

## Risk Management List

### A

**Accident Year Experience:** A comparison of all losses (paid or reserved) during a twelve-month period, with all premiums earned for the same period. The losses included in the report are those that occurred during the period (regardless of when reported); premiums included in the report are those earned during the period (regardless of when written). Once calculated for a given period, accident year experience never changes. Formula: total losses during a twelve-month period ÷ earned premium for the same period.

**Accident Year Statistics:** Used by insurers and risk managers in forecasting future losses, these statistics show incoming premium and outgoing losses for a 12-month period. Since they show the percentage of the premium that is paid out, these statistics are also important in setting future premiums.

**Accountants' Material Test:** A guideline used by accountants to determine the significance of an event's financial impact on a business. The amount most commonly used is 5% of net income before taxes from continuing operations. Any event that has an impact of 5% or greater is considered "material." This test is sometimes used to determine a self-insured's risk retention level.

#### **Accrue:**

**Accrued Benefit Cost Method:** The calculation of pension plan benefits based on the accumulation of "benefit units," which are based on such things as salary and service years. A plan's normal cost for a year is based on the sum of (1) the present value of units accumulated by plan participants during the current year and (2) the present value of accrued benefits credited to participants for service prior to the present year.

**Accumulated Benefit Cost Method:** **See:** accrued benefit cost method.

**Acid-test Ratio:** **See:** quick ratio.

**Active Retention:** **See:** [retention](#).

**Actuarial Adjustments:** A change in premiums, size of reserves, rates of reserve buildup, and other calculations that reflect actual loss experience and expenses and expected, but unpaid, benefits.

**Actuarial Assumptions:** The facts or suppositions utilized by an actuary to forecast uncertain future events. Assumptions on such subjects as future interest rates, claims costs, payrolls, etc. are indicated in the actuary's report.

**Actuarial Benefit Equivalence:** A comparison of benefits under different plans.

**Actuarial Cost Method:** A method to determine a pension plan's future benefits based on current fixed contributions or the contributions required reaching a desired benefit level at a future time. Several different factors are considered in this calculation, such as

mortality forecasts, expenses, interest, labor turnover, salary scales and retirement rates.

**Actuarial Equivalence Tables:** Tables of numbers that provide factors to be assigned to various coverage's for comparing the actuarial benefit equivalence across plans.

**Actuarial Equivalent:** Two or more benefits that are of equal actuarial present value. When two series of payments have equal present values, assuming a given interest rate and mortality according to a specified mortality table, they are actuarially equivalent.

**Actuarial Funding Method:** A funding method selected by an actuary to determine the amount and timing of contributions needed to meet a specified financial obligation.

**Actuarial Gains and Losses:** A comparison between a past event predicted by actuarial methods and the event that actually occurred. Actuarial gains result when experience under the plan is better than the actuary's estimates. Actuarial losses result when experience is less favorable than the actuary's estimates. In the case of a pension plan, this comparison is used to calculate funding needs.

**Actuarial Liability:** See: [present value](#).

**Actuarial Present Value:** See: [present value](#).

**Actuarial Report:** A report prepared and signed by an actuary, indicating current conditions or future requirements of an insurer, self-insured or pension fund to meet its obligations.

**Actuarial Science:** The technical and mathematical aspects of insurance, including the determination of premium rates, premium and loss reserves, dividends, and other management statistical studies. See: [statistics](#).

**Actuarial Soundness:** A written, signed report prepared by an actuary stating that, in the actuary's opinion, reserves established to fund a pension plan are adequate to make projected benefit payments. The degree of confidence that an actuary expresses in his or her opinion.

**Actuarial Valuation:** The determination by an actuary as to whether pension plan contributions are being accumulated at a sufficient rate to fund promised benefits. The actuarial valuation indicates the plan's actuarial liabilities and identifies the plan assets available to meet such liabilities. The determination by an actuary at a specific date of the value of an insurance company's or self-insured's reserves or liabilities.

**Actuary:** An individual, often holding a professional degree, who uses mathematical skills to define, analyze, and solve complex business and social problems involving insurance and employee benefit programs. Actuaries analyze many of life's contingencies (e.g., birth, marriage, sickness, and accidents, loss of property, third-party liability, retirement, and death) and the financial effects that these have on insurance and benefit programs. Many of these programs involve long-range financial obligations, for which actuarial forecasts are fundamental in maintaining a sound financial basis: rate-making, premium determination, loss reserves, investment valuation, pension benefits, and insurance statistics.

**Actuary Enrolled:** An actuary who has been professionally certified by the Internal Revenue Service and the Department of Labor and is thereby authorized to sign actuarial reports mandated by Title II of the Employee Retirement Income Security Act. **See:** [actuary](#).

**Administrative Agent:** **See:** [third-party administrator](#).

**Administrative Services Arrangement (ASA):** **See:** [administrative services only](#).

**Administrative Services Only (ASO):** An arrangement whereby an insurer agrees to provide services to a self-insured entity, such as providing printed claim forms, and processing and auditing claims. The insurer does not assume any insurance risk under an ASO arrangement.

**Administrator:** An individual legally vested with the right of controlling an estate. An individual or firm appointed by a self-insured employer to administer its plan. **See:** [third-party administrator](#).

**Amortization:** The liquidation of a debt on an installment basis; the reduction of a liability by making periodic payments until the outstanding liability reaches zero; recovery of the cost of an intangible capital asset over its useful life or a shorter time permitted by tax laws or generally accepted accounting practices.

**Annual Total Return:**

**Appraised Value:** A value assigned to a property after an appraisal of it is completed. The appraised value is used to ascertain the appropriate amount of insurance to be purchased or the amount of loss to be paid.

**Appreciation Rate:** A rate or index figure that is applied against the value of a property or investment at one date, to bring it up to its present or future value.

**Arithmetic Mean:** **See:** [mean](#).

**Asset Composition Ratio:** A financial ratio that considers the composition of an organization's total assets to evaluate solvency. The higher the ratio, the greater the organization's ability to raise money to pay debt. Formula: total current assets ÷ total assets.

**Assets:** The assets of an insurance company include real estate holdings, stocks, bonds, and other securities, cash, mortgages, and deferred and unpaid premiums. For statutory annual statement purposes, an insurer's assets do not include accounts receivable that are over 90 days in arrears or office equipment.

**Associate in Risk Management (ARM):** A professional designation earned after successfully completing three national examinations given by the Insurance Institute of America. The curriculum covers the risk management decision process as it applies to any organization.

**Association Captive Insurance Company:** A captive insurance company established by members of an association to underwrite their own collective risks. An association captive usually only insures members of the sponsoring association. **See:** [captive insurance company](#).

**Average Cost:** A business inventory valuation method that develops an inventory value by dividing the total costs of goods available for sale throughout the year by the total quantity purchased.

**Asymmetrical Curve:** **See:** [skewed curve](#).

**Aviation Hazard:** The increased life insurance risk associated with flight on aircraft other than commercial airlines. Many life insurance policies exclude coverage for such risks by use of the aviation clause. The increased hazard of death or disability arising from travel on other-than-commercial aircraft.

**Avoidance:** The elimination of a loss exposure by ceasing or never undertaking an activity that produces the exposure. In making this decision, the person or organization must weigh the potential value of the activity against the potential loss.

## **B**

**Back-up Facility Agreement:** A formal or informal agreement between health care providers or health service plan sponsors to render services to the other's patients or enrollees. The agreement can involve either specific medical services or overflow patients. Such agreements can be between two similar health care providers (two hospitals or two clinics, for example) or two quite different health care facilities (a hospital for inpatient care, and a clinic for outpatient follow-up visits). A formal agreement between two businesses for one to provide the other with some form of assistance in the event of a breakdown of equipment or damage to property. Example: An agreement between two newspapers to print the other's paper in the event of a breakdown or loss. **See:** [disaster plan](#).

**Balance:** The difference between credits and debits. If the balance is negative, it is a debit balance; if positive, it is a credit balance. A surplus share reinsurance concept concerning the relationship between written premium under the treaty and the maximum limit of liability to which the reinsurer is exposed. If the desired ratio for a treaty is achieved, the treaty is said to be balanced.

**Balance Sheet:** One of an organization's financial statements, which summarizes the nature and values of an organization's assets, liabilities and capital as of a specific date. It shows what the organization owns, what it owes, and its ownership interests.

**Banking Plan:** A formalized self-insurance program where arrangements are made to obtain a policy with an insurer that spreads the cost of losses over a period of time and at the same time build a reserve fund to pay larger losses.

**Baseline Data:** Benchmark statistics or data of expected losses. Actual losses and other pertinent data are then compared against this data.

**Basis Point:** One-hundredth of a percentage point (0.01%), used when referring to interest rates; the smallest measure of interest rates or yield on investment.

**Bell Curve:** See: [normal probability distribution](#), [symmetrical curve](#).

**Bell-shaped Curve:**

**Book Value per Share:** A company's net worth minus the value of its preferred stock (at its liquidation or redemption value), divided by the number of common shares outstanding.

**Business Risk:** The basic risk inherent in a firm's operations. Business risk plus financial risk (resulting from a company's use of debt) equals total corporate risk.

## C

**Captive Insurance Company:** A risk-financing method or form of self-insurance involving the establishment of a subsidiary corporation or association organized to write insurance. Captives are domiciled either in a country outside the United States or in one of the few U.S. states that authorize them. Captive insurance companies are formed to serve the insurance needs of the parent organization and to escape uncertainties of commercial insurance availability and cost. A captive insurer owned by one company is generally called a single parent captive. A captive owned jointly by two or more companies is a multiple-owned, group or association captive.

**Cash Assets:** The sum of cash on hand plus short-term demand certificates and securities (such as Treasury bills) that can readily be converted into cash without disrupting normal operations. (Cash assets do not include marketable securities.)

**Cash Flow:** The cash account of a business; money available, even if not required, for current expenses; income and expenditures traceable (through a "cash flow statement") from their first appearance in an organization's bank accounts through their final disposition.

**Cash Flow Program:** Insurance program where premium payment is deferred over the policy term or until losses are paid. This allows the insured to utilize or gain investment income on funds for a greater period of time.

**Cash Flow Underwriting:** An underwriting practice where coverage is provided for a premium level that is actuarially less than necessary to pay claims and expenses. The insurer that engages in cash flow underwriting believes that it can make an investment profit on the premiums to compensate for the underwriting loss.

**Catastrophe Hazard:**

**Catastrophe Loss:** An incident or series of related incidents causing insured property losses of more than \$5 million. An exceptionally large loss that cannot accurately be predicted and therefore should be transferred by an individual or organization to an insurer.

**Central Limit Theorem:** An actuarial principle that if a series of samples is collected from a stable population, the distribution of the means (averages) of the samples will result in a normal distribution, where the mean approaches the population as the number of samples increase.

**Claims Administration:** The management of claims that have occurred. This includes certifying a claimant's eligibility; monitoring adjusters, attorneys and medical service providers; and preparing reports.

**Claims Frequency:** See: [loss frequency](#).

**Claims Severity:** See: [loss severity](#).

**Chronological Stabilization Plan:** Insurance programs intended to level losses or stabilize costs, similar to some reinsurance plans or retrospective rating plans. Losses are actuarially projected to arrive at a premium figure that includes a small loading factor. Claims paid for the five- to fifteen-year term of the plan will approach 85% to 95% of paid premium, depending on the terms and type of coverage. If the amount of payable losses falls short of actuarial expectations, a retrospective refund of the excess premium is paid. If losses exceed the calculated amount, an upward adjustment is made.

**Common Equity:** The sum of the value of common stock at par, the surplus of capital received (over par) from the sale of common (i.e., capital surplus), and retained earnings (i.e., earned surplus). Retained earnings in this context equals net profits earned in all years, less dividends paid in all years.

**Common Equity Ratio:** Common equity divided by total capital. Total capital in this context includes long-term debt, preferred equity, and common equity.

**Common Shares Outstanding:** The number of shares of common stock actually outstanding at the end of the calendar (or fiscal) year, excluding any shares held in the company's treasury. The figures for common shares outstanding in previous years are fully adjusted for all subsequent stock splits and stock dividends.

**Confidence Level:** The degree of certainty about an actuarial forecast or calculation. Example: A 95% confidence level indicates that only 5 occurrences in 100 will not fall within a stipulated range.

**Constructive Receipt:** Under Internal Revenue Service rules, a person is deemed to have received funds when there is control over the disposition of money, when the present value of money is specifically set aside for use by the person, or when the funds are available to the person. Funds are not constructively received if something of value must be relinquished to obtain them, if the right to receipt is legally contested, if the obligor is financially insolvent or cannot make payment, or if a valid contract requires that payment be postponed.

**Corporate Risk:** See: [business risk](#).

**Correlation:** An actuarial term for the degree of interaction between two or more attributes of a group of elements.

**Cost of Capital:** The discount factor that is used in the capital budgeting process; a business's cost of funds (e.g., prime rate, interest rate on corporate bonds, etc.). **See:** [discount factor](#).

**Cost of Goods Sold:** The section of a financial statement that includes all of the purchasing or production costs and expenses, both direct and indirect, of the merchandise sold during that period. These expenses include raw materials, direct and indirect labor costs, plant costs (such as depreciation), and electricity, water and shipping costs.

**Credibility:** In general, the predictive value associated with a given body of data; an actuarial term for the input data used in a calculation. High credibility indicates sufficient input data is available, and the distribution of results falls within a narrow range. **See:** [dispersion](#), [distribution curve](#), [mean](#).

**Credit Line:** **See:** [line of credit](#).

**Current Ratio:** A financial analysis ratio that indicates the liquidity or ability of an organization to pay current bills. Formula: total current assets ÷ total current liabilities. The higher the current ratio, the better an organization's debt paying ability. **See:** [financial ratios](#), [financial underwriting](#).

## D

**Decision Tree:** A device for graphically showing the relationships between decisions and chance events.

**Debt-to-Equity Ratio:** A measurement of the proportion of funds provided from investors and from lenders. Formula: total liabilities ÷ total equity. The smaller the ratio, the greater the organization's long-term solvency. **See:** [financial ratios](#), [financial underwriting](#).

**Degree of Risk:** The uncertainty that can arise from a given set of circumstances; the probability that actual experience will differ from what is anticipated.

**Depletion:** A lessening or diminution in quantity, content, or value.

**Depreciation:** A non-cash expense that reflects the current year's share of the cost of an asset; recovery of the cost of a tangible capital asset over its useful life or a shorter time permitted by tax laws or generally accepted accounting practices. In calculating the insurable actual cash value of an asset, insurers use physical depreciation, i.e., the non-accelerated decline in economic value.

**Disaster Plan:** A detailed plan to transfer business operations to another location, or to utilize other equipment, if an existing facility is damaged; a plan to minimize the consequences of loss at a single location.

**Discounted Cash Flow Techniques (DCF):** Methods of evaluating the return on a capital investment, by calculating the present value of the income flow. The analysis of the discounted cash flow is valuable when selecting from competing investments, by taking into account the time value of money.

**Discount Factor:** A number that is multiplied by a monetary value to reduce an expected future sum to its present value. Formula:  $1 \div (1+r)^T$ , where r is the interest rate expressed as a decimal and t represents the time in years for which an amount is to be discounted.

**Discounting:** The process of funding the present value of a series of future cash flows.

**Dispersion:** An actuarial term for the measurement of variability of data from the mean, median or mode. The farther losses occur from the point being measured (i.e., the greater the dispersion), the lower their reliability.

**Distribution Curve:** An actuarial term for the scattering of data around the mean. The normal distribution curve is a symmetrical bell shape.

**Diversification:** A risk management technique that can be used to avoid a catastrophic loss, by spreading an organization's risk geographically, by type of risk, or by type of coverage. Diversification makes it less likely that a single event will adversely affect a significant percentage of an organization's operations or business.

## **E**

**Earnings per Share:** A corporation's net profit, minus preferred stock dividends, divided by common shares outstanding. This figure may be based on actual year-end shares outstanding; on average shares outstanding; on average shares outstanding plus common stock equivalents ("primary earning per share"); or on actual year-end or average shares outstanding plus all shares reserved for conversion of convertible senior securities, and exercise of all warrants and options ("fully diluted earnings per share").

**Emergencies:** An urgent situation with the potential to adversely affect the operations of an organization. Emergencies include war, economic depression, major earthquakes, hurricanes, etc. **See:** [disaster plan](#).

**Estimated Constant Dollar Earnings per Share:** An estimate of the impact of changes in the consumer price index on the cost of replacing, at current prices, previously purchased property that was depreciated at rates sufficient only to recover the original costs. This estimate also adjusts earnings per share for the impact on cost of sales and inventories.

**Expected Rate of Return:** The rate of return an organization expects to realize from an investment.

**Expected Return:** The expected return is the mean value of the probability distribution of the possible returns. **See:** [expected rate of return](#), [mean](#).

## **F**

**Feasibility Study:** A study or research project undertaken to determine whether a given plan of action will succeed. In risk management, such studies are undertaken to determine whether a business should self-insure, form a captive insurance company, or join with other businesses in a risk sharing pool. **See:** [risk management process](#).

**Fellow of the Societies of the Actuaries:** A professional designation earned by passing ten examinations on the mathematics of life and health insurance, actuarial science, accounting, and finance. In addition, successful candidates must meet other educational and experience requirements. Exams and courses are administered by the Society of Actuaries.

**Financial Ratios:** Mathematical ratios developed from a corporation's financial statements that are used to analyze its financial strength and stability by institutions making credit or investment decisions. Making these calculations and evaluating the results is often called ratio analysis or fundamental analysis.

**Financial Underwriting:** The review of an organization's financial statements and related background with the belief that this will indicate the quality of its management. This financial analysis can reveal the moral and morale hazards present in an organization and the potential of the organization for growth, as well as confirm that exposures to risk exist and indicate its ability to pay premiums and comply with financial obligations or guarantees.

**Fixed Assets:** A capital asset, especially a permanent or immovable one, required for use in the operations of a business.

**Frequency:** The number of times an event occurs in a given period of time. Frequency is one factor used to evaluate and underwrite risks; another is severity. A series of low severity losses that occur at a relatively high frequency can be just as costly to an insurer (or to a self-insurer) as a single severe loss because of administrative expenses for each claim. In addition, sufficiently frequent losses in accumulation can produce a loss more severe than would otherwise be the case. Loss frequency should therefore be controlled, as frequency breeds severity.

**Frequency Distribution:** A statistical term for the arrangement of data in equal intervals to show the frequency of values; the number of times losses occur and their severity.

**Functional Obsolescence:** A plant, building or facility that has outlived its useful value because of antiquated equipment or impractical or outmoded design.

**Funded Spread Loss Plan:** A form of banking plan involving a long-term contract of insurance (3 to 10 years), under which an annual premium is paid based on projected losses and the insurer's expense loading. The final premium is based on a retrospective rating formula, which, if the premium and investment income exceeds the losses and loading over the life of the plan, is returned to the policyholder. In the event losses exceed funds accumulated in this plan, the insurer loans the insured funds to pay losses up to the policy limit and increases the annual premium over the remainder of the plan to repay the funds loaned.

## **G**

**Group Captive Insurance Company:** A captive insurance company established and owned by a group of companies engaged in similar businesses to underwrite their own collective risks. A group captive usually insures only its owners.

## **I**

**Identification: See:** [risk identification](#).

**Imprest Account:** An account--usually established by a self-insurer or in a deductible liability plan--to pay for low-severity, high-frequency losses as they occur. As the account is depleted, additional funds must be deposited.

**Incident Report:** A report prepared and issued by law enforcement officials following an automobile accident or crime. A report prepared by an insured when an action or occurrence is likely to lead to a claim being filed.

**Income Statement:** A statement of an organization's sales and expenses, showing profits or losses, usually for a period of one year.

**Incurred But Not Reported (IBNR):** Losses occurring over a specified period that have not been reported to the insurer. IBNR losses are often calculated as a percentage of claims paid and claims outstanding and are reported in an insurer's annual report. Reinsurers establish IBNR reserves as a part of their rating plans under a facultative reinsurance treaty, lest an overly optimistic view of treaty results lead to further under-rating on a book of business. Example: Product liability losses are seldom reported during a policy year. This "tail" of claims will upset any rating plan, unless an IBNR reserve is established and factored into the profit picture.

**Incurred Losses:** Both paid and known reserved losses occurring within a specific period of time.

**Incurred Loss Ratio:** The portion of an earned premium dollar that is spent on incurred losses.

**Industrial Insured's:** An organization that buys its insurance through an employed insurance or risk manager or a continuously retained, full-time insurance consultant. Such insured's have minimum annual non-life and health premiums of \$25,000 per year and employ at least 25 persons on a full-time basis. Many state insurance codes, especially in surplus lines laws, exempt industrial insured's from requirements to purchase insurance only from a domestically authorized insurer.

**Inflation Factor:** A loading added during the development of insurance rates to cover increased claims costs due to anticipated increases in costs of medical care, building construction, vehicle repair, etc.

**Insurance Consultation Services:** Survey, inspection or advisory services performed by insurers, agents or service contractors to reduce the likelihood of injury or loss.

**Insurance Management:** In contrast to risk management, insurance management is security-oriented management that deals with loss exposures almost exclusively through the use of insurance.

**Intercompany Transaction:** A financial transaction among affiliated companies, including contributions to the reserve fund of a subsidiary by its parents.

**Internal Financing:** Funds that are made available for capital budgeting and working capital expansion through the normal operations of the firm; internal financing is approximately equal to retained earnings plus depreciation.

**Internal Rate of Return (IRR):** The average annual rate of return on an investment over a given number of years that makes the present value of future net cash flow equal the cost of the investment; the yield or interest rate that makes the present value of expected cash flow from an investment equal to the cost of the investment project.

**Internal Revenue Code: Section 501 (c):** A federal tax statute that describes the corporations, clubs and other organizations that qualify as nonprofit and receive a tax exemption.

## L

**Large Loss Principle:** A loss that would exceed a firm's ability to absorb it, so the risk of such a loss should be transferred through insurance.

**Last In, First Out (LIFO):** An inventory accounting method by which sales are considered to be from among the latest merchandise or inventory purchased or produced. This method minimizes inventory profits and losses. An understanding of inventory valuation methods is important in estimating business interruption losses.

**Law of Large Numbers:** A principle that the larger the number of exposures considered, the more closely will reported losses equal the true probability of loss. This is the basis for the statistical expectation of loss, which determines premium rates.

**Line of Credit (LOC):** A prearranged borrowing limit established by an individual or organization with a financial institution.

**Liquidity:** The ability of an organization to readily convert its assets into cash with little loss in the asset's value.

**Lognormal Distribution:** An actuarial distribution curve that is skewed to the right. If the logarithms of individual severities are calculated, they will fall into a normal distribution.

**Loss Assumption:** The amount of insurance assumed by a reinsurer from a ceding insurer in an ordinary facultative or treaty reinsurance arrangement.

**Loss Avoidance:** The elimination of a loss exposure by ceasing or never undertaking an activity that produces the exposure. In making this decision, the person or organization must weigh the potential value of the activity against the potential loss.

**Loss Control Policy Statement:** A document--usually prepared by a risk manager or loss control specialist and often approved by a firm's officers or directors--that provides information about loss control objectives to management and employees.

**Loss Development:** The increase or decrease in the value of losses that occurs between two loss evaluation dates.

**Loss Development Factor (LDF):** A factor (expressed as a percentage) designed to correct errors in estimating the reserves for known but unsettled losses and to make an allowance for incurred but not reported losses.

**Loss Frequency:** The number of losses that occur during a specified period of time (usually one year).

**Loss Frequency Method:** A method of projecting the number of future losses to occur in a specified time. It is used by underwriters to develop a basic premium on large accounts. To the basic premium are added the insurer's loading for expenses, profits and contingencies.

**Loss Portfolio Transfer:** The transfer of incurred losses to a third party. The assuming party hopes to profit by investing the sale price it has received over the length of time it requires to settle the claims it has assumed. Such transfers are undertaken by insurers or self-insured's in order to gain tax advantages, to clean up a financial statement, or to exit from a line or class of insurance.

**Loss Rate:** See: [loss frequency](#).

**Loss Retention:** See: [retention](#).

**Loss Run:** A printed report summarizing the losses that have occurred over a specific period of time and are valued as of a specific date.

**Loss Severity:** The amount of a loss.

**Loss Trends:** Projections of future losses based on analysis of past loss patterns. Trends are used to determine the pure cost of protection and the resultant pure premium, contingency reserves, and whether the company should continue writing a specific type of policy, a line of business, or remain active in a particular geographic area.

## **M**

**Manuscript Policy:** An insurance policy designed or tailored for a large commercial insured; a unique coverage written at the request of a broker or a risk manager.

**Mean:** The average value, computed by dividing the sum of a set of values by the number of values in the set. Though the mean is the mathematical average of a set of numbers, mean, median and mode may all be used in various contexts to indicate an average, typical or likely condition; however, they differ. Example: In the number set 1, 2, 2, 4, 5, 8, 13, the mean is 5 ( $35 \div 7$ ); the median is 4 (the middle value); and the mode is 2 (the most frequent value).

**Median:** A statistical term for the middle or most central value in a set of numbers; halfway between two outermost points.

**Mode:** The value with the highest probability; the most frequent or most likely outcome.

**Moving Average Rating Method:** A rate development method that smoothes out irregularities in data, such as exposure units that are not homogeneous, unrepresentative historical losses, adverse selection of data, social inflation and distortions resulting from misleading averages.

## N

**Negative Cash Flow:** A financial situation where a business's cash needs exceed its cash intake. Short periods of negative cash flow create no problem for most businesses, but long periods may require additional capital investment for a business to avoid insolvency.

**Net Income:** The balance of funds remaining after all of an organization's expenses are subtracted from gross sales; the excess of revenues over expenses; profit. Net income is the amount that can be distributed to an organization's owners or be kept as retained earnings.

**Net Worth Ratio:** A test of an organization's earning power based on its capitalization. It is a measure of what the stockholders earned from all sources as a percentage of their investment. Formula:  $\text{net income} \div \text{owner's equity}$ . The higher the ratio, the more willing investors would be to invest in the company.

**Non-insurance:** A decision not to purchase insurance for a known exposure. Losses arising from such an exposure are not pre-funded or self-insured, but are absorbed as a business expense.

**Non-insurance Transfer:** A risk management technique for shifting an organization's potential losses to others. Many alternatives are available that may be less costly than insurance, such as subcontracting part of a project or inserting a hold-harmless agreement in a contract.

**Non-ledger Assets:** Assets that have not been received and have not been entered on the balance sheet, but are due and payable in the current year nonetheless.

**Normal Probability Distribution:** A statistical curve that is symmetrical and bell-shaped. It is often used to plot probable losses.

## O

**Objective Probability Distribution:** An actuarially based probability distribution that emphasizes or expresses reality, not personal opinions or feelings.

**Off-shore Insurers:** See: [captive insurance company](#).

**Open Group Actuarial Cost Method:** A method of determining the cost of an employee benefit plan, where the actuarial present values associated with expected future entrants are considered.

**Opportunity Cost:** The cost of forgoing an economic opportunity because another is chosen; the difference between the maximum profit that could have been obtained from an alternative investment and the profit from the investment actually made.

**Owner's Equity:** The interest in a business or property in excess of any claims or liens against it. As a balance sheet item, owner's equity is established by capital contributions to an organization by its owners for formation or expansion and includes profits (retained earnings).

## P

**Passive Retention:** The assumption of risk of loss (i.e., a person or firm does not purchase insurance or establish a fund to pay expected losses arising from an exposure) because of unawareness of the risk, the prohibitive cost of funding the exposure, or the insignificance of any possible loss.

**Plant Age:** An estimate of the average age of capital assets used in a business, derived by dividing accumulated depreciation at the most recent year end by the depreciation allowance in the most recent year.

**Poisson Distribution:** An actuarial distribution curve that is applied to independent, random events where the frequency is small compared to the number of exposure units.

**Present Value:** The value today of a future monetary sum or cash flow; the amount that, if received now and invested at an assumed rate of return, equals a given future sum. A known or assumed future amount is discounted by a stipulated rate that might be received if invested over the period of time before the money is received. Example: At an assumed investment return of 20%, the present value of \$10,000 receivable in one year is \$8333.

**Probability:**

**Profit and Loss Statement:** See: [income statement](#).

**Pure Captive:** A captive insurance company that insures only its parent's business.

**Pure Premium:** That portion of the premium which covers losses and related loss expenses (i.e., includes no loading for commissions, taxes or other expenses).

**Pure Risk:** A risk involving the probability or possibility of loss with no chance for gain. A pure risk is generally insurable.

## Q

**Quick Ratio:** A measure of an organization's ability to expediently pay all of its current liabilities. Formula: quick assets (cash, trade receivables, marketable securities) ÷ current liabilities. The higher the ratio, the greater the immediate debt-paying ability.

## R

**Rate of Return:** A method developed by the Federal Trade Commission to compare the cost of various life insurance policies. Formula: Step 1. savings element = gross policy premium - pure cost of protection (mortality expectation) + policy dividends (if any). Step 2. Calculate the rate of return needed to match the savings element that must be

accumulated in order to equal the cash value of the policy at some specified future date. There are two methods of calculating rate of return: 1. the yield to maturity method, which is the current yield produced by a security based on its purchase price. Formula:  $\text{current yield} \div \text{purchase price}$ ; 2. the current income method, which is the current yield produced by a security based on its current market value. Formula:  $\text{current yield} \div \text{current market value}$ .

**Reduction of Risk:** A method of handling risk by the scope or volume of a firm's operations, or through the purchase of insurance. Example: A large outdoor advertising firm reduces its risk of lost revenue due to damaged billboards in a way that a small billboard company cannot because of its large number of dispersed exposure units. The scale of operations makes losses relatively predictable. Insurance reduces risk for the small company by combining a number of similar companies' risks into a more predictable group.

**Regression Analysis:** A statistical procedure for predicting the value of a dependent variable on the basis of knowledge about one or more independent variables.

**Reported Claims Count:** The number of claims reported by an insured to an insurance company.

**Retention:** The planned assumption of risk by an insured through deductibles, policy retentions, or self-insurance. The insured's reason for risk retention is usually to reduce expenses and improve cash flow, to increase control of claims reserving and claims settlements, or to fund losses that cannot be insured.

**Risk:** The possibility or chance of loss or injury; the property or person exposed to damage or injury; an insurance company's uncertainty regarding the ultimate amount of any claim payment (underwriting risk) or uncertainty regarding the timing of claim payments (timing risk), or both.

**Risk Assumption:** See: [retention](#).

**Risk Control:** Techniques or programs used to reduce the total amount of physical damage, injury or loss should an event occur that results in a fortuitous loss.

**Risk Financing:** Techniques or methods used to provide funds to pay for losses due to fortuitous events.

**Risk Identification:** The first of the five steps in the risk management process, in which potential sources of loss are identified by conducting complete examinations of possible events that could occur by negligence, oversight or accident.

**Risk Management:** The procedures used to identify, assess, control and finance accidental loss; management of the pure risks to which an organization might be subject; the application of resources to reduce and finance identified loss exposures.

**Risk Management Audit:** A systematic evaluation of an organization's exposure to risks, insurance coverage's or retentions as they relate to those risks, and how the organization is coordinating its risk management program, including any necessary recommendations for improvements.

**Risk Management Consultant:** An individual or firm that provides risk management and insurance consulting--e.g., risk management audits, policy analysis, feasibility studies, etc.--on a fee basis. As a rule, the risk management consultant does not sell insurance, and so maintains its independence and objectivity. Usually such an individual holds a CPCU (Chartered Property Casualty Underwriter) or ARM (Associate in Risk Management) designation.

**Risk Management Manual:** A manual developed for an organization--usually by its risk manager, risk management consultant, or broker--which includes a risk management policy statement, a description of all insurance contracts purchased by the organization, and procedures to report changes in exposures, and claims.

**Risk Management Policy Statement:** A statement developed and approved at a high management level within an organization for the following purposes: 1. to commit top managers to the risk management function; 2. to disseminate risk management information throughout the organization; 3. to set a standard against which the firm's risk management performance can be judged.

**Risk Management Process:** The risk management process is a series of steps: 1. identifying and analyzing loss exposures; 2. measuring loss exposures; 3. selecting the technique or combination of techniques to be used to handle each exposure; 4. implementing the techniques chosen; and 5. monitoring the decisions made and making appropriate changes.

**Risk Quantification:** The measurement criteria used to evaluate loss frequency and loss severity.

**Risk Retention:** An organization can retain risk by one or more of the following techniques: current expensing of losses, funded loss reserves, unfunded loss reserves, borrowing funds to pay losses, or using a captive insurer.

**Risk Transfer:** A risk control technique that involves the contractual shifting of a pure risk from one party to another. An example is the purchase of an insurance policy, by which a specified risk of loss is passed from the policyholder to the insurer. Other examples are the hold harmless clauses in many contracts, contractual requirements to provide insurance coverage for another party's benefit, and reinsurance.

## S

**Segregation of Exposure Units:** A risk control technique to prevent a catastrophic economic loss by physically arranging an organization's activities and resources so they cannot all be lost in a single event. This is commonly accomplished by constructing separate fire divisions at a plant site or by using multiple plants.

**Self-insurance:** The planned assumption of risk instead of purchasing insurance. An organization develops a program for identifying, evaluating and funding its losses. It is often used for workers' compensation, where losses are fairly predictable. Smaller losses that occur frequently are a better subject for self-insurance than large infrequent losses. Self-insurance programs are frequently structured to retain losses up to a specific limit, and insurance is purchased above that level. Most states regulate self-

insurance as they do insurance, requiring certificates of self-insurance for compulsory coverage's such as auto liability and workers' compensation.

**Self-insurance Reserve:** Funds set aside by an organization to cover liability for future claims under its self-insurance program.

**Self-insured Retention:** A potential loss assumed by an organization--that is, not insured. The SIR differs from a deductible because the insured performs all the functions normally undertaken by an insurance company for losses within the SIR, including claims adjusting and audits, funding and paying claims, and complying with applicable state and federal laws and regulations.

### **Simulation:**

**Sinking Fund:** A fund established by regular deposits from current earnings for paying off a long-term debt, redeeming debt securities or preferred stock issues. A fund established by a self-insurer to cover large losses when they occur. As losses are paid, the fund is replenished to maintain a specified amount.

**Skewed Curve:** An actuarial term that refers to the shape of a distribution curve that is not symmetrical. Most curves involving loss projections are skewed to the right because of the small chance for large losses.

**Small Loss Principle:** A risk management principle that small losses can be absorbed more efficiently as normal business expenses through deductibles or through self-insured retentions than through insurance, since insurers add expense loadings (for profit, administrative and selling expenses, etc.) to the basic premium.

**Speculative Risk:** A risk for which it is uncertain as to whether the final outcome will be a gain or loss. Gambling is a speculative risk. Generally, speculative risks cannot be insured.

**Spread of Risk:** A principle of insurance that insurers need to accept homogeneous exposure units spread over a wide geographic area, with the knowledge that only a given number of risks will result in claims or losses. This dispersion of exposure units allows insurers to project expected losses from the entire body of insured's, lessens the potential for catastrophic losses that could occur to exposure units close to each another, and allows for the development of rates.

**Spreadsheet:** A worksheet of entries (usually numerical values) arranged in rows and columns to show the relationship between two variables. Spreadsheets are widely used to display business information, and risk managers use them to track exposure and claim information in a form that can be easily updated.

**Standard Deviation:** An arithmetic mean of the differences between each outcome and the average of all outcomes within a set. It is utilized by actuaries to indicate the degree of dispersion that exists between a set of outcomes.

**Standard Variation:** See: [standard deviation](#).

**Statistics:** A branch of mathematics dealing with the collection, analysis, interpretation and presentation of masses of numerical data; a collection of quantitative data. A leading branch of statistics is actuarial science, which deals with insurance loss probabilities.

**Straight Line Depreciation:** Depreciating a capital asset by the same amount each year over the asset's useful life. The cost (or other valuation basis) minus salvage value is divided by the number of years the asset is expected to remain useful and efficient.

**Symmetrical Curve:** An actuarial term for a distribution curve where the mean, median and mode have the same numerical value; a bell-shaped curve of mathematical values.

## I

**Taxation of Business Income Loss Payments:** Business income insurance proceeds pay for profits that were not realized plus continuing expenses; therefore, like profits, these payments are subject to taxation.

**Taxation of Property Insurance Claims Payments:** Property insurance proceeds are generally taxed as ordinary income to the extent that they exceed the book value of the damaged property. It is sometimes possible to defer taxation if the property is replaced with similar property.

**Taxation of Uninsured Business Interruption Insurance Losses:** Uninsured business interruption losses are not considered casualty losses and are therefore not tax deductible; unindemnified business interruption losses simply represent lost income.

**Taxation of Uninsured Property Losses:** Uninsured business property losses are generally considered casualty losses and are therefore tax deductible, but only up to the amount of book value at the time of loss. When the book value is zero, no deduction is allowed.

**Theory of Probability:** A mathematical description of the likelihood of a specific type of event; the ratio of a given outcome to the number of possible outcomes. The outcome of the forecast (or likelihood of an event occurring) is expressed as a number between zero (certain not to occur) and one (certain to occur).

**Third-party Administrator (TPA):** A claims administrator or insurance company that processes claims on behalf of a self-insured organization or multiple employer welfare arrangement or manages workers' compensation claims for an employer. The administrator is a third party because it is neither the self-insurer nor an insured (claimant or payee). Services may include processing claims (including audits, adjusting, and negotiating settlements), record keeping, self-insurance certification, and notification of excess insurers.

**Time Value of Money:** The possible investment return on money received immediately. Compound interest tables indicate the value between two points in time.

**Transfer of Risk:** See: [risk transfer](#).

**Trending:** The adjustment of historical statistics (both premiums and losses) to current levels or expected future levels in order to reflect measurable changes in economic and

demographic forces and to make past data useful for determining current and future expected cost levels.

## U

**Unbundled Services:** Certain services performed by the insurer, such as claims administration, claims adjusting and loss control, are automatically included in the purchase of a policy. For large policyholders, some insurers provide a policy that excludes some or all of these services, which are provided either directly by the insured or by a third-party contractor.

**Underinsurance:** The purchase of insurance with limits inadequate to meet policy coinsurance requirements, or the failure to purchase insurance in amounts sufficient to cover a large loss.

**Up-stream Merger:** A merger of a subsidiary corporation into its parent.

## V

**Valuation of Potential Property Loss:** The risk management task of identifying and valuing property loss exposures. The value assigned to each risk may be based on replacement cost, actual cash value (physical depreciation considered), and original cost, depreciated value, market value, or tax appraised value, depending on its current use and the organization's financial structure. Once loss exposures are identified and valued, funding for a potential loss, including transfer of risk, can be developed.

**Variable:**

**Vertical Merger:** A merger between a corporation and one of its major suppliers or customers.

## W

**Watered Stock:** Corporate stock that has been reduced in value by issuing shares without a proportionate contribution of capital or by issuing par value shares for less than par.