returns derived from the assumption that the market is in equilibrium where current prices reflect all available information.

Basis The difference between the futures price and the spot price.

Basis risk Risk attributable to uncertain movements in the spread between a futures price and a spot price.

Behavioral finance Models of financial markets that emphasize implications of psychological factors affecting investor behavior.

Benchmark error Use of an inappropriate proxy for the true market portfolio.

Benchmark portfolio Portfolio against which a manager is to be evaluated.

Beta The measure of the systematic risk of a security. The tendency of a security's returns to respond to swings in the broad market.

Bid–asked spread The difference between a dealer's bid and asked price.

Bid price The price at which a dealer is willing to purchase a security.

Binomial model An option-valuation model predicated on the assumption that stock prices can move to only two values over any short time period.

Black-Scholes formula An equation to value a call option that uses the stock price, the exercise price, the risk-free interest rate, the time to maturity, and the standard deviation of the stock return.

Block house Brokerage firms that help to find potential buyers or sellers of large block trades.

Block sale A transaction of more than 10,000 shares of stock.

Block transactions Large transactions in which at least 10,000 shares of stock are bought or sold. Brokers or "block houses" often search directly for other large traders rather than bringing the trade to the stock exchange.

Bogey The return an investment manager is compared to for performance evaluation.

Bond A security issued by a borrower that obligates the issuer to make specified payments to the holder over a specific period. A *coupon bond* obligates the issuer to make interest payments called coupon payments over the life of the bond, then to repay the *face value* at maturity.

Bond equivalent yield Bond yield calculated on an annual percentage rate method. Differs from effective annual yield.

Bond indenture The contract between the issuer and the bondholder.

Bond reconstitution Combining stripped Treasury securities to re-create the original cash flows of a Treasury bond.

Bond stripping Selling bond cash flows (either coupon or principal payments) as stand-alone zero-coupon securities.

Book-to-market effect The tendency for stocks of firms with high ratios of book-to-market value to generate abnormal returns.

Book value An accounting measure describing the net worth of common equity according to a firm's balance sheet.

Breadth The extent to which movements in the broad market index are reflected widely in movements of individual stock prices.

Brokered market A market where an intermediary (a broker) offers search services to buyers and sellers.

Budget deficit The amount by which government spending exceeds government revenues.

Bull CD, bear CD A *bull CD* pays its holder a specified percentage of the increase in return on a specified market index while guaranteeing a minimum rate of return. A *bear CD* pays the holder a fraction of any fall in a given market index.

Bullish, bearish Words used to describe investor attitudes. *Bullish* means optimistic; *bearish* means pessimistic. Also used in bull market and bear market.

Bundling, unbundling A trend allowing creation of securities either by combining primitive and derivative securities into one composite hybrid or by separating returns on an asset into classes.

Business cycle Repetitive cycles of recession and recovery.

Calendar spread Buy one option, and write another with a different expiration date.

Callable bond A bond that the issuer may repurchase at a given price in some specified period.

Call option The right to buy an asset at a specified exercise price on or before a specified expiration date.

Call protection An initial period during which a callable bond may not be called.

Capital allocation decision Allocation of invested funds between risk-free assets versus the risky portfolio.

Capital allocation line (CAL) A graph showing all feasible risk–return combinations of a risky and risk-free asset.

Capital gains The amount by which the sale price of a security exceeds the purchase price.

Capital market line (CML) A capital allocation line provided by the market index portfolio.

Capital markets Includes longer-term, relatively riskier securities.

Cash/bond selection Asset allocation in which the choice is between short-term cash equivalents and longer-term bonds.

Cash equivalents Short-term money-market securities.

Cash flow matching A form of immunization, matching cash flows from a bond portfolio with an obligation.

Cash ratio Measure of liquidity of a firm. Ratio of cash and marketable securities to current liabilities.

Cash settlement The provision of some futures contracts that requires not delivery of the underlying assets (as in agricultural futures) but settlement according to the cash value of the asset.

Certainty equivalent rate The certain return providing the same utility as a risky portfolio.

Certificate of deposit A bank time deposit.

Clearinghouse Established by exchanges to facilitate transfer of securities resulting from trades. For options and futures contracts, the clearinghouse may interpose itself as a middleman between two traders.

Closed-end (mutual) fund A fund whose shares are traded through brokers at market prices; the fund will not redeem shares at their net asset value. The market price of the fund can differ from the net asset value.

Collar An options strategy that brackets the value of a portfolio between two bounds.

Collateral A specific asset pledged against possible default on a bond. *Mortgage bonds* are backed by claims on property. *Collateral trust bonds* are backed by claims on other securities. *Equipment obligation bonds* are backed by claims on equipment.

Collateralized mortgage obligation (CMO) A mortgage pass-through security that partitions cash flows from underlying mortgages into classes called *tranches* that receive principal payments according to stipulated rules.

Commercial paper Short-term unsecured debt issued by large corporations.

Commission broker A broker on the floor of the exchange who executes orders for other members.

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.

Comparison universe The collection of money managers of similar investment style used for assessing relative performance of a portfolio manager.

Complete portfolio The entire portfolio, including risky and risk-free assets.

Conditional tail expectation Expectation of a random variable conditional on it falling below some threshold value. Often used as a measure of down-side risk.

Confidence index Ratio of the yield of top-rated corporate bonds to the yield on intermediate-grade bonds.

Conservativism Notion that investors are too slow to update their beliefs in response to new evidence.

Constant-growth model A form of the dividend discount model that assumes dividends will grow at a constant rate.

Contango theory Holds that the futures price must exceed the expected future spot price.

Contingent claim Claim whose value is directly dependent on or is contingent on the value of some underlying assets.

Contingent immunization A mixed passive-active strategy that immunizes a portfolio if necessary to guarantee a minimum acceptable return but otherwise allows active management.

Convergence arbitrage A bet that two or more prices are out of alignment and that profits can be made when the prices converge back to proper relationship.

Convergence property The convergence of futures prices and spot prices at the maturity of the futures contract.

Convertible bond A bond with an option allowing the bondholder to exchange the bond for a specified number of shares of common stock in the firm. A *conversion ratio* specifies the number of shares. The *market conversion price* is the current value of the shares for which the bond may be exchanged. The *conversion premium* is the excess of the bond's value over the conversion price.

Convexity The curvature of the price-yield relationship of a bond.

Corporate bonds Long-term debt issued by private corporations typically paying semiannual coupons and returning the face value of the bond at maturity.

Correlation coefficient A statistic in which the covariance is scaled to a value between minus one (perfect negative correlation) and plus one (perfect positive correlation).

Cost-of-carry relationship See spot-futures parity theorem.

Country selection A type of active international management that measures the contribution to performance attributable to investing in the better-performing stock markets of the world.

Coupon rate A bond's interest payments per dollar of par value.

Covariance A measure of the degree to which returns on two risky assets move in tandem. A positive covariance means that asset returns move together. A negative covariance means they vary inversely.

Covered call A combination of selling a call on a stock together with buying the stock.

Covered interest arbitrage relationship See interest rate parity theorem.

Credit enhancement Purchase of the financial guarantee of a large insurance company to raise funds.

Credit risk Default risk.

Cross hedge Hedging a position in one asset using futures on another commodity.

Cumulative abnormal return See abnormal return.

Currency selection Asset allocation in which the investor chooses among investments denominated in different currencies.

Current ratio A ratio representing the ability of the firm to pay off its current liabilities by liquidating current assets (current assets/current liabilities).

Current yield A bond's annual coupon payment divided by its price. Differs from yield to maturity.

Cyclical industries Industries with above-average sensitivity to the state of the economy.

Day order A buy order or a sell order expiring at the close of the trading day.

Days' receivables See average collection period.

Dealer market A market where traders specializing in particular commodities buy and sell assets for their own accounts. The OTC market is an example.

Debenture or unsecured bond A bond not backed by specific collateral.

Debt securities Bonds; also called fixed-income securities.

Dedication strategy Refers to multiperiod cash flow matching.

Default premium A differential in promised yield that compensates the investor for the risk inherent in purchasing a corporate bond that entails some risk of default.

Defensive industries Industries with little sensitivity to the state of the economy.

Deferred annuities Tax-advantaged life insurance product. Deferred annuities offer deferral of taxes with the option of withdrawing one's funds in the form of a life annuity.

Defined benefit plans Pension plans in which retirement benefits are set according to a fixed formula.

Defined contribution plans Pension plans in which the employer is committed to making contributions according to a fixed formula.

Degree of operating leverage Percentage change in profits for a 1% change in sales.

Delta (of option) See hedge ratio.

Delta neutral The value of the portfolio is not affected by changes in the value of the asset on which the options are written.

Demand shock An event that affects the demand for goods and services in the economy.

Derivative asset/contingent claim Securities providing payoffs that depend on or are contingent on the values of other assets such as commodity prices, bond and stock prices, or market index values. Examples are futures and options.

Derivative security See primitive security.

Detachable warrant A warrant entitles the holder to buy a given number of shares of stock at a stipulated price. A detachable warrant is one that may be sold separately from the package it may have originally been issued with (usually a bond).

Direct search market Buyers and sellers seek each other directly and transact directly.

Directional strategies Speculating that some market prices will move in a particular direction (in contrast to a market-neutral position).

Discount bonds Bonds selling below par value.

Discount function The discounted value of $1 as a function of time until payment.

Discretionary account An account of a customer who gives a broker the authority to make buy and sell decisions on the customer's behalf.

Diversifiable risk Risk attributable to firm-specific risk, or nonmarket risk. *Nondiversifiable* risk refers to systematic or market risk.

Diversification Spreading a portfolio over many investments to avoid excessive exposure to any one source of risk.

Dividend discount model (DDM) A formula stating that the intrinsic value of a firm is the present value of all expected future dividends.

Dividend payout ratio Percentage of earnings paid out as dividends.

Dividend yield The percent rate of return provided by a stock's dividend payments.

Dollar-weighted return The internal rate of return on an investment.

Doubling option A sinking fund provision that may allow repurchase of twice the required number of bonds at the sinking fund call price.

Dow theory A technical analysis technique that seeks to discern long- and short-term trends in security prices.

Dual funds Funds in which income and capital shares on a portfolio of stocks are sold separately.

DuPont system Decomposition of firm profitability measures into the underlying factors that determine such profitability.

Duration A measure of the average life of a bond, defined as the weighted average of the times until each payment is made, with weights proportional to the present value of the payment.

Dynamic hedging Constant updating of hedge positions as market conditions change.

EAFE index The European, Australian, Far East index, computed by Morgan Stanley, is a widely used index of non-U.S. stocks.

Earnings management The practice of using flexibility in accounting rules to improve the apparent profitability of the firm.

Earnings retention ratio Plowback ratio.

Earnings yield The ratio of earnings to price, E/P.

Economic earnings The real flow of cash that a firm could pay out forever in the absence of any change in the firm's productive capacity.

Economic value added (EVA) The spread between ROA and cost of capital multiplied by the capital invested in the firm. It measures the dollar value of the firm's return in excess of its opportunity cost.

Effective annual rate (EAR) Interest rate is annualized using compound rather than simple interest.

Effective annual yield Annualized interest rate on a security computed using compound interest techniques.

Effective duration Percentage change in bond price per change in the level of market interest rates.

Efficient diversification The organizing principle of modern portfolio theory, which maintains that any risk-averse investor will search for the highest expected return for any level of portfolio risk.

Efficient frontier Graph representing a set of portfolios that maximize expected return at each level of portfolio risk.

Efficient frontier of risky assets The portion of the minimum-variance frontier that lies above the global minimum-variance portfolio.

Efficient market hypothesis The prices of securities fully reflect available information. Investors buying securities in an efficient market should expect to obtain an equilibrium rate of return. Weak-form EMH asserts that stock prices already reflect all information contained in the history of past prices. The semistrong-form hypothesis asserts that stock prices already reflect all publicly available information. The strong-form hypothesis asserts that stock prices reflect all relevant information including insider information.

Elasticity (of an option) Percentage change in the value of an option accompanying a 1 percent change in the value of a stock.

Electronic communication network (ECN) A computer-operated trading network offering an alternative to formal stock exchanges or dealer markets for trading securities.

Endowment funds Organizations chartered to invest money for specific purposes.

Equities Ownership shares in a firm.

Equity Ownership in a firm. Also, the net worth of a margin account.

Equivalent taxable yield The pretax yield on a taxable bond providing an after-tax yield equal to the rate on a tax-exempt municipal bond.

Eurodollars Dollar-denominated deposits at foreign banks or foreign branches of American banks.

European, Australian, Far East (EAFE) index A widely used index of non-U.S. stocks computed by Morgan Stanley.

European option A European option can be exercised only on the expiration date. Compare with an American option, which can be exercised before, up to, and on its expiration date.

Event study Research methodology designed to measure the impact of an event of interest on stock returns.

Event tree Depicts all possible sequences of events.

Excess return Rate of return in excess of the risk-free rate.

Exchange rate Price of a unit of one country's currency in terms of another country's currency.

Exchange rate risk The uncertainty in asset returns due to movements in the exchange rates between the dollar and foreign currencies.

Exchange-traded funds (ETFs) Offshoots of mutual funds that allow investors to trade portfolios of securities just as they do shares of stock.

Exchanges National or regional auction markets providing a facility for members to trade securities. A seat is a membership on an exchange.

Exercise or strike price Price set for calling (buying) an asset or putting (selling) an asset.

Expectations hypothesis (of interest rates) Theory that forward interest rates are unbiased estimates of expected future interest rates.

Expected return The probability-weighted average of the possible outcomes.

Expected return–beta relationship Implication of the CAPM that security risk premiums (expected excess returns) will be proportional to beta.

Face value The maturity value of a bond.

Factor beta Sensitivity of security returns to changes in a systematic factor. Alternatively, factor loading; factor sensitivity.

Factor loading See factor beta.

Factor model A way of decomposing the factors that influence a security's rate of return into common and firm-specific influences.

Factor portfolio A well-diversified portfolio constructed to have a beta of 1.0 on one factor and a beta of zero on any other factor.

Factor sensitivity See factor beta.

Fair game An investment prospect that has a zero risk premium.

Federal funds Funds in a bank's reserve account.

FIFO The first-in first-out accounting method of inventory valuation.

Filter rule A rule for buying or selling stock according to recent price movements.

Financial assets Financial assets such as stocks and bonds are claims to the income generated by real assets or claims on income from the government.

Financial engineering Creating and designing securities with custom-tailored characteristics.

Financial intermediary An institution such as a bank, mutual fund, investment company, or insurance company that serves to connect the household and business sectors so households can invest and businesses can finance production.

Firm-specific risk See diversifiable risk.

First-pass regression A time series regression to estimate the betas of securities or portfolios.

Fiscal policy The use of government spending and taxing for the specific purpose of stabilizing the economy.

Fixed annuities Annuity contracts in which the insurance company pays a fixed dollar amount of money per period.

Fixed-charge coverage ratio Ratio of earnings to all fixed cash obligations, including lease payments and sinking fund payments.

Fixed-income security A security such as a bond that pays a specified cash flow over a specific period.

Flat tax The tax rate is the same at all income levels.

Flight to quality Describes the tendency of investors to require larger default premiums on investments under uncertain economic conditions.

Floating-rate bond A bond whose interest rate is reset periodically according to a specified market rate.

Floor broker A member of the exchange who can execute orders for commission brokers.

Forced conversion Use of a firm's call option on a callable convertible bond when the firm knows that bondholders will exercise their option to convert.

Forecasting records The historical record of the forecasting errors of a security analyst.

Foreign exchange market An informal network of banks and brokers that allows customers to enter forward contracts to purchase or sell currencies in the future at a rate of exchange agreed upon now.

Foreign exchange swap An agreement to exchange stipulated amounts of one currency for another at one or more future dates.

Forward contract An agreement calling for future delivery of an asset at an agreed-upon price. Also see futures contract.

Forward interest rate Rate of interest for a future period that would equate the total return of a long-term bond with that of a strategy of rolling over shorter-term bonds. The forward rate is inferred from the term structure.

Fourth market Direct trading in exchange-listed securities between one investor and another without the benefit of a broker.

Framing Decisions are affected by how choices are described, for example, whether uncertainty is posed as potential gains from a low baseline level, or as losses from a higher baseline value.

Fully diluted earnings per share Earnings per share expressed as if all outstanding convertible securities and warrants have been exercised.

Fundamental analysis Research to predict stock value that focuses on such determinants as earnings and dividends prospects, expectations for future interest rates, and risk evaluation of the firm.

Fundamental risk Risk that even if an asset is mispriced, there is still no arbitrage opportunity, since the mispricing can widen before price eventually converges to intrinsic value.

Futures contract Obliges traders to purchase or sell an asset at an agreed-upon price on a specified future date. The long position is held by the trader who commits to purchase. The short position is held by the trader who commits to sell. Futures differ from forward contracts in their standardization, exchange trading, margin requirements, and daily settling (marking to market).

Futures option The right to enter a specified futures contract at a futures price equal to the stipulated exercise price.

Futures price The price at which a futures trader commits to make or take delivery of the underlying asset.

Gamma The curvature of an option pricing function (as a function of the value of the underlying asset).

Geometric average The *n*th root of the product of *n* numbers. It is used to measure the compound rate of return over time.

Globalization Tendency toward a worldwide investment environment, and the integration of national capital markets.

Gross domestic product (GDP) The market value of goods and services produced over time including the income of foreign corporations and foreign residents working in the United States, but excluding the income of U.S. residents and corporations overseas.

Hedge fund A private investment pool, open to institutional or wealthy investors, that is exempt from SEC regulation and can pursue more speculative policies than mutual funds.

Hedge ratio (for an option) The number of stocks required to hedge against the price risk of holding one option. Also called the option's delta.

Hedging Investing in an asset to reduce the overall risk of a portfolio.

Hedging demands Demands for securities to hedge particular sources of consumption risk, beyond the usual mean variance diversification motivation.

Holding-period return The rate of return over a given period.

Homogenous expectations The assumption that all investors use the same expected returns and covariance matrix of security returns as inputs in security analysis.

Horizon analysis Forecasting the realized compound yield over various holding periods or investment horizons.

Illiquidity Difficulty, cost, and/or delay in selling an asset on short notice without offering substantial price concessions.

Illiquidity premium Extra expected return as compensation for limited liquidity.

Immunization A strategy that matches durations of assets and liabilities so as to make net worth unaffected by interest rate movements.

Implied volatility The standard deviation of stock returns that is consistent with an option's market value.

In the money In the money describes an option whose exercise would produce profits. Out of the money describes an option where exercise would not be profitable.

Income beneficiary One who receives income from a trust.

Income fund A mutual fund providing for liberal current income from investments.

Income statement A financial statement showing a firm's revenues and expenses during a specified period.

Indenture The document defining the contract between the bond issuer and the bondholder.

Index arbitrage An investment strategy that exploits divergences between actual futures prices and their theoretically correct parity values to make a profit.

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

Index model A model of stock returns using a market index such as the S&P 500 to represent common or systematic risk factors.

Index option A call or put option based on a stock market index.

Indifference curve A curve connecting all portfolios with the same utility according to their means and standard deviations.

Industry life cycle Stages through which firms typically pass as they mature.

Inflation The rate at which the general level of prices for goods and services is rising.

Information ratio Ratio of alpha to the standard deviation of diversifiable risk.

Initial public offering Stock issued to the public for the first time by a formerly privately owned company.

Input list List of parameters such as expected returns, variances, and covariances necessary to determine the optimal risky portfolio.

Inside information Nonpublic knowledge about a corporation possessed by corporate officers, major owners, or other individuals with privileged access to information about a firm.

Insider trading Trading by officers, directors, major stockholders, or others who hold private inside information allowing them to benefit from buying or selling stock.

Insurance principle The law of averages. The average outcome for many independent trials of an experiment will approach the expected value of the experiment.

Interest coverage ratio Measure of financial leverage. Earnings before interest and taxes as a multiple of interest expense.

Interest coverage ratio, or **times interest earned** A financial leverage measure (EBIT divided by interest expense).

Interest rate The number of dollars earned per dollar invested per period.

Interest rate parity theorem The spot-futures exchange rate relationship that prevails in well-functioning markets.

Interest rate swaps A method to manage interest rate risk where parties trade the cash flows corresponding to different securities without actually exchanging securities directly.

Intermarket spread swap Switching from one segment of the bond market to another (from Treasuries to corporates, for example).

Intrinsic value (of a firm) The present value of a firm's expected future net cash flows discounted by the required rate of return.

Intrinsic value of an option Stock price minus exercise price, or the profit that could be attained by immediate exercise of an in-the-money option.

Inventory turnover ratio Cost of goods sold as a multiple of average inventory.

Investment Commitment of current resources in the expectation of deriving greater resources in the future.

Investment bankers Firms specializing in the sale of new securities to the public, typically by underwriting the issue.

Investment company Firm managing funds for investors. An investment company may manage several mutual funds.

Investment-grade bond Bond rated BBB and above or Baa and above. Lower-rated bonds are classified as speculative-grade or junk bonds.

Investment horizon Time horizon for purposes of investment decisions.

Investment portfolio Set of securities chosen by an investor.

Jensen's measure The alpha of an investment.

Junk bond See speculative-grade bond.

Kurtosis Measure of the fatness of the tails of a probability distribution. Indicates probability of observing extreme high or low values.

Law of One Price The rule stipulating that equivalent securities or bundles of securities must sell at equal prices to preclude arbitrage opportunities.

Leading economic indicators Economic series that tend to rise or fall in advance of the rest of the economy.

Leakage Release of information to some persons before official public announcement.

Leverage ratio Ratio of debt to total capitalization of a firm.

LIFO The last-in first-out accounting method of valuing inventories.

Limited liability The fact that shareholders have no personal liability to the creditors of the corporation in the event of bankruptcy.

Limit order An order specifying a price at which an investor is willing to buy or sell a security.

Liquidation value Net amount that could be realized by selling the assets of a firm after paying the debt.

Liquidity Liquidity refers to the speed and ease with which an asset can be converted to cash.

Liquidity preference theory Theory that the forward rate exceeds expected future interest rates.

Liquidity premium Forward rate minus expected future short interest rate.

Load Sales charge on the purchase of some mutual funds.

Load fund A mutual fund with a sales commission, or load.

Lognormal distribution The log of the variable has a normal (bell-shaped) distribution.

London Interbank Offered Rate (LIBOR) Rate that most creditworthy banks charge one another for large loans of Eurodollars in the London market.

Long position hedge Hedging the future cost of a purchase by taking a long futures position to protect against changes in the price of the asset.

Lower partial standard deviation Standard deviation computed using only the portion of the probability distribution below the mean of the variable.

Macaulay's duration Effective maturity of bond, equal to weighted average of the times until each payment, with weights proportional to the present value of the payment.

Maintenance, or **variation, margin** An established value below which a trader's margin cannot fall. Reaching the maintenance margin triggers a margin call.

Margin Describes securities purchased with money borrowed from a broker. Current maximum margin is 50 percent.

Market–book-value ratio Ratio of price per share to book value per share.

Market capitalization rate The market-consensus estimate of the appropriate discount rate for a firm's cash flows.

Market model Another version of the index model that breaks down return uncertainty into systematic and nonsystematic components.

Market or systematic risk, firm-specific risk Market risk is risk attributable to common macroeconomic factors. Firm-specific risk reflects risk peculiar to an individual firm that is independent of market risk.

Market order A buy or sell order to be executed immediately at current market prices.

Market portfolio The portfolio for which each security is held in proportion to its market value.

Market price of risk A measure of the extra return, or risk premium, that investors demand to bear risk. The reward-to-risk ratio of the market portfolio.

Market segmentation or preferred habitat theory The theory that long- and short-maturity bonds are traded in essentially distinct or segmented markets and that prices in one market do not affect those in the other.

Market timer An investor who speculates on broad market moves rather than on specific securities.

Market timing Asset allocation in which the investment in the market is increased if one forecasts that the market will outperform T-bills.

Market-neutral bet A "bet" or portfolio position on some market prices with exposure to broad market movements hedged away.

Market-value-weighted index An index of a group of securities computed by calculating a weighted average of the returns of each security in the index, with weights proportional to outstanding market value.

Marking to market Describes the daily settlement of obligations on futures positions.

Mean-variance analysis Evaluation of risky prospects based on the expected value and variance of possible outcomes.

Mean-variance criterion The selection of portfolios based on the means and variances of their returns. The choice of the higher expected return portfolio for a given level of variance or the lower variance portfolio for a given expected return.

Measurement error Errors in measuring an explanatory variable in a regression that leads to biases in estimated parameters.

Membership or seat on an exchange A limited number of exchange positions that enable the holder to trade for the holder's own accounts and charge clients for the execution of trades for their accounts.

Mental accounting Individuals mentally segregate assets into independent accounts rather than viewing them as part of a unified portfolio.

Minimum-variance frontier Graph of the lowest possible portfolio variance that is attainable for a given portfolio expected return.

Minimum-variance portfolio The portfolio of risky assets with lowest variance.

Modern portfolio theory (MPT) Principles underlying analysis and evaluation of rational portfolio choices based on risk–return trade-offs and efficient diversification.

Modified duration Macaulay's duration divided by 1 + yield to maturity. Measures interest rate sensitivity of bond.

Momentum effect The tendency of poorly performing stocks and well-performing stocks in one period to continue that abnormal performance in following periods.

Monetary policy Actions taken by the Board of Governors of the Federal Reserve System to influence the money supply or interest rates.

Money market Includes short-term, highly liquid, and relatively low-risk debt instruments.

Mortality tables Tables of probability that individuals of various ages will die within a year.

Mortgage-backed security 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 the purchaser of the mortgage-backed security.

Multifactor CAPM Generalization of the basic CAPM that accounts for extra-market hedging demands.

Multifactor models Model of security returns positing that returns respond to several systematic factors.

Municipal bonds Tax-exempt bonds issued by state and local governments, generally to finance capital improvement projects. General obligation bonds are backed by the general taxing power of the issuer. Revenue bonds are backed by the proceeds from the project or agency they are issued to finance.

Mutual fund A firm pooling and managing funds of investors.

Mutual fund theorem A result associated with the CAPM, asserting that investors will choose to invest their entire risky portfolio in a market-index mutual fund.

NAICS codes North American Industrial Classification System codes that use numerical values to identify industries.

Naked option writing Writing an option without an offsetting stock position.

Nasdaq The automated quotation system for the OTC market, showing current bid–asked prices for thousands of stocks.

Neglected-firm effect That investments in stock of less well-known firms have generated abnormal returns.

Net asset value (NAV) The value of each share expressed as assets minus liabilities on a per-share basis.

Nominal interest rate The interest rate in terms of nominal (not adjusted for purchasing power) dollars.

Nondiversifiable risk See systematic risk.

Nonsystematic risk Nonmarket or firm-specific risk factors that can be eliminated by diversification. Also called unique risk or diversifiable risk. Systematic risk refers to risk factors common to the entire economy.

Normal backwardation theory Holds that the futures price will be bid down to a level below the expected spot price.

Normal distribution Bell-shaped probability distribution that characterizes many natural phenomena.

Notional principal Principal amount used to calculate swap payments.

On the run Recently issued bond, selling at or near par value.

On-the-run yield curve Relationship between yield to maturity and time to maturity for newly-issued bonds selling at par.

Open-end (mutual) fund A fund that issues or redeems its own shares at their net asset value (NAV).

Open (good-till-canceled) order A buy or sell order remaining in force for up to 6 months unless canceled.

Open interest The number of futures contracts outstanding.

Optimal risky portfolio An investor's best combination of risky assets to be mixed with safe assets to form the complete portfolio.

Option elasticity The percentage increase in an option's value given a 1% change in the value of the underlying security.

Original issue discount bond A bond issued with a low coupon rate that sells at a discount from par value.

Out of the money Out of the money describes an option where exercise would not be profitable. In the money describes an option where exercise would produce profits.

Over-the-counter market An informal network of brokers and dealers who negotiate sales of securities (not a formal exchange).

Par value The face value of the bond.

Passive investment strategy See passive management.

Passive management Buying a well-diversified portfolio to represent a broad-based market index without attempting to search out mispriced securities.

Passive portfolio A market index portfolio.

Passive strategy See passive management.

Pass-through security Pools of loans (such as home mortgage loans) sold in one package. Owners of pass-throughs receive all principal and interest payments made by the borrowers.

Peak The transition from the end of an expansion to the start of a contraction.

P/E effect That portfolios of low P/E stocks have exhibited higher average risk-adjusted returns than high P/E stocks.

Personal trust An interest in an asset held by a trustee for the benefit of another person.

Plowback ratio The proportion of the firm's earnings that is reinvested in the business (and not paid out as dividends). The plowback ratio equals 1 minus the dividend payout ratio.

Political risk Possibility of the expropriation of assets, changes in tax policy, restrictions on the exchange of foreign currency for domestic currency, or other changes in the business climate of a country.

Portfolio insurance The practice of using options or dynamic hedge strategies to provide protection against investment losses while maintaining upside potential.

Portfolio management Process of combining securities in a portfolio tailored to the investor's preferences and needs, monitoring that portfolio, and evaluating its performance.

Portfolio opportunity set The expected return–standard deviation pairs of all portfolios that can be constructed from a given set of assets.

Posterior distribution Probability distribution for a variable after adjustment for empirical evidence on its likely value.

Preferred habitat theory Holds that investors prefer specific maturity ranges but can be induced to switch if risk premiums are sufficient.

Preferred stock Nonvoting shares in a corporation, paying a fixed or variable stream of dividends.

Premium The purchase price of an option.

Premium bonds Bonds selling above par value.

Present value of growth opportunities (PVGO) Net present value of a firm's future investments.

Price value of a basis point The change in the value of a fixed-income asset resulting from a 1 basis point change in the asset's yield to maturity.

Price-weighted average Weighted average with weights proportional to security prices rather than total capitalization.

Price–earnings multiple See price–earnings ratio.

Price–earnings ratio The ratio of a stock's price to its earnings per share. Also referred to as the P/E multiple.

Primary market New issues of securities are offered to the public here.

Primitive security, derivative security A *primitive security* is an instrument such as a stock or bond for which payments depend only on the financial status of its issuer. A *derivative security* is created from the set of primitive securities to yield returns that depend on factors beyond the characteristics of the issuer and that may be related to prices of other assets.

Principal The outstanding balance on a loan.

Prior distribution Probability distribution for a variable before adjusting for empirical evidence on its likely value.

Private placement Primary offering in which shares are sold directly to a small group of institutional or wealthy investors.

Profit margin See return on sales.

Program trading Coordinated buy orders and sell orders of entire portfolios, usually with the aid of computers, often to achieve index arbitrage objectives.

Prospect theory Behavioral (as opposed to rational) model of investor utility. Investor utility depends on changes in wealth rather than levels of wealth.

Prospectus A final and approved registration statement including the price at which the security issue is offered.

Protective covenant A provision specifying requirements of collateral, sinking fund, dividend policy, etc., designed to protect the interests of bondholders.

Protective put Purchase of stock combined with a put option that guarantees minimum proceeds equal to the put's exercise price.

Proxy An instrument empowering an agent to vote in the name of the shareholder.

Prudent investor rule An investment manager must act in accord with the actions of a hypothetical prudent investor.

Pseudo-American call option value The maximum of the value derived by assuming that an option will be held until expiration and the value derived by assuming that the option will be exercised just before an ex-dividend date.

Public offering, private placement A *public offering* consists of bonds sold in the primary market to the general public; a *private placement* is sold directly to a limited number of institutional investors.

Pure play A position on perceived source of mispricing in which all other influences on prices are hedged.

Pure yield curve Refers to the relationship between yield to maturity and time to maturity for zero-coupon bonds.

Pure yield pickup swap Moving to higher-yield bonds.

Put bond A bond that the holder may choose either to exchange for par value at some date or to extend for a given number of years.

Put/Call ratio Ratio of put options to call options outstanding on a stock.

Put-call parity theorem An equation representing the proper relationship between put and call prices. Violation of parity allows arbitrage opportunities.

Put option The right to sell an asset at a specified exercise price on or before a specified expiration date.

Quality of earnings The realism and conservatism of the earnings number and the extent to which we might expect the reported level of earnings to be sustained.

Quick ratio A measure of liquidity similar to the current ratio except for exclusion of inventories (cash plus receivables divided by current liabilities).

Random walk Describes the notion that stock price changes are random and unpredictable.

Rate anticipation swap A switch made in response to forecasts of interest rates.

Real assets, financial assets *Real assets* are land, buildings, and equipment that are used to produce goods and services. *Financial assets* are claims such as securities to the income generated by real assets.

Real consumption Nominal consumption divided by the price deflator.

Real interest rate The excess of the interest rate over the inflation rate. The growth rate of purchasing power derived from an investment.

Realized compound return Yield assuming that coupon payments are invested at the going market interest rate at the time of their receipt and rolled over until the bond matures.

Rebalancing Realigning the proportions of assets in a portfolio as needed.

Registered bond A bond whose issuer records ownership and interest payments. Differs from a bearer bond, which is traded without record of ownership and whose possession is its only evidence of ownership.

Registered trader A member of the exchange who executes frequent trades for his or her own account.

Registration statement Required to be filed with the SEC to describe the issue of a new security.

Regression equation An equation that describes the average relationship between a dependent variable and a set of explanatory variables.

Regret avoidance Notion from behavioral finance that individuals who make decisions that turn out badly will have more regret when that decision was more unconventional.

Reinvestment rate risk The uncertainty surrounding the cumulative future value of reinvested bond coupon payments.

REIT Real estate investment trust, which is similar to a closed-end mutual fund. REITs invest in real estate or loans secured by real estate and issue shares in such investments.

Remainderman One who receives the principal of a trust when it is dissolved.

Replacement cost Cost to replace a firm's assets. "Reproduction" cost.

Representativeness bias People seem to believe that a small sample is just as representative of a broad population as a large one and therefore infer patterns too quickly.

Repurchase agreements (repos) Short-term, often overnight, sales of government securities with an agreement to repurchase the securities at a slightly higher price. A *reverse repo* is a purchase with an agreement to resell at a specified price on a future date.

Residual claim Refers to the fact that shareholders are at the bottom of the list of claimants to assets of a corporation in the event of failure or bankruptcy.

Residual income See economic value added (EVA).

Residuals Parts of stock returns not explained by the explanatory variable (the market-index return). They measure the impact of firm-specific events during a particular period.

Resistance level A price level above which it is supposedly difficult for a stock or stock index to rise.

Retirement annuity Stream of cash flows available for consumption during one's retirement years.

Return on assets (ROA) A profitability ratio; earnings before interest and taxes divided by total assets.

Return on equity (ROE) An accounting ratio of net profits divided by equity.

Return on sales (ROS), or **profit margin** The ratio of operating profits per dollar of sales (EBIT divided by sales).

Reversal effect The tendency of poorly performing stocks and well-performing stocks in one period to experience reversals in following periods.

Reversing trade Entering the opposite side of a currently held futures position to close out the position.

Reward-to-variability ratio Ratio of a portfolio's risk premium to its standard deviation.

Reward-to-volatility ratio Ratio of excess return to portfolio standard deviation.

Riding the yield curve Buying long-term bonds in anticipation of capital gains as yields fall with the declining maturity of the bonds.

Risk arbitrage Speculation on perceived mispriced securities, usually in connection with merger and acquisition targets.

Risk-averse, risk-neutral, risk lover A *risk-averse* investor will consider risky portfolios only if they provide compensation for risk via a risk premium. A *risk-neutral* investor finds the level of risk irrelevant and considers only the expected return of risk prospects. A *risk lover* is willing to accept lower expected returns on prospects with higher amounts of risk.

Risk-free asset An asset with a certain rate of return; often taken to be short-term T-bills.

Risk-free rate The interest rate that can be earned with certainty.

Risk lover See risk-averse.

Risk-neutral See risk-averse.

Risk premium An expected return in excess of that on risk-free securities. The premium provides compensation for the risk of an investment.

Risk–return trade-off If an investor is willing to take on risk, there is the reward of higher expected returns.

Risky asset An asset with an uncertain rate of return.

Scatter diagram Plot of returns of one security versus returns of another security. Each point represents one pair of returns for a given holding period.

Seasoned new issue Stock issued by companies that already have stock on the market.

Secondary market Already existing securities are bought and sold on the exchanges or in the OTC market.

Second-pass regression A cross-sectional regression of portfolio returns on betas. The estimated slope is the measurement of the reward for bearing systematic risk during the period.

Sector rotation An investment strategy which entails shifting the portfolio into industry sectors that are forecast to outperform others based on macroeconomic forecasts.

Securitization Pooling loans for various purposes into standardized securities backed by those loans, which can then be traded like any other security.

Security analysis Determining correct value of a security in the marketplace.

Security characteristic line A plot of the excess return on a security over the risk-free rate as a function of the excess return on the market.

Security market line Graphical representation of the expected return–beta relationship of the CAPM.

Security selection See security selection decision.

Security selection decision Choosing the particular securities to include in a portfolio.

Semistrong-form EMH See efficient market hypothesis.

Separation property The property that portfolio choice can be separated into two independent tasks: (1) determination of the optimal risky portfolio, which is a purely technical problem, and (2) the personal choice of the best mix of the risky portfolio and the risk-free asset.

Serial bond issue An issue of bonds with staggered maturity dates that spreads out the principal repayment burden over time.

Sharpe's measure Reward-to-volatility ratio; ratio of portfolio excess return to standard deviation.

Shelf registration Advance registration of securities with the SEC for sale up to 2 years following initial registration.

Short position or hedge Protecting the value of an asset held by taking a short position in a futures contract.

Short rate A one-period interest rate.

Short sale The sale of shares not owned by the investor but borrowed through a broker and later repurchased to replace the loan. Profit is earned if the initial sale is at a higher price than the repurchase price.

SIC codes Standard Industry Classification. These codes are assigned by the U.S. government for the purpose of grouping firms for statistical analysis.

Simple prospect An investment opportunity where a certain initial wealth is placed at risk and only two outcomes are possible.

Single-country funds Mutual funds that invest in securities of only one country.

Single-factor model A model of security returns that acknowledges only one common factor. See factor model.

Single-index model A model of stock returns that decomposes influences on returns into a systematic factor, as measured by the return on a broad market index, and firm-specific factors.

Single-stock futures Futures contracts on single stock rather than an index.

Sinking fund A procedure that allows for the repayment of principal at maturity by calling for the bond issuer to repurchase some proportion of the outstanding bonds either in the open market or at a special call price associated with the sinking fund provision.

Skew Measure of the asymmetry of a probability distribution.

Skip-day settlement A convention for calculating yield that assumes a T-bill sale is not settled until 2 days after quotation of the T-bill price.

Small-firm effect That investments in stocks of small firms appear to have earned abnormal returns.

Soft dollars The value of research services that brokerage houses supply to investment managers "free of charge" in exchange for the investment managers' business.

Specialist A trader who makes a market in the shares of one or more firms and who maintains a "fair and orderly market" by dealing personally in the stock.

Speculation Undertaking a risky investment with the objective of earning a greater profit than an investment in a risk-free alternative (a risk premium).

Speculative-grade bond Bond rated Ba or lower by Moody's, or BB or lower by Standard & Poor's, or an unrated bond.

Spot-futures parity theorem, or **cost-of-carry relationship** Describes the theoretically correct relationship between spot and futures prices. Violation of the parity relationship gives rise to arbitrage opportunities.

Spot rate The current interest rate appropriate for discounting a cash flow of some given maturity.

Spread (futures) Taking a long position in a futures contract of one maturity and a short position in a contract of different maturity, both on the same commodity.

Spread (options) A combination of two or more call options or put options on the same stock with differing exercise prices or times to expiration. A money spread refers to a spread with different exercise price; a time spread refers to differing expiration date.

Squeeze The possibility that enough long positions hold their contracts to maturity that supplies of the commodity are not adequate to cover all contracts. A *short squeeze* describes the reverse: short positions threaten to deliver an expensive-to-store commodity.

Standard deviation Square root of the variance.

Statement of cash flows A financial statement showing a firm's cash receipts and cash payments during a specified period.

Stock exchanges Secondary markets where already-issued securities are bought and sold by members.

Stock selection An active portfolio management technique that focuses on advantageous selection of particular stocks rather than on broad asset allocation choices.

Stock split Issue by a corporation of a given number of shares in exchange for the current number of shares held by stockholders. Splits may go in either direction, either increasing or decreasing the number of shares outstanding. A *reverse split* decreases the number outstanding.

Stop-loss order A sell order to be executed if the price of the stock falls below a stipulated level.

Stop-loss orders The trade is not to be executed unless the stock price falls below a given level.

Straddle A combination of buying both a call and a put on the same asset, each with the same exercise price and expiration date. The purpose is to profit from expected volatility.

Straight bond A bond with no option features such as callability or convertibility.

Street name Describes securities held by a broker on behalf of a client but registered in the name of the firm.

Strike price See exercise price.

Strip, strap Variants of a straddle. A *strip* is two puts and one call on a stock; a *strap* is two calls and one put, both with the same exercise price and expiration date.

Stripped of coupons Describes the practice of some investment banks that sell "synthetic" zero-coupon bonds by marketing the rights to a single payment backed by a coupon-paying Treasury bond.

Strong-form EMH See efficient market hypothesis.

Subordination clause A provision in a bond indenture that restricts the issuer's future borrowing by subordinating the new leaders' claims on the firm to those of the existing bond holders. Claims of *subordinated* or *junior* debtholders are not paid until the prior debt is paid.

Substitution swap Exchange of one bond for a bond with similar attributes but more attractively priced.

Supply shock An event that influences production capacity and costs in the economy.

Support level A price level below which it is supposedly difficult for a stock or stock index to fall.

Swaption An option on a swap.

Systematic risk Risk factors common to the whole economy, nondiversifiable risk; also called market risk.

Tax anticipation notes Short-term municipal debt to raise funds to pay for expenses before actual collection of taxes.

Tax deferral option The feature of the U.S. Internal Revenue Code that the capital gains tax on an asset is payable only when the gain is realized by selling the asset.

Tax-deferred retirement plans Employer-sponsored and other plans that allow contributions and earnings to be made and accumulate tax-free until they are paid out as benefits.

Tax-timing option Describes the investor's ability to shift the realization of investment gains or losses and their tax implications from one period to another.

Tax swap Swapping two similar bonds to receive a tax benefit.

Technical analysis Research to identify mispriced securities that focuses on recurrent and predictable stock price patterns and on proxies for buy or sell pressure in the market.

Tender offer An offer from an outside investor to shareholders of a company to purchase their shares at a stipulated price, usually substantially above the market price, so that the investor may amass enough shares to obtain control of the company.

Term insurance Provides a death benefit only, no build-up of cash value.

Term premiums Excess of the yields to maturity on long-term bonds over those of short-term bonds.

Term structure of interest rates The pattern of interest rates appropriate for discounting cash flows of various maturities.

Third market Trading of exchange-listed securities on the OTC market.

Times interest earned Ratio of profits to interest expense.

Time value (of an option) The part of the value of an option that is due to its positive time to expiration. Not to be confused with present value or the time value of money.

Time-weighted average An average of the period-by-period holding-period returns of an investment.

Tobin's *q*. Ratio of market value of the firm to replacement cost.

Total asset turnover The annual sales generated by each dollar of assets (sales/assets).

Tracking error The difference between the return on a specified portfolio and that of a benchmark portfolio designed to mimic that portfolio.

Tracking portfolio A portfolio constructed to have returns with the highest possible correlation with a systematic risk factor.

Tranche See collateralized mortgage obligation.

Treasury bill Short-term, highly liquid government securities issued at a discount from the face value and returning the face amount at maturity.

Treasury bond or note Debt obligations of the federal government that make semiannual coupon payments and are issued at or near par value.

Treynor's measure Ratio of excess return to beta.

Trin statistic Ratio of average trading volume in declining stocks to average volume in advancing stocks. Used in technical analysis.

Triple-witching hour The four times a year that the S&P 500 futures contract expires at the same time as the S&P 100 index option contract and option contracts on individual stocks.

Trough The transition point between recession and recovery.

Turnover The ratio of the trading activity of a portfolio to the assets of the portfolio.

Unbundling See bundling.

Underwriting, underwriting syndicate Underwriters (investment bankers) purchase securities from the issuing company and resell them. Usually a syndicate of investment bankers is organized behind a lead firm.

Unemployment rate The ratio of the number of people classified as unemployed to the total labor force.

Unique risk See diversifiable risk.

Unit investment trust Money invested in a portfolio whose composition is fixed for the life of the fund. Shares in a unit trust are called redeemable trust certificates, and they are sold at a premium above net asset value.

Universal life policy An insurance policy that allows for a varying death benefit and premium level over the term of the policy, with an interest rate on the cash value that changes with market interest rates.

Uptick, or **zero-plus tick** A trade resulting in a positive change in a stock price, or a trade at a constant price following a preceding price increase.

Utility The measure of the welfare or satisfaction of an investor.

Utility value The welfare a given investor assigns to an investment with a particular return and risk.

Value at risk Measure of down-side risk. The loss that will be incurred in the event of an extreme adverse price change with some given, typically low, probability.

Variable annuities Annuity contracts in which the insurance company pays a periodic amount linked to the investment performance of an underlying portfolio.

Variable life policy An insurance policy that provides a fixed death benefit plus a cash value that can be invested in a variety of funds from which the policyholder can choose.

Variance A measure of the dispersion of a random variable. Equals the expected value of the squared deviation from the mean.

Variation margin See maintenance margin.

Views An analyst's opinion on the likely performance of a stock or sector compared to the market-consensus expectation.

Volatility risk The risk in the value of options portfolios due to unpredictable changes in the volatility of the underlying asset.

Warrant An option issued by the firm to purchase shares of the firm's stock.

Weak-form EMH See efficient market hypothesis.

Weekend effect The common recurrent negative average return from Friday to Monday in the stock market.

Well-diversified portfolio A portfolio spread out over many securities in such a way that the weight in any security is close to zero.

Whole-life insurance policy Provides a death benefit and a kind of savings plan that builds up cash value for possible future withdrawal.

Workout period Realignment period of a temporary misaligned yield relationship.

World investable wealth The part of world wealth that is traded and is therefore accessible to investors.

Writing a call Selling a call option.

Yield curve A graph of yield to maturity as a function of time to maturity.

Yield to maturity A measure of the average rate of return that will be earned on a bond if held to maturity.

Zero-beta portfolio The minimum-variance portfolio uncorrelated with a chosen efficient portfolio.

Zero-coupon bond A bond paying no coupons that sells at a discount and provides payment of face value only at maturity.

Zero-investment portfolio A portfolio of zero net value, established by buying and shorting component securities, usually in the context of an arbitrage strategy.

12b-1 fees Annual fees charged by a mutual fund to pay for marketing and distribution costs.