Glossary

A priori probability A probability based on logical analysis rather than on observation or personal judgment.

Abandonment option The option to terminate an investment at some future time if the financial results are disappointing.

Abnormal return The amount by which a security's actual return differs from its expected return, given the security's risk and the market's return.

Absolute advantage A country's ability to produce a good or service at a lower absolute cost than its trading partner.

Absolute dispersion The amount of variability present without comparison to any reference point or benchmark.

Absolute frequency The actual number of observations counted for each unique value of the variable (also called raw frequency).

Accelerated book build An offering of securities by an investment bank acting as principal that is accomplished in only one or two days.

Accelerated methods Depreciation methods that allocate a relatively large proportion of the cost of an asset to the early years of the asset's useful life.

Accounting costs Monetary value of economic resources used in performing an activity. These can be explicit, out-of-pocket, current payments, or an allocation of historical payments (depreciation) for resources. They do not include implicit opportunity costs.

Accounting profit Income as reported on the income statement, in accordance with prevailing accounting standards, before the provisions for income tax expense. Also called *income before taxes* or *pretax income*.

Accounts payable Amounts that a business owes to its vendors for goods and services that were purchased from them but which have not yet been paid.

Accredited investors Those who are considered sophisticated enough to take greater risks and to have a reduced need for regulatory oversight and protection. In some jurisdictions, these investors are referred to as professional, eligible, or qualified investors.

Accrued expenses Liabilities related to expenses that have been incurred but not yet paid as of the end of an accounting period—an example of an accrued expense is rent that has been incurred but not yet paid, resulting in a liability "rent payable." Also called *accrued liabilities*.

Accrued interest Interest earned but not yet paid.

Acquisition method A method of accounting for a business combination where the acquirer is required to measure each identifiable asset and liability at fair value. This method was the result of a joint project of the IASB and FASB aiming at convergence in standards for the accounting of business combinations.

Action lag Delay from policy decisions to implementation.

Active investment An approach to investing in which the investor seeks to outperform a given benchmark.

Active return The return on a portfolio minus the return on the portfolio's benchmark.

Activity ratios Ratios that measure how well a company is managing key current assets and working capital over time.

Add-on rates Bank certificates of deposit, repos, and indexes such as Libor and Euribor are quoted on an add-on rate basis (bond equivalent yield basis).

Addition rule for probabilities A principle stating that the probability that A or B occurs (both occur) equals the probability that A occurs, plus the probability that B occurs, minus the probability that both A and B occur.

Affiliate marketing The generation of commission revenues for sales generated on other's websites.

Agency bond See *quasi-government bond*.

Agency costs Costs associated with conflicts of interest between principals and agents when a company is managed by non-owners. Agency costs result from the inherent conflicts of interest between managers and debtholders (referred to as agency costs of debt) and between managers and shareholders (referred to as agency costs of equity).

Agency RMBS In the United States, securities backed by residential mortgage loans and guaranteed by a federal agency or guaranteed by either of the two GSEs (Fannie Mae and Freddie Mac).

Aggregate demand The quantity of goods and services that households, businesses, government, and non-domestic customers want to buy at any given level of prices.

Aggregate demand curve Inverse relationship between the price level and real output.

Aggregate income The value of all the payments earned by the suppliers of factors used in the production of goods and services.

Aggregate output The value of all the goods and services produced during a specified period.

Aggregate supply The quantity of goods and services producers are willing to supply at any given level of price.

Aggregate supply curve The level of domestic output that companies will produce at each price level.

Aggregators Similar to marketplaces, but the aggregator re-markets products and services under its own brand.

All-or-nothing (AON) orders An order that includes the instruction to trade only if the trade fills the entire quantity (size) specified.

Allocationally efficient A characteristic of a market, a financial system, or an economy that promotes the allocation of resources to their highest value uses.

Alternative data Non-traditional data types generated by the use of electronic devices, social media, satellite and sensor networks, and company exhaust.

Alternative hypothesis The hypothesis that is accepted if the null hypothesis is rejected.

Alternative investment markets Market for investments other than traditional securities investments (i.e., traditional common and preferred shares and traditional fixed income instruments). The term usually encompasses direct and indirect investment in real estate (including timberland and farmland) and commodities (including precious metals); hedge funds, private equity, and other investments requiring specialized due diligence.

Alternative trading systems (ATS) Non-exchange trading venues that bring together buyers and sellers to find transaction counterparties. Also called *multilateral trading facilities (MTF)*.

American depository receipt A US dollar-denominated security that trades like a common share on US exchanges.

American depository share The underlying shares on which American depository receipts are based. They trade in the issuing company's domestic market.

American options Options that may be exercised at any time from contract inception until maturity.

American-style Type of option contract that can be exercised at any time up to the option's expiration date.

Amortisation The process of allocating the cost of intangible long-term assets having a finite useful life to accounting periods; the allocation of the amount of a bond premium or discount to the periods remaining until bond maturity.

Amortised cost The historical cost (initially recognised cost) of an asset, adjusted for amortisation and impairment.

Amortizing bond Bond with a payment schedule that calls for periodic payments of interest and repayments of principal.

Amortizing loans Loans with a payment schedule that calls for periodic payments of interest and repayments of principal.

Analysis of variance (ANOVA) The analysis that breaks the total variability of a dataset (such as observations on the dependent variable in a regression) into components representing different sources of variation.

Analytical duration The use of mathematical formulas to estimate the impact of benchmark yield-to-maturity changes on bond prices.

Anchoring and adjustment bias An information-processing bias in which the use of a psychological heuristic influences the way people estimate probabilities.

Annual percentage rate The cost of borrowing expressed as a yearly rate.

Annuity A finite set of level sequential cash flows.

Annuity due An annuity having a first cash flow that is paid immediately.

Anomalies Apparent deviations from market efficiency.

Antidilutive With reference to a transaction or a security, one that would increase earnings per share (EPS) or result in EPS higher than the company's basic EPS—antidilutive securities are not included in the calculation of diluted EPS.

Arbitrage 1) The simultaneous purchase of an undervalued asset or portfolio and sale of an overvalued but equivalent asset or portfolio, in order to obtain a riskless profit on the price differential. Taking advantage of a market inefficiency in a risk-free manner. 2) The condition in a financial market in which equivalent assets or combinations of assets sell for two different prices, creating an opportunity to profit at no risk with no commitment of money. In a well-functioning financial market, few arbitrage opportunities are possible. 3) A risk-free operation that earns an expected positive net profit but requires no net investment of money.

Arbitrageurs Traders who engage in arbitrage. See *arbitrage*.

Arithmetic mean The sum of the observations divided by the number of observations.

Artificial intelligence Computer systems that exhibit cognitive and decision-making ability comparable (or superior) to that of humans.

Ask The price at which a dealer or trader is willing to sell an asset, typically qualified by a maximum quantity (ask size). See *offer*.

Ask size The maximum quantity of an asset that pertains to a specific ask price from a trader. For example, if the ask for a share issue is $30 for a size of 1,000 shares, the trader is offering to sell at $30 up to 1,000 shares.

Asset allocation The process of determining how investment funds should be distributed among asset classes.

Asset-backed securities A type of bond issued by a legal entity called a *special purpose entity* (SPE) on a collection of assets that the SPE owns. Also, securities backed by receivables and loans other than mortgages.

Asset-based valuation models Valuation based on estimates of the market value of a company's assets.

Asset beta The unlevered beta, which reflects the business risk of the assets; the asset's systematic risk.

Asset class A group of assets that have similar characteristics, attributes, and risk–return relationships.

Asset-light business models Business models that minimize required capital investment by shifting the ownership of high-cost assets to other firms.

Asset swap Converts the periodic fixed coupon of a specific bond to an MRR plus or minus a spread.

Asset utilization ratios Ratios that measure how efficiently a company performs day-to-day tasks, such as the collection of receivables and management of inventory.

Assets Resources controlled by an enterprise as a result of past events and from which future economic benefits to the enterprise are expected to flow.

Assignment of accounts receivable The use of accounts receivable as collateral for a loan.

Asymmetric information Also known as information asymmetry. The differential of information between corporate insiders and outsiders regarding the company's performance and prospects. Managers typically have more information about the company's performance and prospects than owners and creditors.

At-the-money Describes a unique situation in which the price of the underlying is equal to an option's exercise price. Like an out-of-the-money option, the intrinsic value is zero.

Auction A type of bond issuing mechanism often used for sovereign bonds that involves bidding.

Auction/reverse auction models Pricing models that establish prices through bidding (by sellers in the case of reverse auctions).

Autarkic price The price of a good or service in an autarkic economy.

Autarky Countries seeking political self-sufficiency with little or no external trade or finance. State-owned enterprises control strategic domestic industries.

Automatic stabilizer A countercyclical factor that automatically comes into play as an economy slows and unemployment rises.

Availability bias An information-processing bias in which people take a heuristic approach to estimating the probability of an outcome based on how easily the outcome comes to mind.

Available-for-sale Under US GAAP, debt securities not classified as either held-to-maturity or held-for-trading securities. The investor is willing to sell but not actively planning to sell. In general, available-for-sale debt securities are reported at fair value on the balance sheet, with unrealized gains included as a component of other comprehensive income.

Average fixed cost Total fixed cost divided by quantity produced.

Average life See *weighted average life.*
Average product Measures the productivity of inputs on average and is calculated by dividing total product by the total number of units for a given input that is used to generate that output.
Average revenue Total revenue divided by quantity sold.
Average total cost Total cost divided by quantity produced.
Average variable cost Total variable cost divided by quantity produced.
Backtesting The process that approximates the real-life investment process, using historical data, to assess whether an investment strategy would have produced desirable results.
Backfill bias A problem whereby certain surviving hedge funds are added to databases and various hedge fund indexes only after they are initially successful and start to report their returns.
Backtesting The process that approximates the real-life investment process, using historical data, to assess whether an investment strategy would have produced desirable results.
Backup line of credit A type of credit enhancement provided by a bank to an issuer of commercial paper to ensure that the issuer will have access to sufficient liquidity to repay maturing commercial paper if issuing new paper is not a viable option.
Backwardation A condition in the futures markets in which the spot price exceeds the futures price, the forward curve is downward sloping, and the convenience yield is high.
Balance of payments A double-entry bookkeeping system that summarizes a country's economic transactions with the rest of the world for a particular period of time, typically a calendar quarter or year.
Balance of trade deficit When the domestic economy is spending more on non-domestic goods and services than non-domestic economies are spending on domestic goods and services.
Balance sheet The financial statement that presents an entity's current financial position by disclosing resources the entity controls (its assets) and the claims on those resources (its liabilities and equity claims), as of a particular point in time (the date of the balance sheet). Also called *statement of financial position* or *statement of financial condition*.
Balance sheet ratios Financial ratios involving balance sheet items only.
Balanced With respect to a government budget, one in which spending and revenues (taxes) are equal.
Balloon payment Large payment required at maturity to retire a bond's outstanding principal amount.
Bar chart A chart for plotting the frequency distribution of categorical data, where each bar represents a distinct category and each bar's height is proportional to the frequency of the corresponding category. In technical analysis, a bar chart that plots four bits of data for each time interval—the high, low, opening, and closing prices. A vertical line connects the high and low prices. A cross-hatch left indicates the opening price and a cross-hatch right indicates the closing price.
Barter economy An economy where economic agents as house-holds, corporations, and governments "pay" for goods and services with another good or service.
Base-rate neglect A type of representativeness bias in which the base rate or probability of the categorization is not adequately considered.
Base rates The reference rate on which a bank bases lending rates to all other customers.
Basic EPS Net earnings available to common shareholders (i.e., net income minus preferred dividends) divided by the weighted average number of common shares outstanding.
Basis point Used in stating yield spreads, one basis point equals one-hundredth of a percentage point, or 0.01%.
Basis risk The possibility that the expected value of a derivative differs unexpectedly from that of the underlying.
Basket of listed depository receipts An exchange-traded fund (ETF) that represents a portfolio of depository receipts.
Bayes' formula The rule for updating the probability of an event of interest—given a set of prior probabilities for the event, information, and information given the event—if you receive new information.
Bearer bonds Bonds for which ownership is not recorded; only the clearing system knows who the bond owner is.
Bearish crossover A technical analysis term that describes a situation where a short-term moving average crosses a longer-term moving average from above; this movement is considered bearish. A **death cross** is a bearish crossover based on 50-day and 200-day moving averages.
Behavioral finance A field of finance that examines the psychological variables that affect and often distort the investment decision making of investors, analysts, and portfolio managers.
Behind the market Said of prices specified in orders that are worse than the best current price; e.g., for a limit buy order, a limit price below the best bid.
Benchmark A comparison portfolio; a point of reference or comparison.
Benchmark issue The latest sovereign bond issue for a given maturity. It serves as a benchmark against which to compare bonds that have the same features but that are issued by another type of issuer.
Benchmark rate Typically the yield-to-maturity on a government bond having the same or close to the same time-to-maturity.
Benchmark spread The yield spread over a specific benchmark, usually measured in basis points.
Bernoulli random variable A random variable having the outcomes 0 and 1.
Bernoulli trial An experiment that can produce one of two outcomes.
Best bid The highest bid in the market.
Best effort offering An offering of a security using an investment bank in which the investment bank, as agent for the issuer, promises to use its best efforts to sell the offering but does not guarantee that a specific amount will be sold.
Best-efforts offering An offering of a security using an investment bank in which the investment bank, as agent for the issuer, promises to use its best efforts to sell the offering but does not guarantee that a specific amount will be sold.
Best-in-class An ESG implementation approach that seeks to identify the most favorable companies and sectors based on ESG considerations. Also called *positive screening*.
Best offer The lowest offer (ask price) in the market.
Beta A measure of the sensitivity of a given investment or portfolio to movements in the overall market.
Bid The price at which a dealer or trader is willing to buy an asset, typically qualified by a maximum quantity.
Bid size The maximum quantity of an asset that pertains to a specific bid price from a trader.
Bid–ask spread The ask price minus the bid price.

Bid–offer spread The difference between the prices at which dealers will buy from a customer (bid) and sell to a customer (offer or ask). It is often used as an indicator of liquidity.

Big Data The vast amount of data being generated by industry, governments, individuals, and electronic devices that arises from both traditional and non-traditional data sources.

Bilateral loan A loan from a single lender to a single borrower.

Bilateralism The conduct of political, economic, financial, or cultural cooperation between two countries. Countries engaging in bilateralism may have relations with many different countries but in one-at-a-time agreements without multiple partners. Typically, countries exist on a spectrum between bilateralism and multilateralism.

Bimodal A distribution that has two most frequently occurring values.

Binomial random variable The number of successes in n Bernoulli trials for which the probability of success is constant for all trials and the trials are independent.

Binomial tree The graphical representation of a model of asset price dynamics in which, at each period, the asset moves up with probability p or down with probability $(1 - p)$.

Bitcoin A cryptocurrency using blockchain technology that was created in 2009.

Bivariate correlation See *Pearson correlation*.

Black swan risk An event that is rare and difficult to predict but has an important impact.

Block brokers A broker (agent) that provides brokerage services for large-size trades.

Blockchain A type of digital ledger in which information is recorded sequentially and then linked together and secured using cryptographic methods.

Blue chip Widely held large market capitalization companies that are considered financially sound and are leaders in their respective industry or local stock market.

Bollinger Bands A price-based technical analysis indicator consisting of a line representing the moving average, a higher line representing the moving average plus a set number of standard deviations from the average (for the same number of periods as was used to calculate the moving average), and a lower line representing the moving average minus the same number of standard deviations.

Bond Contractual agreement between the issuer and the bondholders.

Bond equivalent yield A calculation of yield that is annualized using the ratio of 365 to the number of days to maturity. Bond equivalent yield allows for the restatement and comparison of securities with different compounding periods.

Bond indenture A legal contract specifying the terms of a bond issue.

Bond market vigilantes Bond market participants who might reduce their demand for long-term bonds, thus pushing up their yields.

Bond yield plus risk premium approach An estimate of the cost of common equity that is produced by summing the before-tax cost of debt and a risk premium that captures the additional yield on a company's stock relative to its bonds. The additional yield is often estimated using historical spreads between bond yields and stock yields.

Bonus issue of shares A type of dividend in which a company distributes additional shares of its common stock to shareholders instead of cash.

Book building Investment bankers' process of compiling a "book" or list of indications of interest to buy part of an offering.

Book value The net amount shown for an asset or liability on the balance sheet; book value may also refer to the company's excess of total assets over total liabilities. Also called *carrying value*.

Boom An expansionary phase characterized by economic growth "testing the limits" of the economy.

Bootstrap A resampling method that repeatedly draws samples with replacement of the selected elements from the original observed sample. Bootstrap is usually conducted by using computer simulation and is often used to find standard error or construct confidence intervals of population parameters.

Borrowed capital (debt) Money that is lent by debtholders to a company.

Bottom-up analysis An investment selection approach that focuses on company-specific circumstances rather than emphasizing economic cycles or industry analysis.

Box and whisker plot A graphic for visualizing the dispersion of data across quartiles. It consists of a "box" with "whiskers" connected to the box.

Breakdown A breakdown occurs when the price of an asset moves below a support level.

Breakeven point Represents the price of the underlying in a derivative contract in which the profit to both counterparties would be zero.

Breakout A breakout occurs when the price of an asset moves above a resistance level.

Bridge financing Interim financing that provides funds until permanent financing can be arranged.

Broad money Encompasses narrow money plus the entire range of liquid assets that can be used to make purchases.

Broker 1) An agent who executes orders to buy or sell securities on behalf of a client in exchange for a commission. 2) See *futures commission merchants*.

Broker–dealer A financial intermediary (often a company) that may function as a principal (dealer) or as an agent (broker) depending on the type of trade.

Brokered market A market in which brokers arrange trades among their clients.

Brownfield investment Investing in existing infrastructure assets.

Bubble line chart A line chart that uses varying-sized bubbles to represent a third dimension of the data. The bubbles are sometimes color-coded to present additional information.

Budget surplus/deficit The difference between government revenue and expenditure for a stated fixed period of time.

Bullet bond Bond in which the principal repayment is made entirely at maturity.

Bullish crossover A technical analysis term that describes a situation where a short-term moving average crosses a longer-term moving average from below; this movement is considered bullish. A **golden cross** is a bullish crossover based on 50-day and 200-day moving averages.

Bundling A pricing approach that refers to combining multiple products or services so that customers are incentivized or required to buy them together.

Business cycles are recurrent expansions and contractions in economic activity affecting broad segments of the economy.

Business risk The risk that the firm's operating results will fall short of expectations, independently of how the business is financed.

Buy-side firm An investment management company or other investor that uses the services of brokers or dealers (i.e., the client of the sell side firms).

Buyback A transaction in which a company buys back its own shares. Unlike stock dividends and stock splits, share repurchases use corporate cash.

CBOE Volatility Index (VIX) A measure of near-term market volatility as conveyed by S&P 500 stock index option prices.

CDS credit spread Reflects the credit spread of a credit default swap (CDS) derivative contract. As with cash bonds, CDS credit spreads depend on the probability of default (POD) and the loss given default (LGD).

CVaR Conditional VaR, a tail loss measure. The weighted average of all loss outcomes in the statistical distribution that exceed the VaR loss.

Cabotage The right to transport passengers or goods within a country by a foreign firm. Many countries—including those with multilateral trade agreements—impose restrictions on cabotage across transportation subsectors, meaning that shippers, airlines, and truck drivers are not allowed to transport goods and services within another country's borders.

Call market A market in which trades occur only at a particular time and place (i.e., when the market is called).

Call money rate The interest rate that buyers pay for their margin loan.

Call option The right to buy an underlying.

Call protection The time during which the issuer of the bond is not allowed to exercise the call option.

Callable bond A bond containing an embedded call option that gives the issuer the right to buy the bond back from the investor at specified prices on pre-determined dates.

Calmar ratio A ratio of the average annual compounded return to the maximum drawdown risk over a limited time period, typically three years.

Candlestick chart A price chart with four bits of data for each time interval. A candle indicates the opening and closing price for the interval. The body of the candle is shaded if the opening price was higher than the closing price, and the body is white (or clear) if the opening price was lower than the closing price. Vertical lines known as wicks or shadows extend from the top and bottom of the candle to indicate, respectively, the high and low prices for the interval.

Cannibalization Cannibalization occurs when an investment takes customers and sales away from another part of the company.

Cap rate A metric by which real estate managers are often judged; the annual rent actually earned (net of any vacancies) divided by the price originally paid for the property.

Capacity The ability of the borrower to make its debt payments on time.

Capital account A component of the balance of payments account that measures transfers of capital.

Capital allocation The process that companies use for decision making on capital investments—those projects with a life of one year or longer.

Capital allocation line (CAL) A graph line that describes the combinations of expected return and standard deviation of return available to an investor from combining the optimal portfolio of risky assets with the risk-free asset.

Capital asset pricing model (CAPM) An equation describing the expected return on any asset (or portfolio) as a linear function of its beta relative to the market portfolio.

Capital consumption allowance A measure of the wear and tear (depreciation) of the capital stock that occurs in the production of goods and services.

Capital deepening investment Increases the stock of capital relative to labor.

Capital expenditure Expenditure on physical capital (fixed assets).

Capital investment risk The risk of sub-optimal investment by a firm.

Capital light Also known as asset light. Capital-light businesses require little incremental investment in fixed assets or working capital to enable revenue growth.

Capital market expectations An investor's expectations concerning the risk and return prospects of asset classes.

Capital market line (CML) The line with an intercept point equal to the risk-free rate that is tangent to the efficient frontier of risky assets; represents the efficient frontier when a risk-free asset is available for investment.

Capital market securities Securities with maturities at issuance longer than one year.

Capital markets Financial markets that trade securities of longer duration, such as bonds and equities.

Capital providers Investors who provide capital proceeds to a company in return for holding the corporation's debt or equity securities. Equity investors are referred to as shareholders or owners, while debt investors are referred to as bondholders or debtholders.

Capital restrictions Controls placed on foreigners' ability to own domestic assets and/or domestic residents' ability to own foreign assets.

Capital stock The accumulated amount of buildings, machinery, and equipment used to produce goods and services.

Capital structure The mix of debt and equity that a company uses to finance its business; a company's specific mix of long-term financing.

Carrying Investing and holding an asset for a period of time.

Carrying amount The amount at which an asset or liability is valued according to accounting principles.

Carrying value The net amount shown for an asset or liability on the balance sheet; book value may also refer to the company's excess of total assets over total liabilities. For a bond, the purchase price plus (or minus) the amortized amount of the discount (or premium).

Cartel Participants in collusive agreements that are made openly and formally.

Cash collateral account Form of external credit enhancement whereby the issuer immediately borrows the credit-enhancement amount and then invests that amount, usually in highly rated short-term commercial paper.

Cash conversion cycle A financial metric that measures the length of time required for a company to convert cash invested in its operations to cash received as a result of its operations; equal to days of inventory on hand + days of sales outstanding – number of days of payables. Also called *net operating cycle*.

Cash flow additivity principle The principle that dollar amounts indexed at the same point in time are additive.

Cash flow from operating activities The net amount of cash provided from operating activities.

Cash flow from operations The net amount of cash provided from operating activities.

Cash flow hedge Refers to a specific **hedge accounting** classification in which a derivative is designated as absorbing the variable cash flow of a floating-rate asset or liability, such as foreign exchange, interest rates, or commodities.

Cash flow yield The internal rate of return on a series of cash flows.

Cash market securities Money market securities settled on a "same day" or "cash settlement" basis.

Cash markets Markets in which specific assets are exchanged at current prices. Cash markets are often referred to as **spot markets**.

Cash prices The current prices prevailing in **cash markets**.

Catch-up clause A clause in an agreement that favors the GP. For a GP who earns a 20% performance fee, a catch-up clause allows the GP to receive 100% of the distributions above the hurdle rate *until* she receives 20% of the profits generated, and then every excess dollar is split 80/20 between the LPs and GP.

Categorical data Values that describe a quality or characteristic of a group of observations and therefore can be used as labels to divide a dataset into groups to summarize and visualize (also called qualitative data).

Central bank funds market The market in which deposit-taking banks that have an excess reserve with their national central bank can lend money to banks that need funds for maturities ranging from overnight to one year. Called the Federal or Fed funds market in the United States.

Central bank funds rate Interest rate at which central bank funds are bought (borrowed) and sold (lent) for maturities ranging from overnight to one year. Called Federal or Fed funds rate in the United States.

Central banks The dominant bank in a country, usually with official or semi-official governmental status.

Central clearing mandate A requirement instituted by global regulatory authorities following the 2008 global financial crisis that most **over-the-counter (OTC)** derivatives be **cleared** by a **central counterparty (CCP)**.

Central counterparty (CCP) An economic entity that assumes the **counterparty credit risk** between derivative **counterparties**, one of which is typically a financial intermediary. CCPs provide **clearing** and **settlement** for most **derivative contracts**.

Central limit theorem The theorem that states the sum (and the mean) of a set of independent, identically distributed random variables with finite variances is normally distributed, whatever distribution the random variables follow.

Certificate of deposit An instrument that represents a specified amount of funds on deposit with a bank for a specified maturity and interest rate. CDs are issued in various denominations and can be negotiable or non-negotiable.

Change in polarity principle A tenet of technical analysis that states that once a support level is breached, it becomes a resistance level. The same holds true for resistance levels: Once breached, they become support levels.

Change of control put A covenant giving bondholders the right to require the issuer to buy back their debt, often at par or at some small premium to par value, in the event that the borrower is acquired.

Character The quality of a debt issuer's management.

Chartist An individual who uses charts or graphs of a security's historical prices or levels to forecast its future trends.

Chi-square test of independence A statistical test for detecting a potential association between categorical variables.

Circuit breaker A pause in intraday trading for a brief period if a price limit is reached.

Classical cycle refers to fluctuations in the level of economic activity when measured by GDP in volume terms.

Classified balance sheet A balance sheet organized so as to group together the various assets and liabilities into subcategories (e.g., current and noncurrent).

Clawback A requirement that the general partner return any funds distributed as incentive fees until the limited partners have received back their initial investment and a percentage of the total profit.

Clearing An exchange's process of verifying the execution of a transaction, exchange of payments, and recording of participants.

Clearing instructions Instructions that indicate how to arrange the final settlement ("clearing") of a trade.

Clearinghouse An entity associated with a futures market that acts as middleman between the contracting parties and guarantees to each party the performance of the other.

Closed economy An economy that does not trade with other countries; an *autarkic economy*.

Closed-end fund A mutual fund in which no new investment money is accepted. New investors invest by buying existing shares, and investors in the fund liquidate by selling their shares to other investors.

Cluster sampling A procedure that divides a population into subpopulation groups (clusters) representative of the population and then randomly draws certain clusters to form a sample.

Clustered bar chart See *grouped bar chart*.

Co-investing In co-investing, the investor invests in assets *indirectly* through the fund but also possesses rights (known as co-investment rights) to invest *directly* in the same assets. Through co-investing, an investor is able to make an investment *alongside* a fund when the fund identifies deals.

Code of ethics An established guide that communicates an organization's values and overall expectations regarding member behavior. A code of ethics serves as a general guide for how community members should act.

Coefficient of determination The percentage of the variation of the dependent variable that is explained by the independent variables. Also referred to as the R-squared or R^2.

Coefficient of variation The ratio of a set of observations' standard deviation to the observations' mean value.

Cognitive cost The effort involved in processing new information and updating beliefs.

Cognitive dissonance The mental discomfort that occurs when new information conflicts with previously held beliefs or cognitions.

Cognitive errors Behavioral biases resulting from faulty reasoning; cognitive errors stem from basic statistical, information-processing, or memory errors.

Coincident economic indicators Turning points that are usually close to those of the overall economy; they are believed to have value for identifying the economy's present state.

Collateral Assets or financial guarantees underlying a debt obligation that are above and beyond the issuer's promise to pay.

Collateral manager Buys and sells debt obligations for and from the CDO's portfolio of assets (i.e., the collateral) to generate sufficient cash flows to meet the obligations to the CDO bondholders.

Collateral trust bonds Bonds secured by securities, such as common shares, other bonds, or other financial assets.

Collateralized debt obligation Generic term used to describe a security backed by a diversified pool of one or more debt obligations.

Collateralized mortgage obligations Securities created through the securitization of a pool of mortgage-related products (mortgage pass-through securities or pools of loans).

Collaterals Assets or financial guarantees underlying a debt obligation that are above and beyond the issuer's promise to pay.

Combination A listing in which the order of the listed items does not matter.

Combination formula (binomial formula) The number of ways that we can choose *r* objects from a total of *n* objects, when the order in which the *r* objects are listed does not matter, is ${}_nC_r = \binom{n}{r} = \frac{n!}{(n-r)!r!}$.

Commercial paper A short-term, negotiable, unsecured promissory note that represents a debt obligation of the issuer.

Committed capital The amount that the limited partners have agreed to provide to the private equity fund.

Committed (regular) lines of credit A bank commitment to extend credit; the commitment is considered a short-term liability and is usually in effect for 364 days (one day short of a full year).

Commodity swap A type of swap involving the exchange of payments over multiple dates as determined by specified reference prices or indexes relating to commodities.

Common market Level of economic integration that incorporates all aspects of the customs union and extends it by allowing free movement of factors of production among members.

Common shares A type of security that represent an ownership interest in a company.

Common-size analysis The restatement of financial statement items using a common denominator or reference item that allows one to identify trends and major differences; an example is an income statement in which all items are expressed as a percent of revenue.

Common stock See *common shares*.

Company analysis Analysis of an individual company.

Comparable company A company that has similar business risk, usually in the same industry and preferably with a single line of business.

Comparative advantage A country's ability to produce a good or service at a lower relative cost, or opportunity cost, than its trading partner.

Competitive risk The risk of a loss of market share or pricing power to competitors.

Competitive strategy A company's plans for responding to the threats and opportunities presented by the external environment.

Complement The event not-*S*, written S^C, given the event S. Note that $P(S) + P(S^C) = 1$.

Complements Goods that tend to be used together; technically, two goods whose cross-price elasticity of demand is negative.

Complete markets Informally, markets in which the variety of distinct securities traded is so broad that any desired payoff in a future state-of-the-world is achievable.

Component cost of capital The rate of return required by suppliers of capital for an individual source of a company's funding, such as debt or equity.

Compounding The process of accumulating interest on interest.

Comprehensive income All changes in equity other than contributions by, and distributions to, owners; income under clean surplus accounting; includes all changes in equity during a period except those resulting from investments by owners and distributions to owners. Comprehensive income equals net income plus other comprehensive income.

Conditional expected value The expected value of a stated event given that another event has occurred.

Conditional pass-through covered bonds Covered bonds that convert to pass-through securities after the original maturity date if all bond payments have not yet been made and the sponsor is in default.

Conditional probability The probability of an event given (conditioned on) another event.

Conditional variances The variance of one variable, given the outcome of another.

Confidence level The complement of the level of significance.

Confirmation bias A belief perseverance bias in which people tend to look for and notice what confirms their beliefs, to ignore or undervalue what contradicts their beliefs, and to misinterpret information as support for their beliefs.

Confusion matrix A grid used for error analysis in classification problems, it presents values for four evaluation metrics including true positive (TP), false positive (FP), true negative (TN), and false negative (FN).

Conservatism bias A belief perseverance bias in which people maintain their prior views or forecasts by inadequately incorporating new information.

Consolidation The movement of a stock's price within a well-defined range of trading levels for a period of time. The price consolidates between a support level and a resistance level.

Constant-yield price trajectory A graph that illustrates the change in the price of a fixed-income bond over time assuming no change in yield-to-maturity. The trajectory shows the "pull to par" effect on the price of a bond trading at a premium or a discount to par value.

Constituent securities With respect to an index, the individual securities within an index.

Consumer surplus The difference between the value that a consumer places on units purchased and the amount of money that was required to pay for them.

Contango A condition in the futures markets in which the spot price is lower than the futures price, the forward curve is upward sloping, and there is little or no convenience yield.

Contingency provision Clause in a legal document that allows for some action if a specific event or circumstance occurs.

Contingency table A table of the frequency distribution of observations classified on the basis of two discrete variables.

Contingent claim A type of derivative in which one of the **counterparties** determines whether and when the trade will settle. An **option** is a common type of contingent claim.

Contingent convertible bonds Bonds that automatically convert into equity if a specific event or circumstance occurs, such as the issuer's equity capital falling below the minimum requirement set by the regulators. Also called *CoCos*.

Continuation pattern A type of pattern used in technical analysis to predict the resumption of a market trend that was in place prior to the formation of a pattern.

Continuous data Data that can be measured and can take on any numerical value in a specified range of values.

Continuous random variable A random variable for which the range of possible outcomes is the real line (all real numbers between $-\infty$ and $+\infty$) or some subset of the real line.
Continuous trading market A market in which trades can be arranged and executed any time the market is open.
Continuously compounded return The natural logarithm of 1 plus the holding period return, or equivalently, the natural logarithm of the ending price over the beginning price.
Contra account An account that offsets another account.
Contract rate See *mortgage rate*.
Contract size Amount(s) used for calculation to price and value the derivative. The contract size is often referred to as "notional amount or notional principal."
Contraction The period of a business cycle after the peak and before the trough; often called a *recession* or, if exceptionally severe, called a *depression*.
Contraction risk The risk that when interest rates decline, the security will have a shorter maturity than was anticipated at the time of purchase because borrowers refinance at the new, lower interest rates.
Contractionary Tending to cause the real economy to contract.
Contractionary fiscal policy A fiscal policy that has the objective to make the real economy contract.
Contribution margin The amount available for fixed costs and profit after paying variable costs; revenue minus variable costs.
Controlling shareholders A particular shareholder or group of shareholders holding a percentage of shares that gives them significant voting power.
Convenience sampling A procedure of selecting an element from a population on the basis of whether or not it is accessible to a researcher or how easy it is for a researcher to access the element.
Convenience yield A non-cash benefit of holding a physical commodity versus a derivative.
Conventional bond See *plain vanilla bond*.
Conventional cash flow pattern A conventional cash flow pattern is one with an initial outflow followed by a series of inflows.
Convergence The tendency for differences in output per capita across countries to diminish over time. In technical analysis, the term describes the case when an indicator moves in the same manner as the security being analyzed.
Conversion premium The difference between the convertible bond's price and its conversion value.
Conversion price For a convertible bond, the price per share at which the bond can be converted into shares.
Conversion ratio For a convertible bond, the number of common shares that each bond can be converted into.
Conversion value For a convertible bond, the value of the bond if it is converted at the market price of the shares. Also called *parity value*.
Convertible bond Bond that gives the bondholder the right to exchange the bond for a specified number of common shares in the issuing company.
Convertible preference shares A type of equity security that entitles shareholders to convert their shares into a specified number of common shares.
Convexity adjustment For a bond, one half of the annual or approximate convexity statistic multiplied by the change in the yield-to-maturity squared.
Convexity bias Refers to the difference in price changes for a given change in yield between interest rate futures and interest rate forward contracts. That is, interest rate forwards exhibit a non-linear or convex relationship between price and yield, while the price–yield relationship is linear for interest rate futures.
Cooperation The process by which countries work together toward some shared goal or purpose. These goals may, and often do, vary widely—from strategic or military concerns, to economic influence, to cultural preferences.
Cooperative country A country that engages and reciprocates in rules standardization; harmonization of tariffs; international agreements on trade, immigration, or regulation; and allowing the free flow of information, including technology transfer.
Core inflation Refers to the inflation rate calculated based on a price index of goods and services except food and energy.
Corporate governance The system of internal checks, balances, and incentives that exists to manage conflicting interests among a company's stakeholders.
Correlation A measure of the linear relationship between two random variables.
Correlation coefficient A number between −1 and +1 that measures the consistency or tendency for two investments to act in a similar way. It is used to determine the effect on portfolio risk when two assets are combined.
Cost averaging The periodic investment of a fixed amount of money.
Cost-based pricing Pricing set primarily by reference to the firm's costs.
Cost of capital (opportunity cost of funds) The cost of financing to a company; the rate of return that suppliers of capital require as compensation for their contribution of capital.
Cost of carry The net of the costs and benefits related to owning an underlying asset for a specific period.
Cost of debt The required return on debt financing to a company, such as when it issues a bond, takes out a bank loan, or leases an asset through a finance lease.
Cost of equity The return required by equity investors to compensate for both the time value of money and the risk. Also referred to as the required rate of return on common stock or the required return on equity.
Cost of preferred stock The cost to a company of issuing preferred stock; the dividend yield that a company must commit to pay preferred stockholders.
Cost structure The mix of a company's variable costs and fixed costs.
Counterparty Legal entities entering a **derivative contract**.
Counterparty credit risk The likelihood that a **counterparty** is unable to meet its financial obligations under the contract.
Counterparty risk The risk that the other party to a contract will fail to honor the terms of the contract.
Coupon rate The interest rate promised in a contract; this is the rate used to calculate the periodic interest payments.
Cournot assumption Assumption in which each firm determines its profit-maximizing production level assuming that the other firms' output will not change.
Covariance A measure of the co-movement (linear association) between two random variables.
Covariance matrix A matrix or square array whose entries are covariances; also known as a variance–covariance matrix.
Covenants The terms and conditions of lending agreements that the issuer must comply with; they specify the actions that an issuer is obligated to perform (affirmative covenant) or prohibited from performing (negative covenant).

Covered bond Debt obligation secured by a segregated pool of assets called the cover pool. The issuer must maintain the value of the cover pool. In the event of default, bondholders have recourse against both the issuer and the cover pool.

Covered bonds A senior debt obligation of a financial institution that gives recourse to the originator/issuer and a predetermined underlying collateral pool.

Credit analysis The evaluation of credit risk; the evaluation of the creditworthiness of a borrower or counterparty.

Credit default swap (CDS) A type of credit derivative in which one party, the credit protection buyer who is seeking credit protection against a third party, makes a series of regularly scheduled payments to the other party, the credit protection seller. The seller makes no payments until a credit event occurs.

Credit default swaps (CDS) Derivative contracts that allow an investor to manage the risk of loss from borrower default separately from the bond market.

Credit enhancements Provisions that may be used to reduce the credit risk of a bond issue.

Credit event An event that defines a payout in a credit derivative. Events are usually defined as bankruptcy, failure to pay an obligation, or an involuntary debt restructuring.

Credit-linked coupon bond Bond for which the coupon changes when the bond's credit rating changes.

Credit-linked note (CLN) Fixed-income security in which the holder of the security has the right to withhold payment of the full amount due at maturity if a credit event occurs.

Credit migration risk The risk that a bond issuer's creditworthiness deteriorates, or migrates lower, leading investors to believe the risk of default is higher. Also called *downgrade risk*.

Credit risk The risk of loss caused by a counterparty's or debtor's failure to make a promised payment. Also called *default risk*.

Credit tranching A structure used to redistribute the credit risk associated with the collateral; a set of bond classes created to allow investors a choice in the amount of credit risk that they prefer to bear.

Creditworthiness The perceived willingness and ability of the borrower to pay its debt obligations in a timely manner; it represents the ability of a company to withstand adverse impacts on its cash flows.

Critical values Values of the test statistic at which the decision changes from fail to reject the null hypothesis to reject the null hypothesis.

Cross-default Covenant or contract clause that specifies a borrower is considered in default if they default on another debt obligation.

Cross-default provisions Provisions whereby events of default, such as non-payment of interest on one bond, trigger default on all outstanding debt; implies the same default probability for all issues.

Cross-price elasticity of demand The percentage change in quantity demanded for a given percentage change in the price of another good; the responsiveness of the demand for Product A that is associated with the change in price of Product B.

Cross-sectional analysis Analysis that involves comparisons across individuals in a group over a given time period or at a given point in time.

Cross-sectional data A list of the observations of a specific variable from multiple observational units at a given point in time. The observational units can be individuals, groups, companies, trading markets, regions, etc.

Crossing networks Trading systems that match buyers and sellers who are willing to trade at prices obtained from other markets.

Crowding out The thesis that government borrowing may divert private sector investment from taking place.

Crowdsourcing A business model that enables users to contribute directly to a product, service, or online content.

Cryptocurrency An electronic medium of exchange that lacks physical form.

Cryptography An algorithmic process to encrypt data, making the data unusable if received by unauthorized parties.

Cumulative absolute frequency Cumulates (i.e., adds up) in a frequency distribution the absolute frequencies as one moves from the first bin to the last bin.

Cumulative distribution function A function giving the probability that a random variable is less than or equal to a specified value.

Cumulative frequency distribution chart A chart that plots either the cumulative absolute frequency or the cumulative relative frequency on the y-axis against the upper limit of the interval and allows one to see the number or the percentage of the observations that lie below a certain value.

Cumulative preference shares Preference shares for which any dividends that are not paid accrue and must be paid in full before dividends on common shares can be paid.

Cumulative relative frequency A sequence of partial sums of the relative frequencies in a frequency distribution.

Cumulative voting A voting process whereby shareholders can accumulate and vote all their shares for a single candidate in an election, as opposed to having to allocate their voting rights evenly among all candidates.

Currencies Monies issued by national monetary authorities.

Currency option bonds Bonds that give bondholders the right to choose the currency in which they want to receive interest payments and principal repayments.

Currency swap A swap in which each party makes interest payments to the other in different currencies.

Current account A component of the balance of payments account that measures the flow of goods and services.

Current assets Assets that are expected to be consumed or converted into cash in the near future, typically one year or less. *Also called liquid assets*.

Current cost With reference to assets, the amount of cash or cash equivalents that would have to be paid to buy the same or an equivalent asset today; with reference to liabilities, the undiscounted amount of cash or cash equivalents that would be required to settle the obligation today.

Current government spending With respect to government expenditures, spending on goods and services that are provided on a regular, recurring basis including health, education, and defense.

Current liabilities Short-term obligations, such as accounts payable, wages payable, or accrued liabilities, that are expected to be settled in the near future, typically one year or less.

Current yield The sum of the coupon payments received over the year divided by the flat price; also called the *income* or *interest yield* or *running yield*.

Curve duration The sensitivity of the bond price (or the market value of a financial asset or liability) with respect to a benchmark yield curve.
Customs union Extends the free trade area (FTA) by not only allowing free movement of goods and services among members, but also creating a common trade policy against nonmembers.
Cyclical A cyclical company is one whose profits are strongly correlated with the strength of the overall economy.
Cyclical companies Companies with sales and profits that regularly expand and contract with the business cycle or state of economy.
Daily settlement A specific process of mark-to-market by a central clearing party in which the profits and losses of all counterparties to derivatives contracts are determined using settlement prices for each contract.
Dark pools Alternative trading systems that do not display the orders that their clients send to them.
Data A collection of numbers, characters, words, and text—as well as images, audio, and video—in a raw or organized format to represent facts or information.
Data mining The practice of determining a model by extensive searching through a dataset for statistically significant patterns.
Data science An interdisciplinary field that brings computer science, statistics, and other disciplines together to analyze and produce insights from Big Data.
Data snooping The practice of determining a model by extensive searching through a dataset for statistically significant patterns.
Data table see two-dimensional rectangular array.
Day order An order that is good for the day on which it is submitted. If it has not been filled by the close of business, the order expires unfilled.
Days of inventory on hand An activity ratio equal to the number of days in the period divided by inventory turnover over the period.
Dealers Financial intermediaries, such as commercial banks or investment banks, who transact as **counterparties** with derivative end users.
Dealing securities Securities held by banks or other financial intermediaries for trading purposes.
Death cross See **Bearish crossover**.
Debentures Type of bond that can be secured or unsecured.
Debt-rating approach A method for estimating a company's before-tax cost of debt based on the yield on comparably rated bonds for maturities that closely match that of the company's existing debt.
Debt tax shield The tax benefit from interest paid on debt being tax-deductible from income, equal to the marginal tax rate multiplied by the value of the debt.
Debt-to-assets ratio A solvency ratio calculated as total debt divided by total assets.
Debt-to-capital ratio A solvency ratio calculated as total debt divided by total debt plus total shareholders' equity.
Debt-to-equity ratio A solvency ratio calculated as total debt divided by total shareholders' equity.
Deciles Quantiles that divide a distribution into 10 equal parts.
Declaration date The day that the corporation issues a statement declaring a specific dividend.
Decreasing returns to scale When a production process leads to increases in output that are proportionately smaller than the increase in inputs.
Deductible temporary differences Temporary differences that result in a reduction of or deduction from taxable income in a future period when the balance sheet item is recovered or settled.
Deep-in-the-money option An option that is highly likely to be exercised.
Deep learning Machine learning using neural networks with many hidden layers.
Deep learning nets Machine learning using neural networks with many hidden layers.
Deep-out-of-the-money option An option that is highly unlikely to be exercised.
Default probability The probability that a borrower defaults or fails to meet its obligation to make full and timely payments of principal and interest, according to the terms of the debt security. Also called *default risk*.
Default risk See *credit risk*.
Default risk premium An extra return that compensates investors for the possibility that the borrower will fail to make a promised payment at the contracted time and in the contracted amount.
Defensive companies Companies with sales and profits that have little sensitivity to the business cycle or state of the economy.
Defensive interval ratio A liquidity ratio that estimates the number of days that an entity could meet cash needs from liquid assets; calculated as (cash + short-term marketable investments + receivables) divided by daily cash expenditures.
Deferred coupon bond Bond that pays no coupons for its first few years but then pays a higher coupon than it otherwise normally would for the remainder of its life. Also called *split coupon bond*.
Deferred income A liability account for money that has been collected for goods or services that have not yet been delivered; payment received in advance of providing a good or service.
Deferred revenue A liability account for money that has been collected for goods or services that have not yet been delivered; payment received in advance of providing a good or service.
Deferred tax assets A balance sheet asset that arises when an excess amount is paid for income taxes relative to accounting profit. The taxable income is higher than accounting profit and income tax payable exceeds tax expense. The company expects to recover the difference during the course of future operations when tax expense exceeds income tax payable.
Deferred tax liabilities A balance sheet liability that arises when a deficit amount is paid for income taxes relative to accounting profit. The taxable income is less than the accounting profit and income tax payable is less than tax expense. The company expects to eliminate the liability over the course of future operations when income tax payable exceeds tax expense.
Defined benefit pension plans Plans in which the company promises to pay a certain annual amount (defined benefit) to the employee after retirement. The company bears the investment risk of the plan assets.
Defined contribution pension plans Individual accounts to which an employee and typically the employer makes contributions during their working years and expect to draw on the accumulated funds at retirement. The employee bears the investment and inflation risk of the plan assets.

Deflation Negative inflation.

Degree of confidence The probability that a confidence interval includes the unknown population parameter.

Degree of financial leverage (DFL) The ratio of the percentage change in net income to the percentage change in operating income; the sensitivity of the cash flows available to owners when operating income changes.

Degree of operating leverage (DOL) The ratio of the percentage change in operating income to the percentage change in units sold; the sensitivity of operating income to changes in units sold.

Degree of total leverage The ratio of the percentage change in net income to the percentage change in units sold; the sensitivity of the cash flows to owners to changes in the number of units produced and sold.

Degrees of freedom The number of independent variables used in defining sample statistics, such as variance, and the probability distributions they measure.

Delta The relationship between the option price and the underlying price, which reflects the sensitivity of the price of the option to changes in the price of the underlying. Delta is a good approximation of how an option price will change for a small change in the stock.

Demand curve Graph of the inverse demand function. A graph showing the demand relation, either the highest quantity willingly purchased at each price or the highest price willingly paid for each quantity.

Demand function A relationship that expresses the quantity demanded of a good or service as a function of own-price and possibly other variables.

Demand shock A typically unexpected disturbance to demand, such as an unexpected interruption in trade or transportation.

Dependent With reference to events, the property that the probability of one event occurring depends on (is related to) the occurrence of another event.

Dependent variable The variable whose variation about its mean is to be explained by the regression; the left-side variable in a regression equation. Also referred to as the *explained variable*.

Depository bank A bank that raises funds from depositors and other investors and lends it to borrowers.

Depository institutions Commercial banks, savings and loan banks, credit unions, and similar institutions that raise funds from depositors and other investors and lend it to borrowers.

Depository receipt A security that trades like an ordinary share on a local exchange and represents an economic interest in a foreign company.

Depreciation The process of systematically allocating the cost of long-lived (tangible) assets to the periods during which the assets are expected to provide economic benefits.

Derivative A financial instrument that derives its value from the performance of an underlying asset.

Derivative contract A legal agreement between counterparties with a specific **maturity**, or length of time, until the closing of the transaction, or **settlement**.

Derivative pricing rule A pricing rule used by crossing networks in which a price is taken (derived) from the price that is current in the asset's primary market.

Derivatives A financial instrument whose value depends on the value of some underlying asset or factor (e.g., a stock price, an interest rate, or exchange rate).

Descriptive statistics The study of how data can be summarized effectively.

Diffuse prior The assumption of equal prior probabilities.

Diffusion index Reflects the proportion of the index's components that are moving in a pattern consistent with the overall index.

Diluted EPS The EPS that would result if all dilutive securities were converted into common shares.

Diluted shares The number of shares that would be outstanding if all potentially dilutive claims on common shares (e.g., convertible debt, convertible preferred stock, and employee stock options) were exercised.

Diminishing balance method An accelerated depreciation method, i.e., one that allocates a relatively large proportion of the cost of an asset to the early years of the asset's useful life.

Diminishing marginal productivity When each additional unit of an input, keeping the other inputs unchanged, increases output by a smaller increment.

Direct format With reference to the cash flow statement, a format for the presentation of the statement in which cash flow from operating activities is shown as operating cash receipts less operating cash disbursements. Also called *direct method*.

Direct investing Occurs when an investor makes a direct investment in an asset without the use of an intermediary.

Direct listing (DL) A process whereby a company becomes public by listing on an exchange and shares are sold by existing shareholders.

Direct method See *direct format*.

Direct sales A sales strategy used by businesses to sell directly to the end customer, which bypasses ("disintermediates") the distributor or retailer.

Direct taxes Taxes levied directly on income, wealth, and corporate profits.

Direct write-off method An approach to recognizing credit losses on customer receivables in which the company waits until such time as a customer has defaulted and only then recognizes the loss.

Discount To reduce the value of a future payment in allowance for how far away it is in time; to calculate the present value of some future amount. Also, the amount by which an instrument is priced below its face value.

Discount factor The price equivalent of a zero rate. Also may be stated as the present value of a currency unit on a future date.

Discount margin The discount (or required) margin is the yield spread versus the MRR such that the FRN is priced at par on a rate reset date.

Discount rates In general, the interest rates used to calculate present values. In the money market, however, a discount rate is a specific type of quoted rate.

Discounted cash flow models Valuation models that estimate the intrinsic value of a security as the present value of the future benefits expected to be received from the security.

Discouraged worker A person who has stopped looking for a job or has given up seeking employment.

Discrete data Numerical values that result from a counting process; therefore, practically speaking, the data are limited to a finite number of values.

Discrete random variable A random variable that can take on at most a countable number of possible values.

Discriminatory pricing rule A pricing rule used in continuous markets in which the limit price of the order or quote that first arrived determines the trade price.

Diseconomies of scale Increase in cost per unit resulting from increased production.

Dispersion The variability of a population or sample of observations around the central tendency.

Display size The size of an order displayed to public view.

Disposition effect As a result of loss aversion, an emotional bias whereby investors are reluctant to dispose of losers. This results in an inefficient and gradual adjustment to deterioration in fundamental value.

Disruption When new or potential competitors using new technology or business models take market share rather than known or established competitors using established business models.

Distributed ledger A type of database that can be shared among entities in a network.

Distributed ledger technology Technology based on a distributed ledger.

Divergence In technical analysis, a term that describes the case when an indicator moves differently from the security being analyzed.

Diversification ratio The ratio of the standard deviation of an equally weighted portfolio to the standard deviation of a randomly selected security.

Dividend A distribution paid to shareholders based on the number of shares owned.

Dividend discount model (DDM) A present value model of stock value that views the intrinsic value of a stock as present value of the stock's expected future dividends.

Dividend payout ratio The ratio of cash dividends paid to earnings for a period.

Divisor A number (denominator) used to determine the value of a price return index. It is initially chosen at the inception of an index and subsequently adjusted by the index provider, as necessary, to avoid changes in the index value that are unrelated to changes in the prices of its constituent securities.

Doji In the Japanese terminology used in candlestick charting, the doji signifies that after a full day of trading, the positive price influence of buyers and the negative price influence of sellers exactly counteracted each other—with opening and closing prices that are virtually equal—which suggests that the market under analysis is in balance.

Domestic content provisions Stipulate that some percentage of the value added or components used in production should be of domestic origin.

Double bottom In technical analysis, a reversal pattern that is formed when the price reaches a low, rebounds, and then declines back to the first low level. A double bottom is used to predict a change from a downtrend to an uptrend.

Double coincidence of wants A prerequisite to barter trades, in particular that both economic agents in the transaction want what the other is selling.

Double declining balance depreciation An accelerated depreciation method that involves depreciating the asset at double the straight-line rate. This rate is multiplied by the book value of the asset at the beginning of the period (a declining balance) to calculate depreciation expense.

Double top In technical analysis, a reversal pattern that is formed when an uptrend reverses twice at roughly the same high price level. A double top is used to predict a change from an uptrend to a downtrend.

Down transition probability The probability that an asset's value moves down in a model of asset price dynamics.

Downgrade risk The risk that a bond issuer's creditworthiness deteriorates, or migrates lower, leading investors to believe the risk of default is higher. Also called *credit migration risk*.

Downside risk Risk of incurring returns below a specified value.

Downtrend A pattern that occurs when the price of an asset moves lower over a period of time.

Drag on liquidity When receipts (inflows) lag, creating pressure from the decreased available funds.

Drawdown A percentage peak-to-trough reduction in net asset value.

Drop shipping Often used in e-commerce, when goods are delivered directly from manufacturer to end customer, enabling the marketer to avoid taking the goods into inventory.

DuPont analysis An approach to decomposing return on investment, e.g., return on equity, as the product of other financial ratios.

Dual-currency bonds Bonds that make coupon payments in one currency and pay the par value at maturity in another currency.

Duration A measure of the approximate sensitivity of a security to a change in interest rates (i.e., a measure of interest rate risk).

Duration gap A bond's Macaulay duration minus the investment horizon.

Dutch Book Theorem A result in probability theory stating that inconsistent probabilities create profit opportunities.

Dynamic pricing A pricing approach that charges different prices at different times. Specific examples include off-peak pricing, "surge" pricing, and "congestion" pricing.

ESG An acronym that encompasses environmental, social, and governance factors.

ESG integration An ESG investment approach that focuses on systematic consideration of material ESG factors in asset allocation, security selection, and portfolio construction decisions for the purpose of achieving the product's stated investment objectives. Used interchangeably with **ESG investing**.

ESG risk The risk associated with environmental, social, and governance–related factors.

Early repayment option See *prepayment option*.

Earnings per share The amount of income earned during a period per share of common stock.

Earnings surprise The portion of a company's earnings that is unanticipated by investors and, according to the efficient market hypothesis, merits a price adjustment.

Economic costs All the remuneration needed to keep a productive resource in its current employment or to acquire the resource for productive use; the sum of total accounting costs and implicit opportunity costs.

Economic indicator A variable that provides information on the state of the overall economy.

Economic loss The amount by which accounting profit is less than normal profit.

Economic profit Equal to accounting profit less the implicit opportunity costs not included in total accounting costs; the difference between total revenue (TR) and total cost (TC). Also called *abnormal profit* or *supernormal profit*.

Economic stabilization Reduction of the magnitude of economic fluctuations.

Economic union Incorporates all aspects of a common market and in addition requires common economic institutions and coordination of economic policies among members.

Economies of scale A situation in which average costs per unit of good or service produced fall as volume rises. In reference to mergers, the savings achieved through the consolidation of operations and elimination of duplicate resources.

Effective annual rate The amount by which a unit of currency will grow in a year with interest on interest included.

Effective convexity A *curve convexity* statistic that measures the secondary effect of a change in a benchmark yield curve on a bond's price.

Effective duration Sensitivity of the bond's price to a 100 bps parallel shift of the benchmark yield curve, assuming no change in the bond's credit spread.

Effective interest rate The borrowing rate or market rate that a company incurs at the time of issuance of a bond.

Efficient market A market in which asset prices reflect new information quickly and rationally.

Elastic Said of a good or service when the magnitude of elasticity is greater than one.

Elasticity The percentage change in one variable for a percentage change in another variable; a general measure of how sensitive one variable is to a change in the value of another variable.

Elasticity of demand A measure of the sensitivity of quantity demanded to a change in a product's own price: $\%\Delta Q^D/\%\Delta P$.

Elasticity of supply A measure of the sensitivity of quantity supplied to a change in price: $\%\Delta Q^S/\%\Delta P$.

Electronic communications networks See *alternative trading systems*.

Embedded derivative A derivative within an underlying, such as a callable, putable, or convertible bond.

Embedded option Contingency provisions that provide the issuer or the bondholders the right, but not the obligation, to take action. These options are part of the security and cannot be traded separately.

Embedded options Contingency provisions found in a bond's indenture or offering circular representing rights that enable their holders to take advantage of interest rate movements. They can be exercised by the issuer, by the bondholder, or automatically depending on the course of interest rates.

Emotional biases Behavioral biases resulting from reasoning influenced by feelings; emotional biases stem from impulse or intuition.

Empirical duration The use of statistical methods and historical bond prices to estimate the price–yield relationship for a specific bond or portfolio of bonds.

Empirical probability The probability of an event estimated as a relative frequency of occurrence.

Employed The number of people with a job.

Endowment bias An emotional bias in which people value an asset more when they hold rights to it than when they do not.

Engagement/active ownership An ESG investment approach that uses shareholder power to influence corporate behavior through direct corporate engagement (i.e., communicating with senior management and/or boards of companies), filing or co-filing shareholder proposals, and proxy voting directed by ESG guidelines.

Enterprise risk management An overall assessment of a company's risk position. A centralized approach to risk management sometimes called firmwide risk management.

Enterprise value Total company value (the market value of debt, common equity, and preferred equity) minus the value of cash and investments.

Equal weighting An index weighting method in which an equal weight is assigned to each constituent security at inception.

Equipment trust certificates Bonds secured by specific types of equipment or physical assets.

Equity Assets less liabilities; the residual interest in the assets after subtracting the liabilities.

Equity risk premium The expected return on equities minus the risk-free rate; the premium that investors demand for investing in equities.

Equity swap A swap transaction in which at least one cash flow is tied to the return on an equity portfolio position, often an equity index.

Error term The difference between an observation and its expected value, where the expected value is based on the true underlying population relation between the dependent and independent variables. Also known simply as the *error*.

Estimate The particular value calculated from sample observations using an estimator.

Estimated parameters With reference to a regression analysis, the estimated values of the population intercept and population slope coefficients in a regression.

Estimator An estimation formula; the formula used to compute the sample mean and other sample statistics are examples of estimators.

Ethical principles Beliefs regarding what is good, acceptable, or obligatory behavior and what is bad, unacceptable, or forbidden behavior.

Ethics The study of moral principles or of making good choices. Ethics encompasses a set of moral principles and rules of conduct that provide guidance for our behavior.

Eurobonds Type of bond issued internationally, outside the jurisdiction of the country in whose currency the bond is denominated.

European options Options that may be exercised only at contract maturity.

European-style Said of an option contract that can only be exercised on the option's expiration date.

Event Any outcome or specified set of outcomes of a random variable.

Event risk Risk that evolves around set dates, such as elections, new legislation, or other date-driven milestones, such as holidays or political anniversaries, known in advance. Example: Brexit referendum.

Ex-dividend date The first date that a share trades without (i.e., "ex") the right to receive the declared dividend for the period.

Excess kurtosis Degree of kurtosis (fatness of tails) relative to the kurtosis of the normal distribution.

Exchange-traded derivative (ETD) Futures, options, and other financial contracts available on exchanges.

Exchanges Places where traders can meet to arrange their trades.

Execution instructions Instructions that indicate how to fill an order.

Execution risk The risk that management will be unable to do what is needed to deliver the expected results.

Exercise The decision to transact the underlying by an option buyer.

Exercise price The pre-agreed execution price specified in an option contract. Sometimes, this price is referred to as the strike price.

Exhaustive An index construction strategy that selects every constituent of a universe.

Exogenous risk A sudden or unanticipated risk that impacts either a country's cooperative stance, the ability of non-state actors to globalize, or both. Examples include sudden uprisings, invasions, or the aftermath of natural disasters.

Expansion The period of a business cycle after its lowest point and before its highest point.

Expansionary Tending to cause the real economy to grow.

Expansionary fiscal policy Fiscal policy aimed at achieving real economic growth.

Expected inflation The level of inflation that economic agents expect in the future.

Expected loss Default probability times loss severity given default.

Expected return on the portfolio ($E(R_p)$) The weighted average of the expected returns (R_1 to R_n) on the component securities using their respective weights (w_1 to w_n).

Expected value The probability-weighted average of the possible outcomes of a random variable.

Expenses Outflows of economic resources or increases in liabilities that result in decreases in equity (other than decreases because of distributions to owners); reductions in net assets associated with the creation of revenues.

Export subsidy Paid by the government to the firm when it exports a unit of a good that is being subsidized.

Exports Goods and services that an economy sells to other countries.

Extension risk The risk that when interest rates rise, fewer prepayments will occur because homeowners are reluctant to give up the benefits of a contractual interest rate that now looks low. As a result, the security becomes longer in maturity than anticipated at the time of purchase.

Externalities Spillover effects of production and consumption activities onto others who are not directly involved in a particular transaction, activity, or decision.

Externality An effect of a market transaction that is borne by parties other than those who transacted.

Extra dividend A dividend paid by a company that does not pay dividends on a regular schedule, or a dividend that supplements regular cash dividends with an extra payment.

Extreme value theory A branch of statistics that focuses primarily on extreme outcomes.

FIFO method The first in, first out, method of accounting for inventory, which matches sales against the costs of items of inventory in the order in which they were placed in inventory.

FX swap The combination of a spot and a forward FX transaction.

Face value The amount of cash payable by a company to the bondholders when the bonds mature; the promised payment at maturity separate from any coupon payment.

Factoring arrangement When a company sells its accounts receivable to a lender (known as a factor) who assumes responsibility for the credit-granting and collection process.

Fair value The amount at which an asset could be exchanged, or a liability settled, between knowledgeable, willing parties in an arm's-length transaction; the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants.

Fair value hedge Refers to a specific **hedge accounting** designation that applies when a derivative is deemed to offset the fluctuation in fair value of an asset or liability.

False discovery approach An adjustment in the p-values for tests performed multiple times.

False discovery rate The rate of Type I errors in testing a null hypothesis multiple times for a given level of significance.

Fat-Tailed Describes a distribution that has fatter tails than a normal distribution (also called leptokurtic).

Fed funds rate The US interbank lending rate on overnight borrowings of reserves.

Federal funds rate The US interbank lending rate on overnight borrowings of reserves.

Fiat money Money that is not convertible into any other commodity.

Fiduciary An entity designated to represent the rights and responsibilities of a beneficiary whose assets they are managing, such as a bond trustee acting on behalf of fixed-income investors.

Fiduciary call A combination of a purchased call option and investment in a risk-free bond with face value of the option's exercise price.

Fill or kill See *immediate or cancel order*.

Finance lease A type of lease which is more akin to the purchase or sale of the underlying asset.

Financial account A component of the balance of payments account that records investment flows.

Financial distress Heightened uncertainty regarding a company's ability to meet its various obligations because of diminished earnings power or actual current losses.

Financial flexibility The ability to react and adapt to financial adversity and opportunities.

Financial leverage The use of fixed sources of capital, such as debt, relative to sources without fixed costs, such as equity.

Financial leverage ratio A measure of financial leverage calculated as average total assets divided by average total equity.

Financial risk The risk arising from a company's capital structure and, specifically, from the level of debt and debt-like obligations.

Financing activities Activities related to obtaining or repaying capital to be used in the business (e.g., equity and long-term debt).

Fintech Technological innovation in the design and delivery of financial services and products in the financial industry.

Firm commitment A pre-determined amount (price and quantity) is agreed to be exchanged at settlement. Examples of firm commitments include forward contracts, futures contracts, and swaps.

Firm commitment offering See *underwritten offering*.

First-degree price discrimination Where a monopolist is able to charge each customer the highest price the customer is willing to pay.

First lien debt Debt secured by a pledge of certain assets that could include buildings, but it may also include property and equipment, licenses, patents, brands, etc.

First mortgage debt Debt secured by a pledge of a specific property.

Fiscal multiplier The ratio of a change in national income to a change in government spending.

Fiscal policy The use of taxes and government spending to affect the level of aggregate expenditures.

Fisher effect The thesis that the real rate of interest in an economy is stable over time so that changes in nominal interest rates are the result of changes in expected inflation.

Fixed charge coverage A solvency ratio measuring the number of times interest and lease payments are covered by operating income, calculated as (EBIT + lease payments) divided by (interest payments + lease payments).

Fixed costs Costs that remain at the same level regardless of a company's level of production and sales.

Fixed-rate payer The counterparty paying fixed cash flows in a swap contract. May also be referred to as the floating-rate receiver.

Fixed-rate perpetual preferred stock Nonconvertible, noncallable preferred stock that has a fixed dividend rate and no maturity date.

Flag A technical analysis continuation pattern formed by parallel trendlines, typically over a short period.

Flat price The full price of a bond minus the accrued interest; also called the *quoted* or *clean* price.

Float-adjusted market-capitalization weighting An index weighting method in which the weight assigned to each constituent security is determined by adjusting its market capitalization for its market float.

Floaters See *floating-rate notes*.

Floating-rate notes Notes on which interest payments are not fixed but instead vary from period to period depending on the current level of a reference interest rate.

Floating-rate payer The counterparty paying the variable cash flows in a swap contract. May also be referred to as the fixed-rate receiver.

Flotation cost Fees charged to companies by investment bankers and other costs associated with raising new capital.

Foreclosure Allows the lender to take possession of a mortgaged property if the borrower defaults and then sell it to recover funds.

Foreign currency reserves Holding by the central bank of non-domestic currency deposits and non-domestic bonds.

Foreign direct investment Direct investment by a firm in one country (the source country) in productive assets in a foreign country (the host country).

Foreign direct investments (FDI) Long-term investments in the productive capacity of a foreign country.

Foreign exchange gains (or losses) Gains (or losses) that occur when the exchange rate changes between the investor's currency and the currency that foreign securities are denominated in.

Foreign portfolio investment Shorter-term investment by individuals, firms, and institutional investors (e.g., pension funds) in foreign financial instruments such as foreign stocks and foreign government bonds.

Forward contract A **derivative contract** for the future exchange of an **underlying** at a fixed price set at contract signing.

Forward curve A series of forward rates, each having the same time frame.

Forward market For future delivery, beyond the usual settlement time period in the cash market.

Forward price Represents the price agreed upon in a forward contract to be exchanged at the contract's maturity date, T. This price is shown in equations as $F_0(T)$.

Forward rate An interest rate determined today for a loan that will be initiated in a future period.

Forward rate agreement (FRA) An OTC derivatives contract in which counterparties agree to apply a specific interest rate to a future time period.

Fractile A value at or below which a stated fraction of the data lies. Also called quantile.

Fractional reserve banking Banking in which reserves constitute a fraction of deposits.

Fractionalization The creation of value by selling something in parts.

Framing bias An information-processing bias in which a person answers a question differently based on the way in which it is asked (framed).

Franchising An owner of an asset and associated intellectual property divests the asset and licenses intellectual property to a third-party operator (franchisee) in exchange for royalties. Franchisees operate under the constraints of a franchise agreement.

Free cash flow The actual cash that would be available to the company's investors after making all investments necessary to maintain the company as an ongoing enterprise (also referred to as free cash flow to the firm); the internally generated funds that can be distributed to the company's investors (e.g., shareholders and bondholders) without impairing the value of the company.

Free cash flow hypothesis The hypothesis that higher debt levels discipline managers by forcing them to make fixed debt service payments and by reducing the company's free cash flow.

Free-cash-flow-to-equity models Valuation models based on discounting expected future free cash flow to equity.

Free float The number of shares that are readily and freely tradable in the secondary market.

Free trade When there are no government restrictions on a country's ability to trade.

Free trade areas One of the most prevalent forms of regional integration, in which all barriers to the flow of goods and services among members have been eliminated.

Freemium pricing A pricing approach that allows customers a certain level of usage or functionality at no charge. Those who wish to use more must pay.

Frequency distribution A tabular display of data constructed either by counting the observations of a variable by distinct values or groups or by tallying the values of a numerical variable into a set of numerically ordered bins (also called a one-way table).

Frequency polygon A graph of a frequency distribution obtained by drawing straight lines joining successive points representing the class frequencies.

Frequency table A representation of the frequency of occurrence of two discrete variables.

Full price The price of a security with accrued interest; also called the *invoice* or *dirty* price.

Fundamental analysis The examination of publicly available information and the formulation of forecasts to estimate the intrinsic value of assets.

Fundamental value The underlying or true value of an asset based on an analysis of its qualitative and quantitative characteristics. Also called *intrinsic value*.

Fundamental weighting An index weighting method in which the weight assigned to each constituent security is based on its underlying company's size. It attempts to address the disadvantages of market-capitalization weighting by using measures that are independent of the constituent security's price.

Funds of hedge funds Funds that hold a portfolio of hedge funds, more commonly shortened to *funds of funds*.

Fungible Freely exchangeable, interchangeable, or substitutable with other things of the same type. Money and commodities are the most common examples.

Future value (FV) The amount to which a payment or series of payments will grow by a stated future date.

Futures contract A variation of a forward contract that has essentially the same basic definition but with some additional features, such as a clearinghouse guarantee against credit losses, a daily settlement of gains and losses, and an organized electronic or floor trading facility.

Futures contract basis point value (BPV) The change in price of a futures contract given a 1 basis point (0.01%) change in yield.

Futures contracts Forward contracts with standardized sizes, dates, and underlyings that trade on futures exchanges.

Futures margin account An account held by an exchange clearinghouse for each derivatives counterparty. The funds in such an account are used to ensure that counterparties do not default on their contract obligation.

Futures price The pre-agreed price at which a futures contract buyer (seller) agrees to pay (receive) for the underlying at the maturity date of the futures contract.

GDP deflator A gauge of prices and inflation that measures the aggregate changes in prices across the overall economy.

G-spread The yield spread in basis points over an actual or interpolated government bond.

Gains Asset inflows not directly related to the ordinary activities of the business.

Game theory The set of tools decision makers use to incorporate responses by rival decision makers into their strategies.

Gamma A numerical measure of how sensitive an option's delta (the sensitivity of the derivative's price) is to a change in the value of the underlying.

Gap opening A gap is an area of a chart where a security's price either rises or falls from the previous day's close with no trading occurring in between. A gap opening is the start of a new trading session with a gap.

Gate A fund provision that limits or restricts redemptions from the fund for a period of time.

General partner Individual(s) in a limited partnership responsible for managing the business with unlimited liability.

Geometric mean A measure of central tendency computed by taking the *n*th root of the product of *n* non-negative values.

Geophysical resource endowment Includes such factors as livable geography and climate as well as access to food and water, which are necessary for sustainable growth. Geophysical resource endowment is highly unequal among countries.

Geopolitical risk The risk associated with tensions or actions between actors that affect the normal and peaceful course of international relations. Geopolitical risk can have a tangible impact on investment outcomes.

Geopolitics The study of how geography affects politics and international relations. These relations matter for investments because they contribute to important drivers of investment performance, including economic growth, business performance, market volatility, and transaction costs.

Giffen goods Goods that are consumed more as the price of the good rises because it is a very inferior good whose income effect overwhelms its substitution effect when price changes.

Gilts Bonds issued by the UK government.

Global depository receipt A depository receipt that is issued outside of the company's home country and outside of the United States.

Global minimum-variance portfolio The portfolio on the minimum-variance frontier with the smallest variance of return.

Global registered share A common share that is traded on different stock exchanges around the world in different currencies.

Globalization The process of interaction and integration among people, companies, and governments worldwide. It is marked by the spread of products, information, jobs, and culture across borders.

Gold standard With respect to a currency, if a currency is on the gold standard a given amount can be converted into a prespecified amount of gold.

Golden Cross See **Bullish crossover**.

Good-on-close An execution instruction specifying that an order can only be filled at the close of trading. Also called *market on close*.

Good-on-open An execution instruction specifying that an order can only be filled at the opening of trading.

Good-till-cancelled order An order specifying that it is valid until the entity placing the order has cancelled it (or, commonly, until some specified amount of time such as 60 days has elapsed, whichever comes sooner).

Goodwill An intangible asset that represents the excess of the purchase price of an acquired company over the value of the net identifiable assets acquired.

Government equivalent yield A yield that restates a yield-to-maturity based on a 30/360 day count to one based on actual/actual.

Green bonds Bonds used in green finance whereby the proceeds are earmarked toward environmental-related products.

Green finance A type of finance that addresses environmental concerns while achieving economic growth.

Green loans Any loan instruments made available exclusively to finance or re-finance, in whole or in part, new and/or existing eligible green projects. Green loans are commonly aligned in the market with the Green Loan Principles.

Greenfield investment Investing in infrastructure assets that are to be constructed.

Grey market The forward market for bonds about to be issued. Also called "when issued" market.

Gross domestic product The market value of all final goods and services produced within the economy during a given period (output definition) or, equivalently, the aggregate income earned by all households, all companies, and the government within the economy during a given period (income definition).

Gross margin Sales minus the cost of sales (i.e., the cost of goods sold for a manufacturing company).

Gross profit Sales minus the cost of sales (i.e., the cost of goods sold for a manufacturing company).

Gross profit margin The ratio of gross profit to revenues.

Grouped bar chart A bar chart for showing joint frequencies for two categorical variables (also known as a clustered bar chart).

Grouping by function With reference to the presentation of expenses in an income statement, the grouping together of expenses serving the same function, e.g. all items that are costs of goods sold.

Grouping by nature With reference to the presentation of expenses in an income statement, the grouping together of expenses by similar nature, e.g., all depreciation expenses.

Groupthink The practice of thinking or making decisions as a group in a way that discourages creativity or individual responsibility. For scenario analysis to be useful in portfolio management, teams must work hard to build creative processes, identify scenarios, track these scenarios, and assess the need for action on a regular cadence.

Growth cycle Refers to fluctuations in economic activity around the long-term potential trend growth level, focusing on how much actual economic activity is below or above trend growth in economic activity.

Growth cyclical A term sometimes used to describe companies that are growing rapidly on a long-term basis but that still experience above-average fluctuation in their revenues and profits over the course of a business cycle.

Growth investors With reference to equity investors, investors who seek to invest in high-earnings-growth companies.

Growth option The option to make additional investments in a project at some future time if the financial results are strong. Also called an *expansion option*.

Growth rate cycle Refers to fluctuations in the growth rate of economic activity.

Guarantee certificate A type of structured financial instrument that provides investors with capital protection. It combines a zero-coupon bond and a call option on some underlying asset.

Haircut See *repo margin*.

Halo effect An emotional bias that extends a favorable evaluation of some characteristics to other characteristics.

Hard-bullet covered bonds Covered bonds for which a bond default is triggered and bond payments are accelerated in the event of sponsor default if payments do not occur according to the original maturity schedule.

Hard commodities Traded natural resources, such as crude oil and metals, with markets often involving the physical delivery of the underlying upon settlement.

Harmonic mean A type of weighted mean computed as the reciprocal of the arithmetic average of the reciprocals.

Head and shoulders pattern In technical analysis, a reversal pattern that is formed in three parts: a left shoulder, a head, and a right shoulder. A head and shoulders pattern is used to predict a change from an uptrend to a downtrend.

Headline inflation Refers to the inflation rate calculated based on the price index that includes all goods and services in an economy.

Heat map A type of graphic that organizes and summarizes data in a tabular format and represents it using a color spectrum.

Hedge The **derivative contract** used in **hedging** an exposure.

Hedge accounting Accounting standard(s) that allow an issuer to offset a hedging instrument (usually a derivative) against a hedged transaction or balance sheet item to reduce financial statement volatility.

Hedge funds Private investment vehicles that typically use leverage, derivatives, and long and short investment strategies.

Hedge ratio The proportion of an underlying that will offset the risk associated with a derivative position.

Hedging Theuse of a derivative contract to offset or neutralize existing or anticipated exposure to an **underlying**.

Hegemony Countries that are regional or even global leaders and use their political or economic influence of others to control resources.

Held-to-maturity Debt (fixed-income) securities that a company intends to hold to maturity; these are presented at their original cost, updated for any amortisation of discounts or premiums.

Herding Clustered trading that may or may not be based on information.

Heteroskedasticity The property of having a nonconstant variance; refers to an error term with the property that its variance differs across observations.

Hidden order An order that is exposed not to the public but only to the brokers or exchanges that receive it.

Hidden revenue business models Business models that provide services to users at no charge and generate revenues elsewhere.

High-frequency trading A form of algorithmic trading that makes use of vast quantities of data to execute trades on ultra-high-speed networks in fractions of a second.

High-water mark The highest value, net of fees, that a fund has reached in history. It reflects the highest cumulative return used to calculate an incentive fee.

Hindsight bias A bias with selective perception and retention aspects in which people may see past events as having been predictable and reasonable to expect.

Histogram A chart that presents the distribution of numerical data by using the height of a bar or column to represent the absolute frequency of each bin or interval in the distribution.

Historical cost In reference to assets, the amount paid to purchase an asset, including any costs of acquisition and/or preparation; with reference to liabilities, the amount of proceeds received in exchange in issuing the liability.

Historical equity risk premium approach An estimate of a country's equity risk premium that is based on the historical averages of the risk-free rate and the rate of return on the market portfolio.

Holder-of-record date The date that a shareholder listed on the corporation's books will be deemed to have ownership of the shares for purposes of receiving an upcoming dividend.

Holding period return The return that an investor earns during a specified holding period; a synonym for total return.

Home bias A preference for securities listed on the exchanges of one's home country.

Homogeneity of expectations The assumption that all investors have the same economic expectations and thus have the same expectations of prices, cash flows, and other investment characteristics.

Homoskedasticity The property of having a constant variance; refers to an error term that is constant across observations.

Horizon yield The internal rate of return between the total return (the sum of reinvested coupon payments and the sale price or redemption amount) and the purchase price of the bond.

Horizontal analysis Common-size analysis that involves comparing a specific financial statement with that statement in prior or future time periods; also, cross-sectional analysis of one company with another.

Horizontal demand schedule Implies that at a given price, the response in the quantity demanded is infinite.

Hostile takeover An attempt by one entity to acquire a company without the consent of the company's management.

Household A person or a group of people living in the same residence, taken as a basic unit in economic analysis.

Human capital An implied asset; the net present value of an investor's future expected labor income weighted by the probability of surviving to each future age. Also called *net employment capital*.

Hurdle rate The rate of return that a project's IRR must exceed for the project to be accepted by the company.

Hypothesis A proposed explanation or theory that can be tested.

Hypothesis testing The process of testing of hypotheses about one or more populations using statistical inference.

I-spread The yield spread of a specific bond over the standard swap rate in that currency of the same tenor.

Iceberg order An order in which the display size is less than the order's full size.

If-converted method A method for accounting for the effect of convertible securities on earnings per share (EPS) that specifies what EPS would have been if the convertible securities had been converted at the beginning of the period, taking account of the effects of conversion on net income and the weighted average number of shares outstanding.

Illusion of control bias A bias in which people tend to believe that they can control or influence outcomes when, in fact, they cannot.

Immediate or cancel order An order that is valid only upon receipt by the broker or exchange. If such an order cannot be filled in part or in whole upon receipt, it cancels immediately. Also called *fill or kill*.

Impact investing Investment approach that seeks to achieve targeted social or environmental objectives along with measurable financial returns through engagement with a company or by direct investment in projects or companies.

Impact lag The lag associated with the result of actions affecting the economy with delay.

Implicit price deflator for GDP A gauge of prices and inflation that measures the aggregate changes in prices across the overall economy.

Implicit selection bias One type of selection bias introduced through the presence of a threshold that filters out some unqualified members.

Implied forward rate (IFR) The breakeven reinvestment rate linking a short-dated and long-dated zero-coupon bond. More specifically, the interest rate for a period in the future at which an investor earns the same return from: 1) investing for a period from today until the forward start date and rolling over the proceeds at the implied forward rate, or 2) investing today through the final maturity of the forward rate.

Implied forward rates Calculated from spot rates, an implied forward rate is a breakeven reinvestment rate that links the return on an investment in a shorter-term zero-coupon bond to the return on an investment in a longer-term zero-coupon bond.

Import license Specifies the quantity of a good that can be imported into a country.

Imports Goods and services that a domestic economy (i.e., house-holds, firms, and government) purchases from other countries.

In-the-money Describes an option with a positive intrinsic value.

Income Increases in economic benefits in the form of inflows or enhancements of assets, or decreases of liabilities that result in an increase in equity (other than increases resulting from contributions by owners).

Income elasticity of demand A measure of the responsiveness of demand to changes in income, defined as the percentage change in quantity demanded divided by the percentage change in income.

Income tax paid The actual amount paid for income taxes in the period; not a provision, but the actual cash outflow.

Income tax payable The income tax owed by the company on the basis of taxable income.

Increasing marginal returns When the marginal product of a resource increases as additional units of that input are employed.

Increasing returns to scale When a production process leads to increases in output that are proportionately larger than the increase in inputs.

Incremental cash flow The net cash flow that is realized because of a decision; the changes or increments to cash flows resulting from a decision or action.

Indenture A written contract between a lender and borrower that specifies the terms of the loan, such as interest rate, interest payment schedule, or maturity.

Independent With reference to events, the property that the occurrence of one event does not affect the probability of another event occurring. With reference to two random variables X and Y, they are independent if and only if $P(X,Y) = P(X)P(Y)$.

Independent projects Independent projects are capital investments whose cash flows are independent of each other.

Independent variable A variable used to explain the dependent variable in a regression; a right-side variable in a regression equation. Also referred to as the *explanatory variable*.

Independently and identically distributed With respect to random variables, the property of random variables that are independent of each other but follow the identical probability distribution.

Index-linked bond Bond for which coupon payments and/or principal repayment are linked to a specified index.

Indexing An investment strategy in which an investor constructs a portfolio to mirror the performance of a specified index.

Indicator variable A variable that takes on only one of two values, 0 or 1, based on a condition. In simple linear regression, the slope is the difference in the dependent variable for the two conditions. Also referred to as a *dummy variable*.

Indifference curve A curve representing all the combinations of two goods or attributes such that the consumer is entirely indifferent among them.

Indirect format With reference to cash flow statements, a format for the presentation of the statement which, in the operating cash flow section, begins with net income then shows additions and subtractions to arrive at operating cash flow. Also called *indirect method*.

Indirect method See *indirect format*.

Indirect taxes Taxes such as taxes on spending, as opposed to direct taxes.

Industry A group of companies offering similar products and/or services.

Industry analysis The analysis of a specific branch of manufacturing, service, or trade.

Industry risks Risks that apply to all competitors in the same industry and include risk factors likely to affect the overall level of demand, pricing, and profitability in the industry.

Inelastic Said of a good or service when the magnitude of elasticity is less than one. Insensitive to price changes.

Inferior goods A good whose consumption decreases as income increases.
Inflation The percentage increase in the general price level from one period to the next; a sustained rise in the overall level of prices in an economy.
Inflation-linked bond Type of index-linked bond that offers investors protection against inflation by linking the bond's coupon payments and/or the principal repayment to an index of consumer prices. Also called *linkers*.
Inflation premium An extra return that compensates investors for expected inflation.
Inflation reports A type of economic publication put out by many central banks.
Inflation uncertainty The degree to which economic agents view future rates of inflation as difficult to forecast.
Information cascade The transmission of information from those participants who act first and whose decisions influence the decisions of others.
Information-motivated traders Traders that trade to profit from information that they believe allows them to predict future prices.
Informationally efficient market A market in which asset prices reflect new information quickly and rationally.
Initial coin offering An unregulated process whereby companies raise capital by selling crypto tokens to investors in exchange for fiat money or another agreed-upon cryptocurrency.
Initial margin The required sum that each counterparty must deposit upon entering into the futures contract. This amount is deposited into a futures margin account held at the exchange clearinghouse to settle the daily mark to market.
Initial margin requirement The margin requirement on the first day of a transaction as well as on any day in which additional margin funds must be deposited.
Initial public offering (IPO) The first issuance of common shares to the public by a formerly private corporation.
Initial public offering (IPO) A process used by companies to raise capital and offer shares to the public for the first time.
Input productivity The amount of output produced by workers in a given period of time—for example, output per hour worked; measures the efficiency of labor.
Insolvency Refers to the condition in which firm value is below the face value of debt used to finance the firm's assets.
Institution An established organization or practice in a society or culture. An institution can be a formal structure, such as a university, organization, or process backed by law; or it can be informal, such as a custom or behavioral pattern important to society. Institutions can, but need not be, formed by national governments. Examples of institutions include non-governmental organizations, charities, religious customs, family units, the media, political parties, and educational practice.
Intangible assets Assets without a physical form, such as patents and trademarks.
Interbank market The market of loans and deposits between banks for maturities ranging from overnight to one year.
Intercept The expected value of the dependent variable when the independent variable in a simple linear regression is equal to zero.
Interest Payment for lending funds.
Interest coverage A solvency ratio calculated as EBIT divided by interest payments.
Interest-only mortgage A loan in which no scheduled principal repayment is specified for a certain number of years.
Interest rate A rate of return that reflects the relationship between differently dated cash flows; a discount rate.
Interest rate effect The effect through which price level changes, through demand for money, impact interest rate, which in turn impacts investment and consumption.
Interest rate swap A swap in which the underlying is an interest rate. Can be viewed as a currency swap in which both currencies are the same and can be created as a combination of currency swaps.
Intermarket analysis A field within technical analysis that combines analysis of the major categories of securities—namely, equities, bonds, currencies, and commodities—to identify market trends and possible inflections in trends.
Internal rate of return The discount rate that makes net present value equal 0; the discount rate that makes the present value of an investment's costs (outflows) equal to the present value of the investment's benefits (inflows).
Internet of Things A network arrangement of structures and devices whereby the objects on the network are able to interact and share information.
Interpolated spread The yield spread of a specific bond over the standard swap rate in that currency of the same tenor.
Interquartile range The difference between the third and first quartiles of a dataset.
Interval With reference to grouped data, a set of values within which an observation falls.
Intrinsic value The amount gained (per unit) by an option buyer if an option is exercised at any given point in time. May be referred to as the exercise value of the option.
Inventory investment Net change in business inventory.
Inventory turnover An activity ratio calculated as cost of goods sold divided by average inventory.
Inverse demand function A restatement of the demand function in which price is stated as a function of quantity.
Inverse floater A type of leveraged structured financial instrument. The cash flows are adjusted periodically and move in the opposite direction of changes in the reference rate.
Inverse transformation method A method using randomly generated numbers from the continuous uniform distribution to generate random observations from any distribution.
Investing activities Activities associated with the acquisition and disposal of property, plant, and equipment; intangible assets; other long-term assets; and both long-term and short-term investments in the equity and debt (bonds and loans) issued by other companies.
Investment banks Financial intermediaries that provide advice to their mostly corporate clients and help them arrange transactions such as initial and seasoned securities offerings.
Investment policy statement A written planning document that describes a client's investment objectives and risk tolerance over a relevant time horizon, along with the constraints that apply to the client's portfolio.
Investment property Property used to earn rental income or capital appreciation (or both).
Jackknife A resampling method that repeatedly draws samples by taking the original observed data sample and leaving out one observation at a time (without replacement) from the set.

January effect Calendar anomaly that stock market returns in January are significantly higher compared to the rest of the months of the year, with most of the abnormal returns reported during the first five trading days in January. Also called *turn-of-the-year effect*.

Joint frequencies The entry in the cells of the contingency table that represent the joining of one variable from a row and the other variable from a column to count observations.

Joint probability The probability of the joint occurrence of stated events.

Joint probability function A function giving the probability of joint occurrences of values of stated random variables.

Judgmental Sampling A procedure of selectively handpicking elements from the population based on a researcher's knowledge and professional judgment.

Key rate duration A method of measuring the interest rate sensitivities of a fixed-income instrument or portfolio to shifts in key points along the yield curve.

Keynesians Economists who believe that fiscal policy can have powerful effects on aggregate demand, output, and employment when there is substantial spare capacity in an economy.

Kurtosis The statistical measure that indicates the combined weight of the tails of a distribution relative to the rest of the distribution.

LIFO layer liquidation With respect to the application of the LIFO inventory method, the liquidation of old, relatively low-priced inventory; happens when the volume of sales rises above the volume of recent purchases so that some sales are made from relatively old, low-priced inventory. Also called *LIFO liquidation*.

LIFO method The last in, first out, method of accounting for inventory, which matches sales against the costs of items of inventory in the reverse order the items were placed in inventory (i.e., inventory produced or acquired last are assumed to be sold first).

LIFO reserve The difference between the reported LIFO inventory carrying amount and the inventory amount that would have been reported if the FIFO method had been used (in other words, the FIFO inventory value less the LIFO inventory value).

Labor force Everyone of working age (ages 16 to 64) who either is employed or is available for work but not working.

Labor productivity The quantity of goods and services (real GDP) that a worker can produce in one hour of work.

Lagging economic indicators Turning points that take place later than those of the overall economy; they are believed to have value in identifying the economy's past condition.

Law of demand The principle that as the price of a good rises, buyers will choose to buy less of it, and as its price falls, they will buy more.

Law of diminishing marginal returns The observation that a variable factor's marginal product must eventually fall as more of it is added to a fixed amount of the other factors.

Law of diminishing returns The smallest output that a firm can produce such that its long run average costs are minimized.

Law of one price A principle that states that if two investments have the same or equivalent future cash flows regardless of what will happen in the future, then these two investments should have the same current price.

Lead underwriter The lead investment bank in a syndicate of investment banks and broker–dealers involved in a securities underwriting.

Leading economic indicators A set of economic variables whose values vary with the business cycle but at a fairly consistent time interval before a turn in the business cycle.

Lean startups A form of asset-light business model that attempts to outsource as many functions as possible in order to minimize both capital investment and fixed operating expenses.

Lease A contract that conveys the right to use an asset for a period of time in exchange for consideration.

Leasing The right to use an asset for a specified time, without ownership rights, for a fee.

Legal tender Something that must be accepted when offered in exchange for goods and services.

Lender of last resort An entity willing to lend money when no other entity is ready to do so.

Leptokurtic Describes a distribution that has fatter tails than a normal distribution (also called fat-tailed).

Lessee The party obtaining the use of an asset through a lease.

Lessor The owner of an asset that grants the right to use the asset to another party.

Letter of credit Form of external credit enhancement whereby a financial institution provides the issuer with a credit line to reimburse any cash flow shortfalls from the assets backing the issue.

Level of significance The probability of a Type I error in testing a hypothesis.

Leverage A measure for identifying a potentially influential high-leverage point.

Leveraged buyout A transaction whereby the target company management team converts the target to a privately held company by using heavy borrowing to finance the purchase of the target company's outstanding shares.

Leveraged buyout (LBO) An acquirer (typically an investment fund specializing in LBOs) uses a significant amount of debt to finance the acquisition of a target and then pursues restructuring actions, with the goal of exiting the target with a sale or public listing.

Leveraged buyouts Transactions whereby the target company's management team converts the target to a privately held company by using heavy borrowing to finance the purchase of the target company's outstanding shares.

Liabilities Present obligations of an enterprise arising from past events, the settlement of which is expected to result in an outflow of resources embodying economic benefits; creditors' claims on the resources of a company.

Liability-driven investment (LDI) An investment approach which takes the size, timing and/or relative certainty of future investor financial obligations into account when establishing portfolio risk and return objectives.

Licensing arrangements The right to produce a product or have access to intangible assets using someone else's brand name in return for a royalty (often a percentage of revenues).

Likelihood The probability of an observation, given a particular set of conditions.

Limit order Instructions to a broker or exchange to obtain the best price immediately available when filling an order, but in no event accept a price higher than a specified (limit) price when buying or accept a price lower than a specified (limit) price when selling.

Limit order book The book or list of limit orders to buy and sell that pertains to a security.

Limitations on liens Meant to put limits on how much secured debt an issuer can have.

Limited partners The partners in a limited partnership who cannot lose more than their investment in the partnership due to having limited liability.

Limited partnership A special form of partnership in which there is at least one general partner with unlimited liability and responsibility for management of the business. The remaining limited partners have limited liability in the business.

Limited partnership agreements (LPAs) Legal documents that outline the rules of a partnership and establish the framework that ultimately guides the fund's operations throughout its life.

Lin-log model A regression model in which the independent variable is in logarithmic form.

Line chart A type of graph used to visualize ordered observations. In technical analysis, a plot of price data, typically closing prices, with a line connecting the points.

Linear derivatives Firm commitment derivative contracts in which the contract's payoff/profit function is linear with respect to the price of the underlying.

Linear interpolation The estimation of an unknown value on the basis of two known values that bracket it, using a straight line between the two known values.

Linear regression Regression that models the straight-line relationship between the dependent and independent variables. Also known as *least squares regression* and *ordinary least squares regression*.

Linear scale A scale in which equal distances correspond to equal absolute amounts. Also called an *arithmetic scale*.

Linker See *inflation-linked bond*.

Liquid market Said of a market in which traders can buy or sell with low total transaction costs when they want to trade.

Liquidation To sell the assets of a company, division, or subsidiary piecemeal, typically because of bankruptcy; the form of bankruptcy that allows for the orderly satisfaction of creditors' claims after which the company ceases to exist.

Liquidity The extent to which a company is able to meet its short-term obligations using cash flows and those assets that can be readily transformed into cash.

Liquidity management The company's ability to generate cash when needed, at the lowest possible cost.

Liquidity premium An extra return that compensates investors for the risk of loss relative to an investment's fair value if the investment needs to be converted to cash quickly.

Liquidity ratios Financial ratios measuring the company's ability to meet its short-term obligations to creditors as they come due.

Liquidity risk A divergence in thecash flow timing of a derivative versus that of an underlying transaction.

Liquidity trap A condition in which the demand for money becomes infinitely elastic (horizontal demand curve) so that injections of money into the economy will not lower interest rates or affect real activity.

Load fund A mutual fund in which, in addition to the annual fee, a percentage fee is charged to invest in the fund and/or for redemptions from the fund.

Loan-to-value ratio The ratio of a property's purchase price to the amount of its mortgage.

Lockup periods Minimum fund holding periods before investors are allowed to make withdrawals or redeem shares.

Log-lin model A regression model in which the dependent variable is in logarithmic form.

Log-log model A regression model in which both the dependent and independent variables are in logarithmic form. Also known as the *double-log model*.

Logarithmic scale A scale in which equal distances represent equal proportional changes in the underlying quantity.

London interbank offered rate (Libor) Collective name for multiple rates at which a select set of banks believes they could borrow unsecured funds from other banks in the London interbank market for different currencies and different borrowing periods ranging from overnight to one year.

Long A trading position in a **derivative contract** that gains value as the price of the **underlying** moves higher.

Long-lived assets Assets that are expected to provide economic benefits over a future period of time, typically greater than one year. Also called *long-term assets*.

Long position A position in an asset or contract in which one owns the asset or has an exercisable right under the contract.

Long-run average total cost The curve describing average total cost when no costs are considered fixed.

Look-ahead bias A bias caused by using information that was unavailable on the test date.

Loss aversion The tendency of people to dislike losses more than they like comparable gains.

Loss-aversion bias A bias in which people tend to strongly prefer avoiding losses as opposed to achieving gains.

Loss severity Portion of a bond's value (including unpaid interest) an investor loses in the event of default.

Losses Asset outflows not directly related to the ordinary activities of the business.

Lower bound The lowest possible value of an option.

M^2 A measure of what a portfolio would have returned if it had taken on the same total risk as the market index.

M^2 alpha Difference between the risk-adjusted performance of the portfolio and the performance of the benchmark.

MAR ratio A ratio of the average annual compounded return to the maximum drawdown risk over the full history of the investment. A variation of the Calmar ratio.

Macaulay duration The approximate amount of time a bond would have to be held for the market discount rate at purchase to be realized if there is a single change in interest rate. It indicates the point in time when the coupon reinvestment and price effects of a change in yield-to-maturity offset each other.

Machine learning Computer based techniques that seek to extract knowledge from large amounts of data by "learning" from known examples and then generating structure or predictions. ML algorithms aim to "find the pattern, apply the pattern."

Macro risk The risk from political, economic, legal, and other institutional risk factors that impact all businesses in an economy, a region, or a country.

Macroeconomics The branch of economics that deals with aggregate economic quantities, such as national output and national income.

Maintenance covenants Covenants in bank loan agreements that require the borrower to satisfy certain financial ratio tests while the loan is outstanding.

Maintenance margin Minimum balance set below the initial margin that each contract buyer and seller must hold in the futures margin account from trade initiation until final settlement at maturity.

Maintenance margin requirement The margin requirement on any day other than the first day of a transaction.

Management buy-ins Leveraged buyouts in which the current management team is replaced with the acquiring team.

Management buyout A leveraged buyout event in which a group of investors consisting primarily of the company's existing management purchases at least controlling interest in its outstanding shares. At the extreme, they may purchase all shares and take the company private.

Management buyout (MBO) A process used to take a public company private, involving significant amounts of debt to finance the acquisition by members of the company's current management team.

Management buyouts Leveraged buyout events in which a group of investors consisting primarily of the company's existing management purchases at least a controlling interest in its outstanding shares. At the extreme, they may purchase all shares and take the company private.

Management fee A fee based on assets under management or committed capital, as applicable—also called a *base fee*.

Margin call Request to a derivatives contract counterparty to immediately deposit funds to return the futures margin account balance to the initial margin.

Margin loan Money borrowed from a broker to purchase securities.

Marginal cost The cost of producing an additional unit of a good.

Marginal frequencies The sums determined by adding joint frequencies across rows or across columns in a contingency table.

Marginal product Measures the productivity of each unit of input and is calculated by taking the difference in total product from adding another unit of input (assuming other resource quantities are held constant).

Marginal propensity to consume The proportion of an additional unit of disposable income that is consumed or spent; the change in consumption for a small change in income.

Marginal propensity to save The proportion of an additional unit of disposable income that is saved (not spent).

Marginal revenue The change in total revenue divided by the change in quantity sold; simply, the additional revenue from selling one more unit.

Marginal value curve A curve describing the highest price consumers are willing to pay for each additional unit of a good.

Mark-to-market Refers to the current expected fair market value for which a security would likely be available for purchase or sale if traded in current market conditions.

Mark to market (MTM) The practice in which a central clearing party assigns profits and losses to counterparties to derivative contracts. In exchange-traded markets, this practice takes place daily and is often referred to as daily settlement.

Market anomaly Change in the price or return of a security that cannot directly be linked to current relevant information known in the market or to the release of new information into the market.

Market bid–ask spread The difference between the best bid and the best offer.

Market-capitalization weighting An index weighting method in which the weight assigned to each constituent security is determined by dividing its market capitalization by the total market capitalization (sum of the market capitalization) of all securities in the index. Also called *value weighting*.

Market discount rate The rate of return required by investors given the risk of the investment in a bond; also called the *required yield* or the *required rate of return*.

Market float The number of shares that are available to the investing public.

Market liquidity risk The risk that the price at which investors can actually transact—buying or selling—may differ from the price indicated in the market.

Market makers **Over-the-counter (OTC) dealers** who typically enter into offsetting bilateral transactions with one another to transfer risk to other parties.

Market model A regression model with the return on a stock as the dependent variable and the returns on a market index as the independent variable.

Market multiple models Valuation models based on share price multiples or enterprise value multiples.

Market-on-close An execution instruction specifying that an order can only be filled at the close of trading.

Market order Instructions to a broker or exchange to obtain the best price immediately available when filling an order.

Market-oriented investors With reference to equity investors, investors whose investment disciplines cannot be clearly categorized as value or growth.

Market rate of interest The rate demanded by purchasers of bonds, given the risks associated with future cash payment obligations of the particular bond issue.

Market reference rate (MRR) The interest rate underlying used in interest rate swaps. These rates typically match those of loans or other short-term obligations. Survey-based Libor rates used as reference rates in the past have been replaced by rates based on a daily average of observed market transaction rates. For example, the Secured Overnight Financing Rate (SOFR) is an overnight cash borrowing rate collateralized by US Treasuries. Other MRRs include the euro short-term rate (€STR) and the Sterling Overnight Index Average (SONIA).

Market risk The risk that arises from movements in interest rates, stock prices, exchange rates, and commodity prices.

Market value The price at which an asset or security can currently be bought or sold in an open market.

Marketable limit order A buy limit order in which the limit price is placed above the best offer, or a sell limit order in which the limit price is placed below the best bid. Such orders generally will partially or completely fill right away.

Marketplace businesses Businesses that create networks of buyers and sellers without taking ownership of the goods during the process.

Markowitz efficient frontier The graph of the set of portfolios offering the maximum expected return for their level of risk (standard deviation of return).

Matching principle The accounting principle that expenses should be recognized in the same period in which the associated revenue is recognized.

Matrix pricing Process of estimating the market discount rate and price of a bond based on the quoted or flat prices of more frequently traded comparable bonds.

Maturity Length of time until the closing of a derivative contract, or **settlement**.

Maturity premium An extra return that compensates investors for the increased sensitivity of the market value of debt to a change in market interest rates as maturity is extended.

Maturity structure A factor explaining the differences in yields on similar bonds; also called *term structure*.

Mean absolute deviation With reference to a sample, the mean of the absolute values of deviations from the sample mean.
Mean square error (MSE) The sum of squares error divided by the degrees of freedom, $n - k - 1$; in a simple linear regression, $n - k - 1 = n - 2$.
Mean square regression (MSR) The sum of squares regression divided by the number of independent variables k; in a simple linear regression, $k = 1$.
Mean–variance analysis An approach to portfolio analysis using expected means, variances, and covariances of asset returns.
Measure of central tendency A quantitative measure that specifies where data are centered.
Measure of value A standard for measuring value; a function of money.
Measures of location Quantitative measures that describe the location or distribution of data. They include not only measures of central tendency but also other measures, such as percentiles.
Median The value of the middle item of a set of items that has been sorted into ascending or descending order (i.e., the 50th percentile).
Medium of exchange Any asset that can be used to purchase goods and services or to repay debts; a function of money.
Medium-term note A corporate bond offered continuously to investors by an agent of the issuer, designed to fill the funding gap between commercial paper and long-term bonds.
Mental accounting bias An information-processing bias in which people treat one sum of money differently from another equal-sized sum based on which mental account the money is assigned to.
Menu costs A cost of inflation in which businesses constantly have to incur the costs of changing the advertised prices of their goods and services.
Mesokurtic Describes a distribution with kurtosis equal to that of the normal distribution, namely, kurtosis equal to three.
Microeconomics The branch of economics that deals with markets and decision making of individual economic units, including consumers and businesses.
Minimum efficient scale The smallest output that a firm can produce such that its long-run average total cost is minimized.
Minimum-variance portfolio The portfolio with the minimum variance for each given level of expected return.
Minority shareholders Particular shareholders or a block of shareholders holding a small proportion of a company's outstanding shares, resulting in a limited ability to exercise control in voting activities.
Minsky moment Named for Hyman Minksy. A point in a business cycle when, after individuals become overextended in borrowing to finance speculative investments, people start realizing that something is likely to go wrong and a panic ensues, leading to asset sell-offs.
Modal interval With reference to grouped data, the interval containing the greatest number of observations (i.e., highest frequency).
Mode The most frequently occurring value in a distribution.
Modern portfolio theory (MPT) The analysis of rational portfolio choices based on the efficient use of risk.
Modified duration A measure of the percentage price change of a bond given a change in its yield-to-maturity.
Momentum oscillator A graphical representation of market sentiment that is constructed from price data and calculated so that it oscillates either between a low and a high or around some number.
Monetarists Economists who believe that the rate of growth of the money supply is the primary determinant of the rate of inflation.
Monetary policy Actions taken by a nation's central bank to affect aggregate output and prices through changes in bank reserves, reserve requirements, or its target interest rate.
Monetary transmission mechanism The process whereby a central bank's interest rate gets transmitted through the economy and ultimately affects the rate of increase of prices.
Monetary union An economic union in which the members adopt a common currency.
Money A generally accepted medium of exchange and unit of account.
Money convexity For a bond, the annual or approximate convexity multiplied by the full price.
Money creation The process by which changes in bank reserves translate into changes in the money supply.
Money duration A measure of the price change in units of the currency in which the bond is denominated given a change in its yield-to-maturity.
Money market The market for short-term debt instruments (one-year maturity or less).
Money market securities Fixed-income securities with maturities at issuance of one year or less.
Money multiplier Describes how a change in reserves is expected to affect the money supply; in its simplest form, 1 divided by the reserve requirement.
Money neutrality The thesis that an increase in the money supply leads in the long-run to an increase in the price level, while leaving real variables like output and employment unaffected.
Money-weighted return The internal rate of return on a portfolio, taking account of all cash flows.
Moneyness Expresses the relationship between an option's value and its exercise price across the full range of possible underlying prices.
Monopolistic competition Highly competitive form of imperfect competition; the competitive characteristic is a notably large number of firms, while the monopoly aspect is the result of product differentiation.
Monopoly In pure monopoly markets, there are no substitutes for the given product or service. There is a single seller, which exercises considerable power over pricing and output decisions.
Monte Carlo simulation A technique that uses the inverse transformation method for converting a randomly generated uniformly distributed number into a simulated value of a random variable of a desired distribution. Each key decision variable in a Monte Carlo simulation requires an assumed statistical distribution; this assumption facilitates incorporating non-normality, fat tails, and tail dependence as well as solving high-dimensionality problems.
Moral principles Beliefs regarding what is good, acceptable, or obligatory behavior and what is bad, unacceptable, or forbidden behavior.
Mortgage-backed securities Debt obligations that represent claims to the cash flows from pools of mortgage loans, most commonly on residential property.

Mortgage loan A loan secured by the collateral of some specified real estate property that obliges the borrower to make a predetermined series of payments to the lender.

Mortgage pass-through security A security created when one or more holders of mortgages form a pool of mortgages and sell shares or participation certificates in the pool.

Mortgage rate The interest rate on a mortgage loan; also called *contract rate* or *note rate*.

Moving average The average of the closing price of a security over a specified number of periods. With each new period, the average is recalculated.

Moving-average convergence/divergence oscillator A momentum oscillator that is based on the difference between short-term and long-term moving averages of a security's price.

Multi-factor model A model that explains a variable in terms of the values of a set of factors.

Multi-market indexes Comprised of indexes from different countries, designed to represent multiple security markets.

Multi-step format With respect to the format of the income statement, a format that presents a subtotal for gross profit (revenue minus cost of goods sold).

Multilateral trading facilities (MTF) See *Alternative trading systems (ATS)*.

Multilateralism The conduct of countries who participate in mutually beneficial trade relationships and extensive rules harmonization. Private firms are fully integrated into global supply chains with multiple trade partners. Examples of multilateral countries include Germany and Singapore.

Multinational corporation A company operating in more than one country or having subsidiary firms in more than one country.

Multinomial formula (general formula for labeling problems) The number of ways that n objects can be labeled with k different labels, with n_1 of the first type, n_2 of the second type, and so on, with $n_1 + n_2 + \ldots + n_k = n$, is given by $\frac{n!}{n_1!\, n_2! \ldots n_k!}$.

Multiple of invested capital (MOIC) A simplified calculation that measures the total value of all distributions and residual asset values relative to an initial total investment—also known as a *money multiple*.

Multiple testing problem The risk of getting statistically significant test results when performing a test multiple times.

Multiplication rule for counting If one task can be done in n_1 ways, and a second task, given the first, can be done in n_2 ways, and a third task, given the first two tasks, can be done in n_3 ways, and so on for k tasks, then the number of ways the k tasks can be done is $(n_1)(n_2)(n_3) \ldots (n_k)$.

Multiplication rule for independent events The rule that when two events are independent, the joint probability of A and B equals the product of the individual probabilities of A and B.

Multiplication rule for probability The rule that the joint probability of events A and B equals the probability of A given B times the probability of B.

Multiplier models Valuation models based on share price multiples or enterprise value multiples.

Multivariate distribution A probability distribution that specifies the probabilities for a group of related random variables.

Multivariate normal distribution A probability distribution for a group of random variables that is completely defined by the means and variances of the variables plus all the correlations between pairs of the variables.

Muni See *municipal bond*.

Municipal bond A type of non-sovereign bond issued by a state or local government in the United States. It very often (but not always) offers income tax exemptions.

Mutual fund A comingled investment pool in which investors in the fund each have a pro-rata claim on the income and value of the fund.

Mutually exclusive Indicates that only one event can occur at a time.

Mutually exclusive projects Mutually exclusive projects compete directly with each other. For example, if Projects A and B are mutually exclusive, you can choose A or B but you cannot choose both.

***n* Factorial** For a positive integer n, the product of the first n positive integers; 0 factorial equals 1 by definition. n factorial is written as $n!$.

Narrow money The notes and coins in circulation in an economy, plus other very highly liquid deposits.

Nash equilibrium When two or more participants in a non-coop-erative game have no incentive to deviate from their respective equilibrium strategies given their opponent's strategies.

National income The income received by all factors of production used in the generation of final output. National income equals gross domestic product (or, in some countries, gross national product) minus the capital consumption allowance and a statistical discrepancy.

Nationalism The promotion of a country's own economic interests to the exclusion or detriment of the interests of other nations. Nationalism is marked by limited economic and financial cooperation. These actors may focus on national production and sales, limited cross-border investment and capital flows, and restricted currency exchange.

Natural language processing Computer programs developed to analyze and interpret human language.

Natural rate of unemployment Effective unemployment rate, below which pressure emerges in labor markets.

Negative screening An ESG investment style that focuses on the exclusion of certain sectors, companies, or practices in a fund or portfolio on the basis of specific ESG criteria.

Net book value The remaining (undepreciated) balance of an asset's purchase cost. For liabilities, the face value of a bond minus any unamortized discount, or plus any unamortized premium.

Net exports The difference between the value of a country's exports and the value of its imports (i.e., value of exports minus imports).

Net income The difference between revenue and expenses; what remains after subtracting all expenses (including depreciation, interest, and taxes) from revenue.

Net investment hedge Refers to a specific **hedge accounting** designation that applies when either a foreign currency bond or a derivative, such as an FX swap or forward, is used to offset the exchange rate risk of the equity of a foreign operation.

Net present value The present value of an investment's cash inflows (benefits) minus the present value of its cash outflows (costs).

Net profit margin An indicator of profitability, calculated as net income divided by revenue; indicates how much of each dollar of revenues is left after all costs and expenses. Also called *profit margin* or *return on sales*.

Net realisable value Estimated selling price in the ordinary course of business less the estimated costs necessary to make the sale.
Net revenue Revenue after adjustments (e.g., for estimated returns or for amounts unlikely to be collected).
Net tax rate The tax rate net of transfer payments.
Network effects The increase in value or utility for some services and products as more users join and wider adoption occurs.
Neural networks Computer programs based on how our own brains learn and process information.
Neutral rate of interest The rate of interest that neither spurs on nor slows down the underlying economy.
No-load fund A mutual fund in which there is no fee for investing in the fund or for redeeming fund shares, although there is an annual fee based on a percentage of the fund's net asset value.
Node Each value on a binomial tree from which successive moves or outcomes branch.
Nominal data Categorical values that are not amenable to being organized in a logical order. An example of nominal data is the classification of publicly listed stocks into sectors.
Nominal GDP The value of goods and services measured at current prices.
Nominal risk-free interest rate The sum of the real risk-free interest rate and the inflation premium.
Non-accelerating inflation rate of unemployment Effective unemployment rate below which pressure emerges in labor markets.
Non-agency RMBS In the United States, securities issued by private entities that are not guaranteed by a federal agency or a GSE.
Non-bank lenders Unlike typical banks, which make loans and take deposits, these lenders only make loans and may provide specific financial services to targeted consumers and firms such as mortgage services, lease financing, and venture capital.
Non-cooperative country A country with inconsistent and even arbitrary rules; restricted movement of goods, services, people, and capital across borders; retaliation; and limited technology exchange.
Non-cumulative preference shares Preference shares for which dividends that are not paid in the current or subsequent periods are forfeited permanently (instead of being accrued and paid at a later date).
Non-current assets Assets that are expected to benefit the company over an extended period of time (usually more than one year).
Non-current liabilities Obligations that broadly represent a probable sacrifice of economic benefits in periods generally greater than one year in the future.
Non-cyclical A company whose performance is largely independent of the business cycle. Also known as defensive.
Non-financial risks Risks that arise from sources other than changes in the external financial markets, such as changes in accounting rules, legal environment, or tax rates.
Non-linear derivatives Derivatives, such as options or other contingent claims, with payoff/profit profiles that are non-linear (asymmetric) with respect to the price of the underlying.
Non-participating preference shares Preference shares that do not entitle shareholders to share in the profits of the company. Instead, shareholders are only entitled to receive a fixed dividend payment and the par value of the shares in the event of liquidation.
Non-probability sampling A sampling plan dependent on factors other than probability considerations, such as a sampler's judgment or the convenience to access data.
Non-recourse loan A loan in which the lender does not have a shortfall claim against the borrower, so the lender can look only to the property to recover the outstanding mortgage balance.
Non-renewable resources Finite resources that are depleted once they are consumed; oil and coal are examples.
Non-sovereign bond A bond issued by a government below the national level, such as a province, region, state, or city.
Non-state actors Those that participate in global political, economic, or financial affairs but do not directly control national security or country resources. Examples of non-state actors are non-governmental organizations (NGOs), multinational companies, charities, and even influential individuals, such as business leaders or cultural icons.
Nonconventional cash flow pattern In a nonconventional cash flow pattern, the initial outflow is not followed by inflows only, but the cash flows can flip from positive (inflows) to negative (outflows) again or even change signs several times.
Nonparametric test A test that is not concerned with a parameter or that makes minimal assumptions about the population from which a sample comes.
Nonprofit corporations (Nonprofits) Corporations formed with the specific purpose of promoting a public benefit, religious benefit, or charitable mission. The motive of nonprofits is not expressly profit driven.
Nonsystematic risk Unique risk that is local or limited to a particular asset or industry that need not affect assets outside of that asset class.
Normal distribution A continuous, symmetric probability distribution that is completely described by its mean and its variance.
Normal goods Goods that are consumed in greater quantities as income increases.
Normal profit The level of accounting profit needed to just cover the implicit opportunity costs ignored in accounting costs.
Notching Ratings adjustment methodology where specific issues from the same borrower may be assigned different credit ratings.
Note rate See *mortgage rate*.
Notice periods The length of time (typically 30–90 days) of prior notice that a fund receives from investors who may be required to express their intent to redeem some or all of their investment.
Novation process A process thatsubstitutes the initial **swap execution facility(SEF)** contract with identical trades facing the **central counterparty (CCP)**. The CCP serves as **counterparty** for both financial intermediaries, eliminating bilateral **counterparty credit risk** and providing **clearing** and **settlement** services.
Null hypothesis The hypothesis that is tested.
Numerical data Values that represent measured or counted quantities as a number. Also called quantitative data.

Objective probabilities Probabilities that generally do not vary from person to person; includes a priori and empirical probabilities.

Observation The value of a specific variable collected at a point in time or over a specified period of time.

Odds against *E* The reciprocal of odds for *E*.

Odds for *E* The probability of *E* divided by 1 minus the probability of *E*.

Off-the-run A series of securities or indexes that were issued/created prior to the most recently issued/created series.

Offer The price at which a dealer or trader is willing to sell an asset, typically qualified by a maximum quantity (ask size).

Official interest rate An interest rate that a central bank sets and announces publicly; normally the rate at which it is willing to lend money to the commercial banks. Also called *official policy rate* or *policy rate*.

Official policy rate An interest rate that a central bank sets and announces publicly; normally the rate at which it is willing to lend money to the commercial banks.

Oligopoly Market structure with a relatively small number of firms supplying the market.

Omnichannel A distribution strategy that integrates both digital and physical sales channels, so that both can be used together to complete a sale.

On-the-run The most recently issued and most actively traded sovereign securities.

One-dimensional array The simplest format for representing a collection of data of the same data type.

One-sided hypothesis test A test in which the null hypothesis is rejected only if the evidence indicates that the population parameter is greater than or less than the hypothesized parameter; occurs when the alternative hypothesis is stated either as greater than or less than the hypothesized population parameter.

Open economy An economy that trades with other countries.

Open-end fund A mutual fund that accepts new investment money and issues additional shares at a value equal to the net asset value of the fund at the time of investment.

Open interest The number of outstanding contracts.

Open market operations The purchase or sale of bonds by the national central bank to implement monetary policy. The bonds traded are usually sovereign bonds issued by the national government.

Operating activities Activities that are part of the day-to-day business functioning of an entity, such as selling inventory and providing services.

Operating breakeven The number of units produced and sold at which the company's operating profit is zero (revenues = operating costs).

Operating cash flow The net amount of cash provided from operating activities.

Operating efficiency ratios Ratios that measure how efficiently a company performs day-to-day tasks, such as the collection of receivables and management of inventory.

Operating lease A type of lease which is more akin to the rental of the underlying asset.

Operating leverage The sensitivity of a firm's operating profit to a change in revenues.

Operating profit A company's profits on its usual business activities before deducting taxes. Also called *operating income*.

Operating profit margin A profitability ratio calculated as operating income (i.e., income before interest and taxes) divided by revenue. Also called *operating margin*.

Operating risk The risk attributed to the operating cost structure, in particular the use of fixed costs in operations; the risk arising from the mix of fixed and variable costs; the risk that a company's operations may be severely affected by environmental, social, and governance risk factors.

Operational independence A bank's ability to execute monetary policy and set interest rates in the way it thought would best meet the inflation target.

Operational risk The risk that arises from inadequate or failed people, systems, and internal policies, procedures, and processes, as well as from external events that are beyond the control of the organization but that affect its operations.

Operationally efficient Said of a market, a financial system, or an economy that has relatively low transaction costs.

Opportunity cost Reflects the foregone opportunity of investing in a different asset. It is typically denoted by the risk-free rate of interest, *r*.

Optimal capital structure The capital structure at which the value of the company is maximized.

Option A primary example of a **contingent claim**. A **derivative contract** that provides the buyer the right, but not the obligation, to buy or sell an **underlying**.

Option-adjusted price The value of the embedded option plus the flat price of the bond.

Option-adjusted spread (OAS) Constant spread that, when added to all the one-period forward rates on the interest rate tree, makes the arbitrage-free value of the bond equal to its market price.

Option-adjusted yield The required market discount rate whereby the price is adjusted for the value of the embedded option.

Option contract See *option*.

Option premium An amount that is paid upfront from the option buyer to the option seller. Reflects the value of the option buyer's right to exercise in the future.

Optional product pricing A pricing approach that applies when a customer buys additional services or product features, either at the time of purchase or afterward.

Order A specification of what instrument to trade, how much to trade, and whether to buy or sell.

Order-driven markets A market (generally an auction market) that uses rules to arrange trades based on the orders that traders submit; in their pure form, such markets do not make use of dealers.

Order precedence hierarchy With respect to the execution of orders to trade, a set of rules that determines which orders execute before other orders.

Ordinal data Categorical values that can be logically ordered or ranked.

Ordinary annuity An annuity with a first cash flow that is paid one period from the present.

Ordinary shares Equity shares that are subordinate to all other types of equity (e.g., preferred equity). Also called *common stock* or *common shares*.

Organized exchange A securities marketplace where buyers and seller can meet to arrange their trades.

Other comprehensive income Items of comprehensive income that are not reported on the income statement; comprehensive income minus net income.

Out-of-sample test A test of a strategy or model using a sample outside the period on which the strategy or model was developed.

Out-of-the-money Describes an option with zero intrinsic value because the option buyer would not rationally exercise the option. An example of such would be the case in which the price of the underlying is less than the option's exercise price for a call option.
Outcome A possible value of a random variable.
Over-the-counter (OTC) Refers to derivative markets in which **derivative contracts** are created and traded between derivatives end users and **dealers**, or financial intermediaries, such as commercial banks or investment banks.
Over-the-counter (OTC) market A decentralized market where buy and sell orders initiated from various locations are matched through a communications network.
Overbought When a market has trended too far in one direction and is vulnerable to a trend reversal, or correction.
Overcollateralization Form of internal credit enhancement that refers to the process of posting more collateral than needed to obtain or secure financing.
Overconfidence bias A bias in which people demonstrate unwarranted faith in their own intuitive reasoning, judgments, and/or cognitive abilities.
Overfitting Situation in which the model has too many independent variables relative to the number of observations in the sample, such that the coefficients on the independent variables represent noise rather than relationships with the dependent variable.
Oversold The opposite of overbought; see *overbought*.
Own price The price of a good or service itself (as opposed to the price of something else).
Own-price elasticity of demand The percentage change in quantity demanded for a percentage change in good's own price, holding all other things constant.
Owners' equity The excess of assets over liabilities; the residual interest of shareholders in the assets of an entity after deducting the entity's liabilities. Also called *shareholders' equity* or *shareholders' funds*.
Ownership capital (equity) Money invested by the owners of the company.
***p*-Value** The smallest level of significance at which the null is rejected.
Paired comparisons test See *test of the mean of the differences*.
Panel data A mix of time-series and cross-sectional data that contains observations through time on characteristics of across multiple observational units.
Par curve A sequence of yields-to-maturity such that each bond is priced at par value. The bonds are assumed to have the same currency, credit risk, liquidity, tax status, and annual yields stated for the same periodicity.
Par swap rate The fixed swap rate that equates the present value of all future expected floating cash flows to the present value of fixed cash flows.
Par value The amount of principal on a bond.
Parallel shift A parallel yield curve shift implies that all rates change by the same amount in the same direction.
Parameter A descriptive measure computed from or used to describe a population of data, conventionally represented by Greek letters.
Parametric test Any test (or procedure) concerned with parameters or whose validity depends on assumptions concerning the population generating the sample.
Pari passu Covenant or contract clause that ensures a debt obligation is treated the same as the borrower's other senior debt instruments and is not subordinated to similar obligations.
Partial duration See *key rate duration*.
Participating preference shares Preference shares that entitle shareholders to receive the standard preferred dividend plus the opportunity to receive an additional dividend if the company's profits exceed a pre-specified level.
Partnership agreement A legal document used in a partnership business structure that details how much of the business each partner owns, how the profits are to be shared, and what the duties are of each partner.
Pass-through rate The coupon rate of a mortgage pass-through security.
Passive investment A buy and hold approach in which an investor does not make portfolio changes based on short-term expectations of changing market or security performance.
Pay-in-advance A business model that requires payment from customers before a product or service is delivered, in order to reduce or eliminate the need for working capital.
Payable date The day that the company actually mails out (or electronically transfers) a dividend payment.
Payment date The day that the company actually mails out (or electronically transfers) a dividend payment.
Payments system The system for the transfer of money.
Pearson correlation A parametric measure of the relationship between two variables.
Pecking order theory The theory that managers consider how their actions might be interpreted by outsiders and thereby order their preferences for various forms of corporate financing. Forms of financing that are least visible to outsiders (e.g., internally generated funds) are most preferable to managers, and those that are most visible (e.g., equity) are least preferable.
Peer company See *comparable company*.
Peer group A group of companies engaged in similar business activities whose economics and valuation are influenced by closely related factors.
Penetration pricing A discount pricing approach used when a firm willingly sacrifices margins in order to build scale and market share.
Pennant A technical analysis continuation pattern formed by trendlines that converge to form a triangle, typically over a short period.
Per capita real GDP Real GDP divided by the size of the population, often used as a measure of a country's average standard of living.
Per unit contribution margin The amount that each unit sold contributes to covering fixed costs—that is, the difference between the price per unit and the variable cost per unit.
Percentiles Quantiles that divide a distribution into 100 equal parts that sum to 100.
Perfect capital markets Markets in which, by assumption, there are no taxes, transaction costs, or bankruptcy costs and in which all investors have equal ("symmetric") information.
Perfect competition A market structure in which the individual firm has virtually no impact on market price, because it is assumed to be a very small seller among a very large number of firms selling essentially identical products.
Perfectly elastic When the quantity demanded or supplied of a given good is infinitely sensitive to a change in the value of a specified variable (e.g., price).
Perfectly inelastic When the quantity demanded or supplied of a given good is completely insensitive to a change in the value of a specified variable (e.g., price).

Performance evaluation The measurement and assessment of the outcomes of investment management decisions.

Period costs Costs (e.g., executives' salaries) that cannot be directly matched with the timing of revenues and which are thus expensed immediately.

Periodicity The assumed number of periods in the year; typically matches the frequency of coupon payments.

Permanent differences Differences between tax and financial reporting of revenue (expenses) that will not be reversed at some future date. These result in a difference between the company's effective tax rate and statutory tax rate and do not result in a deferred tax item.

Permissioned networks Networks that are fully open only to select participants on a DLT network.

Permissionless networks Networks that are fully open to any user on a DLT network.

Permutation An ordered listing.

Permutation formula The number of ways that we can choose r objects from a total of n objects, when the order in which the r objects are listed does matter, is ${}_nP_r = \frac{n!}{(n-r)!}$.

Perpetual bonds Bonds with no stated maturity date.

Perpetuity A perpetual annuity, or a set of never-ending level sequential cash flows, with the first cash flow occurring one period from now.

Personal income A broad measure of household income that includes all income received by households, whether earned or unearned; measures the ability of consumers to make purchases.

Pet projects Investments in which influential managers want the corporation to invest. Often, unfortunately, pet projects are selected without undergoing normal capital allocation analysis.

Plain vanilla bond Bond that makes periodic, fixed coupon payments during the bond's life and a lump-sum payment of principal at maturity. Also called *conventional bond*.

Platykurtic Describes a distribution that has relatively less weight in the tails than the normal distribution (also called thin-tailed).

Point estimate A single numerical estimate of an unknown quantity, such as a population parameter.

Policy rate An interest rate that a central bank sets and announces publicly; normally the rate at which it is willing to lend money to the commercial banks.

Population All members of a specified group.

Portfolio companies In private equity, the companies in which the private equity fund is investing.

Portfolio demand for money The demand to hold speculative money balances based on the potential opportunities or risks that are inherent in other financial instruments.

Portfolio investment flows Short-term investments in foreign assets, such as stocks or bonds.

Portfolio planning The process of creating a plan for building a portfolio that is expected to satisfy a client's investment objectives.

Position The quantity of an asset that an entity owns or owes.

Positive screening An ESG implementation approach that seeks to identify the most favorable companies and sectors based on ESG considerations. Also called *best-in-class*.

Posterior probability An updated probability that reflects or comes after new information.

Potential GDP The maximum amount of output an economy can sustainably produce without inducing an increase in the inflation rate. The output level that corresponds to full employment with consistent wage and price expectations.

Power of a test The probability of correctly rejecting the null—that is, rejecting the null hypothesis when it is false.

Precautionary money balances Money held to provide a buffer against unforeseen events that might require money.

Preference shares A type of equity interest which ranks above common shares with respect to the payment of dividends and the distribution of the company's net assets upon liquidation. They have characteristics of both debt and equity securities. Also called *preferred stock*.

Preferred stock See *preference shares*.

Premium In the case of bonds, premium refers to the amount by which a bond is priced above its face (par) value. In the case of an option, the amount paid for the option contract.

Prepaid expense A normal operating expense that has been paid in advance of when it is due.

Prepayment option Contractual provision that entitles the borrower to prepay all or part of the outstanding mortgage principal prior to the scheduled due date when the principal must be repaid. Also called *early repayment option*.

Prepayment penalty mortgages Mortgages that stipulate a monetary penalty if a borrower prepays within a certain time period after the mortgage is originated.

Prepayment risk The uncertainty that the timing of the actual cash flows will be different from the scheduled cash flows as set forth in the loan agreement due to the borrowers' ability to alter payments, usually to take advantage of interest rate movements.

Present value models Valuation models that estimate the intrinsic value of a security as the present value of the future benefits expected to be received from the security. Also called *discounted cash flow models*.

Present value (PV) The present discounted value of future cash flows: For assets, the present discounted value of the future net cash inflows that the asset is expected to generate; for liabilities, the present discounted value of the future net cash outflows that are expected to be required to settle the liabilities.

Pretax margin A profitability ratio calculated as earnings before taxes divided by revenue.

Price discrimination A pricing approach that charges different prices to different customers based on their willingness to pay.

Price elasticity of demand Measures the percentage change in the quantity demanded, given a percentage change in the price of a given product.

Price index Represents the average prices of a basket of goods and services.

Price limits Establish a band relative to the previous day's settlement price within which all trades must occur.

Price multiple A ratio that compares the share price with some sort of monetary flow or value to allow evaluation of the relative worth of a company's stock.

Price priority The principle that the highest priced buy orders and the lowest priced sell orders execute first.

Price relative A ratio of an ending price over a beginning price; it is equal to 1 plus the holding period return on the asset.

Price return Measures *only* the price appreciation or percentage change in price of the securities in an index or portfolio.

Price return index An index that reflects *only* the price appreciation or percentage change in price of the constituent securities. Also called *price index*.

Price-setting option The option to adjust prices when demand varies from what is forecast.

Price stability In economics, refers to an inflation rate that is low on average and not subject to wide fluctuation.
Price takers Producers that must accept whatever price the market dictates.
Price to book value A valuation ratio calculated as price per share divided by book value per share.
Price to cash flow A valuation ratio calculated as price per share divided by cash flow per share.
Price-to-earnings ratio (P/E) The ratio of share price to earnings per share.
Price to sales A valuation ratio calculated as price per share divided by sales per share.
Price value of a basis point A version of money duration, it is an estimate of the change in the full price of a bond given a 1 basis point change in the yield-to-maturity.
Price weighting An index weighting method in which the weight assigned to each constituent security is determined by dividing its price by the sum of all the prices of the constituent securities.
Priced risk Risk for which investors demand compensation for bearing (e.g., equity risk, company-specific factors, macroeconomic factors).
Primary bond market A market in which issuers first sell bonds to investors to raise capital.
Primary capital markets (primary markets) The market where securities are first sold and the issuers receive the proceeds.
Primary dealer Financial institution that is authorized to deal in new issues of sovereign bonds and that serves primarily as a trading counterparty of the office responsible for issuing sovereign bonds.
Primary market The market where securities are first sold and the issuers receive the proceeds.
Prime brokers Brokers that provide services commonly including custody, administration, lending, short borrowing, and trading.
Principal The amount of funds originally invested in a project or instrument; the face value to be paid at maturity.
Principal amount Amount that an issuer agrees to repay the debtholders on the maturity date.
Principal business activity The business activity from which a company derives a majority of its revenues and/or earnings.
Principal value Amount that an issuer agrees to repay the debtholders on the maturity date.
Principal–agent relationship A relationship in which a principal hires an agent to perform a particular task or service; also known as an *agency relationship*.
Prior probabilities Probabilities reflecting beliefs prior to the arrival of new information.
Priority of claims Priority of payment, with the most senior or highest ranking debt having the first claim on the cash flows and assets of the issuer.
Private equity fund A hedge fund that seeks to buy, optimize, and ultimately sell portfolio companies to generate profits. See *venture capital fund*.
Private equity funds Funds that seek to invest in, optimize, and eventually exit portfolio companies to generate profits. See venture capital funds.
Private equity securities Securities that are not listed on public exchanges and have no active secondary market. They are issued primarily to institutional investors via non-public offerings, such as private placements.
Private investment in public equity (PIPE) An investment in the equity of a publicly traded firm that is made at a discount to the market value of the firm's shares.
Private label or "contract" manufacturers Manufacturers that produce goods to be marketed by others.
Private placement Typically, a non-underwritten, unregistered offering of securities that are sold only to an investor or a small group of investors. It can be accomplished directly between the issuer and the investor(s) or through an investment bank.
Private placement memorandum (PPM) A legal document used in the purchase of private company shares that describes the business, the terms of the offering, and the risks involved in making an investment in the company. Also termed an offering memorandum.
Probability A number between 0 and 1 describing the chance that a stated event will occur.
Probability density function A function with non-negative values such that probability can be described by areas under the curve graphing the function.
Probability distribution A distribution that specifies the probabilities of a random variable's possible outcomes.
Probability function A function that specifies the probability that the random variable takes on a specific value.
Probability sampling A sampling plan that allows every member of the population to have an equal chance of being selected.
Probability tree diagram A diagram with branches emanating from nodes representing either mutually exclusive chance events or mutually exclusive decisions.
Product market risk The risk that the market for a new product or service will fall short of expectations.
Production-flexibility option The option to alter production when demand varies from what is forecast.
Production function Provides the quantitative link between the levels of output that the economy can produce and the inputs used in the production process.
Productivity The amount of output produced by workers during a given period—for example, output per hour worked measures the efficiency of labor.
Profession An occupational group that has specific education, expert knowledge, and a framework of practice and behavior that underpins community trust, respect, and recognition.
Profit The return that owners of a company receive for the use of their capital and the assumption of financial risk when making their investments.
Profit and loss (P&L) statement A financial statement that provides information about a company's profitability over a stated period of time. Also called the *income statement*.
Profit margin An indicator of profitability, calculated as net income divided by revenue; indicates how much of each dollar of revenues is left after all costs and expenses.
Profitability ratios Ratios that measure a company's ability to generate profitable sales from its resources (assets).
Project sequencing To defer the decision to invest in a future project until the outcome of some or all of a current investment is known. Investments are sequenced over time, so that making an investment creates the option to invest in future projects.
Promissory note A written promise to pay a certain amount of money on demand.
Property, plant, and equipment Tangible assets that are expected to be used for more than one period in either the production or supply of goods or services, or for administrative purposes.

Prospectus The document that describes the terms of a new bond issue and helps investors perform their analysis on the issue.
Protective put A strategy of purchasing an underlying asset and purchasing a put on the same asset.
Proxy contest Corporate takeover mechanism in which shareholders are persuaded to vote for a group seeking a controlling position on a company's board of directors.
Proxy voting A process that enables shareholders who are unable to attend a meeting to authorize another individual to vote on their behalf.
Public offer See *public offering.*
Public offering An offering of securities in which any member of the public may buy the securities. Also called *public offer*.
Public–private partnership (PPP) An agreement between the public and private sector to finance, build, and operate public infrastructure, such as hospitals and toll roads.
Pull on liquidity When disbursements (outflows) are paid too quickly or trade credit availability is limited, requiring companies to expend funds before they receive funds from sales that could cover the liability.
Pure discount bonds See *zero-coupon bond.*
Put An option that gives the holder the right to sell an underlying asset to another party at a fixed price over a specific period of time.
Put option The right to sell an underlying.
Putable bonds Bonds that give the bondholder the right to sell the bond back to the issuer at a predetermined price on specified dates.
Put–call forward parity Describes the no-arbitrage condition in which at t = 0 the present value of the price of a long forward commitment plus the price of the long put must equal the price of the long call plus the price of the risk-free asset (with face value of the exercise price of both the call and the put).
Put–call parity Describes the no-arbitrage condition in which at t = 0 the price of the long underlying asset plus the price of the long put must equal the price of the long call plus the price of the risk-free asset (with face value of the exercise price of both the call and the put).
Put/call ratio A technical analysis indicator that evaluates market sentiment based on the volume of put options traded divided by the volume of call options traded for a particular financial instrument.
Qualitative data see categorical data.
Quantile A value at or below which a stated fraction of the data lies. Also referred to as a fractile.
Quantitative data see numerical data.
Quantitative easing An expansionary monetary policy based on aggressive open market purchase operations.
Quantity equation of exchange An expression that over a given period, the amount of money used to purchase all goods and services in an economy, $M \times V$, is equal to monetary value of this output, $P \times Y$.
Quantity theory of money Asserts that total spending (in money terms) is proportional to the quantity of money.
Quartiles Quantiles that divide a distribution into four equal parts.
Quasi-fixed cost A cost that stays the same over a range of production but can change to another constant level when production moves outside of that range.
Quasi-government bond A bond issued by an entity that is either owned or sponsored by a national government. Also called *agency bond*.
Quintiles Quantiles that divide a distribution into five equal parts.
Quota rents Profits that foreign producers can earn by raising the price of their goods higher than they would without a quota.
Quotas Government policies that restrict the quantity of a good that can be imported into a country, generally for a specified period of time.
Quote-driven market A market in which dealers acting as principals facilitate trading.
Quoted interest rate A quoted interest rate that does not account for compounding within the year. Also called *stated annual interest rate*.
Quoted margin The yield spread over the MRR established upon issuance of an FRN to compensate investors for assuming an issuer's credit risk.
Random number An observation drawn from a uniform distribution.
Random number generator An algorithm that produces uniformly distributed random numbers between 0 and 1.
Random variable A quantity whose future outcomes are uncertain.
Range The difference between the maximum and minimum values in a dataset.
Raw data Data available in their original form as collected.
Razors-and-blades pricing A pricing approach that combines a low price on a piece of equipment and high-margin pricing on repeat-purchase consumables.
Real estate investment trusts (REITs) Tax-advantaged entities (companies or trusts) that own, operate, and—to a limited extent—develop income-producing real estate property.
Real exchange rate effect The effect through which changing price level impacts real exchange rate which in turn impacts net exports and aggregate demand.
Real GDP The value of goods and services produced, measured at base year prices.
Real income Income adjusted for the effect of inflation on the purchasing power of money. Also known as the *purchasing power of income*. If income remains constant and a good's price falls, real income is said to rise, even though the number of monetary units (e.g., dollars) remains unchanged.
Real interest rate Nominal interest rate minus the expected rate of inflation.
Real risk-free interest rate The single-period interest rate for a completely risk-free security if no inflation were expected.
Realizable (settlement) value With reference to assets, the amount of cash or cash equivalents that could currently be obtained by selling the asset in an orderly disposal; with reference to liabilities, the undiscounted amount of cash or cash equivalents expected to be paid to satisfy the liabilities in the normal course of business.
Rebalancing In the context of asset allocation, a discipline for adjusting the portfolio to align with the strategic asset allocation.
Rebalancing policy The set of rules that guide the process of restoring a portfolio's asset class weights to those specified in the strategic asset allocation.
Recession A period during which real GDP decreases (i.e., negative growth) for at least two successive quarters, or a period of significant decline in total output, income, employment, and sales usually lasting from six months to a year.

Recognition lag The lag in government response to an economic problem resulting from the delay in confirming a change in the state of the economy.

Recourse loan A loan in which the lender has a claim against the borrower for any shortfall between the outstanding mortgage balance and the proceeds received from the sale of the property.

Recurring revenue/subscription pricing A pricing approach that enables customers to "rent" a product or service for as long as they need it.

Redemption yield See *yield-to-maturity*.

Refinancing rate A type of central bank policy rate.

Regionalism In between the two extremes of bilateralism and multilateralism. In regionalism, a group of countries cooperate with one another. Both bilateralism and regionalism can be conducted at the exclusion of other groups. For example, regional blocs may agree to provide trade benefits to one another and increase barriers for those outside of that group.

Registered bonds Bonds for which ownership is recorded by either name or serial number.

Regression analysis A tool for examining whether a variable is useful for explaining another variable.

Regression coefficients The intercept and slope coefficient(s) of a regression.

Regret The feeling that an opportunity has been missed; typically, an expression of *hindsight bias*.

Regret-aversion bias An emotional bias in which people tend to avoid making decisions that will result in action out of fear that the decision will turn out poorly.

Relative dispersion The amount of dispersion relative to a reference value or benchmark.

Relative frequency The absolute frequency of each unique value of the variable divided by the total number of observations of the variable.

Relative price The price of a specific good or service in comparison with those of other goods and services.

Relative strength analysis A comparison of the performance of one asset with the performance of another asset or a benchmark, based on changes in the ratio of the two assets' prices over time.

Relative strength index (RSI) A technical analysis momentum oscillator that compares a security's gains with its losses over a set period.

Renewable resources Resources that can be replenished, such as a forest.

Rent Payment for the use of property.

Reorganization A court-supervised restructuring process available in some jurisdictions for companies facing insolvency from burdensome debt levels. A bankruptcy court assumes control of the company and oversees an orderly negotiation process between the company and its creditors for asset sales, conversion of debt to equity, refinancing, and so on.

Replication A strategy in which a derivative's cash flow stream may be recreated using a combination of long or short positions in an underlying asset and borrowing or lending cash.

Repo A form of collateralized loan involving the sale of a security with a simultaneous agreement by the seller to buy back the same security from the purchaser at an agreed-on price and future date. The party who sells the security at the inception of the repurchase agreement and buys it back at maturity is borrowing money from the other party, and the security sold and subsequently repurchased represents the collateral.

Repo margin The difference between the market value of the security used as collateral and the value of the loan. Also called *haircut*.

Repo rate The interest rate on a repurchase agreement.

Representativeness bias A belief perseverance bias in which people tend to classify new information based on past experiences and classifications.

Repurchase agreement See *Repo*.

Repurchase date The date when the party who sold the security at the inception of a repurchase agreement buys back the security from the cash lending counterparty.

Repurchase price The price at which the party who sold the security at the inception of the repurchase agreement buys back the security from the cash lending counterparty.

Required margin The yield spread over or under the reference rate such that an FRN is priced at par value on a rate reset date.

Required rate of return The minimum rate of return required by an investor to invest in an asset, given the asset's riskiness.

Required yield See *market discount rate*.

Required yield spread The difference between the yield-to-maturity on a new bond and the benchmark rate; additional compensation required by investors for the difference in risk and tax status of a bond relative to a government bond. Sometimes called the *spread over the benchmark*.

Resampling A statistical method that repeatedly draws samples from the original observed data sample for the statistical inference of population parameters.

Reserve accounts Form of internal credit enhancement that relies on creating accounts and depositing in these accounts cash that can be used to absorb losses. Also called *reserve funds*.

Reserve funds See *reserve accounts*.

Reserve requirement The requirement for banks to hold reserves in proportion to the size of deposits.

Residual The difference between an observation and its predicted value, where the predicted value is based on the estimated linear relation between the dependent and independent variables using sample data.

Resistance In technical analysis, a price range in which selling activity is sufficient to stop the rise in the price of a security.

Responsible investing A broad (umbrella) term to describe investing that incorporates environmental, social, and governance factors into investment decisions.

Restricted payments A bond covenant meant to protect creditors by limiting how much cash can be paid out to shareholders over time.

Retracement In technical analysis, a reversal in the movement of a security's price such that it is counter to the prevailing longer-term price trend.

Return-generating model A model that can provide an estimate of the expected return of a security given certain parameters and estimates of the values of the independent variables in the model.

Return on assets (ROA) A profitability ratio calculated as net income divided by average total assets; indicates a company's net profit generated per dollar invested in total assets.

Return on equity (ROE) A profitability ratio calculated as net income divided by average shareholders' equity.

Return on invested capital A measure of the profitability of a company relative to the amount of capital invested by the equity- and debtholders.

Return on sales An indicator of profitability, calculated as net income divided by revenue; indicates how much of each dollar of revenues is left after all costs and expenses. Also referred to as *net profit margin*.

Return on total capital A profitability ratio calculated as EBIT divided by the sum of short- and long-term debt and equity.

Revaluation model Under IFRS, the process of valuing long-lived assets at fair value, rather than at cost less accumulated depreciation. Any resulting profit or loss is either reported on the income statement and/or through equity under revaluation surplus.

Revenue The amount charged for the delivery of goods or services in the ordinary activities of a business over a stated period; the inflows of economic resources to a company over a stated period.

Reversal pattern A type of pattern used in technical analysis to predict the end of a trend and a change in the direction of a security's price.

Reverse repo A repurchase agreement viewed from the perspective of the cash lending counterparty.

Reverse repurchase agreement A repurchase agreement viewed from the perspective of the cash lending counterparty.

Reverse stock split A reduction in the number of shares outstanding with a corresponding increase in share price, but no change to the company's underlying fundamentals.

Revolving credit agreements (also known as revolvers) The most reliable form of short-term bank borrowing facilities; they are in effect for multiple years (e.g., three to five years) and can have optional medium-term loan features.

Rho The change in a given derivative instrument for a given small change in the risk-free interest rate, holding everything else constant. Rho measures the sensitivity of the option to the risk-free interest rate.

Ricardian equivalence An economic theory that implies that it makes no difference whether a government finances a deficit by increasing taxes or issuing debt.

Risk Exposure to uncertainty. The chance of a loss or adverse outcome as a result of an action, inaction, or external event.

Risk averse The assumption that an investor will choose the least risky alternative.

Risk aversion The degree of an investor's unwillingness to take risk; the inverse of risk tolerance.

Risk budgeting The establishment of objectives for individuals, groups, or divisions of an organization that takes into account the allocation of an acceptable level of risk.

Risk exposure The state of being exposed or vulnerable to a risk. The extent to which an organization is sensitive to underlying risks.

Risk governance The top-down process and guidance that directs risk management activities to align with and support the overall enterprise.

Risk management The process of identifying the level of risk an organization wants, measuring the level of risk the organization currently has, taking actions that bring the actual level of risk to the desired level of risk, and monitoring the new actual level of risk so that it continues to be aligned with the desired level of risk.

Risk management framework The infrastructure, process, and analytics needed to support effective risk management in an organization.

Risk-neutral pricing A no-arbitrage derivative value established separately from investor views on risk that uses underlying asset volatility and the risk-free rate to calculate the present value of future cash flows.

Risk-neutral probability The computed probability used in binomial option pricing by which the discounted weighted sum of expected values of the underlying equal the current option price. Specifically, this probability is computed using the risk-free rate and assumed up gross return and down gross return of the underlying.

Risk premium An extra return expected by investors for bearing some specified risk.

Risk shifting Actions to change the distribution of risk outcomes.

Risk tolerance The amount of risk an investor is willing and able to bear to achieve an investment goal.

Risk transfer Actions to pass on a risk to another party, often, but not always, in the form of an insurance policy.

Robo-adviser A machine-based analytical tool or service that provides technology-driven investment solutions through online platforms.

Rule of 72 The principle that the approximate number of years necessary for an investment to double is 72 divided by the stated interest rate.

Running yield See *current yield*.

Safety-first rules Rules for portfolio selection that focus on the risk that portfolio value or portfolio return will fall below some minimum acceptable level over some time horizon.

Sales Generally, a synonym for revenue; "sales" is generally understood to refer to the sale of goods, whereas "revenue" is understood to include the sale of goods or services.

Sales risk The uncertainty regarding the price and number of units sold of a company's products.

Sample A subset of a population.

Sample correlation coefficient A standardized measure of how two variables in a sample move together. It is the ratio of the sample covariance to the product of the two variables' standard deviations.

Sample covariance A measure of how two variables in a sample move together.

Sample excess kurtosis A sample measure of the degree of a distribution's kurtosis in excess of the normal distribution's kurtosis.

Sample mean The sum of the sample observations divided by the sample size.

Sample selection bias Bias introduced by systematically excluding some members of the population according to a particular attribute—for example, the bias introduced when data availability leads to certain observations being excluded from the analysis.

Sample-size neglect A type of representativeness bias in which financial market participants incorrectly assume that small sample sizes are representative of populations (or "real" data).

Sample skewness A sample measure of the degree of asymmetry of a distribution.

Sample standard deviation The positive square root of the sample variance.

Sample statistic A quantity computed from or used to describe a sample.

Sample variance The sum of squared deviations around the mean divided by the degrees of freedom.

Sampling The process of obtaining a sample.

Sampling distribution The distribution of all distinct possible values that a statistic can assume when computed from samples of the same size randomly drawn from the same population.

Sampling error The difference between the observed value of a statistic and the estimate resulting from using subsets of the population.

Sampling plan The set of rules used to select a sample.

Say on pay A process whereby shareholders may vote on executive remuneration (compensation) matters.

Scatter plot A chart in which two variables are plotted along the axis and points on the chart represent pairs of the two variables. In regression, the dependent variable is plotted on the vertical axis and the independent variable is plotted along the horizontal axis. Also known as a scattergram and a *scatter diagram*.

Scatter plot matrix A tool for organizing scatter plots between pairs of variables, making it easy to inspect all pairwise relationships in one combined visual.

Scenario analysis A technique for exploring the performance and risk of investment strategies in different structural regimes.

Screening The application of a set of criteria to reduce a set of potential investments to a smaller set having certain desired characteristics.

Seasoned offering An offering in which an issuer sells additional units of a previously issued security.

Second-degree price discrimination When the monopolist charges different per-unit prices using the quantity purchased as an indicator of how highly the customer values the product.

Second lien A secured interest in the pledged assets that ranks below first lien debt in both collateral protection and priority of payment.

Secondary bond markets Markets in which existing bonds are traded among investors.

Secondary market The market where securities are traded among investors.

Secondary precedence rules Rules that determine how to rank orders placed at the same time.

Sector A group of related industries (GICS definition).

Sector indexes Indexes that represent and track different economic sectors—such as consumer goods, energy, finance, health care, and technology—on either a national, regional, or global basis.

Secured bonds Bonds secured by assets or financial guarantees pledged to ensure debt repayment in case of default.

Secured debt Debt in which the debtholder has a direct claim—a pledge from the issuer—on certain assets and their associated cash flows.

Secured ("asset-based") loans Loan that are backed by specific, secured company assets.

Securitization A process that involves moving assets into a special legal entity, which then uses the assets as guarantees to secure a bond issue.

Securitized assets Assets that are typically used to create asset-backed bonds; for example, when a bank securitizes a pool of loans, the loans are said to be securitized.

Security characteristic line A plot of the excess return of a security on the excess return of the market.

Security market index A portfolio of securities representing a given security market, market segment, or asset class.

Security market line (SML) The graph of the capital asset pricing model.

Security selection The process of selecting individual securities; typically, security selection has the objective of generating superior risk-adjusted returns relative to a portfolio's benchmark.

Self-attribution bias A bias in which people take too much credit for successes (*self-enhancing*) and assign responsibility to others for failures (*self-protecting*).

Self-control bias A bias in which people fail to act in pursuit of their long-term, overarching goals because of a lack of self-discipline.

Self-investment limits With respect to investment limitations applying to pension plans, restrictions on the percentage of assets that can be invested in securities issued by the pension plan sponsor.

Sell-side firm A broker/dealer that sells securities and provides independent investment research and recommendations to their clients (i.e., buy-side firms).

Semi-strong-form efficient market A market in which security prices reflect all publicly known and available information.

Semiannual bond basis yield An annual rate having a periodicity of two; also known as a *semiannual bond equivalent yield*.

Semiannual bond equivalent yield See *semiannual bond basis yield*.

Seniority ranking Priority of payment of various debt obligations.

Sensitivity analysis Analysis that shows the range of possible outcomes as specific assumptions are changed.

Separately managed account (SMA) An investment portfolio managed exclusively for the benefit of an individual or institution.

Serial maturity structure Structure for a bond issue in which the maturity dates are spread out during the bond's life; a stated number of bonds mature and are paid off each year before final maturity.

Settlement The closing date at which the **counterparties** of a **derivative contract** exchange payment for the **underlying** as required by the contract.

Settlement date Date when the buyer makes cash payment and the seller delivers the security.

Settlement price The price determined by an exchange's clearinghouse in the daily settlement of the mark-to-market process. The price reflects an average of the final futures trades of the day.

Share repurchase A transaction in which a company buys back its own shares. Unlike stock dividends and stock splits, share repurchases use corporate cash.

Shareholder activism Strategies used by shareholders to attempt to compel a company to act in a desired manner.

Shareholder engagement The process whereby companies engage with their shareholders.

Shareholders' equity Total assets minus total liabilities.

Sharpe ratio The average return in excess of the risk-free rate divided by the standard deviation of return; a measure of the average excess return earned per unit of standard deviation of return.

Shelf registration A type of public offering that allows the issuer to file a single, all-encompassing offering circular that covers a series of bond issues.

Short A trading position in a **derivative contract** that gains value as the price of the **underlying** moves lower.

Short position A position in an asset or contract in which one has sold an asset one does not own, or in which a right under a contract can be exercised against oneself.

Short-run average total cost The curve describing average total cost when some costs are considered fixed.

Short selling A transaction in which borrowed securities are sold with the intention to repurchase them at a lower price at a later date and return them to the lender.

Shortfall risk The risk that portfolio value or portfolio return will fall below some minimum acceptable level over some time horizon.

Shutdown point The point at which average revenue is equal to the firm's average variable cost.

Side letters Side agreements created between the GP and specific LPs. These agreements exist *outside* the LPA. These agreements provide additional terms and conditions related to the investment agreement.

Signpost An indicator, market level, data piece, or event that signals a risk is becoming more or less likely. An analyst can think of signposts like a traffic light.

Simple interest The interest earned each period on the original investment; interest calculated on the principal only.

Simple linear regression (SLR) A regression that summarizes the relation between the dependent variable and a single independent variable.

Simple random sample A subset of a larger population created in such a way that each element of the population has an equal probability of being selected to the subset.

Simple random sampling The procedure of drawing a sample to satisfy the definition of a simple random sample.

Simple yield The sum of the coupon payments plus the straight-line amortized share of the gain or loss, divided by the flat price.

Simulation A technique for exploring how a target variable (e.g. portfolio returns) would perform in a hypothetical environment specified by the user, rather than a historical setting.

Simulation trial A complete pass through the steps of a simulation.

Single-step format With respect to the format of the income statement, a format that does not subtotal for gross profit (revenue minus cost of goods sold).

Sinking fund arrangement Provision that reduces the credit risk of a bond issue by requiring the issuer to retire a portion of the bond's principal outstanding each year.

Situational influences External factors, such as environmental or cultural elements, that shape our behavior.

Skewed Not symmetrical.

Skewness A quantitative measure of skew (lack of symmetry); a synonym of skew. It is computed as the average cubed deviation from the mean standardized by dividing by the standard deviation cubed.

Slope coefficient The coefficient of an independent variable that represents the average change in the dependent variable for a one-unit change in the independent variable.

Small country A country that is a price taker in the world market for a product and cannot influence the world market price.

Smart beta Involves the use of simple, transparent, rules-based strategies as a basis for investment decisions.

Smart contract A computer program that is designed to self-execute on the basis of pre-specified terms and conditions agreed to by parties to a contract.

Socially responsible investing (SRI) Investing in assets and companies with favorable profiles or attributes based on the investor's social, moral, or faith-based beliefs.

Soft-bullet covered bonds Covered bonds for which bond default and payment acceleration of bond cash flows may be delayed upon sponsor default until a new final maturity date is reached.

Soft commodities Standardized agricultural products, such as cattle and corn, with markets often involving the physical delivery of the underlying upon settlement.

Soft power A means of influencing another country's decisions without force or coercion. Soft power can be built over time through actions, such as cultural programs, advertisement, travel grants, and university exchange.

Solvency Refers to the condition in which firm value exceeds the face value of debt used to finance the firm's assets.

Solvency ratios Ratios that measure a company's ability to meet its long-term obligations.

Solvency risk The risk that an organization does not survive or succeed because it runs out of cash, even though it might otherwise be solvent.

Sovereign bond A bond issued by a national government. Also called "Sovereign."

Spearman rank correlation coefficient A measure of correlation applied to ranked data.

Special dividend A dividend paid by a company that does not pay dividends on a regular schedule, or a dividend that supplements regular cash dividends with an extra payment.

Special purpose acquisition company (SPAC) A publicly listed shell company, also referred to as a "blank check" company, that exists solely for the purpose of acquiring an unspecified private company sometime in the future.

Special purpose entity A non-operating entity created to carry out a specified purpose, such as leasing assets or securitizing receivables; can be a corporation, partnership, trust, or limited liability partnership formed to facilitate a specific type of business activity. Also called *special purpose vehicle*, *special purpose company*, or *variable interest entity*.

Special purpose vehicle See *special purpose entity*.

Specific identification method An inventory accounting method that identifies which specific inventory items were sold and which remained in inventory to be carried over to later periods.

Speculative demand for money The demand to hold speculative money balances based on the potential opportunities or risks that are inherent in other financial instruments. Also called *portfolio demand for money*.

Speculative money balances Monies held in anticipation that other assets will decline in value.

Split coupon bond See *deferred coupon bond*.

Sponsored A type of depository receipt in which the foreign company whose shares are held by the depository has a direct involvement in the issuance of the receipts.

Spot curve A sequence of yields-to-maturity on zero-coupon bonds. Sometimes called *zero* or *strip curve* (because coupon payments are "stripped" off the bonds).

Spot markets Markets in which specific assets are exchanged at current prices. Spot markets are often referred to as **cash markets**.

Spot prices The current prices prevailing in **spot markets**.

Spot rates A sequence of market discount rates that correspond to the cash flow dates; yields-to-maturity on zero-coupon bonds maturing at the date of each cash flow.

Spread In general, the difference in yield between different fixed-income securities. Often used to refer to the difference between the yield-to-maturity and the benchmark.

Spread over the benchmark See *required yield spread*.

Spread risk Bond price risk arising from changes in the yield spread on credit-risky bonds; reflects changes in the market's assessment and/or pricing of credit migration (or downgrade) risk and market liquidity risk.

Spurious correlation Refers to: 1) correlation between two variables that reflects chance relationships in a particular dataset; 2) correlation induced by a calculation that mixes each of two variables with a third variable; and 3) correlation between two variables arising not from a direct relation between them but from their relation to a third variable.

Stacked bar chart An alternative form for presenting the frequency distribution of two categorical variables, where bars representing the sub-groups are placed on top of each other to form a single bar. Each sub-section is shown in a different color to represent the contribution of each sub-group, and the overall height of the stacked bar represents the marginal frequency for the category.

Stackelberg model A prominent model of strategic decision making in which firms are assumed to make their decisions sequentially.

Stagflation The combination of a high inflation rate with a high level of unemployment and a slowdown of the economy.

Staggered boards Board-related election process whereby directors are typically divided into multiple classes that are elected separately in consecutive years — that is, one class every year.

Stakeholder management The identification, prioritization, and understanding of the interests of stakeholder groups and managing the company's relationships with these groups.

Stakeholders Individuals or groups of individuals who may be affected either directly or indirectly by a decision and thus have an interest, or stake, in the decision.

Standard deviation The positive square root of the variance; a measure of dispersion in the same units as the original data.

Standard error of the estimate A measure of the fit of a regression line, calculated as the square root of the mean square error. Also known as the *standard error of the regression* and the *root mean square error*.

Standard error of the forecast A measure of the uncertainty associated with a forecasted value of the dependent variable that depends on the standard error of the estimate, the variability of the independent variable, the deviation of the forecasted independent variable from the mean in the regression, and the number of observations.

Standard error of the slope coefficient The standard error of the slope, which in a simple linear regression is the ratio of the model's standard error of the estimate (s_e) to the square root of the variation of the independent variable.

Standard normal distribution The normal density with mean (μ) equal to 0 and standard deviation (σ) equal to 1.

Standardization The process of creating protocols for the production, sale, transport, or use of a product or service. Standardization occurs when relevant parties agree to follow these protocols together. It helps support expanded economic and financial activities, such as trade and capital flows that support higher economic growth and standards of living, across borders.

Standardizing A transformation that involves subtracting the mean and dividing the result by the standard deviation.

Standards of conduct Behaviors required by a group; established benchmarks that clarify or enhance a group's code of ethics.

Standing limit orders A limit order at a price below market and which therefore is waiting to trade.

State actors Typically national governments, political organizations, or country leaders that exert authority over a country's national security and resources. The South African President, Sultan of Brunei, Malaysia's Parliament, and the British Prime Minister are all examples of state actors.

Stated annual interest rate A quoted interest rate that does not account for compounding within the year. Also called *quoted interest rate*.

Statement of changes in equity (statement of owners' equity) A financial statement that reconciles the beginning-of-period and end-of-period balance sheet values of shareholders' equity; provides information about all factors affecting shareholders' equity. Also called *statement of owners' equity*.

Statement of financial condition The financial statement that presents an entity's current financial position by disclosing resources the entity controls (its assets) and the claims on those resources (its liabilities and equity claims), as of a particular point in time (the date of the balance sheet).

Statement of financial position The financial statement that presents an entity's current financial position by disclosing resources the entity controls (its assets) and the claims on those resources (its liabilities and equity claims), as of a particular point in time (the date of the balance sheet).

Statement of operations A financial statement that provides information about a company's profitability over a stated period of time.

Static trade-off theory of capital structure A theory pertaining to a company's optimal capital structure. The optimal level of debt is found at the point where additional debt would cause the costs of financial distress to increase by a greater amount than the benefit of the additional tax shield.

Statistic A summary measure of a sample of observations.

Statistically significant A result indicating that the null hypothesis can be rejected; with reference to an estimated regression coefficient, frequently understood to mean a result indicating that the corresponding population regression coefficient is different from zero.

Status quo bias An emotional bias in which people do nothing (i.e., maintain the status quo) instead of making a change.

Statutory voting A common method of voting where each share represents one vote.

Step-up coupon bond Bond for which the coupon, fixed or floating, increases by specified margins at specified dates.

Stochastic oscillator A momentum indicator that compares a particular closing price of a security to a range of the security's prices over a certain period of time.

Stock dividend A type of dividend in which a company distributes additional shares of its common stock to shareholders instead of cash.

Stock split An increase in the number of shares outstanding with a consequent decrease in share price, but no change to the company's underlying fundamentals.

Stop-loss order See *stop order*.

Stop order An order in which a trader has specified a stop price condition. Also called *stop-loss order*.

Store of value The quality of tending to preserve value.

Store of wealth Goods that depend on the fact that they do not perish physically over time, and on the belief that others would always value the good.

Straight-line method A depreciation method that allocates evenly the cost of a long-lived asset less its estimated residual value over the estimated useful life of the asset.

Straight voting A shareholder voting process in which shareholders receive one vote for each share owned.

Strategic analysis Analysis of the competitive environment with an emphasis on the implications of the environment for corporate strategy.

Strategic asset allocation The set of exposures to IPS-permissible asset classes that is expected to achieve the client's long-term objectives given the client's investment constraints.

Stratified random sampling A procedure that first divides a population into subpopulations (strata) based on classification criteria and then randomly draws samples from each stratum in sizes proportional to that of each stratum in the population.

Street convention A yield measure that neglects weekends and holidays; the internal rate of return on cash flows assuming payments are made on the scheduled dates, even when the scheduled date falls on a weekend or holiday.

Stress testing A specific type of scenario analysis that estimates losses in rare and extremely unfavorable combinations of events or scenarios.

Strong-form efficient market A market in which security prices reflect all public and private information.

Structural subordination Arises in a holding company structure when the debt of operating subsidiaries is serviced by the cash flow and assets of the subsidiaries before funds can be passed to the holding company to service debt at the parent level.

Structural (or cyclically adjusted) budget deficit The deficit that would exist if the economy was at full employment (or full potential output).

Structured data Data that are highly organized in a pre-defined manner, usually with repeating patterns.

Structured financial instrument A financial instrument that shares the common attribute of repackaging risks. Structured financial instruments include asset-backed securities, collateralized debt obligations, and other structured financial instruments such as capital protected, yield enhancement, participation, and leveraged instruments.

Structured notes A broad category of securities that incorporate the features of debt instruments and one or more embedded derivatives designed to achieve a particular issuer or investor objective.

Subjective probability A probability drawing on personal or subjective judgment.

Subordinated debt A class of unsecured debt that ranks below a firm's senior unsecured obligations.

Subordination A form of internal credit enhancement that relies on creating more than one bond tranche and ordering the claim priorities for ownership or interest in an asset between the tranches. The ordering of the claim priorities is called a senior/subordinated structure, where the tranches of highest seniority are called senior, followed by subordinated or junior tranches. Also called *credit tranching.*

Substitutes Said of two goods or services such that if the price of one increases the demand for the other tends to increase, holding all other things equal (e.g., butter and margarine).

Sum of squares error (SSE) The sum of the squared deviations of (1) the value of the dependent variable and (2) the value of the dependent variable based on the estimated regression line. Also referred to as the *residual sum of squares*.

Sum of squares regression (SSR) The sum of the squared deviations of (1) the value of the dependent variable based on the estimated regression line and (2) the mean of the dependent variable.

Sum of squares total (SST) The sum of the squared deviations of the dependent variable from its mean; the variation of the dependent variable. Also referred to as the *total sum of squares*.

Sunk cost A cost that has already been incurred.

Supervised learning A machine learning approach that makes use of labeled training data.

Supply chain The sequence of processes involved in the creation and delivery of a physical product to the end customer, both within and external to a firm, regardless of whether those steps are performed by a single firm.

Supply shock A typically unexpected disturbance to supply.

Support In technical analysis, a price range in which buying activity is sufficient to stop the decline in the price of a security.

Support tranches Classes or tranches in CMOs that protect PAC tranches from prepayment risk.

Supranational bond A bond issued by a supranational agency such as the World Bank.

Surety bond Form of external credit enhancement whereby a rated and regulated insurance company guarantees to reimburse bondholders for any losses incurred up to a maximum amount if the issuer defaults.

Survey approach An estimate of the equity risk premium that is based on estimates provided by a panel of finance experts.

Survivorship bias The exclusion of poorly performing or defunct companies from an index or database, biasing the index or database toward financially healthy companies.

Sustainability linked loans These are any types of loan instruments and/or contingent facilities (such as bonding lines, guarantee lines, or letters of credit) that incentivize the borrower's achievement of ambitious, pre-determined sustainability performance objectives.

Sustainable growth rate The rate of dividend (and earnings) growth that can be sustained over time for a given level of return on equity, keeping the capital structure constant and without issuing additional common stock.

Sustainable investing Investing in assets and companies based on their perceived ability to deliver value by advancing economic, environmental, and social sustainability.

Sustainable rate of economic growth The rate of increase in the economy's productive capacity or potential GDP.

Swap A firm commitment involving a periodic exchange of cash flows.

Swap contract An agreement between two parties to exchange a series of future cash flows.

Swap execution facility (SEF) A swap trading platform accessed by multiple **dealers**.

Swap rate The fixed rate to be paid by the fixed-rate payer specified in a swap contract.

Switching barriers Factors that make it more difficult or more costly to switch suppliers.

Syndicated loan A loan from a group of lenders to a single borrower.

Syndicated offering A bond issue underwritten by a group of investment banks.

Synthetic protective put The combination of a synthetic long underlying position (i.e., a long forward and risk-free borrowing) and a purchased put on the underlying.

Systematic risk Risk that affects the entire market or economy; it cannot be avoided and is inherent in the overall market. Systematic risk is also known as non-diversifiable or market risk.

Systematic sampling A procedure of selecting every *k*th member until reaching a sample of the desired size. The sample that results from this procedure should be approximately random.

Systemic risk Refers to risks supervisory authorities believe are likely to have broad impact across the financial market infrastructure and affect a wide swath of market participants.

Tactical asset allocation Asset allocation that involves making short-term adjustments to asset class weights based on short-term predictions of relative performance among asset classes.

Tactical asset allocation (TAA) A portfolio strategy that shifts the percentages of assets held in various asset classes (or categories) to take advantage of market opportunities. Allocation shifts can occur within an asset class or across asset classes.

Tag cloud see *word cloud.*

Target capital structure A company's chosen proportions of debt and equity.

Target independent A bank's ability to determine the definition of inflation that they target, the rate of inflation that they target, and the horizon over which the target is to be achieved.

Target semideviation A measure of downside risk, calculated as the square root of the average of the squared deviations of observations below the target (also called target downside deviation).

Tariffs Taxes that a government levies on imported goods.

Tax base The amount at which an asset or liability is valued for tax purposes.

Tax expense An aggregate of an entity's income tax payable (or recoverable in the case of a tax benefit) and any changes in deferred tax assets and liabilities. It is essentially the income tax payable or recoverable if these had been determined based on accounting profit rather than taxable income.

Tax loss carry forward A taxable loss in the current period that may be used to reduce future taxable income.

Taxable income The portion of an entity's income that is subject to income taxes under the tax laws of its jurisdiction.

Taxable temporary differences Temporary differences that result in a taxable amount in a future period when determining the taxable profit as the balance sheet item is recovered or settled.

Technical analysis A form of security analysis that uses price and volume data, often displayed graphically, in decision making.

Technology The process a company uses to transform inputs into outputs.

Tender offer A public offer whereby the acquirer invites target shareholders to submit ("tender") their shares in return for the proposed payment.

Tenor The time-to-maturity for a bond or derivative contract. Also called *term to maturity*.

Term maturity structure Structure for a bond issue in which the bond's notional principal is paid off in a lump sum at maturity.

Term structure See *maturity structure.*

Term structure of credit spreads The relationship between the spreads over the "risk-free" (or benchmark) rates and times-to-maturity.

Term structure of yield volatility The relationship between the volatility of bond yields-to-maturity and times-to-maturity.

Terminal stock value The expected value of a share at the end of the investment horizon—in effect, the expected selling price. Also called *terminal value.*

Terminal value The expected value of a share at the end of the investment horizon—in effect, the expected selling price.

Terms of trade The ratio of the price of exports to the price of imports, representing those prices by export and import price indexes, respectively.

Test of the mean of the differences A statistical test for differences based on paired observations drawn from samples that are dependent on each other.

Text analytics The use of computer programs to analyze and derive meaning from typically large, unstructured text- or voice-based datasets.

Thematic investing An investment approach that focuses on companies within a specific sector or following a specific theme, such as energy efficiency or climate change.

Thematic risks Known risks that evolve and expand over a period of time. Climate change, pattern migration, the rise of populist forces, and the ongoing threat of terrorism fall into this category.

Thin-Tailed Describes a distribution that has relatively less weight in the tails than the normal distribution (also called platykurtic).

Third-degree price discrimination When the monopolist segregates customers into groups based on demographic or other characteristics and offers different pricing to each group.

Tiered pricing A pricing approach that charges different prices to different buyers, commonly based on volume purchased.

Time-period bias The possibility that when we use a time-series sample, our statistical conclusion may be sensitive to the starting and ending dates of the sample.

Time-series data A sequence of observations for a single observational unit of a specific variable collected over time and at discrete and typically equally spaced intervals of time (such as daily, weekly, monthly, annually, or quarterly).

Time tranching The creation of classes or tranches in an ABS/MBS that possess different (expected) maturities.

Time value The difference between an option's premium and its intrinsic value.

Time value decay The process by which the time value of an option declines toward zero as the option's expiration date is approached.

Time value of money The principles governing equivalence relationships between cash flows with different dates.

Time-weighted rate of return The compound rate of growth of one unit of currency invested in a portfolio during a stated measurement period; a measure of investment performance that is not sensitive to the timing and amount of withdrawals or additions to the portfolio.

Title Document representing real estate property ownership covering building and land-use rights along with air, mineral, and surface rights. Titles can be purchased, leased, sold, mortgaged, or transferred together or separately, in whole or in part.

Title search Crucial part of buyer and lender due diligence, ensuring the seller/borrower owns the property without any liens or other claims against the asset, such as from other owners, lenders, or investors or from the government for unpaid taxes.
Tokenization The process of representing ownership rights to physical assets on a blockchain or distributed ledger.
Top-down analysis An investment selection approach that begins with consideration of macroeconomic conditions and then evaluates markets and industries based upon such conditions.
Total comprehensive income The change in equity during a period resulting from transaction and other events, other than those changes resulting from transactions with owners in their capacity as owners.
Total cost The summation of all costs, for which costs are classified as fixed or variable.
Total cost of ownership The aggregate direct and indirect costs associated with owning an asset over its life span.
Total factor productivity A variable which accounts for that part of Y not directly accounted for by the levels of the production factors (K and L).
Total fixed cost The summation of all expenses that do not change as the level of production varies.
Total invested capital The sum of market value of common equity, book value of preferred equity, and face value of debt.
Total probability rule A rule explaining the unconditional probability of an event in terms of probabilities of the event conditional on mutually exclusive and exhaustive scenarios.
Total probability rule for expected value A rule explaining the expected value of a random variable in terms of expected values of the random variable conditional on mutually exclusive and exhaustive scenarios.
Total return Measures the price appreciation, or percentage change in price of the securities in an index or portfolio, plus any income received over the period.
Total return index An index that reflects the price appreciation or percentage change in price of the constituent securities plus any income received since inception.
Total variable cost The summation of all variable expenses.
Tracking error The standard deviation of the differences between a portfolio's returns and its benchmark's returns; a synonym of *active risk*. Also called *tracking risk*.
Tracking risk The standard deviation of the differences between a portfolio's returns and its benchmarks returns. Also called *tracking error*.
Trade creation When regional integration results in the replacement of higher cost domestic production by lower cost imports from other members.
Trade credit A spontaneous form of credit in which a purchaser of the goods or service is financing its purchase by delaying the date on which payment is made.
Trade diversion When regional integration results in lower-cost imports from non-member countries being replaced with higher-cost imports from members.
Trade payables Amounts that a business owes to its vendors for goods and services that were purchased from them but which have not yet been paid.
Trade protection Government policies that impose restrictions on trade, such as tariffs and quotas.
Trade surplus (deficit) When the value of exports is greater (less) than the value of imports.
Trading securities Under US GAAP, a category of debt securities held by a company with the intent to trade them. Also called *held-for-trading securities*.
Traditional investment markets Markets for traditional investments, which include all publicly traded debts and equities and shares in pooled investment vehicles that hold publicly traded debts and/or equities.
Transactions money balances Money balances that are held to finance transactions.
Transfer payments Welfare payments made through the social security system that exist to provide a basic minimum level of income for low-income households.
Treasury stock method A method for accounting for the effect of options (and warrants) on earnings per share (EPS) that specifies what EPS would have been if the options and warrants had been exercised and the company had used the proceeds to repurchase common stock.
Tree-Map Another graphical tool for displaying categorical data. It consists of a set of colored rectangles to represent distinct groups, and the area of each rectangle is proportional to the value of the corresponding group.
Trend A long-term pattern of movement in a particular direction.
Treynor ratio A measure of risk-adjusted performance that relates a portfolio's excess returns to the portfolio's beta.
Triangle pattern In technical analysis, a continuation chart pattern that forms as the range between high and low prices narrows, visually forming a triangle.
Trimmed mean A mean computed after excluding a stated small percentage of the lowest and highest observations.
Trimodal A distribution that has the three most frequently occurring values.
Triple bottom In technical analysis, a reversal pattern that results when the price forms three troughs at roughly the same price level. A triple bottom is used to predict a change from a downtrend to an uptrend.
Triple top In technical analysis, a reversal pattern that results when the price forms three peaks at roughly the same price level. A triple top is used to predict a change from an uptrend to a downtrend.
True yield The internal rate of return on cash flows using the actual calendar, including weekends and bank holidays.
Trust deed The governing legal credit agreement, typically incorporated by reference in the prospectus. Also called *bond indenture*.
Turn-of-the-year effect Calendar anomaly that stock market returns in January are significantly higher compared to the rest of the months of the year, with most of the abnormal returns reported during the first five trading days in January.
Two-dimensional rectangular array A popular form for organizing data for processing by computers or for presenting data visually. It is comprised of columns and rows to hold multiple variables and multiple observations, respectively (also called a data table).
Two-fund separation theorem The theory that all investors regardless of taste, risk preferences, and initial wealth will hold a combination of two portfolios or funds: a risk-free asset and an optimal portfolio of risky assets.
Two-sided hypothesis test A test in which the null hypothesis is rejected in favor of the alternative hypothesis if the evidence indicates that the population parameter is either

smaller or larger than a hypothesized value; occurs when the alternative hypothesis is stated as not equal to the hypothesized population parameters.

Two-way table See *contingency table*.

Two-week repo rate The interest rate on a two-week repurchase agreement; may be used as a policy rate by a central bank.

Type I error The error of rejecting a true null hypothesis; a false positive.

Type II error The error of not rejecting a false null hypothesis; false negative.

Unanticipated (unexpected) inflation The component of inflation that is a surprise.

Uncommitted lines of credit The least reliable form of bank borrowing in which a bank offers, without formal commitment, a line of credit for an extended period of time but reserves the right to refuse any request for its use.

Unconditional probability The probability of an event *not* conditioned on another event.

Underemployed A person who has a job but has the qualifications to work a significantly higher-paying job.

Underlying The asset referred to in a **derivative contract**.

Underwriter A firm, usually an investment bank, that takes the risk of buying the newly issued securities from the issuer and then reselling them to investors or to dealers, thus guaranteeing the sale of the securities at the offering price negotiated with the issuer.

Underwritten offering A type of securities issue mechanism in which the investment bank guarantees the sale of the securities at an offering price that is negotiated with the issuer. Also known as *firm commitment offering*.

Unearned revenue A liability account for money that has been collected for goods or services that have not yet been delivered; payment received in advance of providing a good or service. Also called *deferred revenue* or *deferred income*.

Unemployed People who are actively seeking employment but are currently without a job.

Unemployment rate The ratio of unemployed to the labor force.

Unexpected inflation The component of inflation that is a surprise.

Unimodal A distribution with a single value that is most frequently occurring.

Unit economics The expression of revenues and costs on a per-unit basis.

Unit elastic An elasticity with a magnitude of negative one. Also called *unitary elastic*.

Unit labor cost The average labor cost to produce one unit of output.

Unit normal distribution The normal density with mean (μ) equal to 0 and standard deviation (σ) equal to 1.

Unitranche debt Consists of a hybrid or blended loan structure that combines different tranches of secured and unsecured debt into a single loan with a single, blended interest rate.

Units-of-production method A depreciation method that allocates the cost of a long-lived asset based on actual usage during the period.

Univariate distribution A distribution that specifies the probabilities for a single random variable.

Unsecured debt Debt that gives the debtholder only a general claim on an issuer's assets and cash flow.

Unsponsored A type of depository receipt in which the foreign company whose shares are held by the depository has no involvement in the issuance of the receipts.

Unstructured data Data that do not follow any conventionally organized forms.

Unsupervised learning A machine learning approach that does not make use of labeled training data.

Up transition probability The probability that an asset's value moves up.

Uptrend A pattern that occurs when the price of an asset moves higher over a period of time.

VaR See *value at risk*.

Validity instructions Instructions which indicate when the order may be filled.

Valuation allowance A reserve created against deferred tax assets, based on the likelihood of realizing the deferred tax assets in future accounting periods.

Valuation ratios Ratios that measure the quantity of an asset or flow (e.g., earnings) in relation to the price associated with a specified claim (e.g., a share or ownership of the enterprise).

Value added resellers Businesses that distribute a product and also handle more complex aspects of product installation, customization, service, or support.

Value at risk A money measure of the minimum value of losses expected during a specified time period at a given level of probability.

Value-based pricing Pricing set primarily by reference to the value of the product or service to customers.

Value chain The systems and processes within a firm that create value for its customers.

Value investors With reference to equity investors, investors who are focused on paying a relatively low share price in relation to earnings or assets per share.

Value proposition The product or service attributes valued by a firm's target customer that lead those customers to prefer that firm's offering.

Variable A characteristic or quantity that can be measured, counted, or categorized and that is subject to change (also called a field, an attribute, or a feature).

Variable costs Costs that fluctuate with the level of production and sales.

Variance The expected value (the probability-weighted average) of squared deviations from a random variable's expected value.

Variation margin The amount required to replenish the futures margin account back to the initial margin.

Veblen goods Goods that increase in desirability with increasing price.

Vega The change in a given derivative instrument for a given small change in volatility, holding everything else constant. A sensitivity measure for options that reflects the effect of volatility.

Velocity The pace at which geopolitical risk impacts an investor portfolio.

Venture capital Investments that provide "seed" or start-up capital, early-stage financing, or later-stage financing (including mezzanine-stage financing) to companies in early development stages and requiring more capital for expansion or preparation for an initial public offering.

Venture capital fund A hedge fund that seeks to buy, optimize, and ultimately sell portfolio companies to generate profits. See *private equity fund*.

Vertical analysis Common-size analysis using only one reporting period or one base financial statement; for example, an income statement in which all items are stated as percentages of sales.

Vertical demand schedule Implies that some fixed quantity is demanded, regardless of price.

Visual technique The most common and readily available method of initial data assessment. Experts in pattern recognition maintain that the visual (or "eyeball") technique is still the most effective way of searching for recognizable patterns.

Visualization The presentation of data in a pictorial or graphical format for the purpose of increasing understanding and for gaining insights into the data.

Volatility The standard deviation of the continuously compounded returns on the underlying asset.

Voluntarily unemployed A person voluntarily outside the labor force, such as a jobless worker refusing an available vacancy.

Voluntary export restraint A trade barrier under which the exporting country agrees to limit its exports of the good to its trading partners to a specific number of units.

Vote by proxy A mechanism that allows a designated party—such as another shareholder, a shareholder representative, or management—to vote on the shareholder's behalf.

Warrant Attached option that gives its holder the right to buy the underlying stock of the issuing company at a fixed exercise price until the expiration date.

Waterfall Represents the distribution method that defines the order in which allocations are made to LPs and GPs. There are two major types of waterfall: *deal by deal* (or *American*) and *whole of fund* (or *European*).

Weak-form efficient market hypothesis The belief that security prices fully reflect all past market data, which refers to all historical price and volume trading information.

Wealth effect An increase (decrease) in household wealth increases (decreases) consumer spending out of a given level of current income.

Web-based lenders Lenders that operate primarily on the internet, offering loans in relatively small amounts, typically to small businesses in need of cash.

Weighted average cost method An inventory accounting method that averages the total cost of available inventory items over the total units available for sale.

Weighted average cost of capital A weighted average of the after-tax required rates of return on a company's common stock, preferred stock, and long-term debt, where the weights are the fraction of each source of financing in the company's target capital structure.

Weighted average coupon rate Weighting the mortgage rate of each mortgage loan in the pool by the percentage of the mortgage outstanding relative to the outstanding amount of all the mortgages in the pool.

Weighted average life A measure that gives investors an indication of how long they can expect to hold the MBS before it is paid off; the convention-based average time to receipt of all principal repayments. Also called *average life*.

Weighted average maturity Weighting the remaining number of months to maturity for each mortgage loan in the pool by the amount of the outstanding mortgage balance.

Weighted mean An average in which each observation is weighted by an index of its relative importance.

Winsorized mean A mean computed after assigning a stated percentage of the lowest values equal to one specified low value and a stated percentage of the highest values equal to one specified high value.

Word cloud A visual device for representing textual data, which consists of words extracted from a source of textual data. The size of each distinct word is proportional to the frequency with which it appears in the given text (also known as tag cloud).

Working capital The difference between current assets and current liabilities.

Working capital management The management of a company's short-term assets (such as inventory) and short-term liabilities (such as money owed to suppliers).

World price The price prevailing in the world market.

Yield duration The sensitivity of the bond price with respect to the bond's own yield-to-maturity.

Yield-to-maturity Annual return that an investor earns on a bond if the investor purchases the bond today and holds it until maturity. It is the discount rate that equates the present value of the bond's expected cash flows until maturity with the bond's price. Also called *yield-to-redemption* or *redemption yield*.

Yield-to-redemption See *yield-to-maturity*.

Yield-to-worst The lowest of the sequence of yields-to-call and the yield-to-maturity.

Zero-coupon bond A bond that does not pay interest during its life. It is issued at a discount to par value and redeemed at par. Also called *pure discount bond*.

Zero-volatility spread (Z-spread) Calculates a constant yield spread over a government (or interest rate swap) spot curve.