

CHAPTER 10

MOTOR INSURANCE

Learning Outcomes

When you have completed this chapter you should be able to:

- explain cover in terms of the Road Accident Fund Act (1996);
- define the limit of liability under the Road Accident Fund Act;
- explain when the limit of liability does not apply;
- define the three basic forms of cover under a motor policy;
- list the categories of first amount payable under a motor policy;
- explain what cumulative first amount payable means;
- list cover under the Motor Traders Internal and External policies;
- define the methods of rating under the different classes of motor; and
- explain what is meant by an Aggregate Excess.

Motor insurance is one of the key areas of both commercial and personal lines insurance. This chapter will focus on the various types of motor insurance available to the insuring public.

It is normal for insurers to give cover only if they hold the balance of the insured's portfolio, but Motor is the most common form of insurance cover written by insurers in South Africa. Historically it has usually been a separate department in companies and even today is a separate class for purposes of the Short Term Insurance Act.

10.1 COMPULSORY MOTOR VEHICLE INSURANCE

In South Africa, the Road Accident Fund Act (1996) (previously known as the MMF) is the statute that regulates compulsory motor insurance.

Premiums are collected by way of a levy on motor fuel of R 1.63 cents per litre in 2017. (Wheels24.co.za, 2017)

10.1.1 WHAT IS COVERED?

The fund will compensate any third party for loss or damage he may suffer as a result of:

- bodily injury; or
- death

caused by the negligence or other unlawful act of the person who drove the motor vehicle, or of the owner of the motor vehicle.

10.1.2 LIMIT OF LIABILITY

Major amendments to legislation governing the Road Accident Fund were brought about with the passing of the Road Accident Amendment Act of 2008 in order to drastically limit the payouts to accident victims and to result in what is seen to be a more balanced approach overall.

The considerable amounts of money spent by the Fund on legal costs are viewed as something of a waste.

The amendments are designed to:

- improve the governance of the Fund;
- remove discrimination that existed under the old Act;
- ensure the sustainability of the system;
- reduce abuse; and

- assist the poor in obtaining medical treatment.

The Act affects claims from all accidents after 31 July 2008 and the main changes are as follows:

- all claimants who claim non-pecuniary (general) damages are subject to an assessment by a registered medical practitioner, to determine the severity of the injuries suffered by the claimant, and whether or not the injury is to be classified as a serious injury in relation to the circumstances of the claimant. A serious injury is one that results in 30% or more of total body impairment, based on the American Medical Association's Guides. The injury may also be assessed as serious if it:
 - results in serious long term impairment;
 - loss of a body function;
 - constitutes permanent and serious disfigurement;
 - results in severe long term mental; or
 - a severe long term behavioural disturbance or disorder; or results
 - in a loss of a foetus;
- general damages for pain and suffering, disablement, disfigurement, loss of amenities of life are excluded in all cases except for those injuries which are classified as serious as defined above;
- damages for loss of income are capped at a maximum amount of R160 000 per year (RAF, 2017);
- damages for loss of support are also capped at a maximum amount of R160 000 per year in respect of each deceased breadwinner, irrespective of the number of dependants claiming loss of support as a result of the death of the deceased breadwinner;
- these limits are subject to a quarterly inflationary adjustment by the RAF published in government gazettes with the latest figures each quarter;
- future medical expenses are payable by the RAF in terms of an undertaking to pay such future expenses as and when incurred, but such expenses are now based on the tariff for health services provided by public health establishments using what is known as the "uniform patient fee schedule for full paying patients". A concession applies to emergency expenses incurred in the golden window of opportunity immediately after an accident where proper treatment can have a marked effect on the end result. The definition of emergency treatment being "the immediate, appropriate and justifiable medical evaluation, treatment and care required in an emergency situation in order to preserve the person's life or bodily functions, or both";
- the medical costs covered include those that may be incurred in a foreign country as a result of an accident which occurred in South Africa;
- claims against the RAF for damages as a result of emotional shock suffered by secondary victims. Those who merely witness or observe an accident or are informed about another person having suffered injury or death in an accident are now excluded, although interestingly they are not barred from taking civil action against the guilty party;

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- the most significant consequence is the extent of the abolition of a claimant's common law right to claim any damages that are not recoverable from the RAF, from the negligent owner or driver of the vehicle that caused the accident, or the employer of such negligent driver, as contained in sub-section 21(1) of the Act. The Act now significantly limits the damages recoverable by an injured person from the RAF and gives no right to claim the remaining loss from the guilty party. In general terms under the previous RAF legislation the quantum of damages recoverable from the RAF was not limited, except in claims by passengers, so that the effects of the limitation were not so drastic. This prohibition does not apply to cases of emotional shock as indicated above nor where the RAF is "unable to pay any compensation", although there is some doubt as to what this wording means in practice;
 - the limit of R25 000 placed on the claim of a passenger in a motor vehicle, where the driver of the vehicle in which the claimant was a passenger was the sole cause of the accident, has been removed; and
 - the exclusion of claims by members of the same household as the driver of the motor vehicle has been removed.

Disputes regarding the assessment of the extent of the injuries may be referred to the Registrar of the Health Professions Council of South Africa. However, once an injury is assessed to be serious, the usual rules applying to the quantification of the claim (case law) apply.

The fault system has been retained. In other words the injured party must prove fault on the part of the guilty party.

The automatic entitlement to taxed or agreed party-and-party costs, on settlement before litigation, no longer applies and any settlements will have to be adjudicated separately by a court.

As before, the limits do not apply to members of the National Defence Force being conveyed other than in their employment as defence force personnel, but amounts payable in terms of the Defence Act will be taken into account.

It should be noted that the above also applies to foreigners, although there is some doubt as to whether the (local) exclusion of common law right to sue a guilty party for damages will hold up. For example, what of the situation of two foreigners, where the passenger decides to take action against the driver after they return to their home country?

Some of the effects of the amendments on insurance are:

- the need for owners or drivers of motor vehicles to take out liability insurance cover for personal injury will be somewhat limited. That would be necessary only to cover the possibility of a claim for damages for emotional shock suffered by secondary victims unless motorists over-cautiously wish to insure against the insolvency of the RAF, or a foreign claim;
- the responsibility effectively shifts onto every individual to ensure that he or she has adequate personal accident insurance cover, disability insurance, life insurance and health insurance;
- there is considerable scope for insurers to develop appropriate insurance products to fill these gaps in cover;

- there may be an increased risk for insurers in instances where a policy provided cover subject to any damages claimable in terms of any third party legislation being taken into account. As the damages claimable from the RAF are now limited, this may result in increased payments by insurers in terms of such policies; and
- there is a possibility that a foreign claimant will get a substantial award overseas against a local negligent motorist. Although the judgment may not be enforceable here, it may preclude the defendant owner or driver from travelling to or having assets in that jurisdiction without risk of attachment.

EXCEPTION

In terms of the Act there is one exception to this rule. If you are undergoing military service, the benefit payable is not limited, regardless of:

- the use of the vehicle, or
- the reason why you are in the vehicle.

WHEN COVER DOES NOT APPLY

No claims for any damage to property can be made to the RAF. You can still claim for the damage to your car from the guilty party or his insurance company.

There is no cover for vehicles or third party property.

ADMINISTRATION

The RAF administers the claims and benefits are payable over and above any other insurance benefits that may become due.

10.2 TYPES OF COVER IN MOTOR INSURANCE

There is currently no compulsory cover for third party property damage. As this is a large gap in cover, SAIA are debating a way to try and make this available and required. Insurance companies provide this, and also limited cover for injury to people.

In this section we are going to look at the three basic forms of motor cover available.

They are:

- third party only cover;
- third party, fire and theft; and
- comprehensive cover.

10.2.1 THIRD PARTY ONLY COVER

This is the most basic form of cover. It provides no cover for the insured's own vehicle.

It covers only damages the insured may be legally liable to pay as a result of the use of the insured vehicle.

EXCLUSIONS

There are a number of important exclusions to the cover. They are:

- death or injury to members of the insured's household;
- death or injury to people in his employ;
- loss or damage to property belonging to the insured or in his custody and control; and
- losses to the extent that they are covered by the Road Accident Fund Act.

EXTENSIONS TO COVER

Important extensions to the cover are:

- if the car insured is being driven with the insured's permission by someone other than the insured, provided the driver does not have his own insurance; and
- for damage caused by someone else's car, while the insured is driving it. It does not cover damage to the vehicle the insured is driving at the time.

These extensions only apply to motor cars and not commercial vehicles, or motorcycles.

LIMIT OF LIABILITY

The policy schedule will have a limit of liability written into it. This can be around R2 500 000 and, on some occasions, even R5 000 000. No matter how much compensation the insured becomes liable to pay, the insurer's liability is limited to this amount.

It is very important that the insured has sufficient cover in this area, because:

- the courts are award substantial amounts for injuries sustained in motor accidents; and
- any amount for which the insured becomes liable over and above the policy limit, is for his own account.

ROAD ACCIDENT FUND COVER

Where a claim falls within the scope of the Road Accident Fund the portion paid under the Act is not covered under the motor policy.

Any liability over the amount payable under the Road Accident Fund, is payable under the motor policy, but only up to the limit of liability of the policy.

10.2.2 THIRD PARTY, FIRE AND THEFT

Third party, fire and theft is the second type of motor insurance. This policy covers the same benefits as the Third Party only policy, but is extended to cover the insured vehicle for loss or damage arising from:

- fire;
- self-ignition;
- lightning;
- explosion; and
- theft or any attempt to steal the vehicle.

If the vehicle is stolen and recovered damaged, the damage to the vehicle is covered in terms of the policy.

10.2.3 COMPREHENSIVE COVER

Comprehensive cover includes all the benefits from the other two covers, along with cover for accidental damage to the insured vehicle and some limited medical expense cover. There are, however, some exceptions.

EXCEPTIONS

There is no cover for loss or damage:

- arising from nuclear materials and radiation;
 - arising from war, riot and the like;
 - occurring outside the Republic of South Africa, Botswana, Lesotho, Malawi, Zimbabwe, Mozambique, Namibia and Swaziland;
 - whilst the vehicle is being used other than stated in the policy (for example, used for business, but only insured for private use);
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- while an unlicensed driver is driving the vehicle; and
 - while being driven by someone under the influence of alcohol or drugs which have not been prescribed by a medical practitioner.

INDEMNITY

When a loss occurs, insurers will normally pay the market value of the vehicle. This is calculated using one of the standard valuation guides, such as The Auto Dealers Digest, which is a guide supplied to motor dealers, or the TransUnion listing.

Most insurers calculate the amount to be paid by finding the average between the trade and retail price of a vehicle, which is the market value of the vehicle.

Some insurers are now paying the actual retail price of a vehicle. This is better for the client, as this is what the insured would have to pay to replace his vehicle.

If a motor car is less than one year old, or has driven less than 30 000 kilometres, whichever happens first, it is market practice to pay the cost of a new car.

WINDSCREEN COVER

Insurance companies normally include windscreen cover automatically for motor cars. With LDV's and other commercial vehicles this cover can be included, but for an extra premium.

This cover is specifically for the glass in the vehicle. It allows damaged or broken glass to be replaced without affecting the insured's claim free group.

There is a separate excess or first amount payable.

10.3 FIRST AMOUNT PAYABLE

In motor insurance, policies normally include an excess or first amount payable. The amounts vary from company to company, but the way they are applied is fairly standard throughout the market.

Usually, they apply to the own damage section, but some insurers also have excesses applicable to Third Party damage. This topic outlines some of the details and applications of a first amount payable, along with the role this plays in this class of insurance.

10.3.1 MOTOR CAR FIRST AMOUNT PAYABLE

This table shows how the first amount payable is applied to motor cars.

No.	Type of First Amount Payable	Amount or Percentage
1.	Basic for each and every claim.	5% (minimum R value)
2.	Where the vehicle does not qualify for a NCB ⁸ .	R
3.	While being driven by someone under 21.	R
4.	While being driven by someone over 21, but under 25.	R
5.	While being driven by someone over 25, but under 30	R
6.	While being driven by someone who has had a licence for less than two years.	R
7.	For theft if the vehicle is not fitted with an approved immobiliser/alarm/tracking device	5% (minimum R value)
8.	Loss or damage arising from hijacking or an attempted hijacking.	5% (minimum R value)
9.	Any other amount to be borne by the insured (voluntary excess).	R
10.	Windscreen excess.	10% (minimum R value)

CUMULATIVE FIRST AMOUNTS PAYABLE

The first amount payable is cumulative, except in the case of windscreen excess. This means that when there is a loss, all the facts have to be looked at and any excesses or first amounts payable that apply are added together.

For only the windscreen excess to apply, there can be no claim for any other damage to the vehicle.

APPLICATION

The application of the various types of first amounts payable is best understood through an example.

⁸ No Claim Bonus

EXAMPLE

Example

We have a claim for an accident involving a 19 year old;

- he has had his licence for 1 year;
- has no NCB;
- damages are for R10 000;
- the first amount payable would be:
 1. basic 5% of R10 000 = R500
 2. plus under 21 = R150
 3. plus licence less than 2 years = R150
 4. plus no NCB = R150

Total amount payable by the insured = R950

10.4 MOTORCYCLES

Usually, in motorcycle insurance there is no cover if a passenger is being carried on the motorcycle, or in a side-car, unless the policy has been specifically extended. This extension is known as pillion passenger extension.

This extension means that the vehicle is now covered, but there is still no liability cover for injury to the passenger. The policy needs to be further extended to cover passenger liability. Usually the limit given is small, due to the high risk of injuries to people on motorcycles.

There is no cover at all whilst the insured is driving a motorcycle that does not belong to him.

ADDITIONAL EXCLUSIONS

The cover under a motorcycle policy has additional exclusions. These are:

- no theft cover if at the time of the loss the motorcycle was not;
 - protected by a suitable safety lock; or
 - in a securely locked building;
- no cover for theft of accessories and spare parts if the motorcycle is not stolen. This means that the machine must be taken and not just the wing mirror, or wheel.

APPLICATION

This table outlines the way that these first amounts payable are applied to motorcycles.

No.	Type of First Amount Payable	Amount or percentage
1.	Basic for each and every occurrence where the engine capacity: (a) does not exceed 125cc (b) exceeds 125cc, but not 350cc (c) exceeds 350cc, but not 750cc (d) exceeds 750cc	R R R R
2.	Where the vehicle does not qualify for a NCB	R
3.	While being driven by someone under 21	R
4.	While being driven by someone over 21, but under 25	R
5.	While being driven by someone who has had a licence for less than two years	R
6.	Any other amount to be borne by the insured (voluntary excess)	R
7.	In respect of loss or damage arising from theft or hijacking	5% (minimum R)

In terms of the motorcycle policy the basic excess varies with the engine capacity of the vehicle. The reason for this is that the larger the engine capacity, the more powerful the machine and therefore the chance and any loss is greater.

10.5 COMMERCIAL VEHICLES

The cover for commercial vehicles or Light Delivery Vehicles is similar to that for motor cars. There are a few differences however and these are:

- cover is extended to include damage or injury to third parties caused by loading or unloading goods;
- there is no cover while the insured is driving another vehicle;
- the same as a motor car policy, damage to third party property or persons is covered whilst the vehicle is towing another vehicle. This does not apply if the towing is for payment, for example as a tow truck from a breakdown service or panelbeater, and there is no cover for damage to the vehicle being towed;
- the windscreen cover, although not automatically included, can be included for a premium;
- there is no cover for medical expenses;

- passenger liability cover is not automatically included, but can be included for an extra charge. You can also obtain liability cover for unauthorised passengers, which are those that the driver carries without your knowledge; and
- it is not usual to give passenger liability cover for people in the back of a lorry or in a trailer.

The Commercial Policies give some wider cover:

- liability cover while loading and offloading applies to all types of insured vehicle, not to commercial vehicles only;
- limited medical expenses cover to the occupants of all vehicles, except buses and taxis, but they must be in the permanently enclosed passenger compartment of the vehicle; and
- passenger liability cover is given for the passengers in the cab of an LDV.

APPLICATION

The following table details the first amounts payable for vehicles covered under a commercial vehicle policy.

	Type of First Amount Payable	Amount or percentage
1.	Basic for each and every occurrence	5% (minimum R value)
2.	Where the vehicle does not qualify for a NCB	R
3.	While being driven by someone under 21	R
4.	While being driven by someone over 21 but under 25	R
5.	While being driven by someone who has had a licence for less than two years	R
6.	For theft if the vehicle is not fitted with an approved immobiliser/alarm/tracking device	5% (minimum R value)
7.	In respect of loss or damage arising from hijacking	5% (minimum R value)
8.	Any other amount to be borne by the insured (voluntary excess)	R
9.	Windscreen Excess (if applicable)	10% (minimum R value)

	Type of First Amount Payable	Amount or percentage
10.	Carrying Capacity Excess: <ul style="list-style-type: none"> • 10 ton truck • 20 ton truck This is specifically applicable to heavy trucks	5% (minimum R value) 10% (minimum R value)

First amounts payable are cumulative.

It is normal to apply a larger excess for bigger commercial vehicles.

10.6 MOTOR TRADE RISKS

The insurance of the motor trade is concerned primarily with dealers who need liability cover whilst driving or moving cars not belonging to them, such as:

- vehicles for sale;
- those belonging to customers;
- repairers being mechanics and panel beaters; and
- electricians and specialists who deal with exhaust systems, clutch and brakes, carburettors, trimmers and customisers.

These are special policies designed for the business that buys, sells, or handles motor vehicles as a full time trade. The reason for this cover is that the vehicles they have in stock or at their premises change constantly. It would be impossible to continually add and delete vehicles.

10.6.1 TYPES OF COVER

Cover can be on a Comprehensive, Third Party Fire and Theft, or Third Party only basis.

10.6.2 TYPES OF POLICIES

There are two types of policy:

- Motor Traders External, and
- Motor Traders Internal.

The table below indicates a comparison of these two policies.

Comparing ...	External Policies ...	and ... Internal Policies
Where the vehicle is covered	Covers vehicles while: <ul style="list-style-type: none"> • on the road; or • temporarily garaged in the course of a journey. 	Covers only vehicles damaged at the premises.
The vehicles that are covered	The insured's own vehicles and vehicles in his custody and control.	Only the insured's own vehicles are covered against accidental damage.
Exclusions or restrictions	There is no cover while vehicles are at the insured's premises, only when outside the boundaries of any premises owned or occupied by him for the purpose of the business.	Cover on customer's vehicles, is restricted to: <ul style="list-style-type: none"> • loss or damage arising from negligence of the insured or his employees; and • loss or damage caused by a defect in the premises, plant or machinery.
Methods of rating	Can be rated in three ways <ul style="list-style-type: none"> • Named driver basis - individual drivers are named and a premium charged for each one; • Trade plate basis - the motor dealer has trade plates and the number is given to insurers and a premium charged per plate; or • Wages basis - this rated on annual wages of all employees & directors. 	Normally rated by: <ul style="list-style-type: none"> • the size of the insured's premises. That is, the amount of floor space. The more space, the more vehicles and the higher the exposure; or • the wage figure for the company, including an amount for each principal or director.

10.6.3 RATING A MOTOR TRADERS POLICY

The Motor Traders policy is designed to cover motor dealers and is not on a specified vehicle basis. The policy is therefore not rated on individual vehicles.

The motor dealer will decide on a maximum value of any one vehicle. This should be the most expensive type of vehicle he will deal in.

10.7 METHODS OF RATING

There are a number of ways of rating applied to motor insurance. The rating will largely depend on the type of vehicle and the type of cover required. This topic focuses on the way that each of the various types of motor policies that we have examined, are rated.

10.7.1 MOTOR CARS

The following must be taken into account when rating a motor vehicle:

- the cover required - is the cover comprehensive, third party fire & theft or third party;
- area in which the vehicle is kept and normally driven - Gauteng as opposed to Graaff Reinet;
- the type of car - sports car, high performance engine, imported vehicle;
- the value of the vehicle;
- the use of the vehicle - is it a taxi, or used for business or private use;
- no claim bonus or cash back bonus; and
- the age of the driver⁹.

Many companies give discounts for pensioners and some charge extra for young drivers.

10.7.2 CLAIM REWARDS

Claim rewards are intended to reward the better clients. As a result of their favourable loss history, these clients with fewer claims can pay less into the common pool.

The adverse marketing implication of No Claim Bonuses has tended to see insurers leaning away from this approach to a more relevant form of reward for low claims histories. The use of a cash back bonus payment after a number of claim-free years has become common.

This eliminates the risk of a client who loses a cash back bonus status taking the opportunity to transfer to another insurer on a price basis.

DIFFERENCE BETWEEN NO CLAIM BONUS AND CASH BACK BONUS

The differences between no claims bonuses and cash back bonuses are as follows:

⁹ It should be noted that more recently insurers have noticed an upswing in older but inexperienced drivers on the roads and are increasingly using a combination of age and the number of years since first obtaining a license as the yardstick.

Comparing ...	No Claim Bonus ...	And ... Cash Back Bonus
Identification	These are usually shown by a number such as NCB 1, 2, 3, 4 or 5. The higher NCB's may be partly protected - following a claim the NCB is not lost, only reduced.	The Cash Back Bonus is usually a percentage such as 15%, 20% or 30%. If there is a claim the whole of the Cash Back Bonus is usually lost.

10.7.3 BEHAVIOURAL COSTING FOR MOTOR POLICIES

An interesting twist to private motor insurance is the introduction of schemes whereby the vehicle is fitted with a monitoring device which checks on the speed of the vehicle and various other driving characteristics to assess the driver's potential risk on a real time basis in order to give safer drivers a beneficial rate.

An early test case before the Short Term Ombud suggested that great care needs to be taken in explaining the implications of this form of cover, for example, declining a claim where the speed limit was being exceeded.

A more recent innovation, still under testing in Europe but already in use in South Africa, is the pay-as-you-drive system where your premium is based on the actual kilometres travelled, as measured by a device installed in the car. This rewards drivers who do less mileage.

10.7.4 RATING COMMERCIAL VEHICLES

The following factors are taken into account when rating a commercial vehicle:

- the cover required - comprehensive, third party only, third party fire and theft;
- area in which the vehicle is kept and normally driven for example, Gauteng as opposed to Graaff Reinet;
- the carrying capacity or gross vehicle mass of the vehicle - for example, 20 ton truck or 3 litre LDV;
- the value of the vehicle;
- the use of the vehicle - this is particularly important with large trucks. Compare the frequency with which a truck is used by a removal firm, as opposed to one used by a steel merchant that uses its own lorries only occasionally; and
- the No Claim Bonus.

10.7.5 RATING MOTORCYCLES

Factors to consider when rating a motorcycle are:

- the cover required;
- the area where the vehicle is normally kept and used;
- the size of the engine;
- the value; and
- the type of use - deliveries, or private and pleasure use.

10.7.6 MOTOR FLEET INSURANCE

One type of motor insurance we have not yet discussed is Motor Fleet insurance, used where a Company has a fairly large number of vehicles. The minimum number varies from insurer to insurer. This policy is the same as the motor classes we have mentioned, but instead of each vehicle being specified on the schedule, there are categories of vehicles.

EXAMPLES

- | | | | |
|----|--|-----------------|----|
| 1. | All motor cars up to R100 000 | number of units | 10 |
| 2. | All commercial vehicles up to R100 000 | number of units | 5 |

There are a number of units for each item. At the end of the year, the insured declares the actual number of units in each category they had.

The premium is normally stated as an amount for each vehicle.

The premium is normally calculated using three years' claims experience, with inflation being taken into account. The premium which is then reached is divided over the different categories of vehicles and is reflected as a per unit premium.

10.8 CLAIMS HANDLING

Although there are some essentials specific to motor claims, they are handled in much the same way as other claims. Because of the incidence of fraud, it has become quite standard for insurers to appoint a motor assessor to look into hijack and theft claims.

10.8.1 DOCUMENTATION REQUIRED

Documentation that will be required is:

- motor claim form - this must be fully completed. It should not be accepted if questions have not been answered. Each question on the form serves a purpose. Often incomplete forms are received and this costs insurers, in that they end up paying claims for which they might not be liable;
- copy of the driver's licence and ID - this is required to make sure that the driver of the vehicle was licensed to drive the vehicle. It also tells you how long they have had their licence and their age, for the application of excesses;
- quotations for repairs in the event of accident damage - two are normally required. Some companies now have their own assessment centres, where the insured takes the vehicle to be assessed; and
- any other documents which the insurer may require - in the case of a total loss, the cancellation of registration certificate will be required.

10.8.2 REPAIRED VEHICLE

The insurer has four different options for indemnifying the insured of which the most common form of indemnification in motor claims is repair.

The claim process when a vehicle is repaired is as follows.

Stage	Description
1.	The insured obtains quotations for repair of the damage.
2.	The assessor is sent to the panelbeater where the vehicle has been left. For this reason it is normal for the car to be at the panelbeater, who is going to repair it.
3.	The assessor inspects the vehicle and checks the prices that the panelbeater has quoted. If necessary the assessor negotiates with the panelbeater to secure the best price for the insurer, but this must not be at the expense of the insured.
4.	The vehicle is repaired.

Stage	Description
5.	The insured pays his excess to the panelbeater. The insurer will have advised the panelbeater the amount of the excess.
6.	The insured signs a release to say that the car has been repaired to his satisfaction.
7.	The insured takes the vehicle home.
8.	The claims department receive the panelbeater's account for the repairs, with the amount of the excess deducted.
9.	Claims clerk makes payment to panelbeater settling the balance of the account

The insured is allowed to authorise repairs which fall under a certain level. The maximum limit is normally about R5 000.

Note that the insured might not always have to obtain independent quotations. Often, the claim process is sped up by the use of drive-in assessment centres or by mobile assessing units, maintained by the insurer.

NOTE ABOUT REPAIRS

Repairs can only take place when the amount of damage is less than the value of the car. When the amount of damage is substantial, or is more than the value of the car, then insurers will pay the insured the market value of his car. This is known as uneconomical to repair, and the vehicle is a write-off. The insurer disposes of the salvage.

10.8.3 TOTAL LOSS

A total loss takes place when the vehicle is stolen or written off. When this happens, the same documentation will be required as for repairs, but the cancellation of registration is also required. This cancels the insured as the registered owner.

If the vehicle is found after the insured has been paid out for the loss, the vehicle becomes the property of the insurer.

10.8.4 AGGREGATE EXCESS

An aggregate excess is a method whereby:

- the insured is his own insurer up to a certain limit for all claims in any one period of insurance; and
- if claims exceed the limit, the insurance company will then become liable for the claims in the normal way.

The insured receives a discounted premium for this method of insurance.

EXAMPLE

The ABC Shoe Company has a large number of motor cars on its policy and their insurer is asking R300 000 for the renewal premium.

The manager is not happy with this premium, but realises it is because of the claims they had in the last two years. They have now brought in measures to reduce the number of accidents their drivers have, and have also fitted tracking systems to reduce theft and hijacking claims.

Their broker recommends that they take an aggregate excess and he explains this as follows:

- year 2009 aggregate excess suggested R150 000;
- all claims for the year up to R150 000 in total are paid by ABC Shoes;
- once claims are added up and the R150 000 limit is exceeded, insurers are liable for the claims;
- therefore new renewal premium R120 000.

Chapter Reference List

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QUESTIONS ON CHAPTER 10

Revision questions

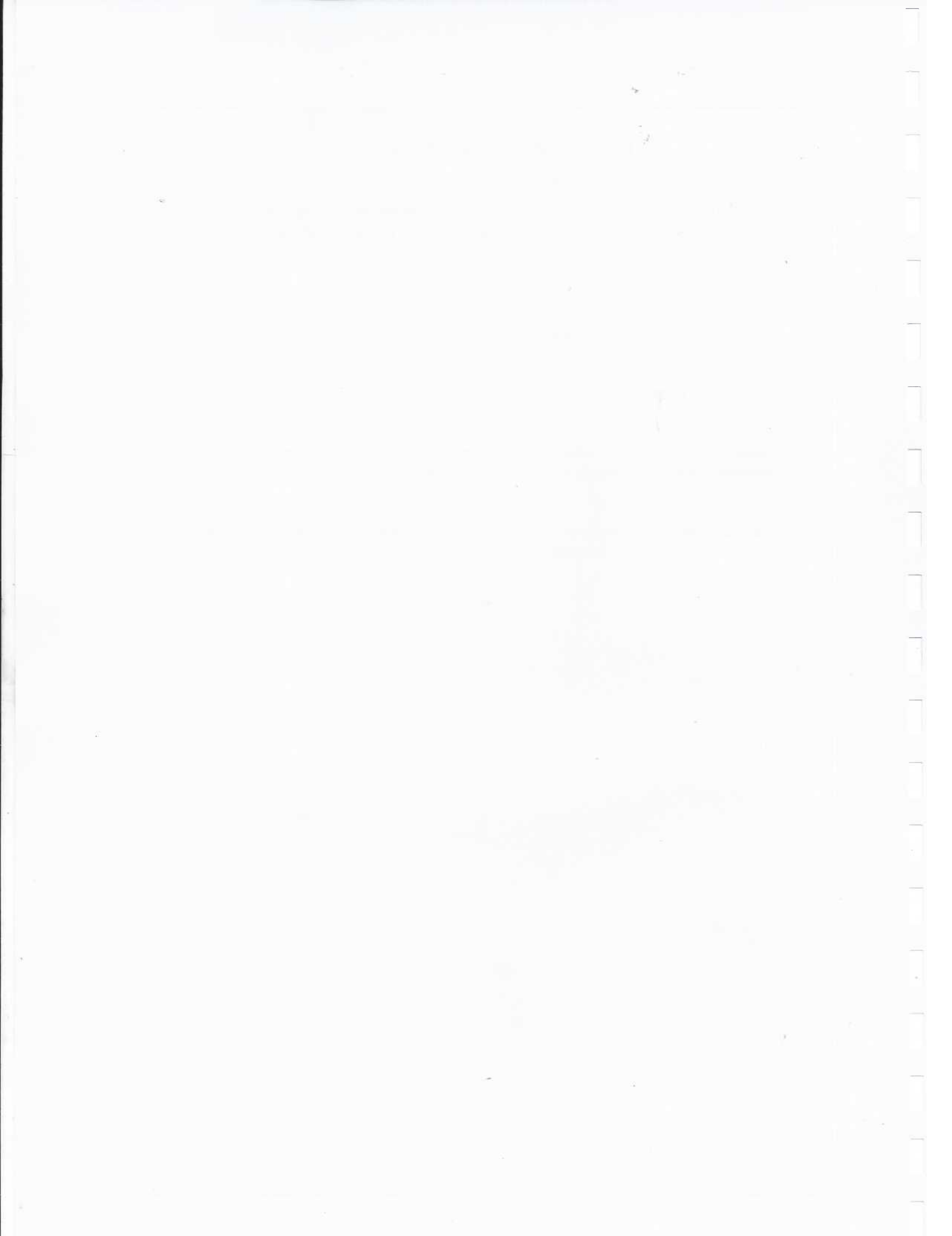
Work through these revision questions as a test of your understanding of this chapter. We suggest that you attempt these before tackling the written questions. Please note that suggested answers are not provided as the chapter's text contains the answers.

1. At what level are claims from the RAF for death capped?
2. What are the three common types or forms of motor insurance cover offered?
3. What is the difference between a motor traders external and internal policy?
4. What are the main factors that impact on the rating of a motorcycle?

Written questions

Attempt these questions after you have completed this chapter and its revision questions. Suggested answers to these questions are at the end of this book.

1. Explain what is meant by an Aggregate Excess.
2. Explain what is meant by first amount payable.
3. Explain what factors are taken into consideration when rating a commercial vehicle policy. Reference should be made to all factors used including those for heavy trucks.
4. Compare a Motor Traders External and Internal policy with specific reference to factors such as cover, rating, exclusions and restrictions.



CHAPTER 11

SASRIA, COID AND MISCELLANEOUS COVERS

Learning Outcomes

When you have completed this chapter you should be able to:

- list the type of SASRIA coupons available;
- explain which SASRIA covers require an underlying policy;
- explain which SASRIA covers do not require an underlying policy;
- describe when SASRIA cover may be issued from;
- define who are not covered in terms of the COID Act;
- list the types of cover available for engineering insurance;
- explain the concept and scope of construction insurance;
- list types of policies issued for marine insurance;
- list the cover that can be arranged for aviation insurance;
- list the cover available under travel policies;
- explain bancassurance; and
- explain group scheme business.

There are many specialised insurance covers available today. It is not necessary for you to have a specialised knowledge, but it is important that you are aware of these covers.

11.1 SOUTH AFRICAN SPECIAL RISKS INSURANCE ASSOCIATION

SASRIA was formed after the 1976 Soweto Riots. Insurers realised that they could no longer underwrite the losses arising from the political riots of the time, as it was equal to giving cover for war risks.

The aim of the rioting was to change social and political conditions and this was therefore a fundamental type of risk, which affected everyone in the country.

As a result, SASRIA was formed. It opened its doors for business on 1 April 1979. It was agreed at the time that participation in SASRIA would be restricted to short term insurers registered to transact business in the Republic and all such insurers who wished to join would be required to become signatories to an agreement which, inter alia, embodied reinsurance obligations to each member company. SASRIA was originally administered by the SAIA. The Government became the reinsurer of last resort with unlimited liability.

11.1.1 TYPES OF COVER

Originally only political riot was covered, but today non-political riot and strike is also covered as reinsurers withdrew their support for the non-political covers in 1987. War risks are, of course, still excluded.

11.1.2 STRUCTURE OF THE COMPANY

SASRIA is not underwritten by the government, but is a separate insurance association controlled by a board of directors.

In 1999 SASRIA was converted from a section 21 company to a limited company. This was done by the Conversion of SASRIA Act. At this stage the government became the sole shareholder of SASRIA. The government does not underwrite SASRIA, but a board of directors controls the company.

As a result of the conversion, the Government ceased to have an unlimited liability. A new agreement was put in place whereby the Government has a limited liability of R1bn to SASRIA Limited.

Full privatisation was expected to be completed prior to 2006 but after the events of 11 September 2001, privatisation has been postponed indefinitely.

SASRIA is for risks in South Africa. A similar arrangement (NASRIA) applies in Namibia. In other territories, normal insurers can issue riot cover if they are prepared to do so.

11.1.3 FUNCTIONING OF SASRIA BUSINESS

SASRIA functions very similarly to other classes of insurance as far as the insured is concerned. There are two ways in which it differs in administrative procedures and these are:

- the issuing of the coupon; and
- the settling of claims.

ISSUING COUPONS

The documentation or coupons providing SASRIA cover are issued by the direct insurance companies. The companies who are authorised to issue SASRIA cover act as agents for SASRIA and are remunerated by commission, part of which they share with the broker or agent who introduced the business.

TYPES OF COUPONS

There were four types of SASRIA cover available. Cover is issued and the insured is provided with the appropriate coupon to prove that cover exists.

SASRIA documentation comprises a certificate and a policy wording. It is normal in the insurance industry to refer to them as coupons.

The types of coupon are as follows:

Type of Cover	Risk Covered
Material Damage	This is the coupon used to cover risks such as fire, glass, marine, goods in transit and money. (In fact, all types except those listed below.)
Contract Works and/or Construction Plant	This covers engineering type risks.
Consequential Loss	This is for the Business Interruption Section, but net profit cannot be insured, only Standing Charges.
Motor Policy	This is for all types of motor vehicles.

Marine Insurance and Goods in Transit are mentioned separately only because a special scale of rates applies to these.

There are two new additional covers - Mining Risks and Money Risks. The mining risk covers certain mining risks whilst the money risks cover losses pertaining to loss or damage of money or cash as a result of crime.

UNDERLYING POLICY

In the case of all the covers - except motor - there must be an underlying policy, issued through an insurer. The insurer who issues the underlying policy must also issue the SASRIA coupon.

11.1.4 PREMIUM ACCOUNTING

Premiums must be paid over to SASRIA within 30 days of the month in which cover begins. Penalties are charged for late payment.

ACCOUNTING RETURNS TO SASRIA

Returns must be submitted to SASRIA twice yearly. They must be verified by the issuing company's auditors. The periods are from 1 January to 30 June and 1 July to 31 December. The purpose is to certify that the premiums due to SASRIA have been paid.

Collected premiums are payable within 45 days from the end of the month that SASRIA cover commences. There is a penalty of 1% payable to SASRIA for late payments of premiums. The penalty is payable even if premiums are a day late. All spoilt certificates - as they are numbered sequentially - must also be kept and accounted for.

VALUE ADDED TAX (VAT)

All premiums and sums insured are inclusive of VAT. Commissions are also inclusive of VAT. The coupons and policies issued serve as VAT invoices.

MONTHLY PREMIUMS

SASRIA premiums are normally annual premiums. However, because of the volume of monthly policies today, there is a facility for a monthly SASRIA policy.

- This is available to clearly identifiable group schemes, or a clearly identifiable group of individual policies.
- It is only available for true monthly policies and not for annual policies paid monthly.

A coupon is issued at the end of each month, providing details of the aggregate sum insured and/or the total number of vehicles listed. Records of individual underlying policies will only be required by SASRIA in the event of a claim.

PRO-RATA PREMIUMS

Pro-rata premium applies the first time the insured takes out SASRIA cover. At every subsequent issue as at renewal of the underlying policy, the full annual premium is payable. A pro-rata premium may also be charged to enable the period of insurance to be adjusted, so that the renewal date falls in line with the insured's financial year.

CANCELLATION OF SASRIA

SASRIA coupons may be cancelled for a variety of reasons, but premiums may only be refunded under certain circumstances. These are:

- when the interest of the insured in the property ceases, because of the sale of the property, insolvency or any other reason;
- where the member cancels the underlying policy due to adverse claims;
- where the member reissues the underlying policy;
- in terms of a final transfer in terms of a take over certificate or similar legal transfer of risk, then the premium adjustment provisions of the underlying policy will apply; and
- if the insurer changes mid-term.

As stated earlier, SASRIA is not renewable, but members may send out expiry notices to remind clients to request the cover for the new period of insurance.

11.1.5 CLAIMS

Insurance companies also handle SASRIA claims investigation and documentation on behalf of SASRIA, but do not have authority to settle claims, other than a motor claim where the repair cost is less than R5 000.

All claims are sent to SASRIA. The procedure for this is that they are channelled through the head office of the member, unless a prior arrangement has been made.

CLAIMS PROCEDURES

- The insurer must treat all SASRIA claims as if they were their own.
- Before submitting a claim, the insurer must check to see whether it is excluded in terms of any other policy in force at the time of the loss.
- All information must be treated as strictly confidential. If a loss adjuster is appointed it must be emphasised that no details can be released to the insured, or the intermediary without prior consent.
- Claims must be reported to SASRIA as soon as reasonably possible.
- Potential claims must be accompanied by sufficient documentation and information to enable SASRIA to open a file.
- Only a Motor Accident claim form or a General Claim form is acceptable.

CLAIM DOCUMENTATION

Only original documentation should be forwarded to SASRIA. The following are essential when submitting a SASRIA claim:

- a preliminary claims advice form which must be attached with a covering letter from the insurer;
- a copy of the SASRIA coupon or policy. Where the claim is in the name of a subsidiary company, the name of the subsidiary must follow the name of the holding company on the claim form;
- the underlying policy schedule. As the terms and conditions of the Material Damages and the Contract Works underlying policy is attached, the underlying policy is required in processing a claim;
- claim forms. In the case of non-motor, a general claims form must be completed. In the case of motor, the motor accident claim form must be completed;
- repair documentation which are two quotations or invoices; and
- additional documentation, as relates to type of claim, including any endorsements, specifications, renewal warranties and any other document that may be required in finalising the claim.

LOSS ADJUSTERS

For claims in excess of R5 000, a loss adjuster must be appointed. The intermediary who introduced the business is not allowed to appoint the loss adjuster. If the claim is in excess of R1 million, SASRIA must be contacted prior to appointing an adjuster.

Claim forms must be submitted as normal. These must provide sufficient information, including full details of the circumstances of the loss or damage.

PRESCRIPTION PERIOD

The prescription period in terms of SASRIA claims follows that of the underlying policy and insurers are expected to adhere strictly to it.

In the case of motor, where there is no need for an underlying policy, the prescription period is twelve months.

VAT: CLAIMS

When the chosen method of settlement is cash, SASRIA includes the VAT component, irrespective of whether the insured is a vendor or non-vendor.

When the article is repaired or replaced, SASRIA will settle the account with the repairer or supplier, including VAT.

11.2 COMPENSATION FOR OCCUPATIONAL INJURIES AND DISEASES (COID) ACT

At one time it was believed that an employee must accept the risks involved in a particular job, because he was employed in it. There was no obligation upon employers to provide safe working conditions.

Today we would find this unacceptable. With the change of attitude has also come a change in laws and regulations. Government has now put measures in place to ensure that workers are protected.

11.2.1 EMPLOYERS LIABILITY COVER

The Workmen's Compensation Act of 1941 gave a workman the right to compensation from the State, for injuries following an accident at work.

This Act only covered persons earning under a certain amount. People earning more than this amount would have to sue their employer and prove negligence in a court of law.

This meant that employers needed insurance protection for the legal liability they could incur toward employees not covered by the Act, if the employee decided to sue. Insurers supplied Employer's Liability cover.

11.2.2 COID ACT

Under the COID Act (130 of 1993), all employees, except those listed below, are now covered in terms of the Act. This means that they no longer can sue their employer, but receive compensation in terms of the Act. The great need for Employers Liability cover fell away, although it is usually recommended as a kind of fail-safe or contingency cover.

PERSONS NOT COVERED BY THE ACT

The categories of employees not covered by the Act are:

- people who are (not Permanent Force Members) undergoing military service or military training;
- SAPS and Defence Force members on active service;
- contractors (people who contract to carry out work, but engage others to do the actual work); and
- domestic employees (for this reason, householders policies give employer's liability cover for domestic workers).

LIMITED BENEFITS

Whilst the new Act has removed the cost of litigation, it has reduced the benefits in some ways. The courts could award what they felt was fair and just compensation for the injury or disease. With the new legislation there is a set scale of benefits, and loss of earnings is based on a percentage of the wage figure. The wage figure itself is set at a maximum of R312 480 p.a. as from March 2013. Any salary earned over and above this is not counted for calculation of any award.

11.2.3 EMPLOYERS LIABILITY COVER

The Workmen's Compensation Act of 1941 gave a workman the right to compensation from the State, for injuries following an accident at work.

This Act only covered persons earning under a certain amount. People earning more than this amount would have to sue their employer and prove negligence in a court of law.

This meant that employers needed insurance protection for the legal liability they could incur toward employees not covered by the Act, if the employee decided to sue. Insurers supplied Employer's Liability cover.

11.3 SPECIALIST INSURANCE COVERS

This topic will focus on other forms of insurance that do not fall under a standard commercial insurance policy. They are:

- engineering insurance;
- construction insurance;
- marine insurance;
- aviation insurance; and
- travel insurance.

11.3.1 ENGINEERING INSURANCE

Engineering is a specialised form of insurance cover and is normally written by a separate department within the company. The types of risks insured by this department have changed a great deal over the years.

At the turn of this century the bulk of the business would have been concerned with equipment such as boilers, heat exchangers and the like, but much of the business is focused on computer equipment and contract works. This does not mean to say that the steam generation plants have totally fallen away.

TYPES OF ENGINEERING COVER

The types of cover available include:

- machinery breakdown;
- business Interruption following machinery breakdown;
- Contract Works, for example the construction of buildings, roads, power stations;
- project delay, resulting from a Contract Works accident;
- Plant All Risks, for example, earth moving equipment being used as a tool of trade;
- dismantling, transit and erection of machinery;
- computer and electronic equipment - this can be anything from a photocopying machine to mainframe computers or computerised plant, such as an automated car manufacturing plant; and
- deterioration of stock in cold rooms, due to failure of the machinery or electrical supply, or by contamination by the refrigerant gas.

11.3.2 CONSTRUCTION INSURANCE

The policy of insurance is for All Risks and can cater for physical loss or damage in transit (other than by sea or air) during the period of construction which may include site preparation, earthworks, foundations, buildings, installation, testing and commissioning of machinery and plant until the work is handed over to the principal by way of a completion certificate, and, if required, for a period usually of 12 months thereafter to cover loss or damage during that period resultant upon prior defects in construction, workmanship, material or even design (by agreement).

The insurance itself is designed to cover loss or damage which is fortuitous or accidental and should not respond to the costs to be incurred normally on contract sites for example - resultant upon expected rain, seasonal storms which could involve water damage or wash-aways. The policy is expected to provide indemnification for the truly unexpected loss or damage.

It is important to realise that construction insurances are not cancellable. A contract is entered into between the principal and the contractor and sub-contractors for the fulfilment of the works to the satisfaction of the principal - accordingly the insurance must likewise last for the duration of the contract.

11.3.3 MARINE INSURANCE

The goods sold in shops, and the materials used in various trades may have come from countries all over the world. In the same way, we export our goods and produce to other lands. Marine insurance cover is vital to this trade.

Sea transport remains one of the cheapest ways of moving goods around the world, but you should know that marine insurance is also widely used for other forms of transport, such as by road, rail, or air. Usually, the marine cover starts when the goods are sent off, and continues until they arrive at the importer's warehouse, even though this may be far inland.

POLICY FORMS

Policies are issued to cover:

Policy	Cover
Hull insurance	The vessel itself, and the owner's third-party liability.
Cargo insurance	Loss or damage to the goods carried.
Freight insurance	Loss of the charges for carrying the goods, as a result of accident to the goods along the way.
Small Craft policies	Small vessels used for private pleasure purposes only. This often forms a special section of personal lines policies.

There are also special policies to cover Building risks of vessels under construction, and local fishing vessels fleets.

This type of insurance is the subject of a specialised course.

11.3.4 AVIATION INSURANCE

In South Africa, this forms a very small, specialised market. A great deal of aviation business, worldwide, is written through Lloyd's and other international markets.

TYPES OF COVER AVAILABLE

Cover can be arranged for the:

- aircraft hull;
- liability to passengers;
- liability to other people, liability in connection with aircraft is excluded from ordinary liability policies; and
- cargo the aircraft transports, unless this is done under a marine policy.

Aviation insurance is again the subject of a specialised course.

11.3.5 TRAVEL INSURANCE

Today travel is an everyday occurrence, with businessmen jetting between Johannesburg/ Cape Town/Durban and overseas on a regular basis. Many South Africans travel overseas every year and tourists come to South Africa.

The need for travel insurance has increased in the last twenty years, but the insurance companies in South Africa have reduced their participation in this type of cover. This is mainly due to the high costs of medical treatment overseas and the Rand rate of exchange to the US\$ and the Euro.

TRAVEL AGENTS

Today the bulk of travel insurance is written through the travel agent with whom you book your ticket. Any business written through local brokers is placed with specialised companies, who often have a Lloyd's Binder, or similar group scheme cover to take the risk.

A Lloyd's Binder is similar to a group scheme in that the cover is standardised within certain limits and set premiums charged.

CREDIT CARDS

Many people pay for their travel tickets with their credit card and the finance company includes free limited travel insurance for clients who pay by this method. However, care should be exercised in this in that the cover is usually quite restricted.

COVER AVAILABLE

The cover can include the following benefits:

- medical expenses;
 - cancellation/curtailment;
 - personal liability;
 - death/permanent disablement;
 - repatriation to country of origin following death;
 - hijack;
 - hospital cover;
 - supply of screened blood;
-

-
- travel delay;
 - baggage and baggage delay; and
 - cash and documents.

Benefits and costs vary widely, with cover for business and pleasure. Included in business packages one can have cover for:

- replacement personnel;
- trade samples; and
- policies issued to frequent travellers on an annual declaration basis.

In the last instance, instead of booking each time, there will be open cover and the travel undertaken declared at the end of the period of insurance.

CONCLUSION

Whilst the South African insurance companies, to a large extent, have withdrawn from the business of travel insurance, the market has become much more specialised. The policies have become more sophisticated and flexible and a niche market has developed with new players taking over.

Something that needs to be carefully checked when arranging travel insurance is whether there is cover for cost arising from terrorist activities or pre-existing conditions, while it is also a good idea to check whether the policy will pay out benefits directly in the foreign country or whether the insured is expected to pay the bills and then claim after returning to South Africa.

11.4 BANCASSURANCE AND GROUP SCHEMES

Strictly speaking, Bancassurance (from the French word Bancassurance) is a term used to describe the combination of insurance and banking principles to provide new solutions to problems of risk. These applications are beyond the scope of this course, but it is worth considering some of the facilities the modern bank offers clients.

Many banking groups have their own insurance brokerage divisions, who can look after your every need - insurance wise. They not only work in the short term market, but also in the long term market.

The cover they provide is the same as that purchased through other brokers, but they often have a group scheme cover for mainly the domestic market, but also for the smaller commercial client.

For many years banks arranged policies for buildings bonded to them. In recent years some banks have started their own insurance companies, with their own policy wordings.

We are not going to analyse the whole of the business underwritten by banks, but rather briefly discuss group schemes.

11.4.1 BENEFITS OF A GROUP SCHEME

The group scheme can be beneficial to the insured in that they will probably enjoy;

- preferential rates; and
- wider cover.

Also because of its size the group scheme can carry more weight with an insurer, which may mean an increased chance of an ex-gratia payment.

11.4.2 DISADVANTAGES OF GROUP SCHEMES

Against these advantages must be weighed the disadvantages. Perhaps the biggest disadvantage is that the claims experience is measured by the whole group and not as an individual.

It is necessary to monitor the loss ratios on any group scheme in order to prevent major rate increases which will seriously affect the relationship between broker and insurer.

11.4.3 TARGETED MARKETS

In South Africa there has been aggressive marketing of group schemes which sometimes has resulted in total retraction when things go wrong. Perhaps this is not the best method.

The better group schemes have proved to be those focused on specific market segments, where the needs of that segment have been taken into account. The banks have used their client base as a marketing tool, as they have already, to a large extent, targeted the population group they want to attract with their banking products.

Marketing to the professional bodies and the executive level has proved to be the better area of business. Nevertheless, the group scheme still meets with varying reactions among insurers, depending on their experience in the past.

11.4.4 OTHER BROKERS

The group scheme is not limited to business from banks alone. Many larger brokers have organised special policy wordings for their clients and in many cases the policy will bear the broker's name in the logo.

The Insurance Act requires that the name of the company underwriting the policy must be disclosed.

11.4.5 CONCLUSION

We have recently seen the start of funeral policies being sold in supermarkets and, more recently, personal accident cover. One wonders where the future of insurance products lies. It is probable that we will see more aggressive marketing of products, by means of special promotions and independent call centres, but short term insurers need to be wary of attracting too much poor quality business.

Chapter Reference List

Compensation for Occupational Injuries and Diseases (COID) Act, 1993 (Act no 130 of 1993)

Workmen's Compensation Act, 1941 (Act no 30 of 1941)

www.sasria.co.za/

QUESTIONS ON CHAPTER 11

Revision questions

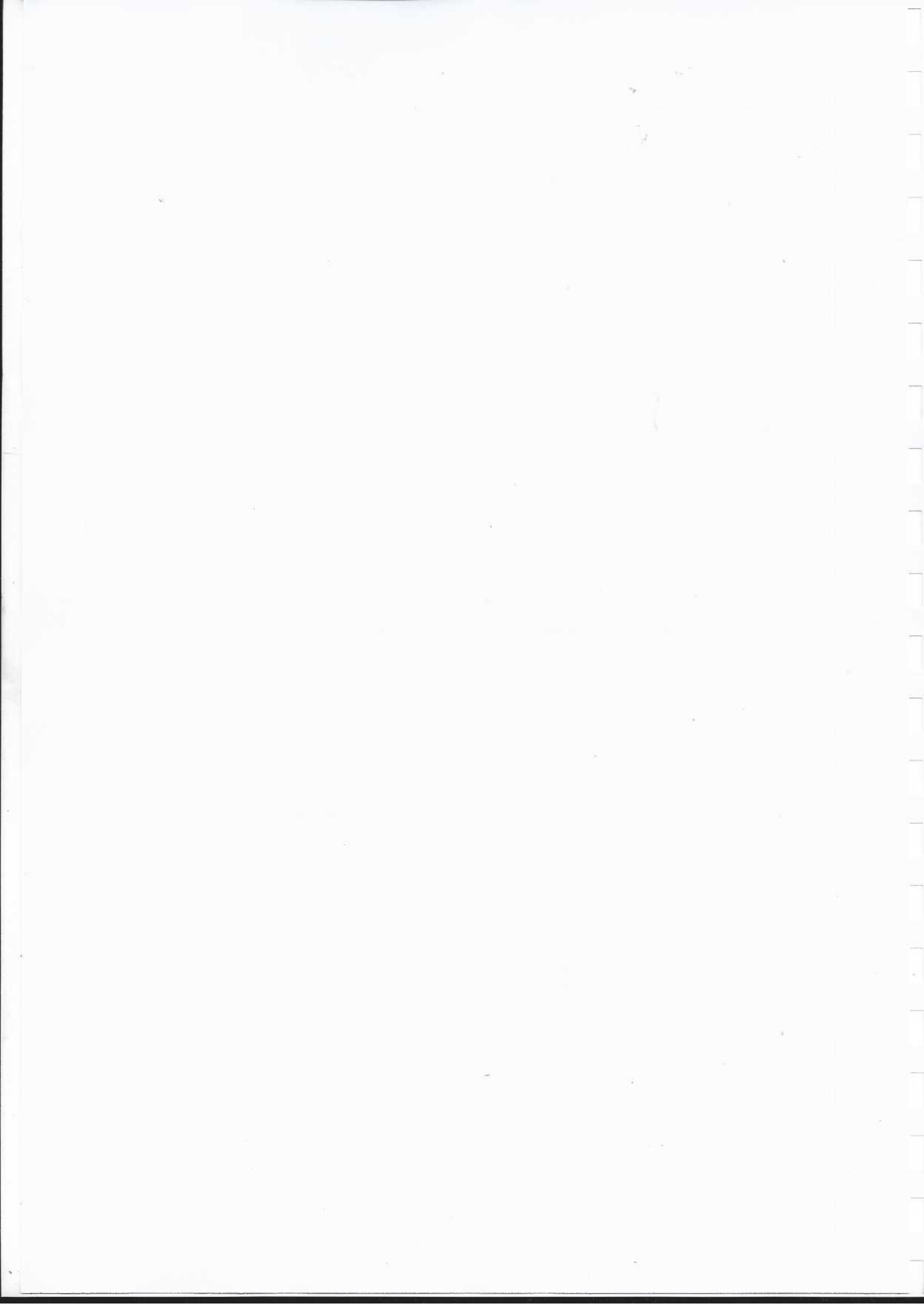
Work through these revision questions as a test of your understanding of this chapter. We suggest that you attempt these before tackling the written questions. Please note that suggested answers are not provided as the chapter's text contains the answers.

1. May a SASRIA coupon be cancelled?
2. What is the prescription period under SASRIA cover?
3. What four groups of workers are not covered under the COID Act?
4. What is meant by the concept of bancassurance?
5. What is the main disadvantage of group insurance schemes?

Written questions

Attempt these questions after you have completed this chapter and its revision questions. Suggested answers to these questions are at the end of this book.

1. A client has asked you to arrange Employers' Liability cover for him. Explain the position to him with specific reference to the COID Act.
2. List the different categories of SASRIA coupon and explain which coupons require an underlying policy and which do not.
3. Explain the procedure for handling a SASRIA claim, with specific reference to the documentation required.
4. What is the prescription period for the different classes of SASRIA coupons?
5. List the cover available under a travel policy for the business traveller.



CHAPTER 12

CONCEPTS OF ALTERNATIVE RISK TRANSFER (ART)

Learning Outcomes

When you have completed this chapter you should be able to:

- briefly describe what is meant by ART, give examples of its application, and examine the effect upon the conventional insurance market;
- understand under which circumstances may be suitable;
- identify the possible role the capital market may play as an alternative to conventional insurance and discuss its possible impact risk financing and insurance;
- describe the different types of deductibles;
- determine cost effective deductible levels; and
- describe deductible funding policies.
- identify the main types of captive operation;
- describe how captives are set up and operate; and
- contrast captive insurers with self-funding operations, detailing the points of difference;
- describe finite risk insurance;
- describe the major types of finite products; and
- explain capital market instruments.

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12.1 ALTERNATIVE RISK TRANSFER (ART)

Originally, Alternative Risk Transfer (ART) referred to risk handled through the medium of captives and risk retention funds. In this form, it has been in use for a number of years. The needs of modern corporations have since become more sophisticated. Apart from tangible assets like buildings, plant and stock, they need to provide for intangibles, such as intellectual property (copyright and special trade processes) and negative publicity. There are also financial risks and the effect of currency exchange rates to consider.

ART has developed a wider meaning, embracing hybridised products that combine aspects of insurance with financial solutions.

12.1.1 TYPES OF LOSSES

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

- A range of high frequency but relatively small losses which by individually have no particularly disturbing effect on a company's finances. These losses are likely to occur once or more during a company's financial year; Type I loss.
- Then there is a cost range in terms of which the loss effects can impact on the income statement reducing the company profit and thus having a possible consequence of increasing the cost of borrowing the additional funds; Type II loss.
- In a third range, the cost of the loss is extensive and 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 is advisable to transfer the cost of this loss to an insurer; Type III loss.

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. Clearly this stable loss is best paid for out of current revenues. This aggregate cost is retained by the insured. Generally no provision is made to fund this loss and thus constitutes unfunded risk retention. However, in some extreme cases the aggregate costs may be abnormal in which some provision may be made to fund this retained loss.

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 but these losses could significantly impact on the profitability of the insured. 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. This type of loss lends itself to a funded risk retention programme.

DEFINITION

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 and as a consequence management should look for an alternative to carrying the loss through the income statement. Risk aversion requires a strategy to mitigate against the risk.

TYPE III LOSSES

The third loss type covers losses which produce aggregate annual costs in excess of those in the first two loss types and hence this type of loss can be dealt with via insurance.

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

Figure 12.1
Loss types and predictability

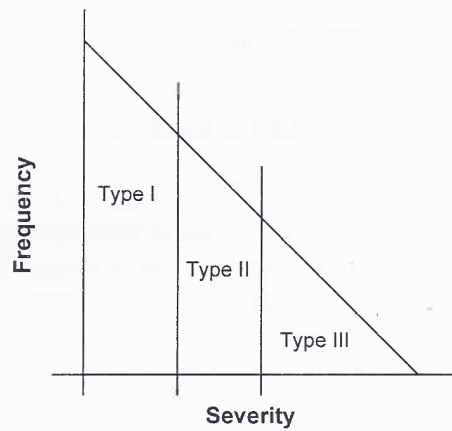
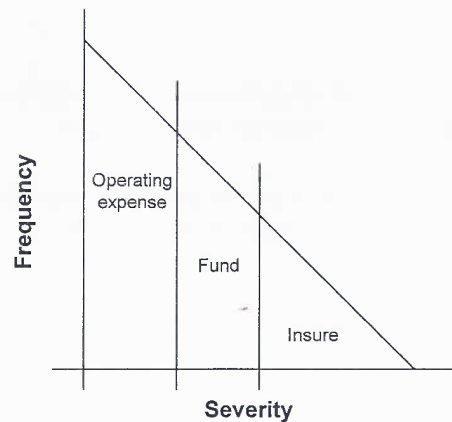


Figure 12.2
Loss types and insurance



The above two diagrams show that the cost of insuring the highly predictable losses (high frequency and low severity) is high. Can you think why this is so?

We now come back to the question why companies decide to use their own funds to finance particular losses. The main answer to this question 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 rands to which insurance companies may add as much as 40%. The objectives of retention-funding are more fully discussed below.

12.1.2 UNFUNDED RETAINED RISK (FRR)

As indicated above as a rule Type I losses will be retained with no specific plan to fund these losses. These are unfunded retained risks (Valsamakis, Vivian, & Du Toit, 2010, p. 239).

12.1.3 FUNDED RETAINED RISK (FRR)

FRR is any plan of risk retention in which a programme or procedure has been set up to fund losses when they occur. It provides finance or creates facility to pay for losses (Valsamakis et al., 2010, pp. 241–42).

Sometimes this is referred to as self-insurance, but this is not really correct. A pool is created, but usually there is no spread of risk.

Risk retention programmes are suitable for Type II losses where aggregate annual losses can be fairly accurately predicted. This is economically more efficient than insuring these risks, because the insurer must also allow for expenses and commission, and a measure of profit.

Risks might also be retained where conventional insurance is difficult or unavailable, or the premiums are perceived to be too high.

The following are some practical considerations.

SIZE OF THE FUND

The fund can be exhausted by unanticipated losses before it has become fully established and reserves built up, or afterward because potential risks were underestimated.

If the fund is too small, the enterprise must fall back on post loss financing, such as debt, which may be expensive in terms of finance and transaction costs. There will also be time delays that interrupt the business.

If the fund is too large, it represents a waste of the cost of capital, because excess funds might have been more profitably invested elsewhere.

ADMINISTRATION COSTS

It is necessary to keep proper records of cash flows and losses so that these do not escalate out of control.

In some self-funding schemes, the insurance broker undertakes this in return for a service fee.

We have also mentioned the cost and time delays involved in raising additional funds, should these be urgently needed.

COST OF CAPITAL

An advantage of insurance is that it frees the insured of the need to create large reserves.

Funding does not mean that the losses go away, it merely shifts the cost to another accounting "label".

Funds that have to be kept available in FRR might be better used in other investments, or employed in the undertaking.

From the tax aspect, premium paid to an insurer is a tax-deductible business expense. On the other hand, the losses that deplete the retention fund would also be claimed as tax deductions, so the end position is the same.

However, accumulating an extra reserve, as might seem sensible to do, is not tax efficient.

12.1.4 OBJECTIVES OF RETENTION-FUNDING

TO REDUCE INSURANCE COSTS

By reducing the risk that is insured, in other words by retention-funding the predictable losses explained in the previous section, the premium expenditure is reduced. The insured risk can be reduced by excluding the peril from cover in terms of the insurance policy cost of the insurance policy (i.e. by fully providing for the loss from own funds, or by participating in the cost of loss). Such participation could be either of the following:

- proportional - the insured agrees to pay, say 10%, of every loss. For this the insured receives a 10% discount on premiums. This concept is also known as "co-insurance"; and
- non-proportional - the insured undertakes to pay an agreed amount for every loss. If the loss is less than this agreed amount, the insured pays the full amount of the loss. If the loss exceeds this amount, the insured's share of the loss is limited to the agreed amount.

The insured's share of the loss is known as the "deductible" or "excess".

TO IMPROVE CASH FLOW

Premiums are normally payable on the first day of the insurance cover. This means that the insured loses the benefit of cash flow whether loss is suffered or not. If the loss or risk is self-insured, loss payments are only made if the loss actually happens and only when the quantum and liability have been finally agreed.

TO PROVIDE THE OPPORTUNITY TO EARN INVESTMENT INCOME

If risks are self-insured, the cost of losses is paid at some future date. Funds set aside to meet such liabilities earn investment income. Depending on the timing of the loss payments, up to 50% of the loss costs may be earned as investment income on outstanding claims reserves. The longer the delay in settlement, the greater the investment income will be.

TO INCREASE THE SCOPE OF RISKS FUNDED

Self-funding provides the opportunity to finance a wider range of risks. Insurance policies generally restrict cover to specific insurable and rateable risk types.

12.1.5 HOW MUCH RISK RETENTION CAN A COMPANY AFFORD?

Before a decision is taken to retain losses, the extent of the company's risk retention has to be determined, and then the extent of the available resources to pay for potential losses. The company's ability to absorb losses is determined by considering the following financial factors:

- working capital;
- total assets;
- earnings;
- earnings per share; and
- sales.

Working Capital

The first and perhaps most critical factor to be considered is working capital, because this factor reflects the liquidity of a company and its ability to handle current obligations. As a guideline, 1% to 25% of the company's working capital offers a measure of loss assumption. When a company cannot easily liquidate current assets, 1% of its working capital could be set aside to finance losses.

Conservatism is also indicated if the relative liquidity of the working capital fluctuates considerably throughout the year, in other words if the working capital is heavily strained at the end of the sales cycle because of concentrated receivables, or strained at the beginning of the sales cycle because of a concentration in inventory. In this case, the proportion of working capital allowed for loss assumption should be adjusted to the lower end of the scale.

Conversely, 10% to 25% should be used when a company has a very liquid working capital position - that is cash or cash equivalents or accounts receivable that turn over regularly and predictably.

Total assets

The ability to absorb losses may also be determined by deciding on the proportion of total assets available to finance losses. A range of 1% to 5% of total assets is considered practical. The low end of the scale would apply to an entity whose assets are already highly leveraged and illiquid. The high end of the scale applies when a company has a high concentration of liquid or unmortgaged assets.

Earnings method

To obtain an indication of a company's ability to fund losses through earnings, the risk manager should consider current earnings and the entity's previous five years' earnings record. The suggested range of values is 1% to 3% of currently retained earnings plus 1% to 3% of average pre-tax earnings over the preceding five years.

In contrast to the working capital and total assets approaches, both of which are measures of the short term ability to raise funds, the earnings method is long range in nature. It relies on the underlying earning power demonstrated by the company's history as the ultimate source of funds to provide for losses.

Earnings per share

The effect of self-funding losses on the company's earnings per share is normally the most tightly constrained measure of its loss assumption ability.

The earnings-per-share guideline is used as a conservative measure to ensure that self-insurance does not over-extend a public company or public entity to a point where earnings per share or current budget would be impaired by a large loss in a single financial reporting period.

The normal level of loss assumption is 10% of earnings per share for a public company, and 10% to 15% of the expected excess of revenue over expenditure in a public entity. The proportion is totally subject to the company's management's discretion, based on the perception of what is required by investors in a particular industry.

Sales budget

The final earnings indicator is based on the sales budget, with a range of 0,5% to 2% of the company's annual sales or revenue. This indicator measures a company's ability to generate revenue and must be tempered by other indicators to develop a valid measure of its loss assumption ability. The 0,5% applies to a company engaged in a high volume, heavily leveraged operation. The 2% in all probability applies to a manufacturing or service operation, because its profit margins are traditionally higher.

These indicators of financial ability to assume loss are applied in terms of the constraints of the entity's general attitude to risk. Computation may produce widely different figures. For example: The working capital approach could yield R1 million in loss assumption ability, total assets of R2 million, the sales budget R3million, and earnings per share R0,5million. The company's management may then be willing to pay the insurance premium to transfer risk in excess of R0,5 million because of its commitment to shareholders pertaining to the stability of earnings. An additional cost of R0,5 million variation in profit caused by an uninsured loss or a series of uninsured losses, would be unacceptable to investors.

Another company's board may take a more liberal view and elect to assume a higher possible variation in earnings. Such seemingly different views on or interpretations of the same set of data stem from "risk aversion". This is a function of a company's attitude to risk, its management style, and even its culture. Risk aversion cannot be measured, and no single rule of thumb exists to cover all possible attitudes. Any analysis or recommendation has to include all the options from which management and the board of directors can make a decision.

The company's ability to assume risk is evaluated in accordance with the above guidelines. When a programme is implemented, the risk manager should be aware of insurance companies' risk-rating plans and whether these plans allow an insured to assume varying degrees of risk and to receive premium reductions or refunds based on actual loss during the insurance period.

When this approach is followed, it becomes possible to stabilize loss exposure over time and to maximise the effectiveness of the insurance-buying function of risk management.

If an insured company increases the amount of expected aggregate losses it wants to self-insure, it is reasonable to expect its insurance premium payments to drop. This trade-off should continue as long as the company receives at least proportional reductions in its premiums. It is the introduction of the company's particular financial constraints that produces an immediate improvement in some of the existing standards for setting retention levels.

12.2 RISK RETENTION FACILITIES

Risk retention means that a company intentionally or unintentionally decides to retain the financial consequences of losses for its own account. This section looks at common facilities which can be utilised to fund retained losses. In the case of "funded retention", a special facility is created to fund these losses, such as a captive insurer. "Unfunded retention" is when losses are funded from current income.

12.2.1 WHAT ARE DEDUCTIBLES?

A logical first choice for a company wanting to retain some of its risks, is the deductible approach. Deductibles as retention facilities are discussed below.

A "deductible" is the part of an insured loss a company retains for its own account. The deductible is subtracted from the amount the insurer reimburses the company for a loss. The larger the deductible, the larger the proportion of self-funding will be. Deductibles range from small amounts to millions of rands.

An extensive deductible programme may offer many of the advantages of a self-funding programme, without increasing the internal expenses that accompany the establishment of, for example, captive insurance companies. This is because the insurer provides all the necessary administrative services and pays all the claims. The insurer then bills its client for amounts that fall within the policy's deductible. For many companies, full retention of losses maybe neither advisable nor desirable (see the previous study unit for determining the extent of self-funding). More specifically, the use of a deductible, offers the insured cash-flow benefits and cash-flow protection.

- **Cash-flow benefits** - in terms of a deductible arrangement, the insurer offers a discount on the full premium cost to the insured in return for the insured's contribution to the cost of a loss. It is in the insurer's interests to transfer losses at lower levels because of the disproportionate administrative costs associated with losses. The benefits to the insured are that the company receives immediate savings and increased cash flow.
- **Cash-flow protection** - the capacity to self-fund losses is constrained by liquidity and time. The shorter the time frame, the lower the tolerance for interruptions to cash flow. For example: The number of losses a company can fund in a year exceeds what it can fund in a month. The longer the period, the more funds can be built up. The longer period also reduces the variability of the losses experienced monthly. Using a deductible places a ceiling on the amount the company has to contribute to settle each loss, and reduces the disruption of cash-flow.

Extensive deductible programmes are flexible in that they can be tailored to fit the risk an insured is comfortable retaining, and they make provision for unbundling services to the insured.

12.2.2 TYPES OF DEDUCTIBLES

The concept of "deductible" requires the insured to bear a portion of the losses arising from pure risk exposures. These may be losses from a single event or over a specified period. Each arrangement has a different effect on the distribution of losses retained by the company.

The following are the main forms of deductible:

- **Straight deductibles.** The straight deductible is one of the simplest and yet most effective deductibles in use. It applies to each loss and is subtracted before a loss payment is made. One example is a R1 250 deductible for vehicle collision losses.

ACTIVITY

Terry Kumalo has a minor accident in her brand new car. The damage comes to R1 000. What will the insurance company pay Terry if

- a R1 250 straight deductible applies?
- the loss results in a R5 000 repair bill?

Answer

- A R1 250 straight deductible will eliminate recovery from her insurance.
- If the loss amounts to R5 000, the insurance will pay only R3 750, which is the difference between the R5 000 loss and the R1 250 deductible.

The straight deductible eliminates the expense of processing all losses less than the deductible. However, it also makes the insured absorb part of every claim that is paid, reducing the hazard of fraudulent claims in this manner.

- **Aggregate deductibles.** Another type of deductible is the aggregate deductible, which applies for an entire year. With an aggregate deductible, the insured absorbs all losses until the deductible level is reached. At that point, the insurer pays for all losses over the specified amount. The aggregate and straight deductibles are sometimes used together.

FOR EXAMPLE

A company's property insurance policy may have a R5 000 straight deductible, subject to an aggregate deductible of R100 000. With this combination, the company would never pay more than R5 000 on any one loss and would not absorb more than R100 000 in total property losses during the year.

If only a straight deductible of R5 000 applied, the company would have a potential liability considerably in excess of R100 000 if numerous losses less than R5 000 occurred and totalled more than R100 000.

Compared to the straight deductible, aggregate deductibles are not as successful in eliminating the cost of processing small claims, because all losses will likely be reported to the insurer for credit towards meeting the deductible. In addition, because losses may be fully paid after the deductible has been met, the ability to reduce the morale hazard is not as great as in the case of the straight deductible.

- **Disappearing deductible.** When a disappearing deductible is used, the size of the deductible decreases as the size of the loss increases. Finally, at a given level of loss, the deductible completely disappears. The reduced deductible is due to the fact that losses are adjusted in terms of a formula. For example:

formula:

$$P = (L - D) \times (1 + R)$$

where

P = payment by insurer

L = loss

D = deductible

R = recapture factor

ACTIVITY

Consider a policy with a R5 000 deductible and a recapture factor of 4%. All losses under R5 000 are absorbed by the insured.

- What would the insurer pay for a loss of R45 000?
- At which loss levels would the deductible disappear completely?

Answer

- For a loss of R45 000, the insurer would pay $[(R45\ 000 - R5\ 000) \times (1 + 0,04)] = R41\ 600$. In essence, the deductible has been reduced from R5 000 to only R3 400, which is $R45\ 000 - R41\ 600$.

- For this set of factors, the deductible will disappear completely for losses of R130 000 or more. If the insured wanted the deductible to disappear at R50 000 rather than R130 000, the recapture factor would change from 4% to 11%, and the associated premium would be higher.

- **Franchise deductible.** A franchise deductible is expressed either as a percentage of value or in rands. When a franchise deductible is applicable, there is no liability on the part of the insurer unless the loss exceeds the stated amount. When the loss exceeds this amount, however, the insurer must pay the entire claim. In insurance for ships and their cargoes, it is common to use a franchise deductible expressed as a percentage of the insured amount. The policy might therefore state, that no loss would be payable unless the loss equals or exceeds 3% of the total value. However, when the loss reaches the 3% level, the insurer is responsible for 100% of the claim.

12.2.3 DETERMINING DEDUCTIBLE LEVELS

Various deductible selection rules exist in the literature. This discussion is limited to the least-cost rule. This rule does not explicitly take financial capacity into account.

LEAST-COST RULE

This rule is based on the proposition that the cost of pure (event) risk to a company is equal to the insurance premium plus the cost of losses retained in terms of the deductible. The initial formulation of the rule assumes that losses are then equal to the full amount of the deductible.

The rule states that the selected deductible should be the one that provides the lowest total expected cost (TEC). This is formally expressed as

$$\text{TEC} = P + qD$$

where

P = insurance premium

D = deductible level

q = average annual frequency of loss occurrences for the exposure

Consider the following example of accident and damage exposure for a commercial fleet of private cars. The premium information is contained in the following table.

Table 12.1
Insurance rates (per vehicle)

Commercial fleet of private cars

Option	Premium	Deductible
1	4 000	0
2	2 900	1 000
3	2 405	2 500
4	1 917	5 000
5	1 375	50 000
6	650	100 000

Additional loss data would be required to judge the value of the deductibles (see Table 12.2 below).

Table 12.2
Loss data for private cars

2012 to 2016
(Adjusted for fleet changes and inflation)

Year	Number of vehicles	Number of incidents	Total cost (R)
2012	2 000	320	820 000
2013	1 700	200	70 000
2014	2 100	480	1 104 000
2015	2 200	640	1 638 500
2015	2 000	360	875 000
Total	10 000	2 000	4 507 500

Analysis of this information reveals the following:

- Average number of incidents per annum 400
- Average annual cost R4 507 500

To apply the total expected cost (TEC) rule, the value of q has to be calculated:

$$= \frac{\text{total number of incidents}}{\text{total number of vehicles}}$$

$$= 2\,000 / 10\,000$$

$$= 0,2$$

OR

$$= \frac{\text{annual average number of incidents}}{\text{annual average number of vehicles}}$$

$$= 400 / 2\,000$$

$$= 0,2$$

The expected cost of the various deductible levels is examined below.

Option	Premium (R)	(qx deductible) = (R)	TEC (R)
1	4 000	0,2 × 0 = 0	4 000
2	2 900	0,2 × 1 000 = 200	3 100
3	2 405	0,2 × 2 500 = 500	2 905
4	1 917	0,2 × 5 000 = 1 000	2 915
5	1 375	0,2 × 50 000 = 10 000	11 375
6	650	0,2 × 100 000 = 20 000	20 650

In terms of the TEC rule, Option 3 with the R2 500 deductible should be selected as it yields the lowest TEC.

This analysis could also be used to judge the reasonableness of the premium discounts for each deductible, as in theory the credits should reflect the expected value of the losses in respect of the deductible.

For example: In the above example, the deductible of R1 000 per car produces a premium discount of R1 100 (R4 000 - R2 900). The question is whether this is reasonable in the light of the company's loss experience.

To answer this question, we need to identify the portion of the received premium the insurer uses to meet claims after expenses and other costs have been deducted. This is known as the "pure risk premium". If we assume an expense ratio of 25% of the gross premium, the pure risk premium would be

$$R1\,100 (1 - 0,25) = R825$$

The insurer is therefore charging R825 for R1 000 of cover. This means that the insurer's figures indicate that 82,5% of all losses are less than R1 000. This figure provides a measure by which the insured can judge the premium discount.

If the company's experience indicates that losses of less than R1 000 comprise less than 82,5% of the distribution of its total losses, the company should self-insure because it is being charged more for these losses than they actually cost. If the ratio of losses exceeds the 82,5%, insurance cover should be purchased as the cost of insurance is less than the actual cost of losses.

12.2.4 DEDUCTIBLE FUNDING POLICIES (CONTINGENCY RISK POLICIES)

Deductible funding policies, also known as "contingency risk policies"; are similar to large deductible programmes except that a client's premium is placed in a fund which is used to reimburse the insurer for losses paid within the deductible layer. The fund earns interest at a predetermined rate and, at the end of the contract, any excess is returned to the insured. These programmes are designed as another mechanism to provide more cash-flow benefits to the insured but still allow the insurer a reasonable rate of return.

As the larger enterprises retain higher level of risks for their own account, they restrict their insurance purchases to catastrophe type covers; Type III losses, and this reduces the cost of premiums paid to conventional insurers.

Some insurers have responded to this development and have identified high frequency/low severity risks as niche market opportunities, and have set up special divisions to operate in them. Insurers have a comparative advantage in dealing with insurable losses.

Insureds can set up facilities to deal with Type II losses but instead of writing only the relatively unpredictable high severity exposures, insurers can also administer the funding of the predictable type risks; Type II losses. Basically, the insured "rents" the insurance company's facilities and licence in order to manage their own insurable Type II losses, rather than taking on the expense of setting up its own facility such as a proper constituted captive insurer. Often, this is inaccurately called rent-a captive.

The facility can be explained as layered.

- For the lower, FRR layer, instead of an internally held retention fund financing high/ frequency low/severity losses as they occur, the insurance company takes over this function in return for a premium.
- The second layer is conventional insurance, and provides excess of loss cover for the high severity exposures.

Generally, in competing for these retention funds, the insurer grants cover in excess of what is provided for in terms of total premium. Depending on the contractual agreement between the parties, part of any excess of premium over actual losses may be refundable to the insured, or carried over to help fund the period that follows. In this way there are elements of transfer and pooling, as well as assumption of risk by the insurer.

The insured does not have ownership of the risk financing vehicle. If the insurer failed (became insolvent), the insured would not be entitled to any accumulation of premium that might have built up.

An alternative arrangement is the cell captive where the insured effectively buys an equity stake in the company, but via the shareholding structure each insured's risk retention is kept separate.

12.2.5 UNFUNDED RETENTION

The simplest form of post loss financing, commonly used to fund small routine losses and policy excesses, is to meet these out of the cash-flow of the business. In doing so, there is a danger that their impact on bottom line profit or loss may be ignored, and remedial measures not taken soon enough.

EXAMPLE

Petty theft of hand tools might be written off as operating expenses, but might escalate into the theft of more expensive power tools, and other items. As part of the budgeting process, loss levels throughout the organisation should be monitored, and variations in performance against budget checked, so that the cause of any variation can be identified.

The main disadvantages of using cash flow are:

- the loss has an immediate and full effect on the accounts;
- due to adverse trading conditions, losses being more than expected, or both, sufficient funds may not be available when needed;
- a possible catastrophe; and
- variations in costs from year to year.

An urgent need for extra finance might be met by borrowing, for example, bank overdraft and other loans, or even by an additional share issue, but this depends on the availability and cost, at the time needed. There may also be delays, during which the business will suffer. In most cases, pre-loss financing is the preferred method.

12.3 CAPTIVES

TERMINOLOGY

Captive

A captive is the insurance subsidiary of a non-insurance parent, writing all or part of the (short term) insurance risks of the parent. In South Africa, insurers must be registered in terms of the Short Term Insurance Act and licensed to write specific classes of insurance. Many countries have specific captive legislation in force.

Off-shore captive

An off-shore captive is a captive established in a country other than that of the parent. In some countries, captives can be set up more speedily and at lower cost than that of the parent. There may be advantages to going off shore, although some of these are now disappearing.

Cell captive

A cell captive is an arrangement whereby organisations, effectively acquire captive facilities within another insurer. This obviates the necessity for the parent to set up its own captive insurer. A cell captive can be achieved by the parent, purchasing an equity stake in a licensed insurer. They have the benefit of ownership, as far as their individual cell is concerned, but do not have the very considerable expense of setting up and running their own captive. The administration structure and license can serve a number of insureds, each running their own insurance programme.

Fronting

Fronting is an arrangement whereby risks are insured directly with a conventional commercial insurer, which then, by specific agreement, reinsures a specified portion back to the captive. This usually happens in the case of a particular territory or jurisdiction where the captive is not able to be licensed or is excluded for any other reason, but might also be because the commercial insurer has special expertise or facilities for handling the type of risk. Fronting is not without controversy.

12.3.1 OPERATION OF A CAPTIVE

A large enterprise can form an insurance subsidiary in which it holds the controlling interest. This subsidiary automatically has a captive market, comprised of the insurance business within the enterprise, although use might also be made of other insurers.

Captives operate in the same way as other commercial insurers. They insure, lay off reinsurance, invest funds, render returns to the Registrar of insurance, and have to meet many of the usual overhead expenses.

Local captives must be registered in terms of the Companies Act and the Short Term Insurance Act; registration will not be granted unless the organisation has the financial and management resources needed. Captives are therefore very expensive to set up, but their numbers are growing, both in South Africa and elsewhere.

HOW DO CAPTIVES WORK?

Captives are licenced and registered commercial insurers and thus function as any other insurer does. In other words, they like any other insurer and reinsure and invest funds. The primary difference between captives and other insurers is that captives concentrate on insuring their parent company's risks. The parent company would almost always have good risk-control programmes and procedures in place before it considers self-insurance to a degree that requires using a captive.

Two common arrangements exist for captives to provide cover for a parent company (and subsidiaries and affiliates), namely the direct method and the indirect method.

Direct method. Premiums are remitted directly to the captive insurer which retains the portion it decides to retain and cedes the remainder to other insurers or reinsurers.

Indirect method. Risks are insured directly with a conventional insurer which by specific agreement, reinsures a specified portion, usually a significant portion of the risk, of a particular type or types of cover to the captive insurer. This process is known as "fronting". A fee is generally payable for the fronting. Fronting is an arrangement in terms of which a captive concludes contracts with a direct insurer which is licensed to conduct business in a jurisdiction (where the captive is had not obtained a license or is excluded for some reason) to provide the required cover and then to reinsure some (or all) of the risk with the captive. Fronting is frowned upon and became less common in South Africa after investigated by the Melamet Commissions (Melamet-I, 1986). After the commission Guardrisk was formed and the tendency has become to either establish a captive insurer or to make use of a cell captive.

It is not uncommon for a parent company to have more than one captive insurer. Examples are: one for property and one for casualty, one for domestic and one for foreign, and one for deductibles and one for excess reinsurance.

REASONS FOR ESTABLISHING A CAPTIVE AND CAUTIONARY COMMENTS

- Business expenditure, both of a capital nature and day to day, on risk control to minimise or eliminate risks are not compensated for by insurance premium reductions, although some reductions do materialise. The reason is simply because insurers have no practical way of verifying the effectiveness of the risk control programmes of each and every one of their clients, and their business philosophy is that the premiums of the majority help pay for the losses of the minority. So, if an owner believes that his own losses are likely to be less than conventional insurers' calculations of premium rates demonstrate, the owner must self-insure to get a payback for his risk control expenditure. The owner would object to sharing the cost of losses of inefficient businesses.
- The insurer's expectation is that premiums will cover claims for losses, with the addition to the premium of an administration cost and an underwriting profit margin. In addition, the insurer expects investment income on premiums before they are repaid as claims. A well-designed self-insurance programme using a captive should lead to most of these benefits accruing to the owner instead.
- Insurance markets go through cycles, often giving rise to hard and soft premium rates that are quite unrelated to individual, industrial, national or worldwide claims experience. More often than not, these fluctuations are due to "noninsurance" factors such as investment income and interest rates. This inconsistency disturbs insurance buyers because it makes accurate budgeting and planning difficult. It also increases the administrative burden because inconsistency frequently promotes changes in brokers and insurers. Using a captive, however, should minimise or eliminate frustration caused by noninsurance factors as the captive provides some refuge from volatile and inconsistent commercial insurance rates. The problem of protected insurance markets crops up in the same context. These generally arise when governments try to develop a local insurance industry and/or want to preserve foreign currency resources. In such a situation claims experience and competitive market prices have little to do with premium rating. In these circumstances a local owner would probably have no option as to where insurance may be purchased, and using captives is either restricted or prohibited. In the case of a multinational with a local subsidiary, the only option would probably be to deal with the local insurer to reinsure the balance over its own retention to the multinational captive so as to ensure some control of and influence over its subsidiary's covers.

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- In conventional insurance markets, the standard covers on offer are sometimes inadequately or incorrectly designed for special situations, and from time to time there may also be unacceptable exclusions. To purchase difference in conditions (DIC) covers for these and for risks that are not normally insurable is often an expensive exercise. In these situations, a captive, especially a joint interest or association captive, is usually the best solution to obtaining economic coverage. Such a captive is the ideal mechanism for "assigned risk pools" (i.e. to meet the special or unique needs of a particular industry), and industry members together contribute to an insurance fund for their own common but special risks, for example those of physicians/hospitals/clinics where the captive is known as a "bed pan mutual".
 - The flexibility obtained from direct parent control of decisions in a captive provides advantages that are not easily obtainable from conventional insurers. The following are key advantages:
 - cash flow - premiums are normally paid up front to the insurer, and the payout period for claims can extend over years. With a captive, premium payments can be scheduled to be more cost and loss-related and the parent will benefit directly from investment income;
 - interpretation - depending on the reinsurance arrangements, the interpretations of policy wording and timing of claims settlements become internal decisions; and
 - cost - the size and cost of administration is directly controlled and limited to the absolutely necessary. Some functions may even be handled by existing corporate staff. Clearly other functions such as sales and marketing fall away.
 - The size of the parent and the nature of the captive's business often enable direct access to reinsurance markets. This means that
 - reinsurance commission, which traditionally accrues to insurers, is eliminated or accrues to the benefit of the captive; and
 - reinsurance premiums do not have to cover costs such as marketing, debt collection and engineering services, and are therefore proportionately lower than those of a conventional insurer.

Other benefits of direct access to reinsurers:

- premiums can be negotiated to relate more directly to the insured's own risk and experience; and
 - there is a more flexible and accommodating attitude when underwriting unusual risks is considered.
- Noninsurance businesses uphold accounting standards and conventions covering treatment of possible losses from contingencies. Generally, a charge can be made against income if, firstly, events demonstrate asset impairment or that a liability has been incurred, and secondly, the loss can be reasonably estimated. If neither of these conditions is met, "income" may not be charged and only a note on the contingency is permitted. Obviously an appropriation from retained earnings cannot be prohibited, but such appropriation would have to be shown with shareholders' equity on a balance sheet. This is clearly unsatisfactory if the business is to self-insure meaningful losses successfully. The above does not apply to an insurer who is obliged to provide for contingencies by way of charging against income. There are methods for quantifying the provisions required from insurers but these fall outside the scope of this module. These obligations also apply to a captive as an insurer and so using a captive ensure proper accounting and financial practice in a self-insurance programme. A noninsurance business may charge insurance premiums against income for accounting and tax purposes, and claims proceeds paid by insurers are then dealt with on a simple capital and revenue basis.

However, if no premiums are paid, self-insured losses are in all probability required to pass the deductibility tests of capital and revenue.

- In most countries, onerous statutory and regulatory controls apply to insurers, ranging from issue (or not) of registration as an insurer, obtaining a licence for specific classes of insurance, maintaining a minimum solvency margin, or operating a full blown solvency management programme, submitting regular returns covering various or all aspects of the insurer's business activities, control of or limitations on transferability of funds to foreign insurance and reinsurance markets, and control and direction with regard to the investment instruments used. The nature of captives permits an almost unlimited choice of domiciles with less supervisory systems specifically tailored to captive insurers.

Some countries specifically create, by legislation or lack of legislation, an environment which is attractive to captive managers because of fewer controls and restrictions. These naturally include tax-free or nominal tax situations so that captives are able to build up reserves faster.

- The success of captives established for the above and possibly other reasons are realities that can easily be verified. In addition, expertise derived from the range of experiences, techniques, skills and consultancy services relative to owning and managing captives, is common knowledge and can be acquired fairly economically. These two factors are powerful reasons for the increased use of captives and for the expansion of services in different countries to advise on and manage captives.

Establishing and using a captive should not under any circumstances destroy relationships between insured and insurer. Conventional insurers do provide a range of real and valuable services to their clients (e.g. claims assessing and administration, risk surveys and engineering advice). Moreover, some risks are probably best left to the professionals, for example "long-tail" risks such as product liability, product contamination and public liability where time exposure and values have practically no limit. This also applies to catastrophe-type losses.

It is doubtful whether all captives and their managers are always cleverer than the conventional insurance and reinsurance markets. They are certainly not immune to and cannot ignore market trends.

It appears from the available statistics that there are some 3 000 active captives in the world (excluding "rent-a-captives" and their clients). In fact, this is a minuscule number relative to the world's insurance requirements and this, among other reasons, clearly indicates that captives only belong in the realm of large insurance portfolios.

CAPTIVE DOMICILE

The governments of a number of fairly small countries (and some states in the USA) have, for economic reasons, deliberately created a positive and supportive environment for captives to settle in and operate in or from their jurisdictions. The most important features of the supportive environment are easy entry and licensing facilities, minimum controls, restrictions and statutory returns, and certainty about taxation (usually tax-free or nominal taxes). This environment has also encouraged all the peripheral support mechanisms and services required to manage captives successfully.

12.3.2 CAPTIVE MANAGEMENT

FEASIBILITY STUDIES

As for any other project or business, a feasibility study is required to test and verify the viability and competitiveness of the captive and, as for the total risk management function; it has to be reviewed regularly.

It is necessary to determine whether using a captive is preferable to existing or alternative insurance and financing options. In other words, would the cost and quality of coverage to be provided by the captive (including operating costs plus reinsurance costs as may be required to limit or stop losses at predetermined levels) be better than those obtainable from commercial insurers? Also, would it produce net underwriting and investment income as payback for risk control expenditure?

It was stated above that insurance markets have historically been subject to business cycles which consequent "hard" and "soft" premiums. It is reasonable to assume that those cycles will continue and also that the fluctuations will not only be caused by pure underwriting factors. Consequently, and notwithstanding the fact that a short term view is also important, a captive should be viewed and used as a long term supplier of a special financial service.

Key input factors to the feasibility study

- An effective and appropriate risk control programme must be in place in the insured's business and must have proven statistically to produce a better (lower) than average loss experience.
- Statistics covering risk financing costs and loss experiences must be available for at least a three-year period.
- A decision is required about the nature and limit of risks to be insured in order to determine the equity capital and the premium income needs. To arrive at such a decision, a detailed analysis is required of the characteristics of the various risks to which the company is exposed and of unsatisfactory features of existing insurance arrangements (e.g. unprotected exposure).
- Under ordinary circumstances, the losses that are self-insured tend to be those which, but for a good risk control programme, occur frequently and predictably, with catastrophes reinsured by professional insurers. Likewise, captive operations do not usually take on "long-tail liability" risks because of the complicated methods required for determining premiums and provisions and their open-ended time element. Nevertheless a number of captives have been established specifically and exclusively to underwrite liability risks when the available commercial cover is inadequate, with too many exclusions and mandates, uneconomic premiums and capacity limits.
- In the case of joint interest and multiparent captives, some forethought and agreement are necessary on how premiums will be adjusted to reflect individual experiences, the extent of premium adjustments, and whether funding will be on a post-loss or prior-loss basis.
- Establishing the amount of capital the captive requires is critical and affected by objectives relating to:
 - the intended exposure to large individual losses and/or accumulations of losses from one event and/or accumulations of losses in any insurance period and the availability and cost of excess insurance/reinsurance;

- the net retained risk and the net premium to be received;
 - new capital or a borrowing facility; and
 - the rate of return expected on capital invested.
- Establishing the security of the insurers and reinsurers with whom the captive may conduct business is a complex insurance-cum-financial exercise which is best dealt with by specialist brokers. In this case a ceding company will probably insist on approving the captive's reinsurance arrangements, including security, and may also require clauses in the agreements that allow direct access to the captive's reinsurers. The ceding company may also require guarantees or indemnities from the parent.
 - Finally, the exercise should culminate in a projection of premium income and claims (both gross and net), cash flows, investment income, and net operating profit.

MANAGEMENT – OWN OR EXTERNAL

The question whether a captive should be managed by employees of its parent or by an external team is relevant to those who do the feasibility study and those who assume ongoing management responsibility.

Introducing a captive into the risk-financing structure does not eliminate or reduce normal insurance documentation and procedures. It remains necessary to decide on the risks to be covered, assemble the sums insured, enter into contracts (policy), pay premiums and prove claims.

Consequently the team would have to come from the financial, legal, insurance, broker, loss adjuster and risk control functions and services. Clearly the degree of company management involvement will depend on which of those functions and services it has in-house. If the parent company's staff is available and competent, they should participate with external consultants.

Apart from a board of directors, which is responsible for the direction and control of the captive, staff will be required for the following activities:

- insurance and reinsurance. Together with brokers, staff will be required to negotiate terms for business inwards and outwards;
- administration. Staff will be required for administration, accounting, finance and investments; and
- legal and auditing. Staff will be required to ensure compliance with external regulations, internal controls, preparation of policy documents, and claims settlements.

12.3.3 CELL CAPTIVE COMPANIES

See also (Valsamakis, Vivian, & Du Toit, 2010, Chapter 11)

Description

Instead of the parent company establishing its own captive insurance company it can make use of a cell within an insurance company which specializes in providing cell-captive facilities. In South Africa, Guardrisk is the most well known company which provides this facility although other insurers can provide similar facilities.

Advantages

Operating an insurance company has become a complex matter, confounded in recent years by complex regulatory requirements. The need for a separate insurance company can be avoided if the risk is placed in a cell via a cell captive insurer. Some countries such as Guernsey and Gibraltar have Protected Cell legislation (Feetman, n.d.).

12.3.4 ADVANTAGES AND DISADVANTAGES OF CAPTIVES**ADVANTAGES**

The advantages of risk retention measures also apply to captives, but in addition:

- premiums to captives are tax-deductible as a business expense;
- the captive is a separate entity, within the corporate group, the individual balance sheets of the companies within the group are not directly affected by losses;
- captive insurers have free access to the reinsurance market, giving them some spread of risk, the capacity to handle large exposures;
- by setting up a proper insurance subsidiary, the organisation can directly control overhead expenses and the delivery of services such as claims management, loss control, and technical support; and
- as with retention, the organisation stands to benefit more directly from risk control improvements, is less affected by cyclic variations in the insurance market, and is able to make its own arrangements for some types of cover which the commercial market is unable or unwilling to provide.

DISADVANTAGES

The main disadvantage is the high cost of establishing a captive.

There may also be a limited spread of risk.

12.4 FINITE RISK INSURANCE AND CAPITAL MARKET INSTRUMENTS

Capital market instruments are used to provide funding for catastrophic-type losses.

A tremendous need for risk transfer mechanisms has arisen over the last decade as a result of changing demographics in the United States. A redistribution of population and wealth occurred in the high-risk catastrophe areas such as California, Florida and Texas. At the same time companies began to realise that the insurance industry has only about \$150 billion net worldwide capacity to cover American property.

Now consider that Hurricane Andrew caused over \$15 billion in insured damage in 1992, the Northridge earthquake caused \$12,5 billion in 1994, and Hurricane Hugo caused \$4 billion in 1989. The extent of these catastrophes suggested that more capital was required to cover catastrophe-type risks. In response to this, the US market started to develop risk-financing instruments that use funds available in the capital markets to provide protection against the financial consequences' of these risks.

12.4.1 FINITE RISK INSURANCE

CHARACTERISTICS OF FINITE RISK INSURANCE

Finite risk insurance is an alternative form of risk financing technique where insurance and self-funding is combined, with emphasis on the time value of money (Valsamakis, Vivian, & Du Toit, 2010, Chapter 13).

- Conventional insurance underwriting constructs a portfolio of similar risks, for a large number of individual clients. Normally, the duration of the individual contract is one year or less.
- Finite risk underwriting constructs a portfolio for a single client out of a number of years of exposure (typically five or ten).
- Instead of the many sharing the losses of the few, the good years must offset the bad ones.

Financial insurance and reinsurance (finite risk) transactions are used extensively by many insurance companies to help stabilise earnings by spreading the peaks and troughs of annual losses over a much longer period.

They are now also recognised as a possible mechanism for major corporate buyers, particularly when faced with unusual risks that do not fit conveniently into a conventional insurance portfolio. Finite underwriting can try to deal with these on their individual merits.

The usual distinguishing features of these contracts are:

- the contract has an aggregate (finite) limit of cover;
- there may also be sub-limits to prevent the full limit being drawn down too quickly;
- policies are long term, with total cost based on a combination of claim payments, instalment premiums, and the investment income earned over the policy period; and

- typical premiums are higher than comparable conventional insurance (where this is available), but there is usually a commutation option offering a substantial return of premium to the insured if loss experience under the contract is low.

The approach is unsuitable for high-frequency predictable losses. Low probability high severity catastrophe exposures, on the other hand, would need a much longer policy period, if the premium cost were not to be unacceptably high.

In the same way, very large indemnity limits could become too expensive when expressed in multi-year terms for a single client.

Do you remember that we defined risk financing as arranging a source of finance to provide for the fortuitous losses of a business? Retention is a subset of the available funding alternatives to cater for the financial consequences of losses. It usually refers to a set of financing alternatives other than insurance, although (as you will see in the next topic) some of the alternative risk-financing techniques combine retention with insurance as a funding alternative.

You may ask why companies would prefer to fund losses themselves if they run the risk of depleting their reserves when insurance is available and has been the principal risk-financing technique for some time. To understand this, you have to consider the nature of losses.

The most important characteristic of finite risk insurance is the insurer's limited (finite) risk assumption. In finite contracts the insured transfers the risk of an unexpectedly rapid settlement of losses from the loss reserve to the insurer, but the insurer's liability is limited to a predetermined amount. The insured is responsible for losses above this predetermined amount.

Another distinguishing feature of finite contracts is that the contract period runs over several years. This reflects the fact that risk managers' problems do not fit into one-year intervals. The insured benefits from long term cover under favourable terms, and finite insurers benefit from a continual flow of premiums.

Another feature is that a substantial portion of the profits that accrue over the multiyear period is paid back to the insured. The insured receives compensation for the limitation of risk through proper risk control.

The expected investment income is also explicitly considered when the premium is calculated. The time value of money is taken into account, and the insured receives the benefits of the investment income from the funds paid to the insurer.

Finite insurance or finite reinsurance differs from conventional insurance in the following respects:

- finite insurance contracts are multiyear contracts. Conventional insurance is normally contracted for one year only;
- the finite insurance contract has an aggregate limit of cover so that the insurer's exposure is limited to the amount of aggregate cover offered (hence the term "finite insurance"). This also differs from conventional insurance contracts where the exposure of the insurer is usually unlimited. Financial insurance contracts may also contain annual sub-limits to prevent early exhaustion of the entire cover that has been offered; and

- the premiums for typical financial insurance contracts are higher than those for conventional insurance, although similar cover is provided. To offset this higher premium, there is usually a commutation option which offers a substantial return of premiums to the insured if the loss in terms of the contract is lower than the expected losses.

Financial insurance may therefore be viewed as limited cover provided at higher rates, but with substantial discounts for better than expected claims experience.

EXAMPLE

A financial reinsurance policy may offer a five-year aggregate cover of R50 million with a sublimit of R15 million in any year. The annual premium is R6 million with an 80% return of the experience fund at the end of the contract. The experience fund comprises the premiums paid plus investment income less claims payments under the contract.

FUNCTIONS OF FINITE INSURANCE

- The most important function of finite insurance is to smooth fluctuations in the insured's loss experience in the course of a multiyear contract. Finite insurance therefore meets the insured's need for stable, long term cover at calculable prices (Valsamakis et al., 2010, para. 13.4)
- Finite insurance programmes allow the insured to improve and to control key balance sheet figures for captive insurance companies (for example the solvency ratio and the reserve ratio).
- Finite products may be used to increase the capacity to underwrite risk. If a captive's solvency ratio increases, it extends the captive's capacity to underwrite additional risk.

MAJOR TYPES OF COVER

Due to the diversity of the available products, it is virtually impossible to provide an overview of all the financial insurance and reinsurance products. The following is a representative sample from the broad spectrum of conceivable solutions.

(a) Loss portfolio transfers (LPTs)

Through an LPT a risk or captive manager can cede future payment obligations based on underwriting in the past. The insurer (or reinsurer) assumes the cedent's reserves for outstanding losses. The insurance premium approximately equals the net current value of the ceded loss reserves. The insurer also stipulates profit and cost margins as well as a risk premium which reflects the timing and potential reserve risks that are accepted.

LPTs focus on timing risk. Together with the risk reserve, the insurer also accepts the risk relating to the settlement of losses over time. The insurer runs the risk of loss in the event that the settlement of losses is unexpectedly rapid.

LPTs have the following benefits for the insured:

- the balance sheet figures of the cedent are markedly improved. The solvency ratio (the ratio of equity to premium volume) of a captive that agrees to an LPT with an insurer or reinsurer, for example, improves since the ceded liability exceeds the insurance premium. This makes it possible for the captive to write more of its parent's business;
- LPTs enable captives to relinquish particular areas of business, to close the books on them, and to enter new fields;
- LPTs are often indispensable in mergers and acquisitions because they eliminate old risks and reassure investors that old liabilities will not get out of control; and
- the costly and lengthy run-off activities pertaining to losses are avoided.

(b) Adverse development covers (ADCs)

ADCs cover cedents for losses of the past. In contrast to LPTs, however, no loss portfolios are ceded. The focus is instead on the insured's need for cover in excess of the loss reserves. Essentially this involves protection against losses which have already been incurred but not reported (IBNR), and against losses which have been incurred but for which inadequate reserves have been made (IBNER). The insurer accepts part of these risks.

ADCs have the following advantages:

- they provide partial cover against IBNR and IBNER losses;
- they facilitate mergers and acquisitions; and
- they increase corporate value.

(c) Finite quota shares (FQs)

In contrast to the previous two finite contracts, FQs are designed as prospective covers for current and future business. FQs not only focus on improving solvency and increasing underwriting capacity, but also contribute to smoothing the captive's underwriting results (eg by an anticyclical quota share treaty). The basic principle is that the insurer pays the cedent a commission which increases as the loss ratio increases, thus helping the cedent when assistance is most urgently required.

This type of sliding-scale commission is exactly the opposite of the usual commission in the insurance market. The moral hazard linked to this type of contract is avoided by entering into a multiyear contract which allows both parties to balance their results overtime.

FQs have the following advantages:

- they increase and stabilise underwriting capacity for the captive; and
- they smooth the underwriting results of the insured.

(d) Spread loss treaties (SLTs)

The problem many captives and large corporations face is that even though they can reliably estimate the total losses during a future period, the distribution of losses among individual years is uncertain. This gave rise to the development of SLTs. The main purpose of SLTs is to cope with timing risk and to smooth fluctuations in results by spreading risk overtime.

SLTs are characterised by two features:

- premiums are accumulated over the entire term of the contract; and
- losses are distributed over a multiyear period.

The insurer provides advance financing for temporary negative balances on the account, but also runs some underwriting risk because the insured does not have to balance the account fully at the end of the period.

SLTs have the following advantages:

- due to their design features, SLTs smooth the loss experience of the insured;
- SLTs reduce variability in the underwriting capacity of a captive;
- SLTs transfer the timing risk to the insurer; and
- they stabilise insurance costs by insulating the captive (cedent) from reinsurance market cycles.

(e) Guaranteed cost approach

The guaranteed cost approach is a well-known method to combine self-funding with insurance. It is a popular approach that provides stability to the self-funding programme by partially transferring the financial consequences of risk to an insurer. It also provides elements such as risk control and claims adjusting services so that the insured does not have to seek alternative sources for these services.

The guaranteed cost programme is a prospective premium-rated plan in which a fixed premium is established prior to the policy's effective date. The premium is based on market rates and the insured's historical loss experience. Although the premium is fixed, it may be adjusted after the policy expires to reflect significant differences between actual and estimated losses and/or dramatic changes in exposure levels.

(f) Retrospectively rated programmes (retro-rated programmes)

Retro-rated programmes are widely used by companies in the US for their global casualty risk programmes. They differ from ordinary insurance plans in that the premium varies with the insured's loss experience, which allows the insured to directly influence its ultimate insurance cost by means of risk control.

An incurred loss retrospective programme allows the insured to pay a premium which is adjusted retrospectively, based on the insured's actual loss experience. The premium is modified by a formula which contains pre-negotiated minimum and maximum limits. A deposit premium is charged at inception of the policy, and this premium is adjusted when the policy has expired to reflect the actual losses incurred.

A retrospectively rated programme is like a self-insured programme up to the maximum premium. The lower the losses of the insured, the lower the premium. The higher the losses, the higher the final premium up to the maximum limit.

ACTIVITY

1. Draw a graph of the following underwriting experience of a captive insurer:

Year	1	2	3	4	5	6
Underwriting Profit / (loss) R000	0	(10)	19	19	(1)	19

2. Draw another line on the graph to represent the underwriting experience of the captive, but assume that it had a spread loss treaty in place over this six-year period.
3. What do you observe?

Answer

The purpose of the spread-loss treaty is to smooth the loss experience over time. The graph with a spread-loss treaty in place will therefore be much smoother than the original graph.

12.4.2 CAPITAL MARKET INSTRUMENTS

Ten most costly insured catastrophes (Valsamakis et al., 2010, Chapter 14)

Year	Catastrophe	Insured loss \$ Billion
2005	Hurricane Katrina	79.66
2011	Earthquake triggers tsunami in Japan	36.87
2012	Hurricane Sandy	36.12
1992	Hurricane Andrew	27.02
2001	Terror attack in US (World Trade Centre, Pentagon etc)	25.13

Year	Catastrophe	Insured loss \$ Billion
1994	Northridge earthquake	24.46
2008	Hurricane Ike	22.34
2011	Earthquake and aftershocks in New Zealand	16.85
2004	Hurricane Ivan	16.18
2011	Heavy monsoon rains, flooding in Thailand	15.8
Total		300.43

(Statista - The Statistics Portal , 2016)

CAPITAL MARKET

The insurance market has always tapped into the capital markets, albeit indirectly. Insurers are rated according to their reserves and their support from investors. People and organisations that want to share in the insurance business, as compared with taking out a policy, buy insurance company shares, traded on the stock exchange. The return, or profit, depends on the insurers underwriting results and the success of its investment programme.

Pure securitisation, on the other hand, is like slicing the exposure to a particular hazard into manageable sized parcels of risk that can be bought or sold, the price changing according to market conditions. From the investor's point of view, this is an opportunity to diversify - to buy an asset not related to his other investments.

CATASTROPHE BONDS (CATBONDS)

In their simplest form, these instruments provide varying returns to investors, based on insurance events rather than financial events. Assets linked to insurance risks enable investors to improve the return/risk ratio on their portfolios, because there is no correlation between insurance events for the most part and market fluctuations.

CATASTROPHE RISK EXCHANGE (CATEX)

This is an electronic system for trading risk, and improves the links between the capital markets and the insurance industry. CATEX enables licensed risk bearers to swap catastrophe exposures with other subscribers, for example, a California earthquake for a Florida hurricane risk. At the opening of daily trading, the CATEX system calculates a set of hypothetical exchange rates, based on historical claims distributions and latest dealing rates. These relative prices adjust to the actual market situation automatically and within split seconds, so that supply and demand are brought into balance. The Chicago Board of Trade has also launched a complex of catastrophe insurance options.

INSURANCE DERIVATIVES

These instruments pay out as a function of a catastrophe index. The Chicago Board of Trade (CBOT) started trading futures on a catastrophe loss index at the end of 1992.

Catastrophe index futures and options are financial tools that allow the purchaser to offset its catastrophe losses by using capital gains from the rise in the futures index. In other words, the purchaser creates a hedge by purchasing catastrophe futures. If an unexpected catastrophe occurs, the value of the index will rise, and a rise in the price of the future will help to offset the unexpected cost of losses.

Pricing a contract

The CBOT uses the following to determine the price of a \$25 000 catastrophe insurance futures contract:

$$\$25\,000 \times (\text{incurred catastrophe losses} / \text{estimated property premium})$$

ACTIVITY

Assume that the ten insurance companies using the pool experience \$300 million in catastrophic losses during a quarter; that 75% of the losses are reported by the end of the quarter, and that the insurance companies collect \$4 billion in property premiums. Determine the contract price.

Answer

The contract price is:

$$\begin{aligned} & \$25\,000 \times \{(\$300\ \text{million} \times 75\%) / \$4\ \text{billion}\} \\ & = \$25\,000 \times 0,05625 \\ & = \$1\,406,25\ \text{per contract} \end{aligned}$$

Using the contract price, the company can determine how many contracts it needs to hedge its catastrophe risks in terms of the following formula:

$$\text{Number of contracts} = (\text{Earned premium} / \text{contract size}) \times (\text{Hedged losses} / \text{per cent reported})$$

ACTIVITY

A company with \$15 million in earned premiums using \$25 000 contracts could hedge 100% of its potential losses. How many contracts would this company need if we assume 75% reported losses?

Answer

Use the formula:

$$\begin{aligned} & (\$15\ \text{million} / \$25\,000) \times (100\ \text{percent} / 75\ \text{percent}) \\ & = \$600 \times 1,3333 \\ & = 800\ \text{contracts} \end{aligned}$$

CATASTROPHIC-EVENT-TRIGGERED EQUITY PUT

Large companies find it difficult to arrange sufficient catastrophe cover, or are unable to arrange any cover at all because some risks (for example, environmental impairment risk) are uninsurable.

Traditional forms of finance such as loans appear as a liability on the balance sheet and therefore have a negative impact on capital and solvency. Moreover, finance is frequently unavailable when most required (for example, in the event of a major catastrophe hitting the company). One way of solving this problem is for a large, highly rated financial institution to sell a put to a corporation, to become effective following certain specific events. The put, which entitles the holder to sell equity instruments to the institution under certain circumstances, may then be used to provide value after a catastrophic event. The equity that is made available in terms of the put typically takes the form of nonvoting preferred shares. After the catastrophic event, the company must absorb the uninsured loss and this is reflected in the income statement. However, by exercising its put option, the company can restore shareholders' equity and financial leverage/solvency ratios. Essentially the sale of such a put option ensures a supply of standby capital, helping to guarantee the corporation's survival in dire circumstances.

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QUESTIONS ON CHAPTER 12

Revision questions

Work through these revision questions as a test of your understanding of this chapter. We suggest that you attempt these before tackling the written questions. Please note that suggested answers are not provided as the chapter's text contains the answers.

1. State what was originally meant by ART.
2. Briefly state the wider meaning of this term, as used now.
3. Outline the main reasons for this continuing development

Written questions

Attempt these questions after you have completed this chapter and its revision questions. Suggested answers to these questions are at the end of this book.

1. Explain the relationship between the severity and frequency of losses and the funding decision.
2. List the advantages of retention.
3. From your knowledge of insurance and the claims process, what would you consider disadvantages of retention?
4. Distinguish between a straight and a franchise deductible.
5. Why should a company consider deductibles as the first step to retention?
6. Why is a straight deductible considered the most effective to use?
7. Explain why the term "finite" is used to describe finite insurance.
8. Spread-loss treaties are described by some as a savings account with a credit line. Do you agree with this description? Justify your view.
9. Briefly describe the different types of finite cover and outline the advantages of each.
10. Describe the different capital market instruments available to fund losses.