Risk Management

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CHAPTER TWO: Risk Management (Theory and Practice)

Textbooks:

- ***Introduction to Risk Management and Insurance, by M. Dorfman and D. Cather, 10th edition, Prentice Hall.***
- ***Lecturer Handouts, Book Chapters***

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What is Risk Management?

It is a process to:

- ❑ Identify all relevant risks
- ❑ Assess / rank those risks

Treat

- ❑ Address the risks in order of priority
- ❑ Monitor risks & report on their management

Risk Management – why do we need it?

- ✓ Promotes good management
- ✓ May be a legal requirement depending upon industry or sector
- ✓ Resources available are limited – therefore a focused response to Risk Management is needed

What is a Risk?

- A risk is an uncertain event which may occur in the future
- A risk may prevent or delay the achievement of an organization's or unit's objectives or goals
- A risk is not certain – Its likelihood can only be estimated

Note:

Not all risk is bad, some level of risk must be taken to progress/prevent stagnation.

Risk Management Cycle

Risk Management Cycle – Step 1

Mission
- Define Purpose

Strategy
- High level Plan

Goals
- Unit Specific Targets

Risk Management Cycle – Step 2

Risk Identification –

what are the threats and uncertainties associated with my organization's or units objectives?

- Separate out the risk into its cause & possible effect
- Be concise & clear
- Do not concentrate on symptoms only
- **Assess the risk's**
  - Impact
  - Likelihood
- **Prioritize the risks**

Risk Management Cycle – Step 3

Challenge & Evaluate Controls

Control:
Policy, action, procedure or process designed to prevent risk or to limit its impact

Do they work, are they effective?

Residual Risk only should be measured

Residual risk is the remaining risk after all mitigation measures have been applied.

Risk Management Cycle – Step 4

Take Action!

- For serious risks where controls are
  A) Weak
  B) Absent

- For risks where the Risk Appetite is exceeded

- Examine Cost vs. Benefit

Risk Management Cycle – Step 4 cont.

Types of Action

A) Tolerate
B) Treat
C) Substitute
D) Terminate

(The choice of the above will be decided upon by your risk appetite)

Risk Management Cycle – Step 5

Monitor & Report

- Use a standard format for capturing risk data e.g. a "Risk Register"
- Review all risks at least annually
- Serious risks to be reviewed more often depending on circumstances
- Report on risk to senior management / Board
- Make Risk Register available to stakeholders to show good governance

Categories of Risks

- There are multiple ways into which risks can be categorized
- Final categories used will depend upon each organizations/ unit's circumstances
- Goal is to cluster risks into standard, meaningful & actionable groupings
- What follows is one example of a type of categorization

Categories of Risks

Financial

- Reduction in funding
- Failure to safeguard assets
- Poor cash flow management
- Lack of value for money
- Fraud/theft
- Poor budgeting

Categories of Risks cont.

Operational

- These risks result from failed or inappropriate policies, procedures, systems or activities e.g.
  - Failure of an IT system
  - Poor quality of services delivered
  - Lack of succession planning
  - Health & Safety risks
  - Staff skill levels
  - No process to track contractual commitments

Categories of Risks cont.

Reputational

- Organization engages in activities that could threaten its good name
  - Through association with other bodies
  - Staff/members acting in a criminal or unethical way

- Poor stakeholder relations

A stakeholder is any individual or group affected by or having an interest in the activities and outcomes of an organization, while a shareholder specifically refers to an individual or entity that owns shares in a company and has a financial interest in its profitability.

Categories of Risk cont.

Governance & Compliance

- Lack of oversight by Board
- Segregation of duties not defined formally
- Ensuring compliance with funders' terms and conditions
- Compliance with applicable legislation
  - ✓ Safeguarding of vulnerable individuals
  - ✓ Taxation Law
  - ✓ Data Protection
  - ✓ Health & Safety Law

Categories of Risk cont.

Strategic

- **Engages in activity at variance with its stated objectives**
- **Fails to engage in an activity that would support its stated objectives**

Risk Register

- A Risk Register is a management tool used to record relevant details relating to risks.
- It is a database of information on risks.
- Best kept simple to begin with!

Risk Management – Register Example

Risk Register
XYZ Charity
Prepared by: Management Team
Date: August 2013

Ref #	Risk Description	Controls/Actions already in place	Impact	Likelihood	Weighting	L/M/H	Risk Owner	Further Actions Required	Date when further actions will be in place
1	**Reduced Funding** - Decrease in funding from central government - Reduction in public donations due to recession - Reduced income at 2nd hand clothing shops due to competition from door collectors. All could cause a reduction in the charities activities.	1) Budgets - all units now prepare 1 year rolling budgets which are reviewed each quarter by Finance Officer and each 6 months by Board. 2) Close down of 1 shop on a temporary basis.	4	4	16	H	Board	1) Management to explore alternative sources of income & report to Board. 2) Possibility of converting current bank overdraft facility into a longer term less expensive bank loan is been explored.	1) March 2014 2) January 2014
2	**Onerous Property Leases** Of the 10 shops in operation 5 are under rental leases which impose a very expensive yearly rent. In these cases the rental charge for the branch comprises 50% or more of all the branch costs.	Negotiations have been opened with landlords but there is concern as so far they are unwilling to reduce the rent.	3	5	15	M	Management Team	Alternative branch locations been examined	June 2016
3	**Theft from Stores** Following an incidence of robbery of cash takings from 1 shop last year there is a risk that shop controls & security measures may not be good enough to safeguard staff & cash.	1) A review of cash controls and procedures was carried out by central management using the services of a consultant. 2) Revised security procedures for the collection of cash takings have been put in place.	1	3	3	L	Operations Manager	No further action is considered necessary at this time.	None

Risk Weighting Values
- 16 + = High Level Risks
- 8-15 = Medium Level Risks
- 0-7 = Low Level Risks

Parts of a Risk Register

Risk Description

Clear description of risk, its cause & consequence

Controls / Actions already in place

List what is actually happening now which reduces the impact of a risk or its likelihood

Impact

scale of 1 to 5 (1 = minor, 5 = catastrophic)

Likelihood

scale of 1 to 5 (1 = remote, 5 = unavoidable)

Weighting

Its Risk Ranking: a calculated figure i.e. impact x likelihood3

Parts of a Risk Register cont.

Risk Owner

The administrative unit, management position or group who are in the best position to manage the risk on an ongoing basis

Further Actions Required

The controls/solutions which have yet to be acted upon which could reduce the impact or likelihood of a risk

Date

The expected date as to when the actions shown under further actions required will be in place & effectively addressing the risk

Risk Management – Example of a Matrix

Risk Assessment Matrix

Impact					
5					
4	5	2		1	
3			4		
2	3		2	3	
1		1			1
	1	2	3	4	5

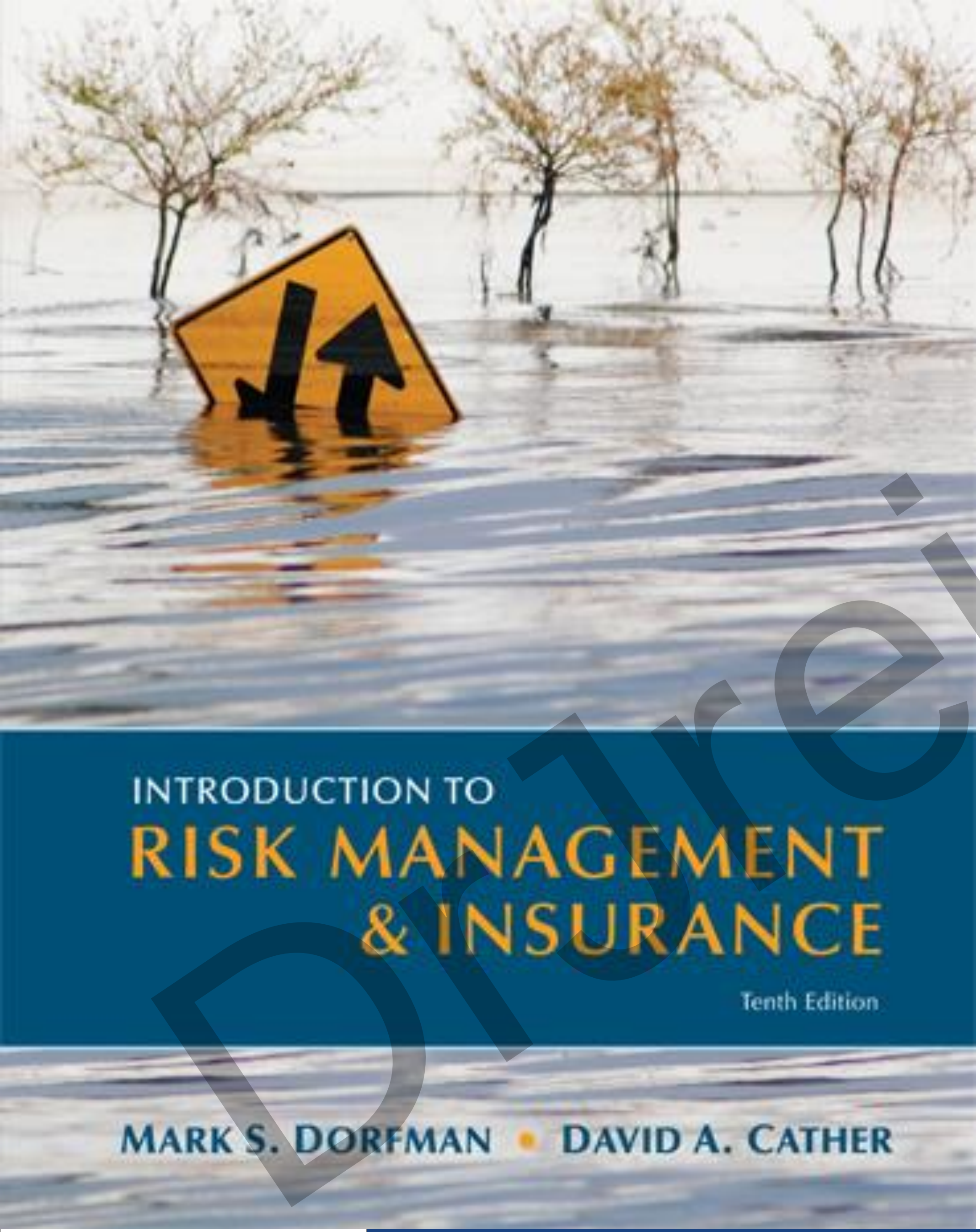
Likelihood

Tips for Success

- Involve all levels of staff & management in the process
- Check that controls are relevant & effective
- Ensure risk owner takes responsibility for management of risks under their control
- Focus on the risk cause, not its symptoms

Why Risk Management May Fail

- Limitations of scope
- Lack of top management support
- Did not engage all stakeholders
- Failure to share information
- RM not embedded within planning & management system



Chapter 1

Introduction to Enterprise Risk Management and Insurance

Enterprise Risk Management

ERM

- Logical process used by firms to deal with multifaceted exposures to loss.
- Continuous process that identifies exposures and decides how to deal efficiently with them.
- Process that examines all risks *collectively*.
- Number of reasons:
  - Catastrophic Loss Events.
  - Corporate Financial Failures.
  - Shrinking Employee Benefits.

Risk – Classification

- Pure Risk - exposure that can result in a loss or no change (two possible outcomes).
- Speculative Risk - exposure that can result in a loss, no change, or gain (three possible outcomes).

Risk – Classification

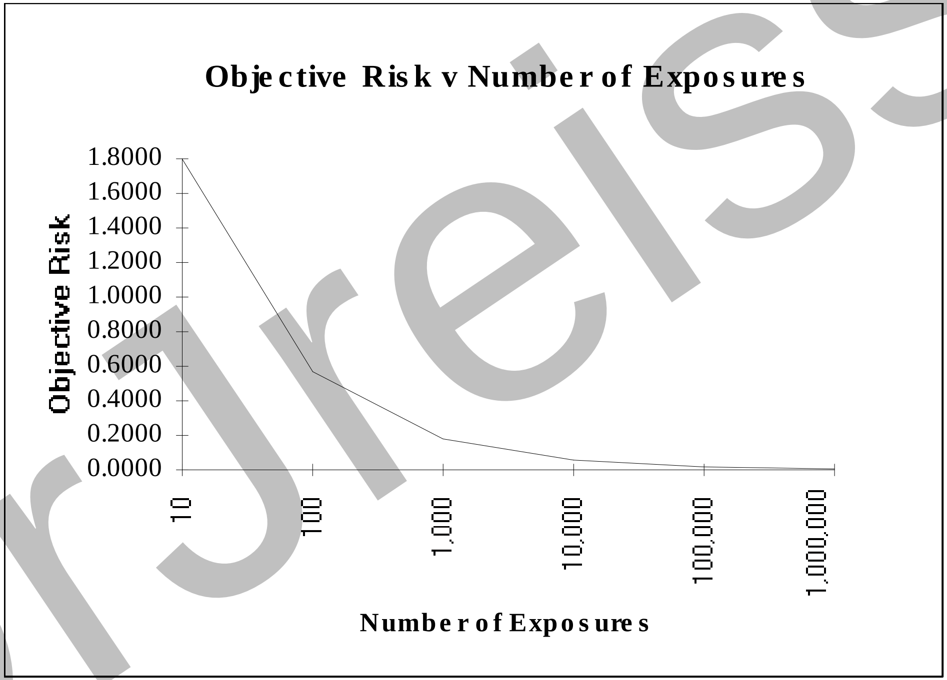
- Diversifiable Risk – financial losses of a few members are spread across a much larger number of the group: "Risk Pooling."
- Non-Diversifiable Risk – cannot be spread, but affects all members.

Risk pooling is a strategy where multiple parties or entities combine their individual risks into a single group, thereby reducing the overall risk through diversification. This approach allows for more predictable outcomes and can lower costs, especially in contexts like insurance and supply chain management.

Spreading Risk

		BINOMIAL DISTRIBUTION			
Number	Probability		Standard	Expected	Coeficient
In Pool	of the event	1-P	Deviation	Value	of Variation
N	P	Q	SQRT(NPQ)	NP	CV
10	0.030	0.970	0.5394	0.3	1.7981
100	0.030	0.970	1.7059	3	0.5686
1,000	0.030	0.970	5.3944	30	0.1798
10,000	0.030	0.970	17.0587	300	0.0569
100,000	0.030	0.970	53.9444	3000	0.0180
1,000,000	0.030	0.970	170.5872	30000	0.0057

Spreading Risk



Insurance works well when:

- Many individuals purchase
  - Paying relatively small premium amounts
- Few people collect
  - Keeps rates affordable
  - Losses can be large

Risk – Classification

A portfolio refers to a collection of investments, projects, or products owned and managed by an individual, organization, or financial institution. In finance, it typically includes a range of assets such as stocks, bonds, and real estate, aimed at achieving specific investment goals and diversifying risk.

TABLE 1-1 **Some Diversifiable and Non-Diversifiable Risks**

	Diversifiable Risk	*Non-Diversifiable Risk*
Pure risk (insurer risk pool)	• Building fire • Auto accident	• Unemployment • Flood
Speculative risk (investment portfolio)	• (Failed) launch of new product • Changes in input prices (corn, gas)	ركود • Economic recession • Global inflation

Risk – Classification

- Risk Aversion – firms and individuals prefer to take less risk rather than more.
- Risk-Return Trade-Off – if taking more risk, firms and individuals expect a higher return.

Benefits Compared to No Insurance

- Stability of families.
- Aids planning ability to businesses.
- Facilitates credit transactions.
- Anti-monopoly device.
- Reduces credit costs.
- Increases capital efficiency.

Social or Private?

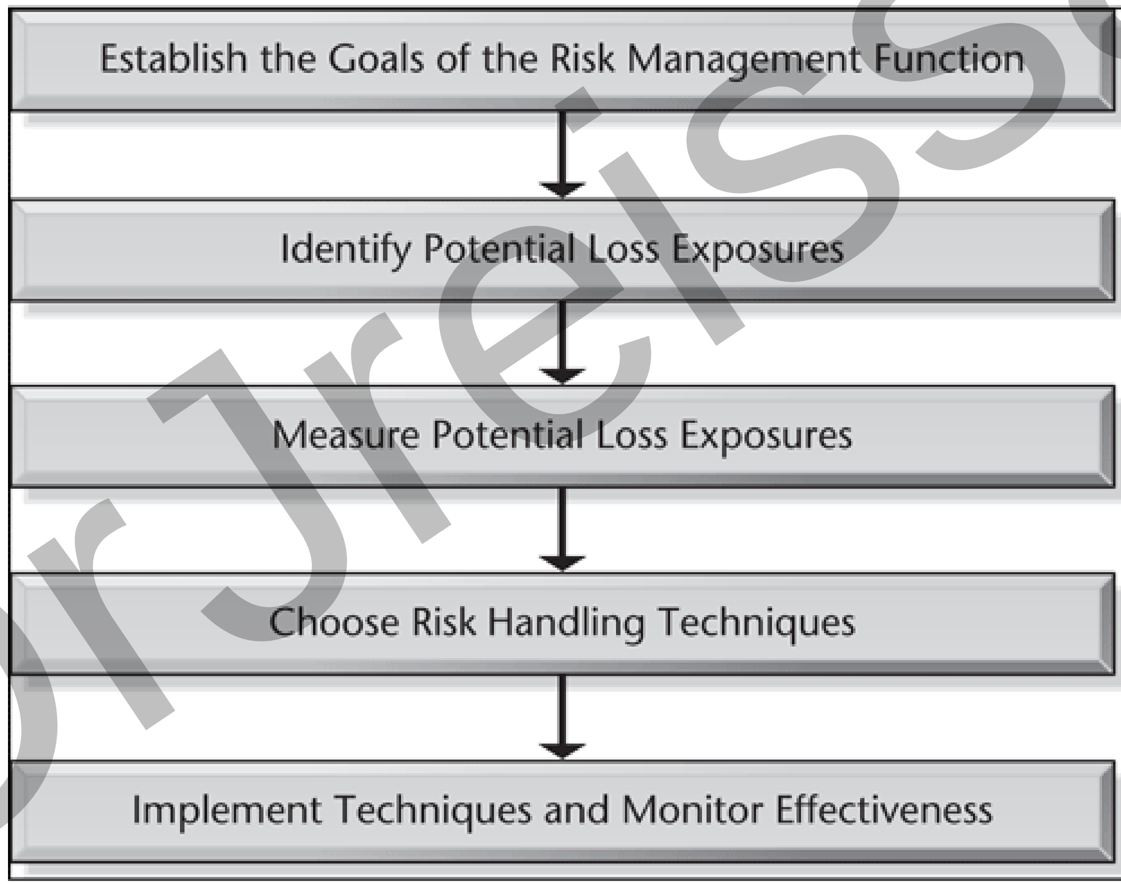
- Insurance is a financial agreement in which an individual pays a premium to transfer the financial consequences to a risk pool.
- <u>Social</u> – administered and funded by governmental bodies.
- <u>Private</u> – independently owned and operated.

Employee Benefit Plans

- Nonwage compensation provided by firms as a protection from a number of personal pure risks:
  - Health.
  - Life.
  - Disability.
  - Retirement.

Risk Management Process

FIGURE 1-1 Steps in the Risk Management Process



Identify Potential Loss Exposures

- Property Risks.
- Liability Risks.
- Human Resource Risks.
- Indirect Losses.

Measure Potential Loss Exposures

- Frequency of the loss.
- Severity of the loss.

Risk Handling Techniques

- Loss control – reduce the frequency and/or severity.
- Loss transfer – (contractual) arrangement to transfer risk to party that is best at mitigating, controlling, or bearing it.
- Loss financing – arrangement to pay for future costs.

Loss Control - Reduction

Always engage in, if beneficial

- Loss Reduction:
  - Steps designed to reduce the ***frequency*** and/or ***severity***.
  - Take steps to reduce the damage before and after a loss

Loss Transfer

- Hold harmless agreements - transfer of risk through a contract.
- Hedging - take equal but opposite position on an even based on chance.
- Financial risk management - techniques to deal with interest rate, currency value, and crop price changes.
- Leases - transfers risk of obsolescence.

Hedging is a risk management strategy used to offset potential losses in one investment by taking an opposite position in a related asset.

ERM – Integrated Framework

- Top-Down Corporate Focus.
- Broad Scope of Loss Exposures.
- Portfolio Perspective for Diversification Opportunities.
- Systematic Process of Risk Identification, Assessment, and Treatment.

ERM – Recent Loss Events

- Hazard Risks, e.g. WTC or death of Michael Jackson.
- Financial Risks, e.g. credit crisis started in an obscure part of real estate financing.
- Operational Risks, e.g. supply chain disruption.
- Strategic Risks, e.g. reputation loss.

Any Questions?