ENTERPRISE RISK MANAGEMENT
MNK203-R

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What is risk?

Definition of risk:

"Risk is defined as the deviation or variability of actual results from desired or expected results"

Study unit 1: What is risk?

Lore and Borodovsky (2000:58) define the three dimensions of risk management as:

- **the generation and utilization of opportunities**
- **introduction of controls to prevent or restrain losses**
- **exercising methods to reduce the variance between anticipated outcomes and actual results**

STUDY UNIT 1: What is risk?

Risk and uncertainty:

- Certainty is the opposite of uncertainty
- Uncertainty arises from a person's imperfect state of knowledge about future events
- The perceived level of uncertainty depends on the information used to make decisions as well as the ability of the individual to evaluate such information

Study unit 1: What is risk?

Level of uncertainty	Characteristics	Example
None (certainty)	Outcomes can be predicted with precision	Physical laws, natural sciences
Level 1: objective uncertainty	Outcomes are identical and probabilities are unknown	Games of chance, cards, dice
Level 2: subjective uncertainty	Outcomes are identified but probabilities are unknown	Fire, motor car accidents, investments
Level 3: uncertainty	Outcomes are not fully identified and probabilities are unknown	Space, exploration, genetic research

Study unit 1: What is risk?

Summary of definition of risk:

- Risk is deviation of actual from the expected
- Risk implies the presence of uncertainty
- There may be uncertainty about the occurrence of an event
- The degree of risk is calculated as the frequency with which an event occurs and the probability that it will display this particular outcome

Study unit 1: What is risk?

Probability:

Is calculated as ....

$$\frac{\text{No of occurences}}{\text{total number of possible outcomes}}$$

Study unit 1: What is risk?

The basic properties of probabilities:

- The number of successes can not be more than the number of possible outcomes. Therefore, the maximum value of P is 1
- The number of successes cannot be a negative value. Therefore the minimum value of P is 0

Study unit 1: What is risk?

Measures of central tendency:

- Mean – is the centre of a probability distribution
- Expected value is a special case of the mean. It is calculated by multiplying each outcome by the probability of its occurrence and then adding the expected values of each probability

Study unit 1: What is risk?

Measures of variation:

- Standard deviation measures the dispersion around the expected value

Study unit 1: What is risk?

Losses	Mean loss	Deviation	Squared deviation
1 000	2 500	-1 500	2 250 000
2 000	2 500	-500	250 000
3 000	2 500	+500	250 000
4 000	2 500	+1500	2 250 000
Total			5 000 000

Study unit 1: What is risk?

Probability distributions used in risk management

- Normal distribution
- Poisson distribution
- Binomial distribution

Study unit 1: What is risk?

Variance = R 5 000/4

Standard deviation = √125 000 = R1 118.03

Study unit 2: Classes of risk

Importance of classification:

- Some risks can be managed, and others not.
- Vital to the risk manager in order to understand the physical/financial environment in which enterprise operates.
- Risk manager needs to be aware of the different types of risks and how they occur and how best to manage each of them.

Study unit 2: Classes of risk

Speculative risks – offer a chance of gain or loss

Divided into:

- Core business risks
- Incidental risks

Study unit 2: Classes of risk

Core business risks - all activities, decisions and events which impact directly on an organization's operating profit.

Divided into:

- **Specific or unsystematic risks** – stem from variations affecting an individual enterprise and not related to the rest of the economy
- **Systematic or market risk** stem from occurrences that affect the economy as a whole

Study unit 2: Classes of risk

Specific or unsystematic risk s include:

- Sales variability
- Operating leverage
- Resource risks
- Profit margin and turnover

Study unit 2: Classes of risk

Incidental business risks – arise naturally from the activities of a business but do not form part of the business' main activities (mainly financial)

Includes:

- Interest rate risk
- Liquidity risk
- Investment risk
- Credit risk
- Currency risk
- Capital risk

Study unit 2: Classes of risk

Event risk – represent the downside or no change outcome of possible future events. They only include the possibility of losses, with no possibility of gains

Divided into:

- **External downside risks** – emanating from factors beyond direct control and influence of the enterprise
- **Operational risk** – resulting from internal failures or shortcomings by people, processes and systems

Study unit 2: Classes of risk

Other important event risk concepts:

Fundamental risks

Particular risks

Important to distinguish between the two classes as particular risks can be insured while fundamental risks can not be insured

Study unit 3: Corporate Governance

Definition:

Narrow definition:

" a formal system of accountability of the board of directors to the shareholders"

Broader definition:

"Corporate governance is concerned with holding the balance between economic and social goals and between individuals and communal goals…the aim is to align as nearly as possible the interest of the individuals, corporations and society" (King Committee on Corporate Governance 2002:7)

Study unit 3: Corporate Governance

Reasons for implementing corporate governance:

- Investors trust in companies decreased while company ethics widely criticized due to recent disasters e.g. Enron, WorldCom
- Corporate governance necessary to attract foreign and local investment

Study unit 3: Corporate Governance

Impact of CG on business areas:

- Assets employed efficiently
- Lower-cost capital attracted
- Meeting social obligations: complying with laws and regulations
- Overall performance

Study unit 3: Corporate Governance

History of Corporate Governance in SA:

- **Has its origins in the Companies Act 61 of 1973**
  - **- Advantages**
  - **- Disadvantages**
- **The King Report on Corporate Governance of 1994**
- **The King Report on Corporate Governance of 2002**

Study unit 3: Corporate Governance

Investors willing to pay a premium because:

- They believe the company will perform better
- It is a way of reducing risk
- It is a positive trend

Study unit 3: Corporate Governance

Characteristics of CG:

- **Discipline**
- **Transparency**
- **Independence**
- **Accountability**
- **Responsibility**
- **Fairness**
- **Social responsibility**

Study unit 4: Evolution of ERM

Traditional approach – limited the term "risk management" to which the organization, principles and techniques appropriate to insurance management were useful i.e. events or hazards

Shortcomings of traditional approach:

- Fragmented risk management responsibilities
- Limited scope on discrete risks
- Risk management: not a product or a process

Study unit 4: Evolution of ERM

Business risk management – incorporates the efforts of the operating managers with the activities of the risk managers. Focused on managing individual risks and groups of related risks

Study unit 4: Evolution of ERM

Enterprise risk management – integrates the historically defensive posture of risk management with a new, strategic orientation targeted towards explicitly optimizing the risk/return trade-off

Study unit 4: Evolution of ERM

Key features of the new risk management model:

OLD PARADIGM	NEW PARADIGM
Fragmented	Integrated
Ad hoc and reactive	Proactive and continuous
Functionally driven	Process driven
Narrowly focused	Broadly focused
Cost driven	Value driven

Study unit 4: Evolution of ERM

Trends necessitating the development towards a strategic approach to risk management:

- **Change**
- **Globalization**
- **Technology**
- **The increased value of tangible assets**
- **Increased concentration of risk**
- **The decline of insurance and development of alternative risk transfer (ART) techniques.**

Study unit 4: Evolution of ERM

Trends towards a strategic approach, continued:

- **New business practices**
- **Increasingly demanding investors and regulators**
- **Increasingly accountable (and demanding) directors**
- **The emergence of new risk management tools and processes**

Study unit 5: ERM

Definition: ERM is .....

" a structured and disciplined approach: it aligns strategy, technology and knowledge with the purpose of evaluating and managing the uncertainties the enterprise faces as it creates value" DeLoach (2000:5)

Study unit 5: ERM

Barriers to successful Implementation of ERM:

- Organizational culture
- Benefits of approach unclear to management
- Lack of formalized process, language and definitions
- Organizational turf
- Lack of tools
- Improper yardsticks

Study unit 5: ERM

Key success factors in implementing ERM:

- **Strong and visible support from management**
- **Capable and dedicated cross-functional staff**
- **Close link between ERM and strategic and financial objectives and the business planning process**
- **Introduction of ERM as an enhancement of entrenched and well-accepted processes**
- **Learning from experience**

Study unit 5: ERM

Benefits of ERM:

- Increased organizational effectiveness
- Better risk reporting
- Improved business performance

Study unit 5: ERM

Proposed framework for implementing ERM:
- **Establish the process**
- **Assess business risk**
- **Formulate risk management strategies**
- **Design and implement risk management capabilities**
- **Monitor performance**
- **Continuously improve risk management capabilities**
- **Provide information for decision making**

Study unit 6: Developing a common language

The need for a common language:

- Facilitates communication
- Promotes learning
- Facilitates the aggregation of risks
- It is the fundamental building block of ERM

Study unit 7: Developing objectives and strategies

Factors that influence risk management objectives
- Internal factors
  - the infrastructure
  - the personnel
  - the process used to produce the goods
  - the technology used in the enterprise
- External factors

Study unit 7: Developing objectives and strategies

Types of risk management objectives:
- **Operational objectives** – relate to the effectiveness and efficiency of an organization's operations
- **Reporting objectives** – the reliability of the internal and external reporting of financial and non-financial goals
- **Compliance objectives** – compliance with relevant laws and regulations

Study unit 7: Developing objectives and strategies

Enterprise oversight structures:
- Generic oversight structure
- Process champion
- Focused risks model
- Expanded corporate governance model

(Not important to memorize details of the structures)

Study unit 8: Assessment of risk and development of risk strategies.

Risk identification methods:
- SWOT analysis
- Insurance reviews
- Physical inspections of the site and plants
- Personal interviews with divisional heads
- Studying of documentation – organizational charts, flow-charts, accounting data etc.
- Other scientific methods

Study unit 8: Assessment of risk and development of risk strategies.

Risk evaluation – loss size

- Maximum possible loss–unfavorable conditions
- Normal loss expectancy – favorable conditions
- "As-if " analysis – analysis of past claims history
- Accumulation – large loss from various risks
- Business interruption
- Insured gross profit
- Standing charges – incurred whether business operates or not

Study unit 8: Assessment of risk and development of risk strategies.

Loss Frequency:

- National and international trends
- Incident reporting
- Near-misses
- "Pareto" rule

Study unit 8: Assessment of risk and development of risk strategies.

Risk control approaches:

- **Risk avoidance – chance of loss occurring is eliminated e.g. avoiding participation in dangerous sports**
- **Risk assumption – consequence of loss born by the organization**
- **Risk elimination – e.g. having back-up facilities**
- **Risk reduction - reducing the likelihood and severity of losses**
- **Risk transfer – risk transferred to third parties e.g. leasing agreements**

Study unit 8: Assessment of risk and development of risk strategies.

Measures of risk control:

Risk can be avoided, eliminated, reduced or transferred through:

- Physical measure
- Procedural measures
- Education/training
- Legal measures

Study unit 8: Assessment of risk and development of risk strategies.

Hedging is defined as:

"the arranging of two different or opposing positions so that the potential losses from one of the positions tends to be more or less offset by profits from the other"

Study unit 8: Assessment of risk and development of risk strategies.

Speculative risk control measures and strategies:

- **Hedging**

- Call option and put option
- Swaps
- Futures contracts
- Forward contracts
- Interest rate caps and collars
- Forward rate agreements

Study unit 9: Designing and implementing risk management capabilities

Objectives of the ERM framework:
- **Link the business strategy to the risk management strategy**
- **Institute a risk management process**
- **Enhance risk management conduct**
- **Institute a risk and performance measurement framework**
- **Create heightened organizational awareness and focus**

Study unit 9: Designing and implementing risk management capabilities

An ERM framework can be defined as …

"an amalgam of strategy, process, infrastructure and environment which help enterprises make intelligent risk-taking decisions prior to committing limited resources and to monitor those decisions."

Study unit 9: Designing and implementing risk management capabilities

Infrastructure:
- Organizational structure and people
- Policies and procedures
- Methodologies
- Limits and controls
- Data and information systems
- Risk reporting

Study unit 9: Designing and implementing risk management capabilities

Environment:

- Culture
- Training and communication
- Performance management and compensation

Study unit 10: Monitoring and improving risk strategies, processes and measures

Benefits of continuous monitoring:
- **Identification of new risks or changing risks**
- **Accumulation of evidence to support assumptions**
- **Development of more accurate portrait of risk**
- **Reduction of costs associated with improper/redundant risk control measures**
- **Improvement of all steps in the risk management process**

Study unit 10: Monitoring and improving risk strategies, processes and measures

Enablers of the continuous improvement philosophy:

- Benchmarking
- Communication
- Ensuring continuous risk management learning

Study unit 10: Monitoring and improving risk strategies, processes and measures

Questions addressed in the monitoring process:

- **Is the risk management strategy effective in minimizing risk?**
- **Do the performance measures or indicators reflect the key outcomes?**
- **Are the assumptions still valid?**
- **Is the risk management strategy comparatively efficient/cost-effective?**
- **Does the risk strategy comply with the legal requirements, government and organizational policies?**

Study unit 11: Linking all the elements

Reasons for the aggregation of multiple risks:

- The cumulative effect of risks
- Increased efficiency and better decisions
- Improved reporting and capital allocation
- Simplicity

Study unit 11: Linking all the elements

Steps in formulating an ERM strategy:

- Establish an oversight structure
- Define a common language and framework
- Target risks and processes
- Develop overall goals, objectives and processes
- Assess risk management capabilities

ENTERPRISE RISK MANAGEMENT

THANK YOU.