# THE AFRICAN REINSURER


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# EDITORIAL

**Bakary H. KAMARA**
Editor-in-Chief

The world insurance industry was ushered into the 21st century with the September 11, 2001 attacks, following which African markets, faced with the insureds' demand for political risks cover, sought appropriate responses. To that end, they had to adopt a common definition or closely related interpretations of political risks and terrorist acts. The reflection, which had started in the early 1990s, when the wind of democratisation and sovereign national conferences started blowing across the continent, resulted in the adoption of different forms of cover, which have evolved over the years to the extent that risks which were hitherto, expressly covered and therefore could be indemnified have now been excluded. The author of « Issues on the cover of Political Risks », a social and political risks underwriter has shed a practitioner light on that discussion.

This 20th edition of the African Reinsurer has also treated the issue of natural catastrophes, another topic of great concern following the earth warming, the destructive hurricanes of 2005, the Tsunami of December 2004 and several earthquakes which, for the past two decades, have rocked the entire planet including the northern part of our continent. Therefore, the advantage of the initiative taken by Algeria is that it tackles the problem squarely and serves as an avenue for the civic and insurance enlightenment of consumers and citizens. Many African countries should draw inspiration from it.

Another topical issue, which is, "Analysing the Financial Strength of an Insurance Company", has been treated in this magazine together with other traditional issues such as Loss Prevention and the rating of Life assurance. Since these are current preoccupations, the Editorial committee considered it important to include the reflection of African insurance practitioners on these issues within the general stream of the restructuring of the world insurance landscape.

# NATURAL CATASTROPHE INSURANCE PROGRAMME IN ALGERIA

**By**

**HADJ MOHAMMED SEBA**
Director of Insurance, Ministry of Finance, Algeria

## I. INTRODUCTION

The climatic, geological and geophysical conditions in Algeria have left the country highly exposed to climatic imbalance as well as earth and underground movements.

During the last 30 years, earthquakes, floods, storms and earth movements have hit various regions in the country causing significant human and material damages. Earthquake constitutes the most expensive and recurrent natural catastrophe. For example, the loss estimates for the earthquake incidences of El Asnam (1954 & 1980), Mascara (1989) and Zammouri (2003), illustrate the degree of exposure to this hazard.

Other risks regularly occur in exposed areas resulting in significant losses. The flood of November 2001 in Bab El-Oued and the storm in Oran (1980) show the extent of damages that can be caused by such natural events.
Given the effect of these catastrophes and their economic and social importance, the issue of preventing and managing natural risks have taken an ever-increasing importance in public policy within the last 25 years.

Such efforts involve rescue strategy, public financing of losses (natural catastrophe fund), expert research on natural phenomena by science institutes.

Insurance, as a means of preventing and financing natural catastrophes, has so far provided limited support. Covers are only provided for facilities and equipment owned by large and medium size companies. In Algeria, natural events are excluded from covers given under personal and property insurance.
Insurance share in the cost of natural catastrophes cover in the past 20 years, though low, is on the increase. While insurance companies did not contribute to financing the resultant cost of the El-Asnam earthquake, they committed up to AD 500m and AD 4bn towards the flood incidences of Bab-el-oued and the Zemmouri earthquake respectively.

The limited nature of insurance against natural catastrophe stands in contrast with the volume of need for cover, which itself can be measured by the scope and diversity of the risk incurred.

This paradox is attributable to a situation of limited supply and in effective demand. In Algeria, as in other places, the availability of insurance against natural risks is hampered by insurability. Indeed, statistical quantification of possible risks as well as the availability of underwriting capacities remain the main determinants of this insurability.
The propensity for insurance is low. In 2002, money spent on insurance products hardly attained 0.48% of overall household expenditure of Algerians. Social attitudes

towards insurance as a means of prevention and protection are hardly improving.

The facultative nature of insurance, combined with the highlighted financial and cultural constraints, impedes the growth of natural catastrophe insurance.
Thus, with each catastrophic occurrence, there is excessive financial pressure on public expenditure budget from which funds are drawn to cover both collective losses (roads, bridges, social, educational and health establishments) and private losses (houses, commercial centres and personal properties).

Government Act N° 03-12 of 12/08/2003 on compulsory natural catastrophe insurance and compensation for victims has produced an insurance model for natural catastrophe, which attempts to overcome the two constraints that hamper the opening up of natural catastrophe insurance to the general public, namely, finances and social behaviour.

Two issues are involved in this regard:

- Redefine the share of the catastrophe cost to be borne by the community as a whole on one hand and by persons at risk on the other hand.

- Manage in time and space the financial consequences of catastrophes

This paper shall describe the insurance scheme for natural catastrophes and defines the rules that govern them. It covers five main areas:

- Purpose
- Scope of application
- Implementation
- Financing
- Supervision

**PURPOSE**

In addition to providing natural disaster victims with insurance cover that would enable them recoup the economic consequences on their personal property, the proposed insurance scheme has four objectives:

**Increased access to insurance**

Natural catastrophe insurance used to be limited to companies whose assets were partly covered by foreign reinsurance. Properties belonging to individuals or small-scale enterprises only received minimal cover. The situation was a result of a weakness in both demand and supply relative to the factors mentioned in the introduction.
Compulsory insurance will stir up insurance awareness but also allow for a proper distribution of cost to the exposed population. Therefore, based on the number of insured persons, the unit cost shall be as low as possible.
The interest of the insured is at the core of the principle of compulsory insurance. The geographical distribution of insured assets is a prerequisite for achieving a balanced portfolio in an insurance company because it brings together average costs and frequencies, which form the basis of actual cost of insured risks. Consequently, the insurance companies' interest is also strongly tied to the principle of compulsory insurance.

**Combine individual preparedness with national solidarity**

The consequences of natural catastrophes in human and economic terms call for a strong and efficient mobilisation of the whole nation. This can be achieved when the majority of citizens as well as institutions in charge of managing such risks participate in the prevention, reduction and repair of losses after a disaster.

Effective mobilisation is achieved through technical controls, institutional organisation and a national savings mechanism, which would ensure successful rescue, supply and reconstruction missions without any serious disruptions or excessive delays.
Such effort is required not only after but prior to a disaster occurrence.
Natural catastrophe insurance is founded on this principle in that it ensures that resources

pooled together for catastrophe financing are spread over time.

The financial resources to be mobilised by insurance will be the product of individual provident arrangements by physical or moral persons who are exposed to catastrophe risks.

As regards national solidarity, this initiative will be supported by the whole nation – represented by Government – who will intervene where necessary to ensure the financial stability of the natural catastrophe insurance scheme.

**Preserve the social and economic assets of the nation**

In addition to the human loss and its tragic effects, more often and depending on the degree of gravity, natural catastrophes affect the social and economic asset base of the country.
When earthquakes occur in Algeria or other parts of the world, residences and industrial or commercial outfits constitute the bulk of damages experienced by households and business owners.

The damages are of a serious and diverse nature: material damages, loss of income, psychological effects... etc.
Insurance has been acknowledged as an avenue through which probable losses can be spread over time, by way of insurance premium, and in space, by way of mutualisation of insured persons.
Insurance enhances preventive management of replacement cost for affected assets and promotes rationalisation of time limits for reconstruction.
Natural catastrophe insurance as determined by Government Act 03-12 will first and foremost focus on losses classified as heaviest, namely, material damages to properties as well as industrial and commercial activities.

**Alleviate public spending on natural disasters**

The financial responsibility after natural disasters in Algeria has often been totally borne by Government budget. It is generally known that damages to collective public property (schools, government buildings, public hospitals) as well as economic losses (bridges, roads, seaports and airports) are repaired using public funds.

In contrast, moral or physical persons from the private sector ought to bear responsibility for damages to their property or business.
However, the constraints of purchasing power compared to the requisite financial effort to pay for damages require that individual contributions be pooled together so as to be able to face each disaster occurrence.
Insurance is proposing this particular service by basically transforming the stakeholders into a community that would mutualise its risks and jointly finance losses.
Through reinsurance, this mutuality will extend to other persons affected by the same risks who live in other countries of the world.
Introducing insurance as a source of finance for natural disasters does not result in lifting the public financial burden, but in rationally sharing the costs between the Government and persons affected by the risk.

Government can then dedicate public funds to repairing public assets, while insurance can pay for private property.
As insurance is a commercial activity with financial capacity limited by the volume of its resources, Government, by way of national support, have to assist insurance companies (which organise mutuality for insured persons) financially in cases where the damages exceed their financial capacities.

**SCOPE OF APPLICATION**

Government Act 03-12 of 26/08/2003 on compulsory natural catastrophe insurance and compensation of victims institutes a programme whereby the scope of application is determined by three parameters: the

object, the persons involved and the risks to be covered.

**Object of insurance**

Two categories of property constitute the object of natural catastrophe insurance:

- Landed property located in Algeria: buildings, private constructions and collective residences, offices together form properties to be insured under the first category.

- Industrial or commercial facilities - buildings used for commercial or industrial activity, as well as their contents, including equipment, materials, goods and others - make up the items to be insured under the second category.

**The persons involved**

Article 1 of Act 03-12 earlier mentioned specifies the physical or moral persons who should take up natural catastrophe insurance, namely;

- Proprietors (moral or physical persons) of landed properties located in Algeria, under the first category.

- Physical or moral persons who are involved in commercial or industrial activity under the second category.

**Risks to be covered**

Natural catastrophe insurance shall be applied to previously determined risks. The identification of the nature of natural catastrophes to be covered arises from the need for insurers to assess potential damage and capacities required to finance it.
The natural catastrophe risks to be covered under the scheme were selected based on their observed or likely scope.

The risks, could result from the following:

- Earthquakes
- Floods and mudflows
- Storms and violent winds
- Earth movements

The legal provisions provide a definition for each of these risks, which serves as a reference for the insurance contract.

## 2 OPERATING MODALITIES

The operational rules for the scheme set up through Act 03-12 are summarised in the insurance contract, which is the binding document.
Apart from the normal property insurance rules, which also cover insurance products for natural catastrophes, four conditions form the basis for the peculiarity of this product: covers, exclusions, claims and rates.

**Covers**

Natural catastrophe insurance as defined by the Act covers insured property (buildings, commercial or industrial facilities and their contents) against direct damage caused by catastrophes related to the earlier mentioned natural phenomena: earthquakes, floods, storms and landslides.

Three parameters define this cover: cover limit, sum insured and deductible

- Cover limit: this amount represents the insurer's maximum liability in the event of claims covered by natural catastrophe protection.
  This limit stands at 80% of the sum insured for property (1st category) and 50% of the sum insured for industrial/commercial facilities (2nd category).

- Sum insured: this amount represents the figure stated on the insurance contract and computed from:

  (1) Reference prices by square metre fixed by the Ministry of Finance for property; these reference prices distinguish between communal and individual buildings.

(2) The amount declared by the insured for reconstruction of buildings and replacement of amenities, materials, goods in the case of commercial/industrial facilities.

- Deductible: this is the share of each loss to be borne by the insured. It stands at 2% (a minimum of AD 30,000) for properties and 10% for industrial/commercial facilities.

**Exclusions**

The specific domains excluded from the natural catastrophe cover are those prescribed in Article 10 of the Act , viz, losses recorded on the following:

- Unpreserved agricultural products
- Crops
- Soils
- Out-door livestock

Damage to the following is also excluded:

- Aircraft hulls
- Ship hulls
- Transported goods

**Claims payments**

Claims payment modalities to victims are included in the operating conditions of the natural catastrophe insurance scheme which have been assigned special treatment by the legislator.

These modalities operate in three stages: declaration of loss, loss adjustment and claims payment.

- Declaration of loss: the cover becomes active as soon as the catastrophe event is announced officially.
  The announcement is released through an official declaration jointly signed by the Ministries of Finance and Internal Affairs.
  The declaration specifies the nature of disaster, the date of occurrence and affected communities, classified by “daïra” and “wilaya”.

- Loss adjustment: all observations and assessments must be noted by the designated adjuster and presented in a report to the insurer not later than three months following the declaration of loss.
  If the deadline is exceeded, in addition to the compensation owed, the insured has the right to claim damages and interests.
  Where the insured contests the first adjuster’s report which was carried out at the instance of the insurer he can seek a counter-adjustment. In event of inconsistency between the two adjusters, a third one can be commissioned by mutual agreement or judicial means.

- Claims payment: taking into account the deductibles earlier mentioned, the insurer is bound to settle his client’s claims within three months with effect from the submission date of the adjuster’s report, failing which the insured has the right to claim damages and interests.

**Rates**

Premium rates for natural catastrophe insurance are based on exposure to seismic risks mainly and secondarily to three other risks covered by natural catastrophe insurance. Exposure to risk is measured by two parameters: risk-prone areas and structural vulnerability.
Risk-prone areas have been identified according to the demarcation established by the “Centre du Génie Sismique - CGS (Centre for Seismology) and graded by order of increased risk: Zones 0, 1, 2a 2b, 3.

Structural vulnerability is first of all measured by the level or absence of compliance with Algerian seismic-resistance regulations (Rpa99) of 2003 or previous versions.
Then, on the basis of the declaration by the insured, vulnerability is measured in relation to the existence or absence of each of the other three catastrophe risks (floods, storms and landslides).

The two factors mentioned earlier provide a template for premium rates applied on sums insured.
Proprietors of unapproved buildings or insured persons operating unregistered industrial/commercial concerns shall pay a surcharge of 20% on premium due.
Natural catastrophe insurance rates are backed by an order from the Minister of Finance. The rates shall apply to all types of risks except policies covered under facultative reinsurance.

## FINANCING

The insurance and reinsurance scheme shall mobilise, from the premium paid by the insureds, the resources for financing natural catastrophe losses. Government shall provide financial support where the insurance and reinsurance capacities have been exhausted.
The three parties, insured persons, insurers and Government are expected to play their role according to the rules determined for each party.

### Insured persons

Insurance is issued annually and can be attached to a global contract or sold separately. Premium is paid according to rates determined by order of the Ministry of Finance.

### Insurers and reinsurers

In the event of disaster, insurers' liabilities are to be financed from the yearly premium as well as the reserves that insurers would have constituted in order to level out the insurance company's results on natural catastrophe risks.

Up to 95% of the technical results on natural catastrophe insurance are to be booked as reserves yearly. The technical results are calculated net of reinsurance premium and charges. By the end of the 21st year from their constitution, unused yearly transfers to reserves are released.

Natural catastrophe portfolios are doubly protected through reinsurance.
The risk is distributed through quota-share treaty between the insurer and the reinsurer based on a fixed proportion: 30% for the insurer and 70% for the reinsurer.
A second reinsurance cover (stop loss) protects the insurer's net retention on natural catastrophe risks against any technical loss.
Where the net annual loss charge is higher than 100% of premium earned for the year in question, the reinsurer finances the excess.

### Government

Only the reinsurer who is beneficiary of government security offers the reinsurance covers described in the previous paragraph.
Government's role in the insurance scheme is to ensure financial solvency in the case where the loss charge exceeds the scheme's claims payment capacity.

Government guarantee is provided to CAT reinsurance operations carried out by Compagnie Centrale de Reassurance (CCR).
The public Treasury finances all technical deficits net of retrocession from CCR's CAT cover account.

Conditions and modalities for benefiting from this guarantee (advances or liquidation of the excess due) are determined by way of regulation.
Financial relations between the Treasury and CCR are managed within the framework of a bilateral agreement.

## SUPERVISION

The natural catastrophe insurance scheme is subject to continuous supervision by relevant authorities in charge of monitoring risk development, supervising portfolio management of insurance companies and also ensuring compliance with insurance regulations.

### Risk control

Catastrophe risks and the level of management by insurers can only grow with

time. For instance, adapting of covers, price factors, reinsurance covers and skills stands as the condition of ensuring a normal and long-lasting functioning of the scheme.
The natural catastrophe committee, which is headed by the Director of Insurance and comprises professionals in the national insurance industry, designed a regulatory document that governs catastrophe insurance. The committee will continue to maintain supervisory efforts towards the smooth functioning of the scheme.

**Portfolio management**

The role of the insurance supervisory authority over insurance companies' portfolio focuses on underwriting, reserving, IT systems, internal control, reinsurance and claims management, particularly claims adjustment and time limits for claims payment.

**Compulsory nature of the scheme**

The compulsory nature of the scheme requires a system that involves both control methods and penalties.
The methods of monitoring compliance regarding CAT cover issues have been considered under two perspectives: real estate transactions and companies' annual tax returns.
Real estate transactions must be backed by a valid insurance document against natural catastrophes.
Such control falls within the responsibility of any institution that is authorised to authenticate such transactions, namely, notaries and the Land Registry Department.
Companies involved in commercial or industrial businesses must attach documents to confirming purchase of CAT cover to their tax returns. The tax offices are in charge of this control.

Two kinds of penalties for non-compliance with compulsory CAT insurance are prescribed in the Government Act: a fine of 120% of premium due as well as possible exclusion from government assistance.
These sanctions are to be applied either by tax inspection offices, if the offence is detected during tax returns or by the insurance company if discovered while subscribing to a new insurance policy.

**Related measures**

The process of implementing a CAT scheme involves a host of other actions that contribute to extensive information dissemination on the product, appropriate training of staff of insurance companies as well as creating awareness on risk prevention and loss minimisation.

- Communication

  The insurance sector should design and put in place a collective communication plan so as to popularise the new CAT product and develop foresight and prevention reflexes.
  The association of insurers, UAR and CAN are naturally expected to take on the task of institutional communication as complementary effort to marketing by individual insurance companies.

- Training

  The innovative nature of natural catastrophe covers and the relative uniqueness of the underlying mechanisms (underwriting, pricing, reserving, reinsurance, skills etc...) imply more pertinent training for the staff in charge of managing the portfolios.
  To that end, insurance companies are expected to design internal or inter-company training programmes to increase knowledge of the product as well as organise the risk management chain from subscription to payment of claims.

Support from national or foreign experts in that respect could contribute to a remarkable improvement of the quality of human resources.

**Prevention**

Insurance being an essential means of reducing the potential cost of risks, the insurer who wants to minimise his overhead costs and the insured who desires the best rate possible have an interest in taking preventive regulations into account where such exist. While accepting risks, insurers must guide the public as well as the relevant authorities on the land occupancy practices, types of construction, maintenance of sewage systems and general organisation so as to minimise the extent of damages after a natural disaster.

In establishing a difference between rates applied to authorised and unauthorised constructions or activities, insurers already indirectly contribute to ensuring compliance of actual practices with the operational regulations.

**CONCLUSION**

The departure from a system of financing losses arising from natural disasters mainly from public funds and government intervention, to an insurance dependent compensation scheme will be achieved gradually. Indeed, as the CAT cover scheme commences, the number of policies sold as well as the total amount of assets protected by insurance is expected to increase accordingly.

The incubation period for the programme will largely depend on the communication efforts of the insurers as well as the corresponding reaction from insurable persons.

The insurance companies will also need an accurate assessment of the aggregate exposure of their portfolios and the reinsurance covers commensurate with their shareholders' funds.

Indeed, government guarantee is designed to add appropriate reinsurance support to cover the liabilities of the national CAT insurance scheme. The introduction of this insurance system should at least ensure that public funds thus far used to repair national assets destroyed by the natural disasters will be redirected towards the socio-economic developmental needs of the country. In reality, providing insurance for the aftermath of natural disasters results in a rational mediation between national solidarity and the responsibility of individuals for their property.

# UNDERWRITING OF POLITICAL RISKS

**By**

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## I. BACKGROUND

The democratisation process in Africa in the early 1990's often brought in its trail riots and civil commotions which resulted in serious property damage to companies: for example, property damage was estimated at FCFA 1.6 billion in Gabon in 1990, FCFA 1.3 billion in Mali in 1991, FCFA 4.0 billion in Central African Republic in 1996 and more than FCFA 2.0 billion in Côte d'Ivoire in 2004.

Apart from property damage, companies also incurred serious financial losses due to drop in production, slow down in operations and loss of business opportunities. Industries and trading outfits in many parts of Africa are foreign investments which are unfortunately exposed to destruction risks during events. This could be one of the reasons for the low level of Foreign Direct Investment into the continent. Yet, in order to develop, Africa requires huge investments in infrastructure and production tools. How can investments be attracted and sustained in such an unstable environment where Governments cannot fully guarantee the security of assets and people? Investors should be provided with the possibility of indemnification in the event of property damage or financial losses resulting from political disturbances.

For now, African States, which are, in principle, the first to be affected, have neither the organisation nor the financial capacity to bear even part of these damages which are generally significant. Therefore, the insurance market has the responsibility of finding solutions to the needs of national and foreign companies, otherwise, at least two major consequences are to be expected:

- Reduction in investment in Africa;
- The delocalisation of political risk covers, which might ultimately result in the delocalisation of the property damage covers for large risks.

Despite the importance of this type of insurance, do African markets have the resources to cover these risks?

Following the events of 4th, 5th and 6th November 2004 in Côte d'Ivoire, reinsurers in African markets and in particular markets of the CIMA (Conférence Interafricaine des Marchés d'Assurances) zone, decided to discontinue the insurance of political risks.

To handle the problems better and seek appropriate solutions for them, this paper will first of all attempt to define political risks. Then, it will present the current situation of insurance offer and how it can evolve to enable practitioners provide appropriate response to the need for political risks cover.

## II. DEFINITION OF POLITICAL RISKS

Political actions and decisions can modify the legal, fiscal and economic framework of a country. Companies established in the country are bound to face these political risks which could endanger or imperil their operations.

**What then are Political Risks?**

It is not easy to define political risks. During the CIMA meeting of November 2005, reinsurers operating in the CIMA and FANAF (Fédération des sociétés d'assurances de droit national africain) markets listed the following events to define political risks:

« Insurrection, civil commotion by way of popular revolt, mutiny and/or military coup, popular uprising, rebellion, revolution, take over of power by the military or usurpers, imposition of martial law or siege as well as any event or circumstance that may result in the imposition or sustenance of martial law or siege; any action perpetrated by a group of people with the aim of either supporting the Government or obtaining a political change and/or influencing it in the form of revolt, revolution, inter-communal conflict or simply conflict between the supporters of Government and the opposition».

From this definition, it will be noticed that only risks of violence are taken into account. That can be explained by the fact that the protection given by insurers and reinsurers in the CIMA zone covers essentially property damage to the exclusion of all forms of financial losses. However, some political situations are non-violent but they have negative consequences on industries, such as the decision to nationalise foreign companies.

In his book Political Risk Insurance Guide, Daniel WAGNER, a political risk underwriter in New York, defined such risks as: « arbitrary or discriminatory actions, taken by home or host governments, political groups, or individuals, that have an adverse impact on international trade or investment transactions. Examples include the risk that a government will interfere in a company's ability to control or operate an overseas investment, that a government will not pay for a shipment of goods received, or that a terrorist will attack a manufacturing facility".

The advantage of this definition is that it covers a wider scope than the one proposed by FANAF.

For a better understanding of political risks, it is proposed to define them as events of political nature (sudden change in economic policy, violent change in political regime, war, expropriation…) which result in property damage or financial losses for companies or interfere with their initial targets, objectives and prospects, thus distorting their normal operating conditions for profit making.

The advantage of this definition lies in its flexibility. Indeed, as it is rather imprecise there is no risk of omitting any event of a political nature, which may constitute risks for companies.

It should be noted that, often, there is only a thin line separating events of political, economic and social nature. An example is the strike of a private transport Union suspected to have sympathy for a political party.

Political risks can affect companies directly or indirectly. For example, expropriation, embargo and taxation have direct effects on them, while other events such as political violence (riots and civil commotion), which although not directed at any particular business sector or company may have detrimental consequences.

## III. UNDERWRITING OF POLITICAL RISKS

### 1. General Overview of Covers

Generally, there are two types of covers for political risks:

**Cover for Commercial Risks**

It should be specified, from the outset, that this cover is not a guarantee for the success of commercial operations in all circumstances. Commercial operations may be hindered by a sudden change in legislation in a foreign country, the review of commercial rules following a change in regime or simply, the imposition of embargo.

It involves covering companies against the risk of inability to continue their commercial operation due to political problems.

Numerous covers are offered and the major ones listed below:

- Inability to honour or execute a contract due to a case of force majeure;
- Unexecuted letter of credit;
- Unilateral cancellation of contract by government;
- Inability to deliver goods;
- Export Credit;
- Cancellation of import or export license.

**Cover for Investments**

Even if not exclusive, this type of cover seeks to protect a company against the risk of its operations not going as planned, that is not being in line with the investment agreement entered into with Government.

The main covers normally provided are as follows:

- Expropriation;
- Forced abandonment of investment in a foreign country: Heads of companies are forced to abandon their companies in situations of trouble or when their countries of origin raise an alert to leave the host country. The insurance cover would ensure that the Head of the company is indemnified to the limit of the abandoned equipment;
- Difficulties in fund repatriation ;
- Impossibility to import ;
- Abusive cancellation of contracts ;
- Political violence : damages caused by foreign or civil wars, acts of sabotage or terrorism, riots and popular movements are not covered by normal property damage insurance policies. These events can be covered by political risks insurance both in respect of property damage and the resulting financial losses.

This is the most predominant kind of risk in African countries.

## 2. Offer of satisfactory Cover for African Markets

2.1 Current Offer

Since the early 1990's, the underwriting of political risks has developed tremendously due to the progress both in the democratisation process in the world and market economy. A number of players are involved in this market segment and these include:

♦ **Lloyd's of London**

This is the best-known organisation of underwriters in the world and in 1990 it offered about US$ 25 billion capacity for political risks insurance and recorded a turnover of about US$ 100 million, i.e. 35% of the world market share.

♦ **MIGA (The Multilateral Investment Guarantee Agency)**

This is an international organisation and a member of the World Bank group.

MIGA provides the following covers to investors and financial institutions against political risks:

- Non transferability and convertibility of currencies ;
- Armed conflicts and civil disturbances ;
- expropriation ;
- cancellation of contract.

MIGA also assists Governments of emerging countries in sourcing for foreign investors by helping them to draw up strategies that would attract investments and provide the investors with the ability to cover political risks. Eligible projects include new cross-border investments, privatisations, and the expansion of existing projects.

♦ **FANAF**

Prior to 1st January 2003, a clause, P24 Afrique, existed in the CIMA markets which covered riots and civil commotion and excluded civil and foreign wars, rebellion, expropriation....
Following the events of 11 September 2001 in the United States, reinsurers excluded criminal attacks and acts of terrorism from clause P24 Afrique and replaced it with a new clause called FANAF 01 in October 2002.

Without expressly indicating it, these clauses, in addition to social and economic risks, also covered political risks, as they did not formally exclude them.

Following the events of 4th, 5th and 6th November 2004 in Côte d'Ivoire, reinsurers initiated the modification of this new clause in 2005 and decided to exclude political risks in order to avoid large losses. In actual fact, two reasons motivated that decision:

- Insurers only retain a minute share of the risks. Individually or as a pool, they ought to retain a higher share of such risks ;

- Insurance premiums are too low compared to the cover given. If the prevailing rates are complied with, the maximum premium payable would be 0.7 per mille of the total sum insured for property.

2.2 Evolution of Offer

As already stated, the insurance of political risks is a major factor for the development of Africa. The current offer does not suit the requirements of companies. Therefore, there is the need to devise public mechanisms and private covers that are capable of fully satisfying the companies.

Taken individually, African states have limited financial capacities. It would therefore be necessary to establish compensation mechanisms through regional or continental organisations (the CFA zone, the ADB...). States would contribute financially towards the creation of a compensation fund for victims of political events. This mechanism can be put in place with the support of international financial institutions.

The political risks indemnity funds will serve as the primary line of recourse up to an agreed maximum limit. With the capacity provided by major reinsurers, private insurers can then act as a secondary line of recourse within limits that would be contractually defined with the insured companies. With this arrangement, it would be possible for private insurers to offer wider covers that would represent real security for investments. Given the stakes involved in the development of Africa, reflections need to be initiated with a view to putting in place adequate cover for political risks. From a purely commercial perspective, this is an opening insurers and reinsurers, especially those in the CIMA zone, should explore. The development of this new formula could contribute to increasing the turnover of markets in the zone which in 2004 only amounted to about USD 357 million. A formula that is more ambitious than the FANAF clause is being prepared by a French broker.

Sometimes, there is only a thin line to distinguish the political, social or economic nature of an event. That is why the product would cover without distinction risks of strikes, riots and civil commotion, irrespective of whether they are of social, economic or political origin.

The premium rate would stand at 0.4% to 0.7% taking into account the magnitude and frequency of the losses of recent years. This way, direct insurers would be in a position to propose covers that actually respond to the needs of companies.

For this cover, the sharing of risks between reinsurers and insurers will be improved, with insurers retaining at least USD 357 517 (equivalent of F.CFA 200 million).

Despite the stride made in the CIMA markets with regard to the diversity of political risks, other insurance products, more complete should be put in place.

In the near future, the insurance sector should be able to offer to national and foreign investors covers that would enable them overcome the fear of the unknown as well as the presumed or avowed insecurity in African countries on the one hand and secure investments and commercial ventures on the other hand.

In addition to the already existing protection, these new products, which should be as wide as possible could cover:

- The risk of inability of the exporter to deliver his goods on time. This is a very important cover for national economic players and exporters of raw materials or semi-processed products ;
- The risk of the deterioration of production tools abandoned as a result of political violence;
- Financial losses whether or not they result from damages suffered by the companies;
- Civil wars and rebellion risks ...

All these risks can be insured. All that is required is to draw inspiration from the covers provided in the international market and fix the correct price.

This article does not pretend to have exhausted the topic but the concern is to trigger off reflections so that appropriate solutions could be found for the insurance of political risks, which hinder the inflow of foreign investments to Africa.

# LOSS PREVENTION AND RISK MINIMISATION IN DEVELOPING COUNTRIES

**By**

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## Introduction

"An ounce of prevention is worth a ton of cure" goes the old saying and this certainly seems to have been borne out by the estimates of the World Bank and the US Geological survey that economic losses from natural disasters in the 1990s could have been reduced by US$ 200 billion if US$ 40 billion had been invested in preventive measures. It has also been estimated that US$ 3.15 billion spent on flood control measures in China over the last two decades of the 20th century have averted losses of about US$ 12 billion*. Therefore, it is evident that a reasonable amount invested in preventive measures will result in significant savings in terms of avoided losses. Further, losses from natural disasters are most devastating to the poorer nations who are ill-prepared to face such occurrences. The same inference could be extended to the losses caused by more traditional insured perils such as fire, machinery breakdown, etc. Generally speaking, the more prepared an insured is to meet any exigency, the less the damage sustained to the property.

## Standards of prevention in developing countries

Standards of loss prevention measures with regard to mitigation of the effects of perils, natural or otherwise, are significantly lower in developing countries, compared to the advanced nations. The statutory requirements relating to fire protection often focus on providing minimal hardware within the buildings and, more often than not, are limited to portable extinguishers and, in some cases, hose reels. Usually, in public buildings like shopping malls, hotels, offices, etc., provision of basic fire fighting hardware is a pre-requisite to obtaining license to occupy the building or commence business operations. However, once installed and the license to occupy or commence business obtained, routine maintenance of the fire fighting equipment is often ignored, the condition of the protective equipment deteriorates resulting in the property being unprotected. Then, in case fire occurs, the installed equipment is not functional and cannot be used to control it at the incipient stages. Therefore, dependence is solely on the public fire brigade. Such delay often results in larger losses, the potential of which timely and appropriate intervention at the early stages of fire could effectively negate.

Statutory safety requirements primarily focus on basic fire protection hardware and on personnel safety aspects. Important though these are, statutory regulations seldom address the more important "software" aspects such as good maintenance, housekeeping, inspection and other procedures.

* (www.worldbank.org/news)

However, what makes management of risks more difficult is that while the objective hazards in developing countries are greater in terms of impact on national economy, the available resources for coping with incidents are meager or minimal. Preventive measures rate low on priority in allocation of available resources - monetary or otherwise. Investment in risk minimisation / loss prevention reduces funds available for other uses and the question arises whether the current cost vis-a-vis the loss savings potential is justified.

### Insurance on property financed by banks - opportunity for insurers to promote safety & prevention

Projects financed by international agencies such as the World Bank or the International Finance Corporation (IFC) are required to include adequate insurance protection. The banks or lending institutions' insistence on insurance provides the insurers an opportunity to induce the insured to establish prevention measures - both hardware & software.

Experience in the Indian Insurance market provides a case for the insurer's role in promoting prevention aspects in developing countries. Indian insurers have long been allowing varying discounts off the fire insurance premium if fire suppression systems in line with internationally accepted safety standards are installed. Even in the UK, the now defunct Fire Offices Committee (FOC) had prescribed a scale of discounts that could be granted if fire-extinguishing equipment was installed in the insured premises. These safety requirements focused mainly on the provision of protective "hardware" ranging from portable extinguishers to the more sophisticated automatic sprinkler and gas based fire suppression systems for which discounts ranging from 2.5% to 50% was granted off the fire insurance premium. However, these requirements did not take into consideration the 'software' or the 'human element' side of loss prevention, except for the establishment of a fire-fighting team to operate the hydrants / hose reels.

Subsequently, realizing the importance of the human element in loss prevention / minimisation, the insurance industry in India devised a "special rating" procedure for industrial occupancies in the late 1980s that cognized not only the physical features of the insured property such as location, construction, layout and spacing, fire protection, utilities, but also the **safety management procedures** (establishment of Safety Committees, ...). This procedure awarded discount points for good features and loading points for adverse features of the risk. Discounts were also granted for **good claims record over the last 5/10 years**, with the aggregate discount allowed for both physical features and good claims record, limited to 35% off the insurance premium. This level of discounts provided an attractive financial incentive to insured to install safety equipment as well as establish safety procedures, which resulted in a higher loss prevention standard overall.

The importance of the "software" or "human element" aspect in prevention cannot be over-emphasized. This includes routine inspection procedures, good maintenance philosophy - both preventive and predictive, accident and "near miss" reporting and investigation, good housekeeping, permit to work systems, regular safety audits and training of personnel in operations and safety. Establishing these software aspects will effectively enhance loss prevention.

### Installation of superior protection systems in specific industries

Another instance of improvement in the standard of prevention in developing countries is the statutory insistence on a higher level of fire protection and safety procedures following a serious incident. As an example, a fire accident in the cable tunnel of a thermal power station in southern India in the 1980's prompted the establishment of higher fire protection standards for thermal

power stations which included water sprinkler / water spray / deluge systems for cable tunnels, as well as the provision of fire cut-offs along the cable tunnel. Spray protection for transformers and coal conveyors were also included as standard protection.

Likewise, in the energy sector in India the petroleum installations had earlier been established on the basis of different technologies and technical collaborations with various foreign companies and there was no uniformity with regard to design and operating facilities. The need to have uniform standards, including safety standards, in the oil industry resulted in the Ministry of Petroleum and Natural Gas establishing a Safety Council that was assisted by the Oil Industry Safety Directorate (OISD). The members of the Safety Council were the Chief Executives of the oil companies, representatives of industry and workmen and safety experts. The OISD itself was a self-regulatory group comprising experts from the oil companies with its main functions being:

- Oversee implementation of all the decisions of the Safety Council;
- Keep abreast of latest design and operating practices in safety and fire fighting in the hydrocarbon industry;
- Conduct periodic safety audits, review and suggest procedures for improvements to the Safety Council;
- Collect information on "near miss" accidents and accidents in the oil industry;
- Ensure implementation of accepted codes of practices for industrial hygiene;
- Review "Disaster Control Plans" and preparedness;
- Review in-plant training programmes with regard to safety.

Such focused efforts in an important sector of the economy have resulted in significant improvement in its safety profile.

**Conclusion**

Summing up, the quality of loss prevention in insured risks in developing countries needs considerable improvement. The current focus is mainly on provision of minimal fire protection 'hardware' as a statutory pre-requisite to occupation of the building or commencement of business operations. A paradigm shift in attitude towards safety as well as a willingness to invest in loss prevention - both hardware and software - is necessary to realize the long-term benefits it affords. Insurance companies and statutory agencies can have a role in this effort - insurance companies by providing financiaél incentives for establishing better loss prevention and the statutory institutions by raising the standard of loss prevention required to be provided **and, more importantly, monitoring its maintenance**, and also perhaps, by offering financial incentives like tax rebates or similar financial advantages for investments in loss prevention.

A quote from the CEO of a large insurance company, published in the 24th February 2004 issue of 'Insurance Day', highlights the importance and benefits of loss prevention: "**This tangible improvement (*in the insurance company's results*) would not have been possible without clients who believe in the philosophy that the majority of loss is preventable, take proactive measures to truly understand their hazards and are financially and philosophically committed to reducing their exposure to risk.**"

# PRICING OF LIFE ASSURANCE IN AFRICA: RELIABILITY OF ITS TECHNICAL BASES

**By**

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## Introduction

Insurance operations, both life and non-life, are based on the notion of risk, defined as an uncertain event beyond the control of the parties, which when it occurs, requires the insurer to pay the agreed benefits. The uncertainty might relate to whether or not the envisaged event would occur (fire, accident, ...), or to the actual moment of occurrence of an unavoidable event, such as death.

Most human activities are fraught with risks which have financial consequences that cannot be fully borne by individual or corporate entity's assets. Thus, the essence of insurance is to transfer all or part of the financial consequences to a third party, the insurer, under terms and circumstances specified in a contract.

By accumulating risks, Insurance companies themselves face the danger of insolvency, especially as they market products whose final cost is unknown, given that premium is payable at the beginning of the insurance period, while the financial cost of future losses can only be determined several months or years later.

This danger can be minimised through the use of probabilities and statistics to evaluate the equitable contribution of each insured for payment of future losses. However, not all risks are insurable, because the use of statistical data can only be possible under certain conditions. For risks to be insured, they must:

- Be rather frequent, that is, the risk should occur often enough to sustain a law of probability on the basis of which to calculate the consequent premium. However, the frequency should also not be too high, otherwise the risk would not be economically insurable, owing to the very high premium per insured.

- Be spread out, that is, the risk should involve a large number of items or persons but can only affect a small proportion of the group or not everybody at the same time.

In all insurance operations, two factors are involved in the calculation of pure or technical premium, that is the amount that the insurer needs to have to be able to pay losses, without allowance for profit or deficit:

- The loss frequency which indicates the relative occurrence of the risk involved.

- The loss distribution which indicates the average cost of losses.

Pure premium is obtained by multiplying the relative frequency by the average cost. To arrive at the commercial or tariff premium, the insurer adds charges meant to cover general expenses and profit.

Most insurance operations are so complex that it might not be easy to apply the two factors which facilitate the calculation of premium. A typical example is the case of motor liability insurance where the insurer undertakes to indemnify the victims of all losses that may occur during the period of cover and where the liabilities resulting from the insured vehicle are established. During that period, not only can the vehicle cause varied number of losses (0, 1, 2, etc.), but also the cost of losses, which may be material and / or bodily, may also vary seriously.

However, in life assurance, it is relatively easy to determine the probability of the occurrence of insured risks (death or survival), using mortality data during a period of a given year for each age group. With regard to the loss distribution, there is no problem first because the amount payable by the insurer in the event of a loss is clearly fixed in the contract and second, there can only be one loss per risk insured (people only die once) and the loss is total.

What are the technical bases for the pricing of life assurance? Why bother about the issue of their reliability in Africa?

This article will endeavour to answer these questions and treat the following issues:

- General issues and technical bases for the pricing of life assurance
- Mortality Tables – General considerations
- Mortality Tables –Situation in Africa
- Illustration of the risk of failure of a life insurer that uses inappropriate mortality table
- Establishment of experience - based mortality tables

## 1. General background and technical bases for the pricing of life insurance

### 1.1 General background

In Encyclopédie de l'assurance, Economica, 1998, Joël Winter, an Actuary, defines Life Assurance as a means of providing for the future, subscribing a life assurance contract is first and foremost a matter of money. It is a private act in which both the insured and the insurer freely agree on their respective financial obligations should an event occur– death or survival which would require the payment of the insured amount. Money therefore plays a central role, but that is not the only issue. There would certainly be no insurance without the uncertainty attached to the events concerned. With regard to life assurance, the founding principles have been extremely simplified: the hazard is strictly contained within the duration of human life.

The development of life assurance was facilitated by the availability of mortality data which made it possible to draw up mortality tables and consequently measure the hazards inherent in the duration of human life.

Life assurance can be grouped into three broad categories:

- **Term Assurance**, where the insurer undertakes to pay an agreed capital if the death of the insured occurred within a predetermined period. If the insured is still alive at the expiry of the period, no payment is due to him by the insurer.

- **Pure Endowment**, where the insurer undertakes to pay an agreed capital if the insured is still alive at the expiry of the contract. If the insured dies before the end of the contract, the dependents are not due for any payment by the insurer.

- **Endowment Assurance**, which is a combination of Term Assurance and Pure Endowment and guarantees payment whether the insured survives or dies before the expiry of the contract.

- **Life Annuity**, where the insurer undertakes to pay an agreed annuity till the death of one or several designated persons, is yet another life product that does not fall under any of the above-mentioned groups.

These different categories of insurance can be written either by individuals (individual assurance) or collectively (Group assurance).

1.2 Technical bases for the pricing of life assurance

Life assurance premiums are determined based on three parameters:

- **The Mortality or « cost of risk».** This is the basic parameter that has to be determined, otherwise the life assurance operations would not be reliable. It is through mortality data that the relative frequency of death per age is known and the premium is consequently calculated.

- **The Technical rate of interest or « cost of time ».** This is an interest that the insurer undertakes to guarantee the insured on the premium paid by the latter. In other words, the insurer should be sure that the premium can be invested in an instrument that would yield not less than the equivalent of the technical rate applicable throughout the period of contract. The effect of the technical rate is to reduce the level of premium payable by the prospective insured and its effect is greater for savings related and long term contracts (pure endowment, Endowment assurance, ...), but insignificant for term assurance or decreasing term assurance on annual premium basis.

- **Expenses or « management cost ».** The insurer should recoup the management cost of the insurance contracts and also make profit. Management cost includes among others, staff remunerations, amortisation of equipment, remuneration of intermediaries, marketing cost, adjuster's fees, legal fees, etc. These management costs constitute a very important factor that the insurer should control and adequately integrate in determining the insurance premium.

The issue of reliability of the technical bases for the pricing of life assurance in Africa is discussed with reference to mortality because until now there have not been mortality tables that specifically reflect the mortality of the population in the different African countries. The two other parameters have nothing that is peculiar to Africa, the important thing is for them to be correctly taken into account in pricing.

## 2. Mortality tables – general issues

Mortality data gathered through the observation of the mortality of a given population during a period of one or more years are collated in mortality tables. Such tables provide mortality rates, for each given age, that is the probability of death within the year marked as ($q_x$). Sometimes they also contain other information such as the number of deaths at age (x), marked ($d_x$), the number of survivors at age (x) marked ($l_x$) as well as life expectancy at age (x) noted ($e_x$). Mortality rate varies with age, sex, country and time.

The first factor in mortality is **age** and this has the advantage of being easily measurable. **Sex** is the second factor. There are mortality tables for men and women as the latter have lower mortality.

Mortality also varies based on **countries**, as may be determined by such factors as the level of economic and sanitary development, climatic conditions and eating habits. Within the same country, mortality might differ from one region to another.

The last factor is the **era**, as mortality evolves with time. Thus, in the developed countries, it has improved considerably in the 20th Century whereas in most of the sub-saharan African countries, it has worsened or at best stagnated due to poverty, catastrophic diseases such as the AIDS pandemic, civil wars, etc...

Mortality tables can be obtained from information provided by general census of the population (breakdown of the population by age and by sex) and from annual statistics in government registries. Such tables are called

demographic mortality tables because they involve the entire population of a country.

There is another type of mortality table, experience-based or actuarial mortality table, which is restricted to the life assured of a company or a group of insurance companies.

Gross mortality rates are calculated for each age through a ratio of the number of deaths for age x in one year (noted $d_x$) to the number of survivors for age x at the beginning of that year (noted $l_x$).

Table I is an extract of the US mortality table of 1958 (1958 CSO table) that reinsurers in the Nigerian market have been using to calculate the rate of premium applicable to group insurance covers for death risk.

**Table 1 – extract of table 1958 CSO**

| Age | $l_x$ | $d_x$ | $q_x$ |
|---|---|---|---|
| 0 | 10 000 000 | 70 800 | 0.00708 |
| 5 | 9 868 375 | 13 322 | 0. 00135 |
| 10 | 9 805 870 | 11 865 | 0. 00121 |
| 15 | 9 743 175 | 14 225 | 0. 00146 |
| 20 | 9 664 994 | 17 300 | 0. 00179 |
| 25 | 9 575 636 | 18 481 | 0. 00193 |
| 30 | 9 480 358 | 20 193 | 0. 00213 |
| 35 | 9 373 807 | 23 528 | 0.00251 |
| 40 | 9 241 359 | 32 622 | 0. 00353 |
| 45 | 9 048 999 | 48 412 | 0.00535 |
| 50 | 8 762 306 | 72 902 | 0.00832 |
| 55 | 8 331 317 | 108 307 | 0.01300 |
| 60 | 7 698 698 | 156 592 | 0.02034 |
| 65 | 6 800 531 | 215 917 | 0.03175 |

In developed countries, demographic mortality tables are currently prepared annually.

## 3. Mortality tables – the situation in Africa

In Africa, till date, insurers do not have any mortality data on which to base the pricing of their life products. For mortality tables to be prepared, there must first of all be a general census and subsequently annual statistics on movement and particulars of people from the Government registry. The cost of general census apart, it is a known fact that the territorial registries of most African countries lack almost all data on the movement and personal information of the population. Children are born and people die without any record. In addition, where statistical institutes exist, they are rather inefficient due to lack of human, material and financial resources. Without sounding pessimistic, there are no indications that the situation would probably change soon.

In the absence of mortality tables that are specific to African countries, European and North American tables dating back to the 1950s or thereafter serve as the basis for the pricing of life products. That is the case in Nigeria, for example, where reinsurers recently adopted a new tariff applicable to Group term Insurance, based on the American mortality table of 1958 (1958 CSO Table) an extract of which has been reproduced in Table I.

There is no objective basis to prove whether the use of these tables is judicious or not. Nevertheless, some questions arise when some United Nations data on sub-saharan African countries is analysed side by side with mortality tables for the period 1920 to 2003 in some western countries.

Table 2 indicates life expectancy at birth (âge 0) and infant mortality in 48 sub-saharan African countries as provided by the United Nations Population .

[1] United Nations (2003b), World Population Prospects, www.unpopulation.org

**Table 2 : Life Expectancy and Infant Mortality from 1950 to 2004 (in 48 sub-saharan African countries)**

| Sub-regions and countries | Life Expectancy (in years) | | | | | | Infant Mortality rate (p. mille) | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1950-1954 | 1960-1964 | 1970-1974 | 1980-1984 | 1990-1994 | 2000-2004 | 1950-1954 | 1960-1964 | 1970-1974 | 1980-1984 | 1990-1994 | 2000-2004 |
| **West Africa** | 35.5 | 39.1 | 43.0 | 47.1 | 50.0 | 49.6 | 192 | 168 | 143 | 120 | 104 | 90 |
| Benin | 33.9 | 38.0 | 44.0 | 49.2 | 51.3 | 50.6 | 200 | 173 | 137 | 111 | 100 | 93 |
| Burkina Faso | 31.9 | 36.7 | 41.2 | 46.1 | 47.5 | 45.7 | 215 | 181 | 153 | 126 | 110 | 93 |
| Cap-Verde | 48.5 | 53.0 | 57.5 | 61.8 | 66.4 | 70.2 | 130 | 105 | 83 | 63 | 44 | 30 |
| Côte d'Ivoire | 36.0 | 40.4 | 45.4 | 50.0 | 48.3 | 41.0 | 186 | 158 | 130 | 106 | 101 | 101 |
| Gambia | 30.0 | 33.0 | 38.0 | 44.1 | 51.0 | 54.1 | 231 | 207 | 173 | 135 | 99 | 81 |
| Ghana | 42.0 | 46.0 | 49.9 | 53.6 | 56.9 | 57.9 | 149 | 127 | 108 | 90 | 72 | 58 |
| Guinea | 31.0 | 34.3 | 37.3 | 40.2 | 44.8 | 49.1 | 222 | 197 | 177 | 157 | 130 | 102 |
| Guinea-Bissau | 32.5 | 34.5 | 36.5 | 39.1 | 43.0 | 45.3 | 211 | 196 | 183 | 164 | 140 | 120 |
| Liberia | 38.5 | 40.5 | 42.6 | 44.9 | 39.3 | 41.4 | 194 | 180 | 165 | 150 | 191 | 147 |
| Mali | 32.7 | 35.3 | 38.2 | 44.4 | 47.5 | 48.6 | 240 | 218 | 196 | 153 | 131 | 119 |
| Mauritania | 35.4 | 39.4 | 43.4 | 47.4 | 49.4 | 52.5 | 189 | 164 | 141 | 120 | 110 | 97 |
| Niger | 32.2 | 35.2 | 38.2 | 40.7 | 42.7 | 46.2 | 213 | 191 | 171 | 156 | 144 | 126 |
| Nigeria | 36.5 | 40.1 | 44.0 | 48.1 | 52.0 | 51.5 | 183 | 160 | 137 | 115 | 95 | 79 |
| Senegal | 36.5 | 38.3 | 41.8 | 46.3 | 50.4 | 52.9 | 184 | 168 | 122 | 91 | 68 | 61 |
| Sierra Leone | 30.0 | 32.0 | 35.0 | 35.3 | 34.5 | 34.2 | 231 | 215 | 193 | 189 | 194 | 177 |
| Togo | 36.0 | 40.5 | 45.5 | 50.2 | 53.6 | 49.7 | 186 | 158 | 130 | 106 | 88 | 82 |
| **Central Africa** | 36.1 | 39.8 | 44.1 | 46.6 | 45.3 | 42.7 | 186 | 162 | 137 | 123 | 118 | 116 |
| Angola | 30.0 | 34.0 | 38.0 | 40.0 | 39.9 | 40.1 | 231 | 200 | 173 | 160 | 158 | 140 |
| Cameroon | 36.0 | 40.5 | 45.7 | 50.7 | 54.8 | 46.2 | 186 | 158 | 128 | 103 | 82 | 88 |
| Central Afri. Rep. | 35.5 | 39.5 | 43.0 | 46.5 | 46.8 | 39.5 | 190 | 164 | 144 | 124 | 108 | 100 |
| Congo | 42.1 | 48.5 | 55.0 | 56.8 | 54.1 | 48.2 | 170 | 130 | 95 | 86 | 84 | 84 |
| D. R. Congo | 39.1 | 42.1 | 45.8 | 47.1 | 43.5 | 41.8 | 167 | 149 | 127 | 118 | 120 | 120 |
| Gabon | 37.0 | 40.5 | 48.7 | 56.3 | 58.0 | 56.6 | 179 | 158 | 114 | 78 | 67 | 57 |
| Equatorial Guinea | 34.5 | 37.5 | 40.5 | 43.8 | 47.6 | 49.1 | 196 | 176 | 157 | 139 | 118 | 101 |
| Sao-Tome and Principe | 46.4 | 51.4 | 56.5 | 61.6 | 66.2 | 69.9 | 169 | 98 | 64 | 62 | 44 | 32 |
| Chad | 32.5 | 35.5 | 39.0 | 42.3 | 44.7 | 44.7 | 211 | 189 | 167 | 146 | 129 | 115 |
| **East Africa** | 36.3 | 40.8 | 45.0 | 47.5 | 46.0 | 43.1 | 182 | 156 | 134 | 119 | 109 | 97 |
| Burundi | 39.0 | 42.0 | 43.9 | 46.6 | 39.8 | 40.9 | 167 | 149 | 137 | 120 | 132 | 107 |
| Comoros | 40.7 | 44.5 | 48.9 | 52.9 | 57.2 | 60.8 | 178 | 154 | 127 | 106 | 84 | 67 |
| Djibouti | 33.0 | 37.0 | 41.0 | 44.7 | 47.1 | 45.7 | 207 | 179 | 155 | 133 | 117 | 102 |
| Eritrea | 35.9 | 40.2 | 44.3 | 43.3 | 50.0 | 52.7 | 176 | 151 | 129 | 117 | 89 | 73 |
| Ethiopia | 32.9 | 37.3 | 41.8 | 42.7 | 46.3 | 45.5 | 208 | 177 | 150 | 143 | 119 | 100 |
| Kenya | 40.9 | 45.9 | 50.9 | 55.7 | 57.4 | 44.6 | 155 | 127 | 103 | 82 | 65 | 69 |
| Madagascar | 36.7 | 40.9 | 44.9 | 48.0 | 49.8 | 53.6 | 181 | 155 | 132 | 117 | 108 | 92 |
| Malawi | 36.3 | 38.5 | 41.0 | 45.7 | 45.1 | 37.5 | 212 | 204 | 191 | 158 | 138 | 115 |
| Mauritius | 51.0 | 60.2 | 62.9 | 66.7 | 69.9 | 72.0 | 99 | 61 | 55 | 28 | 21 | 16 |
| Mozambique | 31.3 | 36.2 | 41.1 | 42.8 | 43.4 | 38.1 | 220 | 185 | 154 | 143 | 137 | 122 |
| Uganda | 40.0 | 44.0 | 46.3 | 47.2 | 41.5 | 46.2 | 161 | 138 | 125 | 120 | 107 | 86 |
| Réunion | 52.7 | 57.7 | 64.2 | 69.8 | 73.5 | 75.2 | 141 | 87 | 41 | 14 | 9 | 8 |
| Rwanda | 40.0 | 43.0 | 44.6 | 46.1 | 24.0 | 39.3 | 161 | 143 | 134 | 125 | 135 | 112 |
| Somalia | 33.0 | 37.0 | 41.0 | 43.0 | 39.5 | 47.9 | 207 | 179 | 155 | 143 | 163 | 118 |
| Sudan | 37.6 | 39.6 | 43.6 | 49.1 | 52.9 | 55.6 | 175 | 163 | 139 | 110 | 93 | 77 |
| Tanzania | 37.0 | 41.7 | 46.5 | 51.0 | 49.4 | 43.3 | 160 | 143 | 125 | 100 | 99 | 100 |
| Zambia | 37.8 | 42.8 | 49.7 | 52.0 | 44.2 | 32.4 | 150 | 130 | 109 | 98 | 107 | 105 |
| Zimbabwe | 47.4 | 51.7 | 56.0 | 59.6 | 53.3 | 33.1 | 120 | 100 | 81 | 65 | 59 | 58 |
| **Southern Africa** | 44.5 | 49.5 | 53.2 | 57.3 | 61.3 | 46.4 | 105 | 92 | 82 | 66 | 52 | 52 |
| South Africa | 45.0 | 50.0 | 53.7 | 57.7 | 61.8 | 47.7 | 96 | 87 | 77 | 62 | 48 | 48 |
| Botswana | 46.0 | 51.5 | 56.1 | 62.8 | 65.0 | 39.7 | 144 | 113 | 90 | 58 | 47 | 57 |
| Lesotho | 41.7 | 47.1 | 49.5 | 52.0 | 53.9 | 35.1 | 172 | 138 | 124 | 110 | 99 | 92 |
| Namibia | 39.2 | 44.2 | 49.9 | 55.2 | 59.2 | 44.3 | 165 | 136 | 108 | 83 | 65 | 60 |
| Swaziland | 40.1 | 42.3 | 47.3 | 52.4 | 55.8 | 34.4 | 160 | 147 | 121 | 96 | 79 | 78 |
| **Total sub-saharan Africa** | 36.7 | 40.6 | 44.7 | 48.0 | 48.6 | 45.7 | 180 | 156 | 134 | 116 | 105 | 95 |

Source : United Nations (2003b) World Population Prospects. The 2002 Revision. Population database on-line (www.unpopulation.org).

What inferences can be drawn from the table?

- From 1950 to 1990, although an increase could be noticed in life expectancy in almost all African countries, the ratio still remained relatively low.

- From 1990 to 2004, life expectancy stagnated in West Africa (50 years), dropped by almost 3 years in Central and East Africa (43 years) and plummeted by 15 years in Southern Africa which as at today has regained its life expectancy of 1950-1954 (46 years).

Twenty of the 48 sub-saharan African countries, still experience decline in mortality and ten of these countries are in West Africa.

In contrast, since the early 1990s, the average life span has stagnated in 7 countries (Bénin, Nigeria, Ethiopia ...), dropped in 7 countries by 1 to 5 years (Togo, Mozambique, Tanzania, ...), by 5 to 12 years in 5 countries (Côte d'Ivoire, Cameroon, Kenya, Malawi, Central African Republic) and in ten other countries especially in Southern Africa, it has plummeted by 12 to 25 years (South Africa, Botswana, Lesotho, Namibia, Swaziland, Zambia, Zimbabwe).

The outbreak of AIDS in the 1980's and its rapid spread is responsible for this tragic decline in life expectancy. The United Nations have also attributed the decline/stagnation to the effects of economic crisis, structural adjustment plans, which disorganised in education and health sectors, led to the aggravation of poverty and the fresh outbreak of infectious diseases which till then were under control. There was also the effects of civil wars which ravaged a number of African countries.

Table 3 below indicates the mortality rates as well as the life expectancy in the United Kingdom, France and the United States at different periods by age range of 5 years.

**Table 3: Mortality rates as well as life expectancy by age range of 5 years in the United Kingdom, France and the United States.**

| | United Kingdom | | | | | | France | | | | | | United States | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1920 | | 1958 | | 2003 | | 1920 | | 1958 | | 2002 | | 1920 | | 1959 | | 2002 | |
| Age | qx | ex | qx | ex | qx | ex | qx | ex | qx | ex | qx | ex | qx | ex | qx | ex | qx | ex |
| 0 | 0.09154 | 56.60 | 0.02234 | 71.02 | 0.00536 | 78.73 | 0.12671 | 51.60 | 0.03115 | 70.16 | 0.00402 | 79.55 | 0.0859 | 54.51 | 0.02673 | 70.00 | 0.0069 | 77.30 |
| 5 | 0.00513 | 60.18 | 0.00053 | 67.88 | 0.00013 | 74.22 | 0.00461 | 56.85 | 0.00049 | 67.80 | 0.00013 | 74.94 | 0.0044 | 57.01 | 0.00060 | 67.22 | 0.0002 | 72.93 |
| 10 | 0.00210 | 56.15 | 0.00030 | 63.01 | 0.00009 | 69.26 | 0.00238 | 52.77 | 0.00031 | 62.94 | 0.00012 | 69.98 | 0.0022 | 52.88 | 0.00041 | 62.38 | 0.0002 | 67.99 |
| 15 | 0.00237 | 51.68 | 0.00041 | 58.10 | 0.00020 | 64.30 | 0.00368 | 48.40 | 0.00059 | 58.04 | 0.00024 | 65.03 | 0.0033 | 48.50 | 0.00070 | 57.52 | 0.0004 | 63.05 |
| 20 | 0.00337 | 47.39 | 0.00077 | 53.27 | 0.00055 | 59.41 | 0.00672 | 44.49 | 0.00101 | 53.26 | 0.00073 | 60.17 | 0.0051 | 44.45 | 0.00126 | 52.78 | 0.0009 | 58.26 |
| 25 | 0.00399 | 43.23 | 0.00080 | 48.47 | 0.00057 | 54.56 | 0.00693 | 40.93 | 0.00129 | 48.52 | 0.00076 | 55.38 | 0.0057 | 40.62 | 0.00129 | 48.10 | 0.0009 | 53.53 |
| 30 | 0.00453 | 39.09 | 0.00094 | 43.67 | 0.00068 | 49.72 | 0.00685 | 37.26 | 0.00156 | 43.84 | 0.00081 | 50.58 | 0.0066 | 36.75 | 0.00144 | 43.39 | 0.0011 | 48.77 |
| 35 | 0.00543 | 34.97 | 0.00140 | 38.90 | 0.00092 | 44.90 | 0.00726 | 33.50 | 0.00195 | 39.18 | 0.00111 | 45.80 | 0.0075 | 32.99 | 0.00194 | 38.73 | 0.0014 | 44.04 |
| 40 | 0.00634 | 30.90 | 0.00197 | 34.19 | 0.00136 | 40.12 | 0.00796 | 29.67 | 0.00294 | 34.60 | 0.00175 | 41.09 | 0.0082 | 29.20 | 0.00303 | 34.14 | 0.0021 | 39.38 |
| 45 | 0.00780 | 26.88 | 0.00343 | 29.61 | 0.00191 | 35.42 | 0.00938 | 25.84 | 0.00414 | 30.13 | 0.00292 | 36.51 | 0.0099 | 25.40 | 0.00474 | 29.72 | 0.0031 | 34.83 |
| 50 | 0.01098 | 22.97 | 0.00608 | 25.21 | 0.00337 | 30.83 | 0.01232 | 22.09 | 0.00689 | 25.83 | 0.00422 | 32.11 | 0.0128 | 21.68 | 0.00765 | 25.51 | 0.0045 | 30.42 |
| 55 | 0.01410 | 19.27 | 0.00975 | 21.08 | 0.00510 | 26.39 | 0.01678 | 18.50 | 0.01010 | 21.78 | 0.00589 | 27.84 | 0.0181 | 18.14 | 0.01118 | 21.58 | 0.0067 | 26.14 |
| 60 | 0.02293 | 15.78 | 0.01602 | 17.27 | 0.00835 | 22.12 | 0.02354 | 15.10 | 0.01539 | 17.97 | 0.00790 | 23.70 | 0.0248 | 14.87 | 0.01702 | 17.92 | 0.0098 | 22.06 |
| 65 | 0.03466 | 12.61 | 0.02611 | 13.81 | 0.01292 | 18.11 | 0.03415 | 11.96 | 0.02281 | 14.42 | 0.01119 | 19.67 | 0.0371 | 11.81 | 0.02681 | 14.58 | 0.015 | 18.25 |
| 70 | 0.05187 | 9.81 | 0.04054 | 10.74 | 0.02044 | 14.38 | 0.05357 | 9.15 | 0.03598 | 11.18 | 0.01718 | 15.86 | 0.0573 | 9.18 | 0.03946 | 11.57 | 0.0233 | 14.73 |
| 75 | 0.07977 | 7.43 | 0.06620 | 8.11 | 0.03590 | 11.03 | 0.08666 | 6.83 | 0.05949 | 8.35 | 0.02692 | 12.31 | 0.0856 | 6.99 | 0.05967 | 8.91 | 0.0358 | 11.54 |
| 80 | 0.11627 | 5.64 | 0.10296 | 5.99 | 0.05989 | 8.20 | 0.13380 | 5.02 | 0.09913 | 6.06 | 0.04615 | 9.12 | 0.1316 | 5.20 | 0.09142 | 6.67 | 0.0566 | 8.74 |
| 85 | 0.17399 | 4.19 | 0.15980 | 4.32 | 0.09766 | 5.86 | 0.20088 | 3.66 | 0.15898 | 4.33 | 0.08308 | 6.43 | 0.1848 | 3.95 | 0.13842 | 4.91 | 0.0917 | 6.40 |
| 90 | 0.22943 | 3.23 | 0.23325 | 3.16 | 0.16477 | 4.12 | 0.28743 | 2.71 | 0.23719 | 3.10 | 0.14715 | 4.39 | 0.2542 | 2.94 | 0.20520 | 3.65 | 0.1419 | 4.63 |
| 95 | 0.31822 | 2.39 | 0.32499 | 2.32 | 0.25359 | 2.88 | 0.36448 | 2.07 | 0.32863 | 2.29 | 0.23779 | 3.01 | 0.3421 | 2.20 | 0.27432 | 2.76 | 0.2207 | 3.29 |
| 100 | 0.39852 | 1.89 | 0.41605 | 1.79 | 0.35710 | 2.09 | 0.44698 | 1.66 | 0.42236 | 1.76 | 0.35112 | 2.11 | 0.4286 | 1.66 | 0.35691 | 2.12 | 0.312 | 2.40 |

As Table 2 did not contain the mortality rate or life expectancy in adulthood, it cannot be compared with Table 3. Nevertheless, it can be observed that:

- Life expectancy at birth for the period 2000-2004 in most of the 48 sub-saharan African countries (an average of 45.7 years) is lower than those of the United Kingdom in 1920, France and the United States which stood respectively at 56.6, 51.6 and 54.51 years.

- Life expectancy for these three countries in 1958 (71.02, 70.16 and 70 years) was more than twenty years higher than those of most African countries for the period 2000-2004.

There is nothing to indicate that this gap is sustained to adulthood, but there is that apprehension, especially as it is known that HIV/AIDS, for example, is ravaging the adult population. In the scenario where the gap in life expectancy at birth is sustained to adulthood, even the utilisation of the 1920 tables would, from the insurer's point of view, be too optimistic for the pricing of term assurance.

Undoubtedly, the insured population presents better mortality statistics than the general population because of the medical

selection and that can justify the use of these European and American tables, in the absence of appropriate ones. However, special attention needs to be paid to group assurance, especially by the reinsurers who carry all the weight of the risks of death. Indeed, medical selection is not systematic. It only applies to those members of the group whose sum insured exceed the free cover limit. The free cover should be limited to reasonable amounts. In addition, if the reinsurance is based on the original premium, it would not be out of place for the cedants to apply a premium rate below the requisite mortality tables to beat competition.

The use of inappropriate tables may lead to premium rates that are either favourable or detrimental to the insurer, depending on the type of insurance written. It can be demonstrated that the use of lower mortality rates than the real mortality of the insured population is advantageous to the insurer in the case of pure endowment and annuity. In contrast, the use of lower mortality rates in the case of term assurance or decreasing term assurance etc... for a population with higher actual mortality would be very detrimental to the insurer.

Section 4 which follows, would demonstrate, using a fictitious portfolio, the risk of insolvency facing an insurer that uses the low mortality table (USA 1959) to cover the death risks of a population whose actual mortality is higher (table USA 1920) .

## 4. Illustration of insolvency risks for a life insurer that uses inappropriate mortality table

Consider the case of an insurer with a group life portfolio of 4 000 insured, made up of people aged 20, 30, 40, 50 years, with each group comprising 1 000 members.

4.1 Features of the portfolio and calculation scenario

- group term life assurance
- sum insured per member of the group is US$100 000
- period of cover:10 years
- a single premium payable at inception
- a technical interest of 3.5% on the premium deposited
- The American gross mortality table of 1959 serves as the basis for the calculation of the premium but the appropriate table that should have been used is that of 1920; both tables are reproduced in Annex 1.
- No security charges or expenses applied

4.2. Results of calculations

Table 4 presents the pure premiums, calculated on the basis of the gross mortality rates without any charges. The formula for  may appear complicated but in actual fact its interpretation is simple to understand.

Take the case of the insured aged 20 years, who at the beginning of the insurance period are 1 000 in number (lx). Going by the mortality table of 1920 (Annex 1), there would be 5 deaths (0.00507 * 1 000) and 995 survivors in the first year. For the second year, there would also be 5 deaths (0.00536* 995) and 990 survivors. By repeating the same calculation for the period of ten years, it would be noticed that out of the total of 1 000 insured at the beginning, 55 would have died by the end of the insurance period. As each one was insured for US$ 100 000, the insurer would have to pay a total of US$ 5 500 000. To meet this liability, the insurer should therefore demand a premium of US$ 5 500 from each of the 1 000 insured. However, due to the technical interest of 3.5% guaranteed by the insurer, the premium per insured is reduced to US$ 4 659.319.

2

$$P = C\left(v^{1/2}\frac{d_x}{l_x} + v^{3/2}\frac{d_{x+1}}{l_x} + v^{5/2}\frac{d_{x+2}}{l_x} + v^{7/2}\frac{d_{x+3}}{l_x} + v^{9/2}\frac{d_{x+4}}{l_x} + v^{11/2}\frac{d_{x+5}}{l_x} + v^{13/2}\frac{d_{x+6}}{l_x} + v^{15/2}\frac{d_{x+7}}{l_x} + v^{17/2}\frac{d_{x+8}}{l_x} + v^{19/2}\frac{d_{x+9}}{l_x}\right)$$

where C= the sum insured, $v=\frac{1}{1+i}$ i = technical rate of interest, dx= number of deaths at age x, lx= number of survivors at age x

**Table 4 – Pure premium based on mortality tables US 1920 and 1959**

| | | **Premium based on table 1920** | | **Premium based on table 1959** | |
|---|---|---|---|---|---|
| Age | Number of the insured | Premium/Insured | **Total Premium** | Premium/Insured | **Total Premium** |
| 20 | 1 000 | 4 659,319 | **4 659 319** | 1 073,109 | **1 073 109** |
| 30 | 1 000 | 6 037,075 | **6 037 075** | 1 618,474 | **1 618 474** |
| 40 | 1 000 | 7 900,504 | **7 900 504** | 3 782,315 | **3 782 315** |
| 50 | 1 000 | 13 659,025 | **13 659 025** | 8 936,784 | **8 936 784** |
| | | **Total** | **32 255 923** | | **15 410 682** |

The table reveals a significant proportion of variance in the premium per insured depending on whether the table used is that of 1920 or the one of 1959.

Assuming that the 1920 table is the one that reflects the actual mortality of the insured, it can be easily verified in Table 5 that the premium received would adequately allow for the expected claims to be settled without surplus or loss.

**Table 5 – Evolution of insurers' fortune during the contract period baded on the gross mortality table US 1920**

| Year | Number of | Insurers assets at the beginning of the year | Loss | Insurers assets at mid-year | Insurers assets at year end |
|---|---|---|---|---|---|
| 1 | 33 | 32 255 923 | 3 300 000 | 29 515 547 | 30 027 627 |
| 2 | 34 | 30 027 627 | 3 400 000 | 27 148 591 | 27 619 606 |
| 3 | 35 | 27 619 606 | 3 500 000 | 24 598 792 | 25 025 569 |
| 4 | 36 | 25 025 569 | 3 600 000 | 21 859 750 | 22 239 005 |
| 5 | 38 | 22 239 005 | 3 800 000 | 18 824 841 | 19 151 442 |
| 6 | 39 | 19 151 442 | 3 900 000 | 15 583 710 | 15 854 080 |
| 7 | 40 | 15 854 080 | 4 000 000 | 12 129 140 | 12 339 575 |
| 8 | 42 | 12 339 575 | 4 200 000 | 8 353 660 | 8 498 592 |
| 9 | 43 | 8 498 592 | 4 300 000 | 4 346 038 | 4 421 440 |
| 10 | 45 | 4 421 440 | 4 500 000 | -1 851 | |
| Total | 385 | | 38 500 000 | | |

[3] For all the ages

[4] The assumption is that deaths are uniformly spread throughout the year and on the average they occur in the middle of the year.

This table can be interpreted as follows:

At the beginning of year 1, the insurer receives a total premium of US$ 32 255 923 for all the 4 000 insured (cf. Table 4). In the middle of year 1, he pays US$3 300 000 in respect of deaths which are supposed to be spread in a uniform manner throughout the year and therefore occur on the average in the middle of the year. Meanwhile, the premium paid at the beginning of the year, has yielded an interest of 3.5% for six months, i.e. US$559 624. Therefore, in the middle of the year, the insurer would have the sum of US$32 815 547 just before the payment of claims and the figure would be reduced to US$ 29 515 547 after payment. At the end of year 1, the figure would increase to US$30 027 627 (6 months interest of 3.5%) and represents the fortune available to the insurer at the beginning of the second year.

The same scenario would be replicated in the following years and in the middle of the tenth year, all the claims would have been paid with no deficit or profit for the insurer (the little deficit of US$1 851 is traceable to the fact that the exact calculation does not give a round figure for the deaths: 384.98 instead of 385 in Table 4). Certainly, the result of no deficit and no gain supposes that the death projections in the mortality table would occur without alteration.

However, if the insurer uses the 1959 table as the basis for pricing while the 1920 table reflects the actual mortality, he would record a deficit of US$22 527 554 at the end of the tenth year, the term of the insurance as shown in Table 6. From the middle of the 5th year, he would already be running in deficit and would no longer be able to pay for future claims unless by recourse to his capital, if within that time, he does not become insolvent.

**Table 6– Evolution of the insurer's fortune during the contract period based on the gross mortality table US 1959**

| Year | Number of Deaths | Insurer's assets at the beginning of the year | Claims paid | Insurer's assets in the middle of the year | Insurer's assets at the end of the year |
|---|---|---|---|---|---|
| 1 | 33 | 15 410 682 | 3 300 000 | 12 378 050 | 12 592 803 |
| 2 | 34 | 12 592 803 | 3400 000 | 9 411 281 | 9 574 562 |
| 3 | 35 | 9 574 562 | 3 500 000 | 6 240 676 | 6 348 949 |
| 4 | 36 | 6 348 949 | 3 600 000 | 2 859 100 | 2 908 704 |
| 5 | 38 | 2 908 704 | 3 800 000 | -840 832 | -840 832 |
| 6 | 39 | -840 832 | 3 900 000 | -4 740 832 | -4 740 832 |
| 7 | 40 | -4 740 832 | 4 000 000 | -8 740 832 | -8 740 832 |
| 8 | 42 | -8 740 832 | 4 200 000 | -12 940 832 | -12 940 832 |
| 9 | 43 | -12 940 832 | 4 300 000 | -17 240 832 | -17 240 832 |
| 10 | 45 | -17 240 832 | 4 500 000 | -21 740 832 | -21 740 832 |
| | 385 | | 38 500 000 | | |

This illustration of the risk of failure of an insurer that uses an inappropriate table for the pricing of death risk, using hypothetical case (the same sum insured, same effective date, same duration, single premium, identical age ranges) was given to facilitate understanding, but a similar outcome would still be obtained in real cases.

As the importance of having an appropriate pricing tool is all too clear, African insurers and reinsurers should pool together their data on mortality and draw up experience-based tables.

### 5. Preparation of experience-based mortality tables

The preparation of such tables would involve the observation of the mortality of the insured population. That exercise would not be possible unless there is a sufficiently high number of insured lives. Otherwise, the mortality rates would have no significance.

As life assurance is not a masses' affair in Africa, it is imperative for the players in the sector to pool together their data, because it is unlikely that a single insurer or reinsurer can on his own have the number of insured population required to prepare an experience-based table.

These tables could be constructed by region, for example for West Africa, Central Africa, East Africa, Southern Africa and North Africa.

Concretely, mortality observation may take up to a period of 3 to 5 years and require, grouping the insured population into age range (20-24, 25-29, 30-34, etc.) without gender distinction. The objective of the grouping would be to arrive at sizeable insured population per age range, so that the resultant mortality rates would be significant. Mortality rates that correspond to each age would then be calculated with the assumption that qx would vary within each age range in line with a law similar to that of .

Supposing that the following observations were made in West Africa over a period of three years:

| Age range | Insured lives | Average N° of deaths per year |
|---|---|---|
| 40-44 | 20 000 | 72 |
| 45-49 | 15 000 | 95 |
| 50-54 | 12 000 | 122 |
| 55-59 | 10 000 | 162 |

Mortality rate per age range is obtained by dividing the number of deaths by the insured lives, which gives the following value per mille:

| Age range | Mortality rate per age range (‰) |
|---|---|
| 40-44 | 3.6 |
| 45-49 | 6.3 |
| 50-54 | 10.2 |
| 55-59 | 16.2 |

As already mentioned, the mortality coefficients for intermediary ages could be worked out from the foregoing using a formula similar to that of GOMPERTZ.

**Conclusion**

The insurance industry differs from all the other sectors of economic activities because of its peculiar inversion of the production cycle, that is, the fact of marketing products whose final cost will only be known posteriori. Consequently, by accumulating the risks written, the insurer might be unable to fulfil its commitment to bear the financial cost of future losses if the pricing indices are not reliable.

In that regard, the case of life assurance in Africa is worrisome and deserves special attention.

Indeed, as at now, no single African country has a mortality table applicable to its

[5] $q_x = B.c^x$

population and the question of the relevance of using European and North American tables that date back to the 1950s for the pricing of life assurance operations can be objectively posed.

The use of inappropriate mortality table can be either favourable or unfavourable to the insurer depending on the type of life assurance underwritten. It is particularly catastrophic for an insurer that underwrites term assurance in a population whose mortality rate is higher than the rates in the relevant; Thus, the need to have an appropriate pricing tool.

Demographic mortality tables constitute appropriate tools but their absence in several African countries may last for much longer. It is therefore the responsibility of the players concerned, that is, African insurers and reinsurers to come together and prepare an experience based mortality table based on a fair pricing of life assurance, which is lacking until now in Africa.

## References


1. The Human Mortality Database www.mortality.org

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**Annex 1**

**Gross mortality tables US 1920 and 1959**

| Age | qx | |
|---|---|---|
| | | |
| 20 | 0.00507 | 0.00126 |
| 21 | 0.00536 | 0.00131 |
| 22 | 0.00557 | 0.00129 |
| 23 | 0.00567 | 0.00122 |
| 24 | 0.00569 | 0.00125 |
| 25 | 0.00566 | 0.00129 |
| 26 | 0.00567 | 0.00127 |
| 27 | 0.00575 | 0.00124 |
| 28 | 0.00596 | 0.00128 |
| 29 | 0.00627 | 0.00135 |
| 30 | 0.00659 | 0.00144 |
| 31 | 0.00690 | 0.00152 |
| 32 | 0.00714 | 0.00164 |
| 33 | 0.00729 | 0.00172 |
| 34 | 0.00737 | 0.00184 |
| 35 | 0.00748 | 0.00194 |
| 36 | 0.00760 | 0.00206 |
| 37 | 0.00773 | 0.00221 |
| 38 | 0.00788 | 0.00255 |
| 39 | 0.00804 | 0.00276 |
| 40 | 0.00824 | 0.00303 |
| 41 | 0.00845 | 0.00309 |
| 42 | 0.00871 | 0.00364 |
| 43 | 0.00904 | 0.00392 |
| 44 | 0.00942 | 0.00433 |
| 45 | 0.00985 | 0.00474 |
| 46 | 0.01035 | 0.00511 |
| 47 | 0.01090 | 0.00567 |
| 48 | 0.01147 | 0.00636 |
| 49 | 0.01210 | 0.00693 |
| 50 | 0.01279 | 0.00765 |
| 51 | 0.01357 | 0.00813 |
| 52 | 0.01448 | 0.00924 |
| 53 | 0.01554 | 0.00984 |
| 54 | 0.01673 | 0.01065 |
| 55 | 0.01808 | 0.01118 |
| 56 | 0.01954 | 0.01202 |
| 57 | 0.02094 | 0.01243 |
| 58 | 0.02219 | 0.01545 |
| 59 | 0.02343 | 0.01683 |
| 60 | 0.02481 | 0.01702 |

[6] Source : www.lifetable.de/data/MPIDR/USA_1901-1999.txt

[7] Source : www.mortality.org

# ANALYSING INSURER FINANCIAL STRENGTH

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## INTRODUCTION

The purpose of analyzing an insurer's financial strength is to provide an opinion on the ability to meet its current and future obligations to its policyholders on a timely basis. Broadly used, financial strength refers to the ability to withstand financial strain. It provides an indication of the size and quality of an entity's assets relative to its liability. Although size is generally used to measure strength, the quality of net assets is much more important than its magnitude. Insurers and reinsurers do not just provide covers. They provide guarantees / promises they will be there with a big umbrella during the torrential rains that are bound to happen when the heavens open up. Therefore, one needs to know how big and strong the umbrella is to weather the storm.

Achieving a credible assessment of the financial strength involves a thorough and comprehensive quantitative as well as qualitative analysis of a company's balance sheet strength, operation, performance and business profile. This goes beyond just computing ratios, as the interpretation of the result of the analysis is paramount.

There are various groups within an entity's operating environment and each of them is interested in the financial strength of the firm. These potential users and beneficiaries include management and employees, shareholders, governments and tax authorities, competitors, financial analysts, etc.

Before any analysis can be performed, there is the need to obtain relevant and reliable information sufficient to provide a basis for such an assessment. By far the most important source of information about a company is its financial statements, including its audited accounts and Annual Reports, quarterly accounts (where available), reports filed with regulatory agencies and other publicly available documents.

In analysing financial strength, the single most important area to evaluate is the balance sheet which is used not in the narrow sense, but to mean the full audited Financial Statements. In this connection, it is necessary to understand the underlying rules governing the preparation of those statements as well as their general structure and contents.

## FINANCIAL STATEMENTS

They contain summarised information on a firm's financial affairs, organised systematically as a means of presenting reports of the firm to the owners, creditors, employees, government and the general public. Since modern day business structures entail separation of ownership from management, managers have to report periodically to owners on how efficiently or otherwise resources have been utilised. Basically, the preparation of the financial statement is the responsibility of the

Accountant and is generally covered under the accounting and financial reporting functions.

The statements are prepared to assist management in decision-making and provide reliable and up-to-date financial information about the economic activities and obligations of the business enterprise. They also give indications about changes in the net resources, as well as useful information to the investors, creditors and other stakeholders. Besides, they predict, compare and evaluate potential earning power and cashflows in terms of amount, timing and related uncertainty.

Typically, financial statements will comprise the balance sheet, income statement, statement of changes in equity, cash flow statements, five-year financial summary, statement of accounting policies, the directors report, notes to the accounts, value added statements and the auditors' report.

## REGULATORY FRAMEWORK

As a result of the diversity in the interests and requirements of different users of financial statements, they should be produced using known and common basis, policies and principles.

The preparation of financial statements are governed by Statutes and Accounting Standards.

The statutes define the generic framework for conducting business transactions and accounting for such transactions. Every country has its own set of laws designed to regulate business practices. The majority of the laws for the English speaking countries of the continent have the English Companies Act as their root, while the Francophones derive theirs from the French norms.

In addition to the requirement for compliance with the relevant legislation, financial statements are prepared in accordance with standards set by the relevant accounting regulatory bodies. In those countries where the practice of accounting is sufficiently organised, there are national accounting standards, otherwise the International Financial Reporting Standards are adopted.

Having reviewed the structure and content of financial statements and the principles guiding their preparation, attention would now turn to the real task of identifying the salient points contained in those statements and present them in a form that will allow conclusions to be drawn on the strength of the entity.

## ANALYSIS OF FINANCIAL STATEMENTS

Financial statement analysis is the process of identifying the relationship between various items in the Balance Sheet and Profit & Loss statements as a way of assessing the strength and weaknesses of the reporting entity. It helps to measure the liquidity, the efficiency, the solvency and the profitability of an enterprise.
This information is pertinent for the reinsurance manager who is seeking good security, the investment manager responsible for the investment portfolio, or the business development manager wishing to identify targets for marketing.

Usually, analysts would focus on the underwriting, financial as well as asset leverage in assessing overall balance sheet strength. The key objective of balance sheet analysis is to determine the impact of a company's operating and financial practices on its capital. In principle, a highly geared or poorly capitalised company is likely to be more exposed to a high risk of instability resulting from catastrophes, unexpected losses, adverse changes in underwriting results, fluctuating investment returns, investment losses and changes in regulatory or economic conditions than a company with a conservative level of leverage. To gain a better insight into the "story" which the financial statements tell and highlight about the relationship amongst several areas of the

financial statements, analysts make extensive use of financial ratios.

## RATIO ANALYSIS

The absolute figures reported in the financial statement may not provide a meaningful understanding of the performance and financial position of the company. Accordingly, financial ratios are designed to show the relationship between two numbers or group of numbers on the financial statement which may be expressed in fraction, percentage or in absolute figure. In analyzing the financial strength of an insurer, it is pertinent to review the following areas:

- Capital,
- Stability
- Investment / Assets
- Profitability
- Business Profile

The list is by no means exhaustive, neither does it seek to be prescriptive. It has been highlighted to serve as a guide in the process of financial strength assessment.

## CAPITAL

By far, the most important issue in the financial strength assessment is the capital in terms of its adequacy and appropriateness. Several aspects of the capital are considered, including the absolute size and quality, while a number of tests are applied to gain a better understanding of this critical Balance Sheet area.

The analysis of capital usually starts with a review of the basic solvency margin. The objective here is to assess the company's ability to support controlled business growth. Although growth or decline by more than a certain magnitude would require further investigation, the result may not be conclusive. It merely provides a basis to make further enquiries especially where it falls outside what is considered the standard range.

In its simple form, the solvency margin relates the shareholders' funds to the net written premiums, expressed as a percentage. Statutory solvency margins usually take the form of a somewhat arbitrary value (say 5 times or 20%) and a formula is shown for qualifying assets (assets to be included and assets to be excluded).

This percentage gives a crude appreciation of the adequacy of shareholders' funds in relation to the level of underwriting exposure. It is used to assess the company's exposure to pricing errors in its current book of business. Generally, the higher the ratio, the stronger the firm is adjudged. There are a number of variants to the computation which seek to measure the number of times that an insurance company's eligible assets exceed the local regulatory minimum margin. Whatever the variant however, the basic aim is to assess the adequacy of amounts available over and above the premiums to meet the future claims obligations of the insurer.

The fundamental flaw of the basic solvency measure is that it relates capital to premium not risk and assumes that one unit of premium equates one unit of exposure. As the industry has witnessed a soft cycle, a reduction in rates (and therefore written premiums) tends to produce a much stronger solvency while in actual fact the real risk could be as great and the probability of underwriting loss very much greater due to premium inadequacy. Similarly, if rates fall and the insurer writes more business, the solvency ratio may remain the same but the risk exposure would substantially increase.

In addition, the solvency margin computation often ignores the impact of the following factors

- current level and trend of underwriting and overall loss;
- the size of technical reserves relative to net premiums;
- the volatility of investment value;
- possible failure of reinsurers to pay.

It is for these (and more) reasons that the rating agencies adopt a broader, rather more rigorous risk-based model of assessing capital adequacy by measuring the ratio of Adjusted Capital (AC) to Required Capital (RC). The models are typically fashioned after those of the U.S. National Association of Insurance Commissioners.

$$CAR = \frac{AC}{RC} \times 100$$

Where: AC = Total Adjusted Capital
RC = Total Required Capital
CAR = Capital Adequacy Ratio

In computing total adjusted capital, the analyst tries to establish the true capital base of an insurer by taking the published shareholders' funds and then adjusting this gross figure by what is termed a prudent "hair cut". This entails adjusting the gross figures for a margin against possible future downturn in investment values, hidden reserves, including deliberate over reserving (unearned premium and loss reserves), valuation differences, off balance sheet items, valuation and amortisation of intangible assets, non-recurring profit or loss, etc. These serve to even out the playing field by seeking to reflect and/or standardize certain economic values not properly or uniformly captured in the statutory financial statements. It also provides a more economic and comparable basis for assessing capital adequacy.

The required capital is therefore defined as the capital needed to support all those identified risks, adjusted for a co-variance calculation on the basis that all the risks are unlikely to develop simultaneously. While the key risk areas for Property and Casualty (P&C) companies are the loss reserve risks and written premium risks, life companies are more exposed to credit risks and interest rate risks.

The model is used for measuring how well a company's capital base would stand up to a reasonably stressful (but by no means worst case) underwriting and investment scenario. It should be noted however that in addition to the Capital Adequacy Ratio, other quantitative and qualitative measures are used in assessing capitalisation levels. Such considerations include quality of capital, reserve adequacy, appropriateness of reinsurance protection, among others. In addition, the capital structure of a holding company can have a significant impact on the overall financial strength of its subsidiaries. While a big, credible and properly capitalised holding company can provide subsidiaries with additional financial flexibility (capital infusion, access capital markets etc), a debt-ridden holding company can reduce financial flexibility and place a strain on the earnings and cashflows of the subsidiary.

Accordingly, where the company being analysed belongs to a group, it would be useful to take a look at the financial position of the other companies within the group, especially the holding company. When the holding company engages in businesses other than insurance, it would be necessary to review those non-insurance operations to determine their impact, if any, on the overall financial strength of the insurance operations.

**QUALITY OF ASSETS**

A key indicator of an insurer's financial stability is the quality and appropriateness of invested assets. Generally, the better the liquidity, diversification and/or quality of the assets, the greater the level of financial stability. Insurers would usually invest in money market instruments, fixed income securities, equities, real estate, etc. It is necessary to evaluate the risks associated with the assets and the potential impact a forced sale could have on shareholders' funds. In assessing financial strength therefore, analysts review invested assets for liquidity, diversification, single obligor concentration, sensitivity to interest rate / exchange rate changes, speculation etc.

## Liquidity

Liquidity measures a company's ability to meet its obligations to third parties on a timely basis. Therefore, a lot of attention is devoted to its measurement in assessing financial strength. As insurance is about risk and uncertainty, liquidity is a very critical issue to consider. To determine a company's ability to meet its financial obligations without having to sell fixed assets or other (long-term) investments under unfavourable market conditions, the analyst would review the level of cash and cash equivalents that have a very low exposure to market fluctuations. It is also necessary to evaluate the size and stability of operational cashflow as well as the quality, diversification and market value of invested assets.

The current ratio estimates the degree to which current assets cover current liabilities. It measures reserve of liquid funds in excess of current obligations available as a margin of safety against unexpected interruptions in operations. The rule of thumb commonly employed (by bankers) is that the current ratio should be at least 2.

The quick ratio estimates how far current liabilities are covered against easily convertible current assets. Generally in the current assets group, inventories are considered less liquid and are therefore deducted from total current assets in determining the quick ratio.

A ratio of not less than 1 is considered normal. It measures the proportion of net liabilities covered by cash and cash equivalent, and gives an indication of an insurer's ability to settle outstanding liabilities.

The debtors and creditors ratios deserve special mention especially as they affect the insurance industry in the continent. Because trade practices in most parts of Africa have not caught up with the rest of the world, receivables still constitute a significant percentage of the total assets being carried in the balance sheet of a number of African insurers and reinsurers. Considering the level of inflation and currency devaluation or depreciation in most countries, the financial losses being suffered are enormous. It is not unusual to find balances outstanding and unpaid for more than one year. It is very important therefore to pay particular attention to this item in the financial statement and its relationship to premium income.

The overall liquidity ratio is defined as total assets divided by total liabilities, less conditional reserves, expressed as a percentage. This ratio assumes the collectibility and marketability of reinsurance receivables, affiliated investments as well as other uninvested assets. A range of 110% - 180% is considered acceptable, with liability companies expected to have lower ratios than property insurers.

The current liquidity relates the sum of cash and cash equivalents, accrued investment income and unaffiliated invested assets to net liabilities. The ratio measures the proportion of liabilities covered by cash and cash equivalents and can be compared to the quick ratio. Where this ratio is less than 100%, the company's solvency is highly dependent on the collectibility or marketability of premium balances and investment in affiliates. The acceptable range for this measure is 95% - 140%, with life and liability risks underwriters expected to produce the lower ratios.

## PROFITABILITY

While liquidity is important in determining a firm's ability to meet maturing obligations in a timely and efficient manner, in the long run, profitability is what enables an insurer to operate as a going concern and perpetuate balance sheet strength, including liquidity. The analyst is interested in the stability and sustainability of the insurer's sources of income in relation to its liabilities profile. To fully understand the insurer's profit, it may be necessary to analyse its sources, including underwriting, investment, capital gains / losses and any other unusual or other non-recurring income or expenditure. Because

profitability is easily susceptible to valuation / measurement methodologies, it is also important to fully understand the accounting basis used in determining income and expenditure as well as assets and liabilities. In assessing profitability, the analyst will consider the changes in written and retained premium, combined ratio and its composition, operating ratio, return on revenue, investment yield and return on equity, among others.

**TECHNICAL RESERVES**

Before any meaningful conclusion can be reached on an insurer's profitability, liquidity and capitalisation, it is necessary to evaluate the adequacy or otherwise of its reported reserves. Invariably, profit and capital are directly affected by movement in reserves. While loss reserve is vital in determining financial strength, unfortunately, the ability to predict ultimate reserve requirements is as much as an art as it is a science. Although the industry has developed some rather sophisticated models to estimate risk exposure and reserve levels, the fact that there are significant shortfalls in reserves (asbestos, environmental pollution, hurricanes, etc.) goes to show that at the end of the day, it remains what it is – a mere estimate! A useful quick check on reserve adequacy is the ratio of reserves to premium and reserves to shareholders funds.

Again, care should be taken when analysing the results of these computations. In addition to looking at trends and comparing with industry standards or peers, exceptions should be analysed by reference to the company's specific situation. The portfolio composition, tail of business, and whether reserves are discounted or not are some of the issues that the analyst should take into consideration in interpreting the results of the computed ratios.

**REINSURANCE PROGRAMME**

Reinsurance is an integral part of an insurer's risk management technique and it provides additional financial flexibility. Often, an insurer's ability to meet its financial obligations can become highly dependent upon the performance of its reinsurers. The profitability of an insurance company can also be significantly exposed to the ups and downs of the reinsurance markets. Where there is a huge dependence on reinsurers, the insolvency or dispute with a major reinsurer can become problematic for the company. Overall, the more a company is dependent upon reinsurance, the more vulnerable its underwriting capacity and financial strength are to negative movements in the reinsurance market. A reinsurer would be expected to have a decent level of retention ratio. Otherwise, the signal is that in the case of a major catastrophe, the reinsurer and invariably the company, will be dependent on a 3rd party, who incidentally may be totally unknown to the cedant. The reinsured should therefore be interested in not just the current retention ratio, but its development over time.

**BUSINESS PROFILE**

An insurer's business profile is influenced by the degree of risk inherent in the company's mix of business, competitive market position and the depth and experience of its management. Key business profile issues include spread of business across geographical and product lines, quality of ownership and management and market risks.

Apart from the examination of the ownership structure and quality of management, each insurer has a distinct image with its customers, reinsurers and the insurance world in general. Is the company cautious, conservative or is it highly innovative? What is the relationship with the market bodies? Is it efficient in responding to correspondences? Are the financial statements prepared and audited on a timely basis? The analyst will consider all these and more as part of the overall financial strength assessment.

## EVALUATION OF FINANCIAL RATIOS

Two broad measures for evaluating the ratios for individual companies are used. One is to compare them with industry averages or standards, while the other is to analyse historical trends.

### Industry Standards

A comparison of individual ratios with industry composites is useful as a starting point. However, it is not determinate. The product characteristics of the individual firm may differ from those of the industry as a whole. For example, benchmarking the results of a company specialising in life business with the industry average, where 75% of the market is general business, could lead to inaccuracies. In addition, the firm may follow specific policies which make its situation somewhat different from that of the industry. An important value of comparing the individual firm with the industry, however, is that if differences are observed, they form a basis for raising the significant analytical questions: Why are the ratios different? What distinct and different policies are being followed? What is the basis for these different policies? Under what economic conditions would these policies be particularly advantageous? Under what economic and financial circumstances would different policies of the firm be undesirable or unfavourable?

Industry data are usually available with the Insurance supervisory authorities, research departments of large national corporations or the insurance institute.

### Analysis of Historical Trends

Trend data is a comparison of ratios over time within a company. It would provide indications as to whether the company is doing better or worse and lead to further enquiries where large and unexplained variations are observed from year to year.

Although there is no agreed number of years to use when examining the trend in a company, a range of three to six years is considered appropriate in most cases. Less than three years is not deemed sufficient to establish a trend while more than six years is less meaningful because the external environment usually changes making the comparison difficult.

The statutes of a number of countries requires financial statements to contain a five-year summary of key financial data.

### Selected firms in the same industry

Comparative Ratio analysis of some selected firms in the same industry, especially the most progressive ones could be carried out. This enables the analyst ascertain the position of the company within the industry.

## A WORD OF CAUTION

Because the assessment of an insurer's financial strength relies heavily on the financial statements, the analyst should fully understand and factor in the limitations of such statements, many of which relate to shortcomings identified therewith. Without doubt, the document that draws the most criticism is the Balance Sheet and some of the commonly cited disadvantages concern the focus of the balance sheet on the past rather than the future, timeliness of preparation, inability to measure non-financial qualities, window dressing, historical concept and a host of others.

## CONCLUSION

As a result of the foregoing, managers and analysts cannot place absolute reliance upon the results of financial ratio analysis, as "window-dressing" practices, may be utilised. These include the postponement of the maintenance of fixed assets, which will decrease costs and increase profitability in the short run.

A policy of delaying the purchase of modern equipment will decrease capital outlays and reduce depreciation expenditures in the short run. However, failure to keep pace with competitors that are installing modern and efficient infrastructure will adversely affect the ability of the company to compete in the global market.

In addition, changes in price levels and in the current values of assets can produce distortions in accounting measures of performance and financial position. It is desirable, therefore, to have on hand the kinds of additional information that are available regarding current replacement values. Nevertheless, even with the supplementary information, financial ratio analysis is not the complete answer to evaluating the performance of a firm. When a financial ratio shows that the patterns of a firm depart from industry norms, this disparity is not an absolute indication that something is wrong. Departures from industry norms provide a basis for further questions, investigation and analysis.

Additional information and discussions may provide sound explanations for such differences or reveal forms of mismanagement calling for correction.

Conversely, conformance to industry composite ratios does not establish with certainty that the firm is performing normally and is managed well. In the short run, many devices may be used to make the firm "look well" in relation to industry standards. The analyst must develop firsthand knowledge of the operations of the firm and of its management to provide a check on the financial ratios. In the same vein, he must develop a feel of what is going on in the firm, as it is this sixth sense that sometimes uncovers weaknesses.

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# THE KENYA INSURANCE MARKET

**By**

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## 1. INTRODUCTION

The history of the insurance market in Kenya is similar to that in most developing countries in that it was one of the products of colonisation and the development of a modern economic sector. Initially, insurance agents acting for foreign insurance companies, mostly British and Indian, appeared on the scene. Lloyds of London was also represented by such agents, as Smith Mackenzie and Co. whose operations started as early as 1901, Sydne and C. Fichart who were established as a land and estate agents in 1905, but in addition acted as sole agents in British East Africa and Uganda for the Norwich Union Fire Assurance Society. Subsequently, the East African Underwriters started business as chief agents in 1954 for a number of Indian Insurance companies such as United India Fire and General Insurance Co. Ltd and Oriental Fire and General Insurance Co.

As business grew, overseas companies established branches in Kenya and in 1930, history was made when the Pioneer Assurance Society Ltd was locally incorporated. The Jubilee Insurance Co. Ltd followed in 1937, while Pan Africa Insurance Co. joined the two in 1946. These three were the first insurance companies formed by local interest. Among the earlier mentioned branch offices to start operations in Kenya was the Provincial Insurance Co. Ltd in 1949, which was soon followed by other branch offices of mainly British and Indian insurance companies.

Kenya National Assurance Co. Ltd which in the 1970s and 1980s became a major player in the industry was incorporated on the 11th of December 1964 and started operations in February 1965. Initial shareholding of the company was mainly private but the Government took over the ownership in 1973, after paying off other shareholders who included insurance companies in the market.

Insurance brokers were not left out in these early developments. The first of such companies to be formed was Colin Hood Insurance Ltd in 1951. It has changed hands many times and is currently trading as Alexander Forbes Insurance Brokers Ltd. Another pioneer broking company was J. H. Minet & Co of United Kingdom which started operations through an agency (R. E. Bunson Insurance Ltd). The Company has also changed hands over the years and is currently trading as Aon Minet Insurance Brokers Ltd.

## 2. INSURANCE LEGISLATION

As in some African and other developing countries, there was no specific insurance legislation in Kenya until 1960, when the Insurance Ordinance of that year was promulgated. The law was intended to control the establishment, working and finances of insurance companies. Before the Ordinance, insurance companies had to comply only with the Companies Act. After independence in 1963 and with the assistance of the United Nations Conference on Trade and Development (UNDP), through the

Special Programme on Insurance (SPI), Kenya like other emerging nations in Africa realised that there was need to introduce legislation on insurance to guide the growth of the industry and make it relevant to the national economy. Two UNCTAD Resolutions are of significance in this regard. The first, adopted in 1964, formalised the belief that "a sound national insurance and reinsurance market is an essential characteristic of economic growth". (Recommendation A.IV.23). The second resolution, Resolution 42 (III) adopted in 1972, invited developing countries to take measures geared to promoting the following objectives:

- To minimise to the extent feasible, the dependence of developing countries on international insurers and reinsurers.
- To obtain competitive reinsurance terms and conditions from the international market.

### 2.1 The Insurance Act

Following the above resolutions, SPI conducted studies on insurance legislation and supervision. Developments in insurance legislation in Kenya were influenced by these studies and UNCTAD in addition offered both material and financial support to the Government in drafting the current legislation, which is the Insurance Act Chapter 487 of the Laws of Kenya, enacted in 1986 and enforced on 1st January 1987. The Act provides for the following among others:

- Prior authorisation for all persons transacting insurance business in Kenya.
- Minimum capital requirements for insurance companies and brokers as well as the requirement for local participation which is one third (1/3) for insurance companies and sixty percent (60%) for brokers.
- Local incorporation.
- Approval of reinsurance arrangements by the Commissioner of Insurance.
- Provision for margins of solvency and admissibility of assets.
- Ceilings on amounts that can be invested in various categories of investment.
- Prescribed formats for financial statements including balance sheets.
- Submission of audited accounts by 1st April of the following year.
- On site inspections by staff of the office of the Commissioner of Insurance.
- Maximum ceilings for management expenses.
- Filing of rates, policy terms and conditions of insurance contracts with the office of the Commissioner of Insurance.
- Provision for intervention in the management and eventual winding up of an insurance company where necessary.
- Regulations and requirements relating to the process of transfers, long-term business portfolios, amalgamations and mergers of insurance companies.

While it is true that most countries on the continent enacted insurance legislations after independence, to make them more relevant to their economies, the political system followed by the new nations influenced legislations on the industry as it did in the other sectors of the economy. Broadly, countries opted to follow either the socialist system of national economy or market/mixed economies. Kenya followed the latter with the result that players in the country's insurance industry were either privately owned or state owned. Some of the major

differences between the current Insurance Act and the earlier order were that all insurance and reinsurance companies were required to be locally incorporated with minimum subscribed capital (KShs 100 million for general business, KShs 50 million for long-term and KShs 500 million for reinsurance business). In addition, ownership of the companies was also to be either wholly or partially local.

### 2.2 Government Directives - 1978

In the development of the insurance market in Kenya, Government directives issued in 1978 by the Minister for Finance cannot be ignored. These directed that all insurance companies operating in the country had to seek local incorporation and that all imports into the country had to be insured locally, while reinsurance treaties arranged by local companies should be reviewed and approved by Kenya Reinsurance Corporation, as the office of the supervisory authority had not been established.

The birth of the insurance market in Kenya can rightfully be traced to 1978 and the Insurance Act reinforced and consolidated the gains made through the Government directives referred to above. As a result, the local industry, which was merely an extension of other markets, particularly that of the United Kingdom, became part of the national economy with the following characteristics:

i) Existence of insurance products,

ii) Geographical reference,

iii) Specific legislation (s) covering the operations of the industry,

iv) Local incorporation, whole or partial ownership by local interests.

v) Retention of part of the business written by insurers.

## 3. THE MARKET

### 3.1 Market players

3.1.1 Insurance Companies

The industry is highly fragmented with about forty registered insurance companies writing long and short-term business. In 2003, two leading companies accounted for 20% of the short-term premium income, eight had shares ranging between 3.7% and 6.3% adding to 37%, while the rest of the companies, controlled 43% of the market. There were twenty-one companies actively writing long-term business. The top five dominated the market with a share of 68% of the gross premium income. The life insurance sector is driven by two main lines of business; ordinary life and superanuation, which includes group life assurance and deposit administration.

3.1.2 Insurance Brokers Agents and Other Service Providers

According to a list published by the Commissioner of Insurance, there are over two hundred registered insurance brokers currently operating in the market and one thousand (1000) registered insurance agents. The market also has about two hundred and fifty (250) registered surveyors, loss adjusters and investigators, in addition to five (5) qualified actuaries working in the industry.

### 3.2. Current status

By world standards, the Kenya insurance market is very small in terms of premium income. It is however one of the leading markets in Africa occupying the 7th position going by the 2003 statistics published in "Sigma". It ranks fourth in terms of insurance penetration after South Africa, Mauritius and Zimbabwe with a rate of 3.09%. Life and non-life corresponding rates were 0.81% and 2.28% respectively. In 2003 the market premium was KShs 27.9 billion (US$ 411 million), which grew to Kshs 32.60 billion (US $ 446.60 million) the following year, with a breakdown of KShs 9.97 billion and KShs 22.63 billion for long and short-term business, respectively. The performance of the industry for the year 2004 on the basis of information provided by the Association of Kenya Insurers was as follows:

| Class | Gross Premium | Net Earned Premium | Incurred Claims | Expenses | Underwriting Profit |
|---|---|---|---|---|---|
| Short Term | 22.63 | 14.56 | 8.78 | 4.70 | 1.08 |
| Long Term | 9.97 | 9.26 | 5.12 | 3.29 | 0.85 |
| *Total* | 32.60 | 23.82 | 13.90 | 7.99 | 1.93 |

Underwriting results - General Business

The underwriting profit amounted to KShs 1.074 billion compared to KShs 224.54 million the previous year. The major contributors in terms of premium were motor commercial at 24.3%, motor private 16.8% and personal accident at 15.9%. Motor insurance as can be noted accounts for 41% of the annual total general business premium. The worst performing classes were Aviation with a loss ratio of 132%, workmen's compensation 115% and motor private 70.8%. The industry claims ratio for general business was 59.9% in 2004 as compared to 62% the previous year.

Underwriting results – Long term insurance

The total long-term premium income and pensions contributions from all the three lines of life business (Ordinary life, Group life and Deposit Administration) was KShs 9.97 billion as compared to KShs 8.47 billion the previous year. Claims and policyholders benefits paid during the year added to KShs 5.12 billion as compared to KShs 4.64 billion in 2003. The distribution of gross claims and policy benefits paid for during 2004 were as follows:-

| Class of Business | Gross Claims Paid (KShs) | Share |
|---|---|---|
| Ordinary Life | 1,502,870,505 | 29.3% |
| Group Life | 892,779,135 | 17.4% |
| Pensions | 2,726,977,081 | 53,2% |
| Total | 5,122,626,721 | 100% |

## 3.3 Major Developments

### 3.3.1. Short-Term business

Due to the presence of many players in the market, competition for business has unfortunately focused on pricing. In a survey carried out for the period 2001 to 2003, the market produced positive underwriting results despite the pressure on rates. Over these three years, nineteen companies averaged a combined ratio of under 100%, signifying underwriting profit, while the remaining sixteen companies showed underwriting losses, with the worst performer recording a combined ratio of 135%. In spite of this, all but two companies were able to realise a profit for year 2003 because healthy investment returns boosted the poor underwriting performance. As a result of price wars and other management inadequacies, the industry experienced company failures, with five companies being placed under liquidation or statutory management. The latest casualty was United Insurance Co Ltd, which joined Kenya National Assurance Company Ltd, Access Assurance Co Ltd, Stallion and Lakestar, all of which had collapsed earlier. Most of them had large portfolios of motor insurance, which is a statutory class of business. To avoid policyholders and third party claimants being unable to recover claims under the policies, the Government has set up a Policyholders' Compensation Fund under the Insurance (Policyholders' Compensation Fund) Regulations 2004. The fund is expected to pay claims which are a subject of a policy of insurance, where the underwriter has gone into liquidation. However, the level of compensation is very low (KShs 100,000) and is only available to individual policyholders as opposed to corporate institutions. The Fund is to benefit from contributions by policyholders at 0.5% of gross premium payable on a policy and a similar contribution by insurers on premium written on both life and non-life classes during the year. If well structured with reinsurance protection, the fund should be able to pay all such losses or at least a substantial share of what would

have been recoverable from insurers. The Fund should also extend to include corporate policyholders because of the contributions they are supposed to make to the fund. The introduction of the legislation is not however a totally new invention as it may have been copied from the United Kingdom. Following the collapse of the Vehicles and General in the 1970s, in the U.K, the Policyholders Protection Act 1975, was enacted to protect private policyholders and third parties in the case of compulsory insurance(s) against the risk of a U.K. authorised insurance company failing to meet its liabilities. The difference between the two funds is that in the case of the one in Kenya, contributions are expected both from policyholders and insurers, while in the U.K. it is the Government that funds the scheme. The issue of price competition has been of such concern to market players in the industry (short-term business) over the last few years that the Association of Kenya Insurers was forced to give guidance to its members. Unfortunately, the Minister for Finance through a legal notice outlawed the intervention which is seen to contravene the provisions of the Restrictive Trade Practices, Monopolies and Price Control Act. The industry through the office of the Commissioner of Insurance still has hope of seeing some order prevailing on the issue of pricing, by way of enforcement of section 30 of the Insurance Act which requires, among others, that in applying for registration and licence as an insurer, applicants must submit statements of premium rates, terms and conditions to apply to their policies. Since licensing is an annual requirement, the office has the ability to prevail on market rates.

3.3.2 Life Assurance

Fortunately price wars have not been a feature of long-term business mainly because in arriving at a rate, for a given product, actuaries are still using UK mortality tables 1929 – 1952. The market has not developed its own mortality tables though there are arrangements already in place to compile a local one. Group life has however experienced some rate competition, while AIDS is of concern to group life and individual life underwriters. As a result, some life underwriters have taken the following measures to protect themselves.

i) Specific pricing for AIDS,
ii) Additional reserving,
iii) Exclusion clauses,
iv) Loading of premiums,
v) Removal of premium rate guarantees,
vi) Experience rating,
vii) Identification of high risk groups,
viii) Reduction of free cover limits.

Though logic may demand that free cover limits be reduced, some insurers are increasing the limits as an element of competition.

The Retirement Benefits Act (Act No. 3 of 1997) and Regulations. 2000

One of the major developments in the long-term business sector, has been the enactment of the Retirement Benefits Act and the Regulations, in as far as Deposit Compensation Schemes are concerned. The main areas covered by the legislation can broadly be grouped under the following headings:

i) Provision for a supervisory authority
ii) Registration of schemes
iii) Trusteeship
iv) Funding levels
v) Investments
vi) Service providers, such as administrators, managers, custodians, auditors and actuaries.

The Act has established the Retirements Benefits Authority (RBA) with the following mandate to:

a) Regulate and supervise the establishment and management of the retirements benefits schemes

b) Protect the interest of members and sponsors of the retirement benefits scheme.

c) Promote the development of the retirement benefits industry.

d) Advise the Minister for Finance on national policies to be followed with regard to the retirement benefits industry.

e) Implement all government policies relating thereto.

The role of the RBA is in some ways similar to that of other regulators in the financial service sector such as the Capital Markets Authority, the Central Bank and the Insurance Commission. The RBA is however in a slightly weaker position because retirement benefits schemes are still voluntary in Kenya. The Act has formalised and given Trustees a greater responsibility in managing pension schemes as they will appoint all service providers including insurers. It has brought more transparency in the management of pension schemes because even for funds managed by insurance companies, Trustees have to appoint custodians and independent financial consultants.

3.3.3. Reinsurance

Due to the presence of a number of reinsurers operating in the market, Nairobi has become an important reinsurance centre in the East, Central and South African countries. These reinsurers are:

a. Kenya Reinsurance Corporation Ltd which is still 100% owned by the Government and receives legal cessions of 18% on each treaty arranged by the local insurers and reinsurers. However, this is to be phased out on 1st January 2007.

b. East Africa Reinsurance Company Ltd also 100 % owned by the private insurance companies. The reinsurer does not receive compulsory cessions.

c. ZEP-RE/PTA-RE, a joint venture company by countries in the COMESA region and some insurance companies. It receives compulsory cessions of 10% on all treaties arranged by insurance companies operating in member countries.

d. African Reinsurance Corporation formed by African Governments members of the African Union and which also has some insurance and reinsurance companies operating in member countries as its shareholders. Shareholding was recently extended to institutions outside the continent. The Corporation receives a compulsory cessions of 5% on all treaties arranged by insurance companies and reinsurers operating in member countries.

As can be seen above, a substantial share of treaties arranged by companies in the market are placed locally.

3.3.4 Insurance Training

The market has taken insurance training and education seriously, both at company and industry levels. According to available records, there are about four hundred Associates and Fellows of the Insurance Institute of London in the country. The industry has also developed its own diploma and to date, there are about ten people who have acquired the local diploma through examinations. The responsibility for insurance training and education has been assigned to the Insurance Training and Education Trust, which is funded through a Training Levy currently payable at the rate of 0.2% on non-life premium. Other than the courses leading to the award of the local diploma and tuition for the London examinations (Diploma and Advanced Diploma), the Trust through the College of Insurance, offers the following courses:

i) Certificate Course in Insurance (CCI).

ii) Certificate of Proficiency in Insurance (COP).
iii) Various Information Technology Courses.
iv) Management Courses for specific requirements of the industry.

The Insurance Training and Education Trust has two subsidiaries, the College of Insurance Management Board and the Kenya National Insurance Examinations Board which, will become an autonomous body when the expected legislation giving it legal backing is enacted.

3.3.5 Insurance Associations and the Yellow Card

An account of the Insurance industry in Kenya would not be complete without reference to various associations operating in the market. The oldest of these is the Insurance Institute of Kenya which was established in the late 1940s, as an affiliate of the Chartered Insurance Institute of London. Its main objective is the promotion of insurance training and education and professionalism. Other Associations formed later are:-

i) The Association of Kenya Insurers (AKI)
ii) The Association of Insurance Brokers of Kenya (AIBK)
iii) The Institute of Loss Adjusters, and Risk Surveyors (ILARS)
iv) The Association of Kenya Reinsurers (AKR).

The objective of the Associations is to provide a channel of communication between members and the authorities and promote members' interests and self-regulation.

The Yellow Card Scheme for the Common Market and for Eastern and Southern Africa (COMESA) Countries.

The above scheme was introduced in 1987 to provide a guarantee for road accident victims, for damage or injury suffered as a result of road accidents, thereby facilitate movement of vehicles between member countries. Subscribing member States are Burundi, Democratic Republic of Congo, Djibouti, Eritrea, Ethiopia, Kenya, Malawi, Rwanda, Sudan, Tanzania, Uganda and Zimbabwe. In addition to meeting at least the minimum insurance requirements under third party motor traffic legislation in member states, the scheme provides cover of up to US$ 150 per person for drivers and passengers for injuries they may sustain while in transit. Over sixty thousand motorists now use the Yellow Card annually with a premium income of US$ 2.5 million (2004). The number of insurance companies participating in the scheme now stands at one hundred and sixty. In addition, a number of insurance agents have been designated at boarder posts, enabling motorists to easily access the cover. In terms of organisational structures, each country subscribing to the scheme has a national Bureau which coordinates the activities related to the Yellow Card and the main policy making body is the Council of Bureaux of the Yellow Card Scheme which is answerable to the COMESA Council of Ministers.

## 4. FUTURE DEVELOPMENTS

The expected developments in the market include the introduction of the following:-

i) Legislation establishing an Insurance Regulatory Authority
ii) The enactment of the Accident Compensation Bill 2003 into law.

The first expected legislation has been promised by the Government and it is most likely that an appropriate Bill will be introduced in Parliament in 2006. The Authority will be able to provide a more efficient and effective regulatory environment than under the current arrangement where the office of the Commissioner of Insurance is a department within the Ministry of Finance. Over the years, courts in the country have been awarding ever increasing amounts in damages to victims of motor accidents to the extent that such awards together with

legal fees, are forcing insurers out of motor insurance business, particularly as regards the cover of public service vehicles. Court processes take a long time for the awards to be useful to the victims especially when they need them most. The same problem is being experienced by other accident underwriters and in particular, Workmen's Compensation insurers. To minimise the delays and make the amounts payable known and paid promptly, it has been necessary to legislate on a structured compensation system. The above Bill has been drafted on the basis of no-fault system. When it is passed it will not therefore be necessary or material to prove that death or injury which is subject of a claim, was occasioned by the negligence or other tort of any person.

## 5. CONCLUSION

The insurance market in Kenya as outlined above has had its share of problems like others, but the structures in place such as the Supervisory Authority and the Associations, are adequately in control and able to guide the industry to a more stable and prosperous future. Much depends on the growth of the economy which is showing signs of improvement. The economy has been under-performing for a number of years with GDP growth rates of 1% or less. For the first time in many years, this has improved to 4% in 2004 and it is expected that the current year will show even better growth in GDP, estimated at 5%.

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## ANGLOPHONE WEST AFRICA

### 1. New Companies

**Ghana**

Global Alliance Insurance Company Ltd.

**Nigeria**

Energy and Special Risk Insurance Co.

### 2. Major Losses

- The open store of the Ajaokuta Steel Company was engulfed by fire on 09 January 2005. The provisional estimate is ₦450,000,000 (US$3,214,286.00).

- Fire at the Switch Board of Reliance Telecommunication on 6th July 2004. The cost is ₦315.000.000 (US$2,368,421.00).

### 3. Legislation

**Nigeria**

In compliance with the Insurance Act 2003 and the recommendation made in respect of the minimum share capital of insurance and reinsurance companies on September 2005 by the Ministry of Finance, the new capital for insurance outfits were fixed as follows:

Life Business: ₦ 2 billion (US$14.8 m)

Gen. Insurance Business: ₦ 3 billion (US$22.2 m)

Reinsurance Business: ₦ 10 billion (US$74 m)

**Gambia**

Insurance Regulation 2005, which gets its authority from the Insurance Act 2003 stipulated the following capital requirement for insurance business in the Gambia:

Life Business: GMD 15 million (US$535,714)

Non-Life Business: GMD 15 million (US$535,714)

Composite Insurance : GMD 30 million (US$1,071,429)

Reinsurance Business: GMD100 million (US$3,571,429)

**Sierra Leone**

A pool has been created to manage the insurance of government properties. The motor tariff for Third party cover has been increased by about 96.7% from le90,000 to le150,000 for private vehicles and about 38.9% from le180,000 to le250,000 for commercial vehicles.

## FRANCOPHONE AFRICA (CIMA ZONE)

### 1. New companies

NSIA – Togo
NSIA – Gabon Vie
NSAB Vie (Benin)
SAMIRIS (Cameroon)
ALPHA ASSURANCES (Cameroon)

### 2. Major Losses

**Côte d'Ivoire**

- On 9th January 2005, one of the engines of a BOEING 767-300 belonging to Cameroon Airlines absorbed a bird during take-off, resulting in damages on the engine. The cost of repairs has been put at USD 15,328,416.00.

- A fire incident of unknown origin occurred in FIMA mattress-producing factory on 20/04/2005. Damages are estimated at USD 4,917,322.00.

- On 20th April 2005, while processing chemical products, there was a fire outbreak in INDUSCHIMIE, which spread to surrounding properties. The cost of loss stands at USD 2,355.861.00.

- A group compressor of SIR's hydrocracking equipment broke down on 04/11/2005, resulting in a breakdown in production for 270 days. Damages (including business interruption) are estimated at USD 6.3million.

- On 01/01/2006, a gas turbine was switched off as a result of an accidental compressor breakdown. The repairs are estimated to last for 75 days, while the cost of loss is valued at USD 8,654,233.

**Cameroon**

On 26th February 2005, damages affecting a pipeline located between two offshore platforms were estimated at USD 2.8million.

**Senegal**

A fire incident of undetermined source occurred on 30/07/2005 in a mattress and plastic shoes manufacturing company. The loss is estimated at USD 1,978,026.00.

**Togo**

On 12/02/2005, a fire incident was reported from AMINA warehouse (hairpiece manufacturer) in Lomé. The cause of the fire remains unknown. Damages are estimated at USD 2,661,344.

### 3. Others

- **Change in Name /Shareholding**

All the Life subsidiary companies of AXA within the CIMA zone have been bought over by Groupe SUNU. They have since assumed the name "Union des Assurances" followed by the name of the country and the class of business (e.g. Union des Assurances de Côte d'Ivoire Vie).

In Cameroon, COLINA group took up a significant number of shares in La CITOYENNE's capital.

- **Executive Appointments**

Mr. Jean-Claude NGBWA, former Director of Economic Controls, Cameroon, has been appointed as the new Secretary General of CIMA, thereby replacing Mr. Erard NONYU MOUTASSIE who has just concluded his second and last term of office.

M. Hyppolite OYOUBA, former Controller of Insurance, CIMA, was appointed Deputy Managing Director of CICA RE to replace Mr. Ndagmaissou NDUSON KADADI who proceeded on retirement in December 2005.

## EAST AND SOUTHERN AFRICA

### 1. New Companies

**Kenya**

- PACIS Insurance Company
- Metropolitan Life Insurance Company
- Mayfair Insurance Company
- Direct Line Insurance Company

**Uganda**

Microcare Insurance Company

**Tanzania**

Prosperity Insurance Company (Health Insurance)

**Malawi**

Reunion Insurance Company

### 2. Major Losses

**Tanzania**

- Insured: Songas Limited – Date of Loss 16/10/2004
  Marine Cargo Gas Turbine Generator and Skids aboard MV "BBC China" which has run aground off Kwazulu Natal, South Africa. The loss amounted to US$17,151,492.

- Insured: Mohamed Enterprises
  Fire on warehouse and stock on 23rd December 2003 paid in 2005 amounting to equivalent of about US$2.5 million.

- Insured: Tanzania Portland Cement Company Limited
  Fire at Twiga Cement Company Limited, Wazo Hill, Dar es Salaam on 20th November 2004. Estimated loss at US$1,883,319.

- Insured: Tanzania Portland Cement Company Limited
  Breakdown of Bigelon Boiler at Moshi, Tanzania on 4th December 2004. Estimated gross loss at US$3,190,000.

**Kenya**

Insured: City Council – Fire on office building/contents on 2nd March 2004. Total claim estimated at equivalent to US$2.6 million.

**3. Others**

**Kenya**

- United Insurance Company put a statutory management.

- Appreciation of Kenya Shilling by 8.5% against the dollar in 2005.

- Severe drought experienced in Kenya affecting more than 2 million people.

- Referendum on New Constitution rejected by the majority of voters.

**Tanzania**

- After a legal contest on mandatory cession to Tan Re, an agreement was reached on share to be ceded to Tan Re. The share will start at 10%. It will be increased every year up to 25% then phased out.

- General and presidential election successfully completed and a new President elected.

**Burundi**

The period of transition ended by a successful General and Presidential election which also terminated a period of over 10 years civil war. A new President has been elected.

**Zambia**

Substantial appreciation of Zambia Kwacha by 37.5% against the dollar in 2005 against 2004. Zambia also benefited from the debt relief package offered to the poorest countries which met some conditions.

**Eritrea**

Successful privatisation of NICE Insurance Company.

**Djibouti**

Major investments expected due to regional and international new interest to the country considering its strategic situation as an entry/exit point in the region in particular.

**Mauritius**

- On 22/07/05, the Indian Ocean summit comprising the Heads of States of Mauritius, Madagascar, the Seychelles and Comores was declared open in Madagascar. Issues discussed included political, diplomatic and economic co-operation. The President of France, Mr. Jacques Chirac also attended the summit.

- Mr. Iqbal Rajahbalee, the Chief Executive Officer of the Financial Services Commission completed his term of office. He has been at the Head of the institution since its creation in 2001. The new CEO is Mr. Milan Meetarbhan.

- There was a change of government in Mauritius in July 2005 following the elections won by the Social Alliance Party. The new Prime Minister is Hon. Navin Ramgoolam.

# AFRICA RE MANAGERIAL STAFF

## HEADQUARTERS

| | | |
|---|---|---|
| **Executive Management** | Managing Director | Bakary KAMARA |
| | Deputy Managing Director | Haile M. KUMSA |
| **Secretariat & Administration** | Director of Administration/ Corporation Secretary | Isidore KPENOU |
| | Assistant Director, Human Resources & General Services | Muhammed ALI-KOTE |
| | Assistant Director, Secretariat & Languages | Mamadou DIALLO |
| **Finance & Accounts** | Director of Finance & Accounts | Ganiyu MUSA |
| **Information Technology** | Assistant Director | Gabriel OPADOKUN |
| **Technical Operations** | Director, Central Operations and Inspection | Alain G. RAVOAJA |
| | Director of Operations, West Africa | K. AGHOGHOVBIA |
| **Internal Audit** | Director of Internal Audit | Ike O. UDUMA |

## REGIONAL OFFICES

| | | |
|---|---|---|
| **Casablanca** | Regional Director | Moncef MANAI |
| | Assistant Director, Fin. & Accounts | Ousmane SARR |
| | Deputy Directors, Underwriting & Marketing | Mohammed KANNOU |
| | | Mohammed BELAZIZ |
| | | Fuad ELGDERI |
| **Nairobi** | Regional Director | George OTIENO |
| | Assistant Director, Operations | R. RAMAMONJARISOA |
| | Assistant Director, Fin. & Accounts | Ibrahim A. IBISOMI |
| | Assistant Director, Internal Audit | Sere Mady KABA |
| **Abidjan** | Regional Director | Bene B. LAWSON |
| | Assistant Director, Fin. & Accounts | Assemian O. ASSEMIAN |
| | Assistant Director, Operations | M. HAIDARA |
| **Mauritius** | Regional Director | Ms. E. AMADIUME |
| | Assistant Director, Fin. & Accounts | Eshan GAFFAR |
| **Cairo** | Regional Director | Omar A. H. GOUDA |
| | Finance & Accounts | Austine IKHEKUA |

## SUBSIDIARY

| | | |
|---|---|---|
| **South Africa** | Managing Director | Paul RAY |
| | General Manager, Operations/Marketing | Daryl De Vos |
| | General Manager, Finance & Accounts | Godfrey WAWERU |