

INTRODUCTION

This area of study in your course for Commercial Law is not covered in the prescribed textbook. The materials chosen to cover this aspect of the syllabus can be downloaded from the following link:

http://www.google.co.za/url?sa=t&source=web&cd=1&ved=0CBgQFjAA&url=http%3A%2F%2Fwww.proboards.nl%2Fdata_docs%2FNSW-Risk_management_guide_small_business.pdf&ei=0Dk2TIm0JMeCOMCXkfQE&usg=AFQjCNE_JKO92PmlxRRu2Fna4rBdzz-tqw

You may make a copy of this information for your own study purposes. Once you have studied this material, please answer the following questions.

SELF-TEST QUESTIONS

A. Multiple Choice Questions

1. Risk management can be defined as the art and science of _____ risk factors throughout the life cycle of a project.
 - A. researching, reviewing, and acting on
 - B. identifying, analyzing, and responding to
 - C. reviewing, monitoring, and managing
 - D. identifying, reviewing, and avoiding
 - E. analyzing, changing, and suppressing
2. Risk Management includes all of the following processes except:
 - A. Risk Monitoring and Control
 - B. Risk Identification
 - C. Risk Avoidance
 - D. Risk Response Planning
 - E. Risk Management Planning
3. A risk response which involves eliminating a threat is called:
 - A. Mitigation
 - B. Deflection
 - C. Avoidance
 - D. Transfer
 - E. b and d
4. When should a risk be avoided?
 - A. When the risk event has a low probability of occurrence and low impact
 - B. When the risk event is unacceptable -- generally one with a very high probability of occurrence and high impact
 - C. When it can be transferred by purchasing insurance
 - D. A risk event can never be avoided

5. An example of risk mitigation is:
 - A. Using proven technology in the development of a product to lessen the probability that the product will not work
 - B. Purchasing insurance
 - C. Eliminating the cause of a risk
 - D. Accepting a lower profit if costs overrun
 - E. a and b

6. Risk mitigation involves all but which of the following:
 - A. Developing system standards (policies, procedures, responsibility standards)
 - B. Obtaining insurance against loss
 - C. Identification of project risks
 - D. Performing contingent planning
 - E. Developing planning alternatives

7. Mitigating risk could involve
 - A. identifying risks, obtaining insurance and developing alternatives
 - B. contracting and quality assurance
 - C. developing standards, buying insurance, and planning for contingencies and alternatives
 - D. re-scoping the project and reassessing requirements
 - E. C and D

8. Suppose a project has many hazards that could easily injure one or more persons and there is no method of avoiding the potential for damages. The project manager should consider _____ as a means of deflecting the risk.
 - A. abandoning the project
 - B. buying insurance for personal bodily injury
 - C. establishing a contingency fund
 - D. establishing a management reserve
 - E. not acknowledging the potential for injury

B. True or False Questions

Answer **true or false** to each of the following statements and give a reason for your answer.

1. Something that could kill you must be very risky.
2. Risk combines the chance of something happening along with the amount of harm it can do.
3. A high risk activity is quite likely to cause a lot of harm.
4. If something is very risky then it must also be very difficult to do.
5. Everyday things, like playing sport, are not risky at all.
6. Risk is only to do with industry and accidents at work.

C. Short Answer Questions

1. What is risk management? What factors of risk are addressed by managing risk?
2. What is risk avoidance? Give an example.
3. Describe the reduction of risk.
4. Describe risk minimisation.
5. Describe transfer of risk.
6. Describe risk elimination.
7. Discuss the relationship between avoidance and elimination.
8. Give one reason why do we do not transfer all risks by using insurance.
9. Name one way in which the Government is involved in risk reduction.
10. Name one way to manage the risk to items that are susceptible to water damage.
11. How does the risk management process start?
12. Name two items covered in a risk management statement.
13. Who is responsible for compiling the risk management statement?
14. How do you decide on items of priority? What factors are taken into account when deciding priority?
15. What is the cost of insurance called?
16. How is risk reduction or minimisation used in the process of risk management?
17. What is a risk management statement?
18. Brainstorm this question with a friend or family member. Think about the risks that an event like the Comrades Marathon might have to face. Make a list of all the risks that you can think of and make suggestions about the solutions you would put in place to address these risks.

e.g. Risk: one of the sponsors does not turn up to man a water table at a key point in the race.

Solution: have a group of stand-by volunteers who could be asked to step in and take over at a moment's notice

D. Case Studies

CASE STUDY 1 – HAZARD-BASED RISK

A small cleaning company specialises in providing contract cleaning services for medical providers. A recent OH&S audit conducted internally by this company identified the following hazards:

- manual handling tasks including heavy lifting and repetitive, forceful or awkward movements
- the work environment, including wet floors and cluttered workspaces
- unsafe work practices, including faulty electrical equipment
- prevalence of sharp materials resulting in exposure to dangerous blood-borne viruses
- the use of hazardous chemicals.

Draft a basic risk treatment plan that indicates how you would deal with each of these risks.

CASE STUDY 2: DMGM

DMG Manufacturing (DMGM) owns a high-rise office building with glass cladding (a protective covering) and adjacent factory premises, and it operates from these factory premises. DMGM refurbishes and sells electric motors. Its processes include stripping down old motors, sandblasting motor casings, armature winding, varnishing, spray-painting and assembly.

In order to write a risk management statement, the risk manager will carry out a physical inspection to familiarise himself or herself with the factory layout and processes. The risk management process of *identification* will consist of listing all manufacturing processes using a checklist to ensure that he or she asks all the relevant questions. The checklist will also include questions such as what flammable liquids are used, in what quantities, and where are they stored?

During the *identification* step of the risk management process for DMGM, the risk manager identifies the following insurable risks:

Risk	Office building	Factory premises
Fire	Low probability	High probability
Explosions	Low probability	High probability
Storm	High probability of hail damage to glass cladding	Medium probability
Riot and strike	Low to medium probability related to possible labour disputes	Low to medium probability related to possible labour disputes
Theft	Medium probability	Low probability
Personal liability	Low probability	High probability

The next step in the risk management process is to *measure* the potential risks, or place a

value on the impact of the risk. The measurement process for DMGM reveals the following information:

- *Fire damage to the office building:* The low potential for fire in the office building is further improved by the construction specification that includes fire resistant doors on stairways and the installation of a sprinkler system. In the event of fire, estimates suggest that the damage would be limited to 60% of the building. However, this exercise identified the possibility of damage through accidental activation of the sprinkler system. This risk must be added to the list.
- *Sprinkler leakage:* In the case of leakage, estimates suggest that the damage would be 15% of the insured contents value of the office building.
- *Fire damage to factory premises:* The factory premises contain potential sources of ignition and inflammable material that could feed a fire. Open flames are used to strip old motors. Therefore, the potential for fire damage is high and likely to be 80% of the total value of the contents and building. Fire would also damage the combustible components of the stock of refurbished and new motors.
- *Storm damage:* The potential loss from storm damage is estimated at 25% of the value of the factory premises, and 20% of the value of the office building. The potential damage to the glass cladding must be separately evaluated. The impact of hail damage could be 25% of the total cost of glass replacement, representing one total side of the building. Statistics also show that, on average, five panes of glass break accidentally every year. This equates to R4 000 in total, at a cost of R800 per pane.
- *Riot and strike damage:* The potential loss from riot and strike damage is estimated at 10% of the total value of the factory premises.
- *Theft:* In the case of theft the estimate loss, per event, is R50 000 for the factory and R10 000 for the office.
- *Product liability:* The refurbished products could attract product liability claims against DMGM if DMGM's negligence caused damage to property where the motors are installed. The estimated loss is R2 million, inclusive of legal fees.
- *Business interruption:* A fire could seriously impact on the ability of the business to continue. In this event, competitors would move into DMGM's market if the company could not provide its services for an extended period. It is estimated that DMG could be affected for at least six months after a serious fire.

Draft a risk management plan to deal with the following risks that have been identified:

- fire and explosion;
- business interruption; and
- product liability.

ANSWERS TO SELF-TEST QUESTIONS

A. Multiple Choice Questions

- | | |
|------|------|
| 1. A | 5. E |
| 2. C | 6. C |
| 3. E | 7. E |
| 4. B | 8. B |

B. True or False Questions

1. **False.** Things that can kill you could be very risky but only if they are likely to happen. Being hit by a meteorite will kill you but it is so unlikely to happen that it is only a very, very small risk.
2. **True.** Something that is very risky causes a lot of harm and is very likely to happen. Drunk-driving is very risky as it's very likely to cause a serious accident. That's why it is against the law.
3. **True.** High risk means that the activity is dangerous and also has a high chance of causing harm. Taking drugs like heroin is very likely to lead to addiction.
4. **False.** Sometimes things that are very risky are actually easy to do. Crossing a busy road without looking would be very risky.
5. **False.** Unfortunately people get hurt each year playing sports. Just because you do something every day does not mean that it has no risk.
6. **False.** There is some amount of risk in all the activities that we do; in school, at home, in work and at play.

C. Short Answer Questions

1. Risk management is about dealing with the risks identified and consists of various measures and techniques to ensure that we can survive the risks. Risk management is aimed at reducing the frequency of risk and also at minimising the effects of the risk.
2. Risk avoidance entails taking alternative action to avoid a potential peril before exposure to the risk. For instance, you can research and identify all possible risks relating to a particular location and find alternatives to avoid these risks. So, for example, you wouldn't install very sensitive instruments that are at risk from lightning strikes and power surges in an area such as Gauteng, which experiences large electric thunderstorms.
3. Risk reduction is the process of reducing the frequency of risk. Reduction of risk starts at Government level. For example, legislation regulates building standards and the workplace environment. In practice, we introduce physical protection and good housekeeping to reduce the occurrence of risk.
4. The aim of risk minimisation is to reduce the effects of a risk. Risk minimisation concentrates on reducing losses to the lowest possible level. However, risk minimisation acknowledges that we cannot totally eliminate risk, but may be able to restrict the damage caused by the risk.
5. The transfer of risk takes place because all risks cannot be avoided or eliminated and the effect of minimisation cannot be guaranteed. For example, even if we install the best fire prevention measures we still cannot guarantee that a fire will not occur and then spread uncontrollably. Therefore, the risk can be transferred to third parties by either transferring the rights to the assets at risk, or by transferring the risk to an insurer by paying a premium. Note that when we refer to the transfer of risk, we are referring to the effect of the risk and not the risk itself.
6. Risk elimination is a proactive technique of risk management. We react to an existing risk and proactively try to eliminate the risk by changing the circumstances of the risk.

7. Avoidance and elimination are related. However, avoidance takes place before the risk exposure, while risk elimination takes place when the risk is already in place.
8. We do not transfer all risks by using insurance, because some risks may occur frequently but have a low severity and no potential for a high severity. These risks would be too expensive to insure because the price required by the insurer would be too high. This is because the insurer will require a reward sufficient to make a profit and this may exceed the expected impact of the loss during a specific period. It is not cost-effective to spend thousands of rands in insurance premiums to avoid risk valued in hundreds of rands.
9. The Government is involved in risk reduction by laying down standards to protect society, such as such regulations for building standards and workplace safety.
10. One way to manage the risk to items susceptible to water damage is to store them above floor level on pallets or shelves.
11. The risk management process starts when the board of directors sets the policies and philosophy of risk management for the organisation.
12. The risk management statement contains:
 - the stated policies of the board;
 - the risk objectives of the organisation; and
 - details of the organisation's risk tolerance philosophy.
13. The risk manager compiles the risk management statement in conjunction with senior management and executive directors.
14. We decide priority by evaluating what can be done to eliminate, avoid, reduce and minimise the risk. Only when this can be done economically, and the risk is brought down to manageable levels within the limits of the risk tolerance statement, is the risk retained by the organisation. Otherwise, risk is transferred using insurance. So the factors we take into account are the cost of reduction, minimisation, elimination or avoidance. That is, the cost of transfer compared to the potential frequency and severity of the risk.
15. The cost of insurance is referred to as a premium. The insured (buyer) pays the premium and the insurer will then indemnify the insured against the risks insured for.
16. The organisation can apply risk reduction or minimisation to determine whether the risk can be managed down to levels where it is acceptable to the organisation. For example, if plate glass can be economically coated with a film to prevent cracking, the risk of breakage may become manageable and within the limits of risk tolerance for the organisation.
17. The risk management statement is the statement by the board of directors indicating which risks are acceptable, and which risks are not acceptable to the organisation. For example, a risk tolerance statement may set a limit of exposure for motor vehicle accidents under R10 000 to be carried by the company. Therefore, only the risks exceeding this amount would be transferred to insurance. This statement would be

measured against the frequency of accidents lower than R10 000 and the premium savings realised by the organisation accepting that level of risk.

D. Case Studies

CASE STUDY 1– HAZARD-BASED RISKS

To manage these hazard-based risks, the company trains staff to employ the hierarchy of controls for each new contract:

- eliminate – avoid wherever possible
- substitute – wherever possible use alternative methods or equipment
- separate – separate the hazard from workers wherever possible
- redesign – change the work layout, processes or equipment
- administer – change current work practices, train staff
- protect – consider all other control options first and then provide staff with protective equipment.

CASE STUDY 2: DMGM

The risk management plan would include the following information.

Fire and explosion

The plan for managing the risk of fire and explosion is first to look at ways to minimise or avoid the risk. The risk of open flames cannot be avoided but can be reduced by locating this operation in a specific area surrounded by asbestos curtains and splashboards. Fire extinguishers will also be on hand in this area, and all factory personnel trained to use the fire-fighting equipment.

The risk from flammable liquids and spray-painting cannot be avoided or eliminated, but DMGM can implement reduction and minimisation measures. For example, they can:

- Store all flammable liquids in an approved storeroom.
- Spray-paint only in a proper booth with extraction fans and flameproof fittings.
- Remove all sources of ignition from both areas.
- Store all finished goods in separate storerooms, on shelves above floor level, and with ample space between shelves.
- Install fire-fighting equipment (hose reels and extinguishers) to all areas and keep them clear of congestion.
- Implement housekeeping routines that include daily cleaning and removal of finished goods to storage.

These measures will reduce the risk but cannot eliminate all the risk. We have seen that a fire would lead to high losses and therefore DMGM will transfer some of the risk through insurance.

The premium rates quoted by the broker are 0,2% (a fifth of 1%) for the office building and 0,35% for the factory premises, based on the replacement value of each. Looking at these

rates it is clear that it will take 300 to 500 years for DMGM to pay the equivalent of the insured value in premium ($100\% \div 0,2\% = 500$).

However, DMGM has stated that it will retain some risk and has decided to carry the first R20 000 of any claim in exchange for a 20% reduction in the premium. This is cost-effective as the following calculation illustrates. The value of the office is R10 million for which a premium at 0,2% rate = R20 000 per year. A 20% discount is R4 000 per year. Therefore, less than one fire every five-year period would produce a profit from this risk retention. The probability of fire every five years is very low.

Business interruption

To avoid or minimise business interruption, DMGM could look at continuing the business at other premises that have the necessary facilities. However, these premises may not be readily available, so risk reduction will be focused towards recovery from a loss-producing event and sustaining the business from reserve stocks.

However, the risk could be significant and insurance is used to transfer the risk.

Product liability

DMGM supply motors and refurbished motors to various customers such as mining companies and large factories. DMGM can only look at strict quality control and stringent testing of motors prior to delivery. These steps must be well documented to provide potential defence information in the event of any actions. A liability claim will have a serious impact on business reputation, and legal fees can be substantial. Therefore, this risk will be transferred to insurance.

The risk manager would summarise the plan in tabular form as follows.

Risk	Retain	Reduction / Minimisation	Avoidance / Elimination	Transfer to
Fire – office	Proportion	Protection, hose reels, sprinkler system	Not cost-effective	Insurance
Fire – factory	None	Protection and layout	Not cost-effective	Insurance
Glass – storm	Proportion	None	Not cost-effective	Insurance
Glass – accidental breakage	100%	None	None	None
Business interruption	None	Recovery plan	None	Insurance
Product liability	None	Testing and quality control	Not cost-effective	Insurance