

Risk is a pervasive condition of human existence, defined as the uncertainty of an outcome where an unfavorable event is possible. While its intuitive meaning is clear, the term "risk" can have specialized insurance connotations, referring either to a peril or an insured entity. However, this text broadly defines risk as a situation involving exposure to loss. More specifically, risk is a condition of the real world characterized by the possibility of an adverse deviation from a desired outcome. Despite a lack of universal agreement among insurance theorists, common elements in risk definitions include indeterminacy (the outcome must be in question, with at least two possibilities) and loss (at least one undesirable outcome). Other definitions encompass the chance of loss, possibility of loss, uncertainty, dispersion of actual from expected results, or probability of any outcome different from expected.

Uncertainty is a psychological state of doubt resulting from a lack of knowledge about future events, contrasting with certainty. The existence of risk, as a condition where loss is possible, creates this individual uncertainty, which varies based on personal knowledge and attitudes. Crucially, risk objectively exists regardless of whether an individual recognizes or feels uncertain about it; for example, stating 'I am uncertain what grade I will get' reflects this lack of knowledge. The degree of risk relates to the likelihood of an adverse occurrence, measured by the probability of an adverse deviation. Risk is considered zero when the probability of loss is 0% (impossible) or 100% (certain), as the outcome is known. The expected value of a loss, calculated by multiplying the probability of loss by the potential loss amount, helps measure this degree. For example, a \$10 risk with a 0.10 probability has an expected value of \$1. It's essential to distinguish risk from peril and hazard. A **peril** is the direct cause of a loss (e.g., fire, flood). A **hazard** is a condition that increases the chance or severity of a loss from a peril. Hazards are classified as: **Physical hazards:** Tangible properties increasing loss likelihood (e.g., building construction type). **Moral hazards:** Increased loss probability due to an insured's dishonest tendencies (e.g., attempting to defraud). **Legal hazards:** Increased loss frequency/severity due to legal doctrines or regulations (e.g., new environmental laws). Risks are classified in several ways: 1. **Static and Dynamic Risks:** **Dynamic risks** arise from economic changes (e.g., price level, technology shifts); they can cause financial loss but often benefit society long-term through resource reallocation. **Static risks** would occur even without economic changes (e.g., natural perils, human dishonesty); they don't generate societal gain, involve asset destruction or possession change, and are generally predictable. 2. **Fundamental and Particular Risks:** **Fundamental risks** are impersonal in origin and widespread in consequence, affecting large populations due to economic, social, political, or physical phenomena beyond individual control (e.g., earthquakes, unemployment). Society is typically responsible for addressing them. **Particular risks** stem from individual events and impact individuals (e.g., a house fire). Individuals are typically responsible for managing these. 3. **Pure and Speculative Risks:** **Speculative risks** involve both the possibility of loss and gain (e.g., investment, entrepreneurship). **Pure risks** involve only the chance of loss or no loss (e.g., property damage). Crucially, **only pure risks are insurable**. 4. **Classifications of Pure Risk:** **Personal risks:** Loss of income or assets due to inability to earn (e.g., premature death, disability, unemployment). **Property risks:** Loss from destruction or theft of possessions, encompassing **direct loss** (value of asset) and **indirect/consequential loss** (loss of use, additional expenses like temporary housing).

Liability risks: Loss of assets/income due to legal liability or damages from torts or rights invasion. **Risks from failure of others:** Financial loss due to another party's unfulfilled obligations (e.g., contractor delays, debtor defaults).

5. **Diversifiable and Non-diversifiable Risks:**

- Diversifiable risk** (nonsystematic or particular risk) affects individuals/small groups and can be reduced by diversification.
- Non-diversifiable risk** (systematic or fundamental risk) affects the entire economy or large populations and cannot be diversified away. Firms face additional risks, including crime exposures (theft, fraud), human resources exposures (worker injuries, key employee loss), foreign loss exposures (terrorism, political risks), intangible property exposures (reputation, goodwill), and government exposures (new laws, regulations).

The relationship between the degree of risk and the probability of loss is non-linear. The degree of risk is zero when the probability of loss is 0% or 100%, as the outcome is certain. It increases as the probability of loss rises from 0% to 50%, where the degree of risk is double the probability ($\text{Degree} = 2 * \text{Probability}$). If the probability exceeds 50% and approaches 100%, the degree of risk decreases, calculated as double the complement of the probability ($\text{Degree} = 2 * (1 - \text{Probability})$). For example, a 70% probability of loss yields a 60% degree of risk ($2 * (1 - 0.70)$).

Individuals adopt two primary risk management policies:

- The Positive Policy:** Involves engaging in risky activities after careful data collection, analysis, and prediction of future risk tendencies.
- The Negative Policy:** Involves avoiding activities due to perceived risks, even if manageable (e.g., not investing money for fear of loss).