Tutorial Letter 202/2/2017

Risk Financing and Short Term Insurance

RSK3701

Semester 2

Department of Finance, Risk Management and Banking

This tutorial letter contains the suggested solutions to assignments 02 and 03.

Bar code

Define tomorrow.

UNISA university of south africa

CONTENTS

Please note / important notes:

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It is also important that you provide Unisa with your cellular number because important announcements may be sent to you by sms.

1 INTRODUCTION

Dear Student

The purpose of this tutorial letter is to provide you with guidelines on answering assignments 02 and 03.

2 GUIDELINES FOR ANSWERING ASSIGNMENT 02

<u>Question 1: Correct option 1</u>

Refer to page 139 in the prescribed book.

An excessive claim reserve will result in a decrease in the share price of the insurance company and a decrease in investments from external sources. The loss ratio of the insurer appears higher than it actually is because of the higher solvency margin.

<u>Question 2: Correct option 2</u>

Refer to study unit 8 in the Unisa study guide.

A House Owners policy covers the buildings and outbuildings of a residence but can also be extended to include fixed television antennae against breakage, swimming pool machinery against accidental damage, excluding wear and tear and fixed sanitary ware against accidental breakage but not chipping and scratching. Damage to television sets and video cassette recorders will be covered under a Householders policy.

Question 3: Correct option 1

Refer to page 165 in the prescribed book.

A man murdered by thugs on his way home from work is likely to be covered in terms of a Personal Accident policy. A worker sustaining lung cancer as a result of working in an asbestos plant will not be covered as illness is not covered under this policy. A man injured when picking up a heavy box will not be covered under this policy as there was no violence involved. A women dying six months after being injured in a car accident will only be paid if her death is directly related to the motorcar accident and her death occur within the number of months specified in the policy.

Question 4: Correct option 2

Refer to study unit 8 in the Unisa study guide.

Exceptions in terms of liability covers in a domestic package include amongst others, liability arising from conduct of business for reward and liability for the death of the policyholder. Liability arising from the negligent use of a firearm or from the consequences of a bad slice at golf will be covered.

Question 5: Correct option 1 – please refer to the announcement forwarded to students with regard to this question.

Refer to study unit 9 in the Unisa study guide and chapter 9 in the prescribed book.

Mr A insures his factory in terms of a general fire policy. A worker who was dismissed by the company deliberately sets fire to some flammable material which is stored in the factory. The sprinkler system is activated which extinguishes the fire but causes water damage to the other stock in the factory. Some records of debtors are also destroyed. It is assumed that it will take more or less two months to restore the factory to full production.

Under this scenario consequential losses caused by damage to the factory will **not** be covered in terms of the policy. The water represents both the hazard and peril in this particular case. Water damage caused by the sprinkler system will be covered in terms of the policy. Arson is not an automatic cause for repudiating a claim. The insurer will not be liable for any losses caused by arson only if the insurer can proof that the fire was set deliberately by the insured.

<u>Question 6: Correct option 1</u>

Refer to page 183 in the prescribed book.

Mr Albany is an electrician. Apart from the working tools he carries with him, he also carries wires and pipes and in many cases electrical equipment that needs to be fitted at a clients' premises. In terms of Goods in Transit insurance only the pipes, wire and electrical equipment that needs to be installed will be covered. His working tools need be insured under a **Business All Risk policy.**

<u>Question 7: Correct option 3</u>

Refer to chapter 10 in the prescribed book.

Under third party only cover, **no** cover is provided for the insured's vehicle. The first amount payable under motor insurance is cumulative **except** in the case of windscreen excess**.** Damage to the insured's recovered stolen vehicle will be covered under a Third party, Fire and Theft policy. In terms of the "pillion passenger extension" liability cover is **provided for the motor cycle but not** for injuries to passengers carried in a side-car of a motor cycle. A separate liability policy must be taken out to cover passengers traveling on a motor cycle or in a side-car of a motor cycle.

<u>Question 8: Correct option 3</u>

Refer to study unit 9 in the Unisa study guide.

A fire policy can be extended to include damage caused by earth tremors, landslips and malfunctioning of sprinkler systems. Damage caused by aircraft, other than areal devices or articles dropped from an aircraft, may be covered, but damage caused by sonic shock waves is excluded.

<u>Question 9: Correct option 4</u>

Refer to page 177 in the prescribed book.

Business interruption insurance is also referred to as **Loss of Profits** insurance. It was developed to reimburse those charges that continue regardless of the reduction in turnover after a loss incident. It **does not** provide cover for bad debts, only for irrecoverable debts due to the destruction of records and has a **limited** indemnity period.

<u>Question 10: Correct option 2</u>

Refer to chapter 9 in the prescribed book.

Shoplifting is **not** covered under theft insurance as it does not involve forcible and violent entry or exit. The breakage of mirrors in a fitting room of a retailer is covered under Glass insurance cover. Money transported to and from the bank is covered under **Money** insurance. Theft of money by employees is covered under Money insurance if discovered within **14** days of its happening.

<u>Question 11: Correct option 3</u>

Refer to chapter 6 in the prescribed book.

Arbitration can only be used to resolve **problems of quantum**. Repudiation of liability applies where the terms and/or conditions of a policy have not been complied with. **Negotiation** is the most common way of handling disputed claims.

<u>Question 12: Correct option 3</u>

Refer to chapter 15 in the prescribed book.

Consider a policy with a R5000 deductible and a recapture factor of 5%. For a loss of R45 000 the **insurer** would pay R42 000.

Calculation:

P = (L-D) X (1 + R) = (R45 000 – R5 000) X (1 + 0.05) = R42 000. The deductible payable by the insured decreased from R5 000 to R3 000.

Note: please read the question carefully in the exam. Make sure that you distinguish between the amount payable by the insurer versus the deductible payable by the insured.

<u>Question 13: Correct option 2</u>

Refer to page 107 in the prescribed book.

An insurer enters into a quota share arrangement with the ceding insurer retaining 60% of any loss. The **insurer** will pay R24 000 if the loss amounts to R40 000 while the reinsurer will be liable for R16 000.

Calculation:

R40 000 x 0.60 = R24 000. The reinsurer will pay the remainder of the loss, or 40%, amounting to R16 000.

Note: please read the question carefully in the exam and make sure you know the difference between the ceding insurer (cedent) and the reinsurer.

<u>Question 14: Correct option 1</u>

Refer to page 222 in the prescribed book.

In terms of the COID Act (130 of 1993) employers have less need for Employer's Liability cover as employees **can no longer** sue their employers for injuries following an accident at work, but receive compensation in terms of the Act. Domestic workers and contractors **are not covered by the Act** and do not have a right to compensation from the government for injuries following an accident at work. Permanent Military Force members **are covered by the Act** and have the right to compensation from the government for injuries following an accident at work.

Question 15: Correct option 1

Refer to Chapter 11 in the prescribed book.

Risks such as good in transit are covered under a Material Damage coupon in terms of SASRIA cover. SARIA cover **is not renewable** but members may send out expiry notices to remind clients to request the cover for the new period of insurance. Insurance companies do not have the authority to settle claims on behalf of SASRIA. The prescription period in terms of SASRIA motor claims is **12** months.

3 GUIDELINES FOR ANSWERING ASSIGNMENT 03

Question 1 (10 marks)

ABC Traders, a medium sized retailer, is considering the implementation of a self-insurance programme and approaches you for some assistance in this regard. The following information is supplied by the auditor of the concern to assist you with your final recommendations:

Annual sales	R1 100 000
Net income after tax	R 520 000
Average net income after tax for 5 years	R 580 000
Net income percentage of turnover	33%
Un-mortgaged assets	R400 000
Current ratio	2:1
Asset test ratio	1.1:1

You are required to comment on the aforementioned organisation's ability to absorb losses and to make recommendations with regard to the implementation of a self-insurance programme. All recommendations should be backed by sound theoretical principles.

Refer to Chapter 12 in the prescribed book and study unit 12 in the Unisa study guide.

Before answering any question you should **analyse the question** to determine exactly what is required from you. Highlight the **key instructions** and **words** in the question to guide you in answering the question.

When answering a long question such as this, make sure to structure your answer by using **headings and subheadings** and writing in **point form**.

Please keep in mind that an assignment should be a learning experience and should therefore be as complete and detailed as possible.

You could commence your answer to this question by providing a brief **theoretical discussion** of the various financial variables to be considered in measuring the loss assumption ability of the business.

- **Working capital**:

Working capital reflects the liquidity of the business. A range between 1% and 25% of working capital is considered as guideline when deciding on the amount to be reserved for loss assumption. Where the current assets of a business cannot be easily liquidated or where the liquidity levels fluctuate throughout the financial period, the lower end of the scale should be considered for loss assumption. The higher end of the scale applies to stable and higher liquidity ratios. √

- **Total assets:**

The ability to absorb losses may also be determined by taking into consideration the proportion of total assets available for funding. A range between 1% and 5% is considered practical. Where assets are highly leveraged and illiquid the lower end of the scale will be considered. The higher end of the scale applies when the assets of the business is liquid or unencumbered. √

- **Earnings method:**

The ability to fund losses can also be determined by considering the current earnings and the previous five years' earnings of the business. The suggested range is between 1% and 3% of current retained earnings plus 1% to 3% of average pre-tax earnings over the preceding 5 years. √

- **Earnings per share**:

Earnings per share represent the most tightly constrained measure of loss assumption. It is used as a conservative measure to ensure that self-funding does not over-extend a public entity or company to a point where earnings per share or current budget would be impaired by a large loss in a single reporting financial year. Normal loss assumption is considered 10% of earnings per share of a public company and 10% to 15% of the expected excess of revenue over expenditure in a public entity. The proportion will depend on management discretion and the perception of what is required by investors in a particular industry. √

- **Sales budget:**

The final indicator is based on the sales budget with a range of 0.5% to 2% of annual sales or revenue as guideline. It measures the business' ability to generate revenue. The lower end of the scale applies to a high volume, heavy leveraged operation while the higher end of the scale applies to businesses with traditionally higher profit margins. √

The above indicators should finally be considered within the constraints of the entity's overall attitude towards risk. Companies with a more risk adverse culture may interpret the variables in a different light than entities with a more risk taking culture.

The next section of the answer may be answered in table format. You need to make a **recommendation** and **motivate** your recommendation. There is really no right or wrong answer as the specific range that you indicate will depend on your own numerical example and attitude towards risk.

NORM	RATIO OF COMPANY	RECOMMENDATIONS AND COMMENTS
Working capital 1-25%	2:1 Current ratio 1.1:1 Asset test ratio√	The working capital ratios imply that a higher ratio of working capital may be reserved for self-insurance. Recommended range: 10-15% of working capital. The figure cannot be calculated as the amounts of current assets and liabilities are not suplied.√
Total assets 1-5%	Un-mortgaged: R400 000	There is not sufficient information as the total assets and liability figures are not provided. Therefore a lower range of 1% of un-motgaged assets is recommended. √
Earnings 1-3% of current earnings Plus 1-3% of pretax earnings over the past year	The earnings was relative stable for the preceding five years and use higher scale of 2% can be used: R520 000 x 0,02 = R10 400 R580 000 x 0,02 = R11 600√	Based on earnings, an amount of R22 000 can be recommended to be reserved for self-funding.√

Earnings per share	No information supplied.	
Sales Budget 0.5-2% of annual sales or revenues	Sales = R1 100 000 Profit margin – 33% √	The profit margin is relative low and the lower end of the scale, 1% of annual sales, is therefore recommended. R1 100 000 x 0,01 = R11 000√

The above answer contains a lot of facts – a student can easily obtain full marks. Many of the facts are however repeated for which only one mark will be awarded. It is of utmost importance to highlight facts to ensure you do not duplicate facts in answers.

Question 2 (10 marks)

Graphically illustrate and explain the relationship between **severity and frequency** of losses and the **funding decision**. In your answer identify and briefly explain the **three categories of possible losses** in an organisation.

Suggested solution:

Refer to Chapter 12 of the IISA prescribed book.

In a database of historical loss experience, we can identify three loss categories defined in terms of their individual impact on the financial integrity of a company.

- A range of relatively small losses exist but they have no particularly disturbing effect on a company's finances beyond their direct cost.√
- Then there is a cost range in terms of which the loss effects can be reasonably established by adding the direct cost of the loss to the cost of having to borrow the additional funds in the money market.√
- In a third range, the cost of extensive losses has a more serious effect on the ability of the company to finance the loss from its regular cash flows and normal credit lines. It may be advisable to transfer this cost to an insurer.√

Losses can also be classified as type 1, II and III losses:

Type I losses

The first loss type emanates from risks that produce aggregate yearly costs which are over time considered stable. The stability estimate is usually based on past experiences projected into the future. Year after year this type of loss shows little variation between the aggregate value of predicted losses and the aggregate of actual annual losses.√

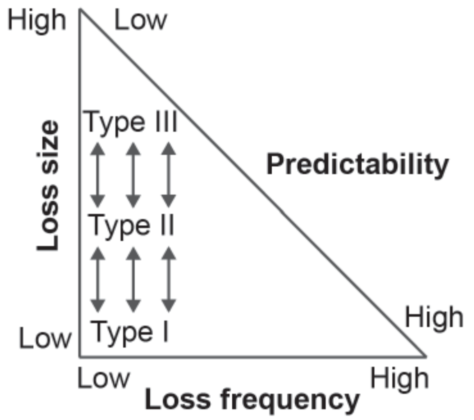
Type II losses

The second loss type emanates from risks that produce annual aggregate losses in excess of those associated with the first loss type. However, a company can absorb these losses within one year and remain a going concern. The maximum cost consequence of risk in this class varies according to the company's ability to absorb loss and the risk aversion attitude of its management. Risk aversion is defined as the reluctance of management to subject the company to the possibility of loss costs in excess of a planned or budgeted limit.√

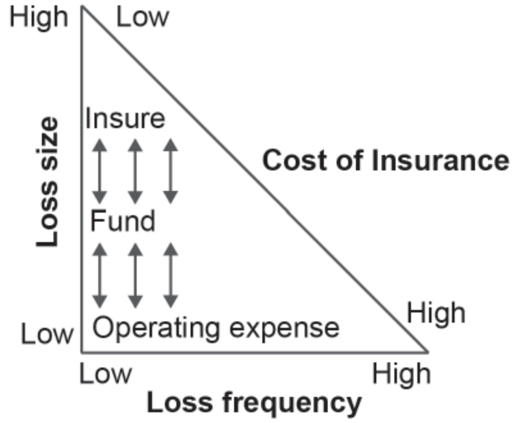
Type III losses

The third loss type covers losses which produce aggregate annual costs in excess of those in the first two loss types.√

The relationship between the severity and the frequency of losses and their insurability is depicted in the two diagrams below.



Loss types and predictability√√



Loss types and Insurance√√

The above two diagrams show that the cost of insuring the highly predictable losses (high frequency and low severity) is high. The main reason is the high cost associated with predictable losses. The insurance company has to recover an amount that is at least equal to the size of the loss plus an additional amount for profits and administrative costs. This boils down to what is referred to as “rand swapping” which is quite costly to the insured. By funding these losses from its own resources, the company saves a substantial amount of money. This is especially true if we take into account that these losses can run into millions of Rand to which insurance companies may add as much as 40%.√

In order to receive the marks for the graphs, you should have listed all the necessary details on the graphs.

Question 3 (5 marks)

A worker sustained lung cancer as a result of working in an asbestos plant. Explain whether the worker would have a claim under the **Personal Accident Section** of a policy.

Suggested solution:

Refer to Chapters 8 and 11 in the prescribed book.

The worker will not be able to claim from a Personal Accident policy in this case.√ Personal accident insurance compensates the insured, if he or she is injured or killed by violent, external and visible means as a direct result of an accident.√ There is no cover for illness.√ The worker will however be able to claim compensation in terms of the Compensation for Occupational Injuries and Diseases Act (COID) (130 OF 1993). Where the illness is a direct result from the negligence of the employer, the worker might also proceed with a liability claim against the employer.√

You will note that the solution to this question is relative concise when compared to that of question 4 that carry the same mark allocation. Question 3 is considered an application or insight question and students were required to use the theory and apply it to a practical scenario. The answer must include very specific information that would answer the question posed.

Question 4 (5 marks)

Use a **numerical example** to illustrate the difference between a straight and disappearing deductible.

Suggested solution:

Refer to Chapter 13 in the prescribed book.

A **straight deductible** applies to each and every loss and is subtracted before a loss payment is made. √

Example:

Mr A has a straight deductible of R1 500 for motorcar accidents. Mr A scratches his car while parking. The value of the damage is R1 000. In this case the value of the damage is less than the deductible payment and the insurer will not be liable for any payment. √

Mr B has a deductible of R 2 000 for motor vehicle accidents. He is involved in an accident and sustains damages to the value of R10 000. In this case the insurer will be liable for the amount in access of the deductible (R10 000 – R2 000 = R8 000). √

When a **disappearing deductible** is used, the size of the deductible decreases as the size of the loss increases. At a certain level of loss, the deductible disappear completely.√ The reduced deductible is calculated in terms of the following formula:

P = (L-D) X (1 + R)

Example:

Mr C has a policy with a R5 000 deductible and a recapture factor of 5%. He sustained a loss of R5 000. The insurer will pay (R50 000 – R5 000) x (1.05) = R47 250. The deductible is in effect reduced from R5 000 to only R2 250 which is R45 000 – R47 250.√

Keep in mind that without the recapture factor, the insured would have paid the full deductible of R5 000 and the insurer R45 000 of the loss.

4 CONCLUDING REMARKS

We trust that you have found the study of this module both interesting and rewarding. Please visit the discussion forums to gain insight in the experiences of fellow students.

We wish you all of the best with your preparation for the examination. Please do not hesitate to contact us if you have any difficulties with the study material for this module.

Best wishes

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