INSURANCE EXAM · IC-86

IC-86 Risk Management

Revision book

11	2	105
chapters	master tables	numbered sections

FREE SAMPLE: Chapter 1 of 11

CHAPTER 1

Risk And Theory Of Probability

1.1	Meaning of risk	1.2	Political risk
1.3	Risk and uncertainty	1.4	Risk possibilities
1.5	Classification	1.6	Commercial and insurable risk
1.7	Three types of business risk	1.8	Risk attitude
1.9	Risk costs	1.10	Total Cost of Risk (TCOR)

MUST KNOW

1. Risk = the element of change from the wanted result (better or worse).
2. ISO 31000:**2018**: risk = effect of uncertainty on objectives, positive or negative. Insurance counts only the negative side.
3. **Insurance meaning:** risk = future uncertainty as regards financial loss.
4. Risk = chance can be calculated. Uncertainty = one-off or no pattern.
5. Risk (statistical) = variation of actual from expected outcome; more variance, more risk.
6. **Probability:** decimal, fraction or percentage, always 0 to 1 (0 impossible, 1 certain).
7. Law of large numbers = law of average = doctrine of probability.
8. **Three reasons for loss:** lack of awareness, capability, motivation.
9. Pure = loss only; speculative = loss or gain. Static = loss only; dynamic = profit or loss.
10. **Attitudes:** risk neutral, risk preferer, risk averter. TCOR = total cost of risk, usually % of revenue.

1.1 Meaning of risk

- **Ordinary meaning:** exposure to danger.
- **Concise Oxford:** hazard, chance of bad consequences, loss; exposure to mischance.
- **Chambers:** hazard, danger, chance of loss or injury, degree of probability of loss; a person, thing or factor likely to cause loss.
- Higher chance of happening = higher risk; then combine with size of loss.
- Risk is ubiquitous; "concepts" and "structure" help to manage it.
- Risk may bring loss and gain (usually to different people): repairer after storm.
- Physical risk = direct harm or damage. Social risk = loss of reputation, self-esteem.
- **"Social" has two uses:** reputation / self-esteem (physical vs social) and riot, strike, civil commotion, burglary, theft (physical / social / market).
- **Behaviour:** conscious or unwitting, accidental or deliberate; aimed at good, harm or indifferent.

TRAP

- ISO includes positive effects; insurance does NOT.
- **Insurers use "risk" for:** subject matter of insurance, and perils (fire, flood). Not hazards, not losses.

1.2 Political risk

- CEND = confiscation, expropriation, nationalisation, deprivation of private property by governments.
- Matters most for global business and foreign investment.
- **Related:** currency inconvertibility / non-transfer; political violence / war; business interruption and contingent BI; dishonour of promissory notes, letters of credit, sovereign guarantees; contract frustration; forced abandonment / divestiture; non-compliance with foreign judgments and arbitration awards.
- Social change is a major risk factor; inflation / deflation policy, limits on import and export of capital goods, more laws = more cost.
- Only a sub-set of risks is insurable.

1.3 Risk and uncertainty

Point	Risk	Uncertainty
Chance	Can be calculated (reason or past statistics)	Cannot be analysed
Cause	Repeated, patterned events	One-off, or no pattern

- Risk = variation in outcome over a specified period in a given situation.
- **American risk body:** "uncertainty or lack of knowledge concerning the outcome of events".
- Probability = occasions an event occurs in an infinitely large number of independent events.
- Probability = relative frequency in the long run.
- **Law of large numbers:** more cases, longer period = better forecast of loss.

> **TRAP**
> Probability is never below 0 or above 1; not "only a decimal".

1.4 Risk possibilities

- **Created by:** activities (commercial, constructional, financial, manufacturing, professional, charitable, political, scientific); relation to people or property; laws and regulations; environmental, physical, social, political situation.

Reason for loss	Meaning
Lack of awareness	Fails to see the risk
Lack of capability	No knowledge, skill, competence
Lack of motivation	Indifference, refusal to deal with risk

1.5 Classification

Grouping	Types
(a)	Personal, property, liability
(b)	Physical, social, market
(c)	Pure, speculative
(d)	Static, dynamic
(e)	Fundamental, particular

- Personal = loss to persons; property = loss to property; liability = liability of person or institution.

- Physical = storm, tempest, flood, hurricane. Social = riot, strike, civil commotion, burglary, theft. Market = price fall, buying and selling limits.
- **Pure examples:** chemical (fire, explosion); natural (cyclone, flood, earthquake); social (riot, strike, theft, fraud, negligence); technical (machinery breakdown); personal (death, disablement, sickness, injury).
- **Business (entrepreneurial) risk = speculative:** technical (new technology); social (consumer behaviour, industrial unrest); economic (inflation, tax policy, competition); political (war, nationalisation).
- **Production risk:** raw material short or dearer; strikes, work-to-rule, go-slow.
- **Sales risk:** rival price cuts, fashion change, recession; export hit by war, exchange controls, tariffs, import quotas.
- **Credit risk:** bank credit scarce, interest rate rise, debtors default.
- **Static:** nature's irregular action, human mistakes; only loss; independent of social change.
- **Dynamic:** changing wants, new machines and technology; market, management, political forces; profit or loss.
- **Fundamental:** group risk, impersonal; whole market, industry, country, region (recession, disaster, pandemic).
- **Particular:** individual or one firm, partly under own control (key person death, warehouse fire, home burglary).

FORMULA AND WORKED SUM

- **Resigns in full employment, no new job:** particular. Unemployment across the economy: fundamental.

TRAP

Theft, fraud, strike = pure. Inflation, competition, tax policy = business (speculative).

1.6 Commercial and insurable risk

Insurable	Commercial
Static, pure	Speculative, dynamic (usually uninsurable)

- **Trade-off:** premium now against compensation later; like capital spending now for returns later.
- **Conclusion:** risk manager's remit must not be limited by this false division.

1.7 Three types of business risk

- (1) Partly manageable (physical damage, liability).
- (2) Directly controllable (staff selection and control).
- (3) Not under direct control but manageable to some degree (social, political, physical environment); loss or gain.

TRAP

No category "fully controllable".

1.8 Risk attitude

Attitude	Behaviour
Risk neutral	Reacts in line with statistical probability; bets equal on both teams
Risk preferer	Welcomes risk; takes chance of gain against odds
Risk averter	Frightened by risk; pays premium for certainty

1.9 Risk costs

Area	Content
1 Cost of loss	Direct (repair, replacement, third-party compensation, assessor's fees); indirect (extra wear on other vehicles, time lost)
2 Cost of handling	Time on identifying, analysing, negotiating cover; loss prevention; consultancy fees; insurer's profit loading
3 Cost imposed by risk	Willing to pay more than expected value of loss

- **Cost of risk depends on:** risk control measures, uninsured losses, insurance.
- Total direct and indirect costs of risk = handling + loss + imposed by risk; each falls as private or social cost (distribution of costs).
- Private costs = necessarily incurred by the firm. Social costs = fall on the community (effluent, smoke).
- Law at the place decides if the firm must pay; then they are private costs. Moral duty may lead to payment.
- **Handling methods:** avoidance, reduction, retention (or mix), transfer, hedging, research.

> **TRAP**
> Direct / indirect belong to cost of the loss; private / social is a different split.

1.10 Total Cost of Risk (TCOR)

- A metric adding all costs of the insured business for effective risk management; usually % of revenue.

Part	Content
Risk transfer (financing)	Premiums; broker commission and fees
Self-retained risk	Deductibles, retained risks, unfunded claim costs
Administrative	Insurance department, claims administration, loss control monitoring
Taxes and fees	Government taxes and fees to regulators, and their admin costs

- **Uses:** benchmark with same industry; improve performance; senior decisions; benchmark allocated risk costs; measure success; direct resources.