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June 2007, Volume 021 Established in 1987

EDITORIAL

Bakary H. KAMARA
Editor-in-Chief

Faithful to its tradition and editorial preference for an eclectic presentation, the 21st edition of The African Reinsurer examines several and diverse issues. Indeed, conscious of the need to give voice to practitioners who are passionate about the African insurance industry, the Editorial Committee, once again, decided that various themes such as the insurance of oil and life-related risks, as well as market presentations would be treated. Although readers are familiar with these issues, they have been presented in a new light, since insurance as a constantly changing profession cannot be cast in static rules and norms. It was necessary that being a new crude oil export zone, Africa, and the new opportunities the continent offers to oil underwriters, should be presented.

This same pedagogical approach explains the analogy drawn between two articles, which while discussing the same subject – solvency and financial strength of insurance companies – treat the issue from different perspectives.

The first is the traditional angle of solvency margin with its usual parameters and corresponding regulatory measures.

The other method is that of financial modelling, which rating agencies and supervisory authorities have recommended as the panacea to an intelligible financial assessment and a prognostic analysis of the well-being of an insurance company.

In conclusion, as required by technological revolution and advancements, some articles have been devoted to e-commerce.

The African insurance industry, which cannot remain aloof to these innovations, must imperatively stay in tune with globalisation.

THE DEVELOPMENT OF OFF SHORE OIL RISKS INSURANCE IN AFRICA

By

Jean Pierre CORVAL

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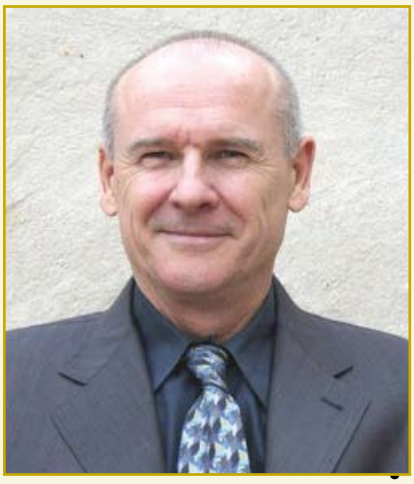

From the moment Elf discovered the first oil wells in Gabon in the 1950s to this era of mega installations in Angola, Nigeria and Congo, the sums insured for offshore oil risks in Africa have continued on an upward trend. Today, with the continued reduction of oil resources, a new development boom is unfolding in Africa: new players, new investors are venturing into new oil wells even in very deep seas.

In what ways, then, have African insurance markets, lawmakers, insurers and reinsurers been involved in the insurance of off shore oil risks?

COMPULSORY INSURANCE

Off shore oil business was subject to the compulsory insurance Act in practically every African country. Although lawmakers did not particularly have oil risks in mind, that class of business was naturally included as one of those to be compulsorily insured.

What was the financial reality?

On the one hand, the African insurers had:

- Inadequate shareholders' funds (often less than US$1 million)
- Reinsurance treaties that excluded off shore oil risks
- Annual premium income that could not measure up to the oil risks
- Underwriting limits that could not cover beyond the national territory
- Little or no training in the insurance of off shore oil insurance risks
- Little or no contact with international facultative reinsurance markets, which had little confidence in the security of African insurers.

On the other hand, the insured oil companies had:

- Shareholders' funds that were far higher (100- 1000 times higher) than those of African insurers
- Cumulative risks that were hardly lower than US$50 million (physical damage, cost of control of wells, liability and cumulative transports)

International reinsurance programmes that covered their risks all over the world

- Captive insurance companies that are also members of Oil Mutuals (OIL)
- Constant relationship with large international brokers and facultative reinsurance markets
- A good knowledge of their own risks.

Oil companies have always been aware of the conflict between their legal obligations and financial reality. Initially, they either ignored the law or obtained waivers from African political authorities.

Does that situation still obtain today?

The answer is affirmative in Equatorial Guinea, where no off shore oil company insures with a local insurer despite the substantial amount of oil produced and the fact that CIMA code applies. To the best of our knowledge, no other African country still remains in that situation.

THE PERIOD OF FRONTING

A balance had to be found between the legal obligation and financial security: fronting was adopted and still remains the most appropriate solution. Depending on the level of confidence reposed on the local insurer and the financial dimension, fronting is characterised by several features:

-The level of confidence:

- High level of confidence: the insurance premium is paid by the locally insured oil company to the local insurer who in turn pays, within a reasonable

period, the international reinsurer or captive imposed or proposed by the insured oil company. The international reinsurer or captive pays the reinsurance claim to the insurer who then settles the claims within a reasonable period.

- Minimal confidence: the locally insured oil company pays the insurance premium to the international reinsurer or captive and separately pays the reinsurance commission and local taxes to the local insurer either directly or through the broker. Reinsurance claims are paid directly by the international reinsurer to the locally insured oil company. A full cut-through clause on the payment schedule for premium and claims is included to mutually discharge the insurer and reinsurer of reciprocal responsibilities and liabilities towards the insured.
- Between these two extreme scenarios, several options are applicable. It should be recognised that the clauses governing these options are normally formulated by international brokers who are more concerned with protecting the interest of their oil clients than those of local African insurers. There have, indeed, been cases of clear aberrations: there was a case where losses exceeded USD 10 million and the local African insurer was bound to notify the lawyers representing the American bank - lenders of the oil company - but the addresses of the lawyers were never communicated to the African insurer who also never asked for them.

- The financial dimension

The commissions for fronting negotiated between the local insurer and the oil company would depend on the political situation and the number of local insurers that are likely to take part in the fronting: if the insurer has a monopoly of the market or if political Authorities impose a single oil insurer in a market of several local insurers, the single insurer would find itself in a position of strength and could negotiate a double digit figure as commission for premiums that exceed a million dollars.

In countries where several insurers compete within the market, the law of competition takes effect and unless the insurers reach an agreement, the commission rates or fixed amount for fronting could, after the tender for local services, be ridiculously low. If the local insurer does not take the precaution of striking a balance between its commission for fronting and the various taxes and liabilities on the written premium as well as the costs necessitated by the legal balance sheet reserves obligations, it could end up with a financially negative fronting. Meanwhile, 100% of the local insurance premium would have been reflected in its turnover, placing it above other competitors in the ranking of insurance companies within the country.

A quick word on the obligation for statutory reserves: there have been cases where companies were compelled to constitute reserves for oil business in which there were very precise cut through clauses discharging the African insurer of any liability towards the insured should the reinsurer that was imposed by the insured not pay losses. Such a clause is perfectly normal. However, why do some lawmakers, as is the case with CIMA, compel the African insurer to constitute a reserve in such a case? It should be noted that the French law imposes similar obligations and the African lawmakers should, in their interest, detach themselves from the French example.

THE PERIOD OF RETENTION

Several countries have refused to be satisfied with the fronting solution. Angola is certainly the most radical of these countries as it has imposed, by law, its own local insurer, its local broker, its reinsurance broker in London, its London reinsurer and its own adjusters allowing the local oil company the liberty of choosing its deductibles.

The security of the London reinsurers was presented to the oil clients who found the names of their reinsurers on the list and therefore could not oppose it.

These same oil companies who are interested in producing in one of the most promising countries in Africa accepted the insurance terms imposed by the Angolan Authorities. Angola, the fourth African producer, was able to obtain a favourable outcome that a country with a lesser level of petroleum resources would probably not have been able to achieve. Indeed, it would be difficult for another country to give such conditions, if it desires to attract new oil operators.

There are also doubts as to the medium term reliability of the system in Angola as the only insurance company that is allowed to write oil risks now has private shareholding, yet a monopoly is still granted by the State of Angola. Other local insurance companies and international multilateral institutions in Angola would wish for the restoration of open competition sooner or later.

On its part, Nigeria has introduced a local content development policy, i.e. local retention in which local insurers and reinsurers are expected to write a minimum of 45% of oil risks in 2007, to be increased to 70% at the end of 2010.

Each insured oil company should submit to the Nigerian supervisory Authority the proof that it has exhausted the financially available local capacity before receiving approval to patronise international reinsurers. It is also envisaged that the Nigerian local insurer and no longer the insured oil company would select appropriate international reinsurance broker to cover the relevant risks. At the same time, Nigeria has carried out the sanitisation of licensed insurance companies, which with effect from 28 February 2007 are required to have a minimum capital of 3 billion Naira (about US$22 m) to continue to carry out business in the Non-Life class, which covers off shore oil risks.

The policy reasoning behind this reform is as follows: an oil producing country should take advantage of its oil wealth to develop other non-oil sectors of its economy. It is abnormal for the bulk of the oil insurance premium to be exported abroad for the economic development of foreign countries.

Again, while the Nigerian insurers will invoke the legal obligation, the international insured oil companies will harp on financial security. The Nigerian insurers will also refer to their increased capital (the authorised minimum has been increased by 20 times), their improved experience in writing oil risks after over ten years, their numerous contacts with the London reinsurance market, while the insured oil company would counter with the argument that the cumulative limit of the existing or prospective deep sea Contractors' All Risks Policies exceed one or more billion dollars. Therefore, 45% of that amount would be completely beyond the financial capacity of local insurers. They would also argue that their bankers, lenders and shareholders require their insurers to have a minimum of A- rating by Standard & Poor's. It would be noted that Africa Re is the only Nigerian based reinsurer with a BBB+ rating by Standard & Poor's, which is lower than A-.

WHAT ABOUT INDIGENOUS AFRICAN OIL COMPANIES

It is not only international oil companies that operate in Africa. There are also an increasing number of African companies, both state owned and private.

How do they manage the placement of their off shore oil risks? It is difficult to have an exhaustive understanding of their insurance placement policy as we do not have specific knowledge of each of them. In the course of our professional life, we have only been able to gain insight into their insurance policy, which is characterised by wide diversity:

- Some African oil companies are not key players but only act as partners in fields operated by international players. In that case, the percentage of their interest in the partnership is normally reflected in the insurance policy of the operator. Thus, the international operator decides on the insurance policy. By contrast, in Cameroon, the national oil company is not an operator but controls the insurance policy. It places the risks in the local market, which reinsures them with international and African reinsurers. In that case, the African insured takes charge of its insurance policy and decides on the risks, the sums insured, the values and deductibles. In the previous case, it supports the policy of the operator, which does not often suit that of the local African oil company. The financial resources of a local African company are totally different from those of the international operator. Therefore, insuring the two companies with the same deductibles makes no sense. This case is only one example but there are other inconsistencies, whenever an international oil company includes an African oil company in its international insurance programme. Insuring two such different entities in exactly the same way makes no sense.
- Large national African operators in Algeria, Libya, Nigeria and Angola have their own insurance

policies and cede various shares to the African insurance market (local insurance and reinsurance companies) and it would be interesting to quantify these shares precisely.

- New African private operators generally approach international insurance brokers, which assist them to design insurance policies that respond to their needs and, subsequently, place their risks in international markets with very low local retention. Thus, African insureds demand the same level of financial security from their insurers (a minimum of A- from Standard & Poor's). At first, it could appear surprising that these African insureds behave in the same way as international insureds and do not seek to favour African insurers. Two reasons can be adduced for this behaviour:

  1. They are equally concerned with their financial security.
  2. Most often, they also borrow from the international money market to finance their activities and the lenders demand the same security covers for their insurance. The same security rules apply, as required by globalisation.

WHAT ABOUT LOSSES?

In the policy reflection that led to the development of local insurance retention, the issue of losses in off shore oil insurance is rarely mentioned. One only has to read the press in markets where local content is canvassed to have the impression that losses do not exist. Premiums develop the local economy but losses do not impoverish the local economy because no body talks about losses. One cannot treat the issue of insurance risks in off shore oil activities in Africa without mentioning the risks of losses and their consequences on the local insurer and the local economy.

Let us take a specific case: a storage vessel in an off shore field in Cameroon is worth about US$60-80 million. In the event of explosion and total loss, the cost of pollution, the cost of cargo and loss of business for several months have to be added to the amount. In all, such a loss would exceed US$100 million.

Let us imagine that the Cameroonian insurance market is bearing these risks solely without reinsurance support: payment of such a loss would throw Cameroonian insurers into insolvency as they, consequently, would no longer be able to pay losses in the Motor, householders' comprehensive, SME fire, etc…and the failure of insurers would lead to a series of other failures. How would the economic interest of the country be served? It would be recalled that, in the early 1980s the storage tank « Fako » exploded off the coasts of Cameroon.

THE WORLD MARKET

An analysis of global financial results in this class of business in the past decades would reveal that there are cyclical variations of four to five years. While some cycles are profitable, others are to a large extent negative. By and large, insurers do not or hardly balance their technical result and the cost of operation (international brokerage, underwriters, Claims Managers, specialised and highly paid adjusters) is very high compared to other classes of business.

In Europe, these results have led to the following phenomenon: in the early 1980s several insurers took part in the risks with the majority and the most prominent based in London, but today, how many of them are still writing off shore oil risks?

- No insurer or reinsurer from Spain, Portugal, Italy, Holland and Denmark (the list is not exhaustive);
- Two companies from France, two from Switzerland through their London office and one from Norway;
- Insurers from England, although the number of underwriters has dropped drastically.
- A few American insurers, mainly through their subsidiaries in Bermuda or London
- Some new companies from the Middle East, Africa and lately China, which restrict their activities to their natural geographical space.

The rate of failure has therefore been very high and African insurers should reflect on this as well as the reasons for the survival of English insurers. In our opinion, the reasons are as follows:

- Financial consolidation (the coming together of syndicates, mergers of companies) and the regular inflow of fresh capital.

- Consolidation of knowledge: with the drop in the number of insurers, there has been a marked improvement in the quality of underwriters and claims managers.
- Geographical scope: all the oil business from all over the world find their way to London, thereby ensuring:
    1. Geographical diversification of risks,
    2. Constant improvement in the quality of underwriters who are able to assess and accept or reject the risks. A London underwriter handles about 20 risks per week; how many does an insurer from Africa handle in a year?
    3. The high number of risks (and therefore premium) written for the same underwriting capacity. Providing a capacity of US$25 million 150 times in a year for 150 different risks from 50 different countries enables you to protect yourself with an oil treaty that is hundred times better than if you were only able to provide the same capacity of US$ 25 million only twenty times in the same country.
- Proximity of the reinsurance market: apart from these advantages that are related to the diversification of the portfolio offered to treaty reinsurers, U.K. insurers have always been very close to the U.K. or European reinsurers. The reinsurers trust them because they have confidence in their professionalism and therefore can create solid protection by way of good oil treaties whereas local African insurers can hardly obtain an oil treaty from the same reinsurers.

THE WAY FORWARD

Having undertaken this overview, it would be difficult to complete this article without proposing improvements that would enable African insurance markets to make progress in the area of off shore oil risks. Let us go back to the reasons for the success of the U.K. insurers and consider whether African insurers can draw inspiration from them and adapt appropriately:

- Financial Consolidation: this is an imperative that has not escaped the initiators of the reforms in Nigeria. The minimum capital of USD 22 million that has been fixed is not adequate compared to the existing deep sea off shore risks in Nigeria, but that is a tremendous step forward. The shareholders who invested their capital would now start clamouring for return on their investments and if 20 companies are left in the market in 2007, it will not be easy for each of them to make profit on the sum invested. That would have been easier if only 10 companies were left.

It is now left to monitor or see if other countries would decide to follow the example of Nigeria. In our opinion, that would be a necessity. Indeed, should this financial consolidation be limited to only the existing national boundaries or extended to cover the entire African geographic zone?

- Improvement in know-how: this improvement can only come by way of consolidation of companies. First, the initial training cost and effort could be easily borne by companies that have already been consolidated. Secondly, know-how can only develop and be sustained if those that have acquired it are able to apply it on about fifty different risks in a year rather than one or two. That being the case, the field of operation of the oil insurer should not be limited to its national territory, but should at least become pan-African.
- Geographical scope: London insurers accept business from all over the world. No African insurer can balance its results by remaining in its national territory. It should at least be able to write within the frontiers of the African continent. There is also the need to consider how this necessity can be allowed to flourish side by side with the practice of local fronting which is already in existence and assures local insurers of some income.
- Proximity to the reinsurance market: in this regard, the London advantage can only be recognised and not adapted. It is only when African entities have been adequately consolidated, present an improved quality and write sufficient number of business that they can create their own treaties or at least line slips, that would enable them develop their underwriting capacities.

Apart from the English example, it would be necessary to consider the success of the Energy business in

Africa Re: With a paid-up capital of US$100 million, the Corporation offers an underwriting capacity of US$ 27.5 million, including the oil pool, which is an average capacity of a Lloyd's of London syndicate. Africa Re writes off shore oil business from the entire African continent and has started accepting risks from the Middle East and South East Asia. The Corporation, which obtains two reinsurance treaties to protect its capacity and is rated by Standard & Poor's (BBB+) and AM Best (A-), has trained competent personnel and does not hesitate to engage the services of foreign specialists.

It has earned the trust of Chevron, Total and ENI, oil companies that require a minimum of A- rating (Standard & Poor's) from international insurers and reinsurers. Indeed, Africa Re involves interested African insurers through the Energy pool, which it manages.

In my opinion, it would be interesting for the Management of that Corporation to present a brief background of that success in a future article and emphasise the difficulties the company had to overcome to arrive at the current stage of development.

That example could inspire some groups of African insurers in various countries, as I consider it important that companies should be able to write off shore oil risks from as wide a territory as possible to have a chance of maximising their investment.

THE DYNAMICS OF FINANCIAL ANALYSIS

By
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Introduction

Dynamic Financial Analysis, or DFA, is now on everybody's lips in the insurance and reinsurance industry.

DFA is one of those insurance terms that is used by many but with no one agreed definition. In purest terms, it represents a whole company asset and liability model, but in common usage it is any probabilistic or stochastic model.

Building a multi-year, multi-risk model (for example, asset and reserving risk) is a more difficult task, a task that most insurers have avoided, unless forced. But what are the practical implications of building and implementing such a multi-year, multi-risk DFA model in an insurance company? Are there any benefits to offset the pain of the process?

Many insurance markets round the world are moving towards more risk based regulatory regimes. Within Africa, the South African Financial Services Board is encouraging the use of internal financial models in its new capital regime proposals. These follow the developments by the Australian Prudential Regulatory Authority (APRA) in the Australian market but represent a global trend, perhaps the most notable being Solvency II, a European wide risk-based solvency system, which is currently being finalised and expected to be in place by 2010. These regulatory developments are being complemented by Enterprise Risk Management (ERM) being given significant focus by rating agencies, in particular Standard & Poor's. A key element of ERM is the development and, more importantly, the use of internal models.

Fortunately for the global insurance industry, one part of the world has, albeit reluctantly, pioneered the development of whole company, multi-year asset and liability models. Virtually every UK company now either has a DFA model of their business, or is building one, driven in part by the expectations of the UK Financial Services Authority. Demand for DFA software and for actuaries and analysts with DFA experience is rocketing.

But why is this? What was the motivation for UK companies (or the UK regulator) to invest so quickly and so heavily in DFA modelling? Are there lessons in the successes and failures experienced by UK insurers?

What is DFA?

DFA is now often used as a catch-all term for any stochastic financial model. A stochastic model does not just seek to present the most likely result, or a worst case, but rather the whole range of possible outcomes, each with its associated probability. It does this by describing each key variable in a system as a probability distribution rather than just a single value. Some distributions may depend upon others, while others will be independent. Thousands of simulations will be run, perhaps one hundred thousand, each a different version of the following year or years. From the model, it is possible to see not only the most likely outcome (the median) but also the average (the mean) or the extremes (e.g. the 1 in 200th worst year).

The early days of DFA

Stochastic modelling really started to be used in re/insurance in the 1990s, as computer power increased and software tools became available. Typical initial analyses were limited to specific tasks, for example optimisation of the reinsurance programme for a single class of business. But by the late 1990s whole company DFA models were being attempted, particularly in the USA. The concept was captivating, a single model encompassing all the risks to which the company was exposed. Strategic decisions could be compared based upon their impact on the whole company: for example, would reinsurance strategy A deliver a higher return

and lower the risk of company failure than strategy B? Or is the company investment policy consistent with its underwriting risk appetite?

Unfortunately, most of the early projects failed; they tried to do too much, too soon. The software was slow and not very robust, the models became too complicated and impossible to interpret or audit. Whole company DFA models got a very bad name.

Stochastic modelling comes of age

Through the late 1990s and early 2000s stochastic analysis became common-place. The modelling was often used by reinsurance brokers to determine "optimal" reinsurance arrangements and prove to their customers the value of their reinsurance purchase. Similarly, the output was often used to demonstrate the economics of a deal to reinsurers, particularly for non-traditional reinsurances where the behaviour of the contract may not be readily clear.

In parallel, probabilistic catastrophe peril models were growing in use and influence. A peril model is essentially a specific purpose DFA model, though often, particularly in the early days, with little transparency about the assumptions used to generate the catastrophe events themselves or the damage they cause. People became familiar with the concept of a "1 in 100" event or "1 in 100" aggregate year for catastrophic risk and sought equivalent information for other classes of business.

At the same time, computers were getting faster and DFA software becoming readily available, either as add-in to Microsoft Excel or as a stand-alone product. At the end of 1999, the first component based, flexible DFA tool ReMetrica™ was launched. There was now no theoretical barrier to building a stochastic financial model appropriate to each task.

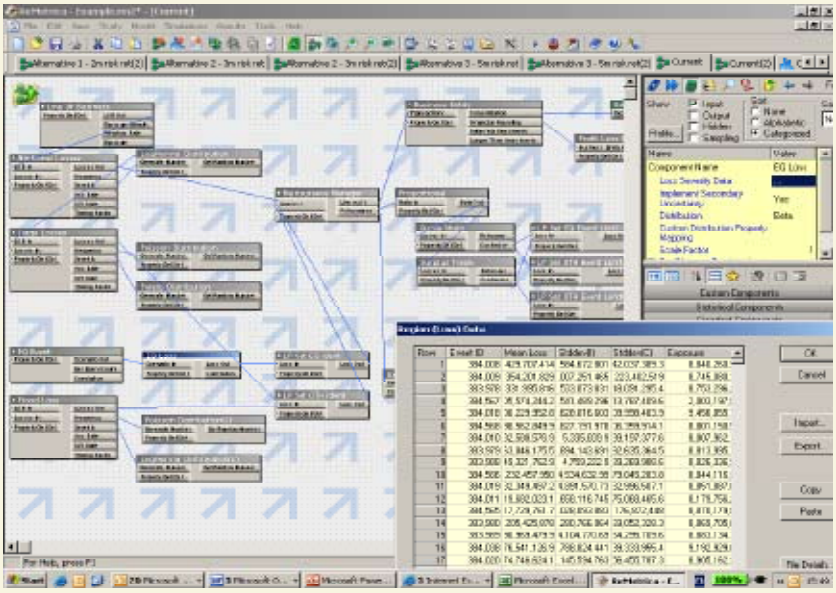

Figure 1: Example Component based DFA model with event by event peril model input

Whole company DFA models

By the early 2000s full company DFA were still a "nice to have" rather than a "need to have". But it had become clear to many that business strategies could not be properly compared on a departmental basis if one measure of success was the capital efficiency of the company as a whole.

How to model capital is a matter for another paper, but typically companies use some form of Value at Risk (VAR) or Tail Value at Risk (TVAR) method to assess and/or allocate the economic capital required to support a line of business. Note that VAR methods look at a chosen percentile, whilst TVAR methods look at the average over a threshold. For example, every 200 years, you may expect an underwriting loss of over USD 100m or more (VAR) with the average such large loss being USD 150m (TVAR).

Consider two companies with identical motor portfolios; one a mono-line motor company, the other a diversified composite company. The capital implication of cancelling a quota share reinsurance arrangement for the mono-line company is likely to be severe: its 1 in 200 number, and so its required capital, could double. But for the diversified company, things are very different. It could be that its capital is driven not by the motor book but by a much larger property book exposed to catastrophe risk. Cancelling the quota share does inject more risk in the motor book, but most of the 1 in 200 year and above scenarios for the company as a whole are driven by the property book. Cancelling the motor quota share thus has little if any capital implication.

An early case study

An example of this is some work done around the turn of the century with a leading UK company. The company was one of the first to attempt a whole company DFA in the UK, but would be the first to acknowledge that in 1999 it was still very crude. Benfield was attempting to show the value of the company's UK catastrophe treaty protections.

1. Benfield's initial analysis looked at the impact of the programme on the company's UK catastrophe losses: the 1 in 100 catastrophe loss, at the time its chosen benchmark, was cut from £500m to under £50m, an excellent result.
2. Benfield then looked at the cover in the context of the company's global catastrophe exposures; it still looked good, reflecting the UK dominance of their portfolio.
3. But when non-catastrophe property losses were included, things began to change. The model probably over-estimated the variability of attritional property losses, but even so the result was unexpected. The gap between the gross and net 1 in 100 result narrowed from £400m to under £200m, as bad attritional loss years dominated the net 1 in 100 number. Whilst still valuable, the catastrophe cover was looking less attractive.
4. Adding in all other underwriting risks, e.g. motor, casualty etc, the impact of the catastrophe cover was becoming negligible – the gap between 1 in 100 gross and net of the catastrophe cover fell to under £50m.
5. When asset risk was added, the gap almost disappeared – the UK catastrophe programme had no measurable effect on the group's 1 in 100 number.

Did that company stop buying catastrophe cover on the basis of that analysis? No, for two reasons: firstly the model was known to be flawed, so it would be unwise to base a decision solely on the result of that model; secondly the company was well aware that catastrophe reinsurance is not only bought for capital protection. Should there be a large catastrophe tomorrow and the company reported a larger net loss proportionate to size than its peers, it would appear ill-managed, its share price would fall and management might lose their jobs.

But the company did at last have the beginnings of a framework to judge the value of its reinsurances objectively. It became aware that these models can be used to educate stakeholders about why decisions were made, managing expectation.

The same company continued to develop its DFA model, achieving by 2005 a "state of the art" regulatory capital model. Interestingly, the model showed that for regulatory capital purposes, catastrophe reinsurance was important, but capital requirements were dominated by reserving and asset risk.

Current drivers of demand

The spur for UK companies though was not internal but external. The European Union has long been edging towards a uniform risk-based regulatory capital regime called Solvency II, but the UK regulator, the Financial Services Authority (FSA), decided to go it alone. In 2005, the FSA introduced a risk-based capital regime with a commitment to it being "super-equivalent" to that likely to emerge from European discussion. Essentially the capital assessment element has three components:

1. Minimum Solvency Requirement (MSR): the current "Solvency I" EU minimum capital. Regulatory capital must be at least at this level.
2. Economic Capital Required (ECR): an enhanced

ratio with separate varying charges based on premiums, reserves and asset classes.

3. Individual Capital Assessment (ICA): the company's own view of its capital requirement – with the probability threshold set at 1 in 200. Many UK companies have used DFA models to derive this number.

From these three the FSA impose Individual Capital Guidance (ICG). Normally, this is at least the higher of the MSR, ECR and ICA, perhaps with an additional margin, although the FSA has offered the carrot that it may be willing to accept the ICA number even if lower than the ECR if it is convinced by the model.

Contrary to FSA expectation, the vast majority of UK companies decided to use a DFA model to estimate their ICA; the FSA expected most initially to use stress-test methods. This caused the FSA a problem, as it did not have enough actuaries to validate the DFA models built. But in truth, the FSA is more interested in seeing that there is a robust risk management process in place. The DFA model is part of the evidence that a company has thought through the risks it faces and how they inter-relate.

But interestingly, aside from official regulatory developments, the methodology is now being championed by those that many would call the real regulators of the insurance industry, the rating agencies.

Rating Agency Pressure

In late 2005, Standard & Poor's (S&P) announced two initiatives that could have profound implications for many insurers and reinsurers. Firstly, the catastrophe element of its capital adequacy calculation was no longer to be a flat premium charge but rather a modelled 1 in 250 worst case aggregate net catastrophe loss year. In many cases, this has caused a leap in capital requirement. S&P makes no recommendation about which peril model to use. The agency is aware of the risk of "peril model shopping", i.e. companies picking the most benign model in the market. It seeks to ameliorate this risk by expecting the same model to be used in internal decision making, i.e. the same model should be used to determine reinsurance policy and perhaps be included in the corporate DFA.

The second S&P initiative is a more formal consideration of a company's Enterprise Risk Management (ERM). Just like the UK regulator, S&P wants to see that risks are properly managed and that robust risk control policies and procedures are in place. Again there is no immediate requirement for a DFA model, but it is expected that most re/insurers will feel that they have a greater chance of demonstrating an efficient ERM policy if a corporate DFA is the result of such a process, i.e. risks are not only identified, but also quantified.

However, the position is becoming more interesting. For example, in November 2006, Standard and Poor's published a consultation paper about their proposed capital modelling changes. They indicated in an accompanying brief paper that they will take into account the results of a company's internal "ERM modelling" in their capital assessment. Like their announcement in the previous year about using peril model results to assess catastrophe capital, it is suspected that the exact methodology is yet to be fully thought through. Clearly the key to whether they accept internal modelling will be the credibility of:

1. **The modelling approach:** How are key risks identified, assessed and captured in the internal model, including risk inter-dependencies? Also what risks fall outside the main probabilistic model and how are allowances made for these?
2. **The software used:** Benfield's ReMetrica™ is the market's leading DFA software, used by over 50 companies worldwide and recently selected by the world's largest, AXA, for all their global insurance, reinsurance, asset and capital modelling. Within Africa, ReMetrica is now used by Africa Re and the three largest South African insurance companies.
3. **The model's use:** Do management fully understand the model, and can they demonstrate the model is used to make key business decisions?

The last point is key, it is likely that S&P staff will be more comfortable auditing the softer elements of the ERM process, i.e. risk registers and risk control procedures, than the DFA. But, the DFA must be credible, transparent and intuitive.

Lessons learnt from the UK

It is certainly true that the UK experience over the last

two years has been painful: painful for the companies, painful for the regulators and painful (if profitable) for the actuaries and modellers. But there have been positive lessons learnt and potential traps identified. These include:

1. **Do not under-estimate the time that the process will take.** This is not only time for actuaries and modellers, but also time for business managers and ultimately the board. The FSA does not want to see a model owned by actuaries used once a year to keep it happy. It wants to see a model embedded in the risk management and decision making culture of the company. A senior FSA spokesman said in 2005 "We expect the senior management team to "own" the ICA and to understand what it means for the way in which they manage the business"; other regulators and rating agencies will have similar expectations. This is not just a model, it is a cultural change. So start early, don't wait until you have to do it.
2. **Do not expect it to be easy.** The FSA require a multi-year model, normally 3-5 years. They expect the model to behave realistically, e.g. if there is a big loss in year 1 of a simulation, what will happen to reinsurance pricing? It expects companies to think through the impact of business and pricing cycles on their business and their volatility. Companies are expected to identify and model dependency and correlation explicitly. All this must be expressed in a way that is not only technical, but also measurable and understandable to non-mathematicians.
3. **Do expect some surprises.** It is rare for a model not to come up with unexpected results. But it is also rare for a truly unexpected result to not be either due to a mistake or an over-simplified assumption. Checking the model will probably take as long as building it.
4. **Keep it simple.** It is far better to have a simple model which is understood, with its flaws identified and known, than an over-complicated model which produces results nobody understands. One leading UK company was forced to scrap its ICA model as it produced results far worse than any of its competitors for reasons that were not fully understood. If a flexible DFA tool is used, it is possible to add complexity back in where required once a working, believable, base model is built.
5. **Don't build a DFA just because you feel you have to have one.** Build a DFA for a purpose. If there is no immediate regulatory pressure, then pick a pilot study – perhaps a simple whole company capital model, or a detailed model of one line of business for reinsurance optimisation purposes.
6. **Have clear responsibilities and deliverables.** Every DFA project must have a senior management champion, a strong project leader, buy-in from all levels of management and clear, measurable deliverables. If even one of these is not there, the chance of failure is high. If possible, phase the project such that the first real value is delivered in weeks, not months or years.
7. **Choose your software carefully.** In the final reckoning, cost of software is but a small part of the cost of a DFA exercise. The software must be flexible, fit for purpose, robust and fast. This will include having the necessary sophisticated business logic and operating functionality in terms of both model building and result management and reporting. Even then, the software must be robust enough to run over 100,000 simulations, otherwise, as many UK companies have found, the results are vulnerable to sampling error. And finally, the most important lesson:
8. **Remember models advise, models do not decide.** Even the most sophisticated model must be used wisely. Every model requires interpretation; it must be a guide to decision making not the decision maker. A company that lets a model decide its future is dead. But, used intelligently, a DFA model is a superb management tool that can help management determine optimal policy, test the sensitivity of that policy to changes in assumptions, demonstrate risk management competence and explain decisions to others, be they colleagues, superiors, regulators, rating agencies, shareholders, parent company, analysts or reinsurers.

Embarking on a DFA process is not trivial, but within

three years every major company, in Africa or elsewhere, will either have a whole company DFA model or be desperately building one. But building a model is the easy part; embedding it in the culture of the company, and so getting the full benefit without damaging but rather improving the efficiency of the company, is the real challenge.

LIFE ASSURANCE RISKS

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Article 328 of the insurance code, which lists out the main classes of insurance, defines life assurance as; "insurance that depends on the human life span". This is a purely legal but somehow brief definition, which needs to be expanded in order to reflect the full implications of the actual nature of operations.

In the 18th century, Etienne Clavière, founder of the first French Life assurance company and author of the celebrated « 1788 Prospectus » explained the purpose of life assurance in these terms:

"life assurance means a contract by which insurers receive a certain amount annually, over a limited number of years or once and for all, with the condition to pay, on the death of one or several people stated in the contract, a fixed sum or annuity per head for the same one or several persons indicated in the contract. Also included in the insurance contract is the insurer's commitment to pay the insured a certain amount or annuity, when he attains a certain age till his death."

Two centuries later, Messrs. Picard and Besson, in their Non-Marine Treaty, define life assurance more simply as:

"the contract through which in consideration of premium, an insurer undertakes to pay the policyholder or a designated third party, a specified capital sum or annuity in the event of the death of the insured person or if he lives up to a determined period" (Picard and Besson, "Non-Marine Insurance, Volume I, Insurance Contracts", LGDJ, 1982).

Today, this definition seems too narrow considering the volume of group policies companies write.

Thus far, insurance companies seem to establish the object of life assurance as individual or group contracts by which, in return for premiums or contributions, the insurer undertakes to pay the policyholder or a designated third party, a lump sum or annuity fixed at a certain time and for a duration stated in the contract, in the event of the insured's death or if the latter lives on.

Given the rather long duration, an average of about ten years, between the time when the insurer collects premiums and when he must fulfil his obligations, he can be exposed to a number of risks, which may compromise his solvency.

Definition

By risk, the author means any contingency which reduces the insurer's ability to meet his liabilities.

The issue is to handle not just the contractual liabilities but also other hidden liabilities vis-à-vis shareholders, for instance, in the case of a listed company or contributors in the case of an endowment fund.

For instance, in this last case, protecting annuities against inflation risks constitutes an implied liability for the institution even though this is not necessarily expressed in the contract. Moreover, it is not a case of precise indexation, but rather protection of purchasing power in the long term.

Observation

The risk can emanate from aggravated cost of contractual *liabilities (inadequate assessment of loss experience). It can also result from a drop in value, returns, or the liquidity of the insurer's investment portfolio. Beyond these purely financial aspects, it is equally important to know how risk occurrence will impact on the accounts depending on the requirements of industry specific regulations.*

The insurer is confronted with risks from the two professions he is involved in, namely:

- Marketing and management of insurance policies
- Financial management of investment portfolios

The first risk is related to his core business. The insurer manages multiple technical, legal and administrative problems associated with the contractual relationship established with his client or with his partners (distribution network, co-insurers, reinsurers etc).

The second financial risk affects life insurers in particular since the 80s. Indeed, clients, instigated by insurance intermediaries and by the media, always insist on the best returns for their savings and do not hesitate in triggering competition. Therefore, the industry should ensure optimisation of profitability in both finances and risks (i.e. improve the performance of its contracts as well as protect its margins).

The main risks, which weigh on the financial situation of life assurance companies, are listed subsequently. Life annuity risks, which are risks related to the duration of human life, are presented first. Cash-valued insurance products induce financial risks that are different from products in which the covers are denominated in units of account. Moreover, life assurance contracts include hidden options, that is, risks which do not appear on the balance sheet.

Life Annuity Risks

Definition

Life annuity risks are related to the duration of human life. It appears right from the moment the life contract provides for different benefits or different payment dates depending on if the insured lives or dies.

The value of life annuity liability is measured with a mortality table. In fact, this is the age by age, mortality rate of a given population (national population or the insured lives in the society). Once the mortality estimate has been determined, the insurer's risk takes on a dual nature:

- A drop in mortality: With time, policyholders live longer (due to medical advancements, improved living conditions) in such a way as was not envisaged by the mortality table used;
- Anti-selection phenomenon: Policyholders do not represent the populations on the basis of which the death or survival rates were estimated.

However, it is appropriate to note that annuity risks do not exist in most life contracts. It is rather the case with endowment covers where the insurer's liability is limited to the accumulated value of the constituted life benefits. In fact, only provident funds and retirement funds covers pose high life annuity risks.

Terminal Benefits Risks

This refers to benefits paid in event of the insured's death. It mainly concerns the payment of a capital sum.

Two risks are identified:

Frequency risk

The first mortality risk that comes to mind is that of loss frequency. The company must use a mortality table that does not underestimate the probability of death while evaluating its liabilities.

Medical selection enables the company to better assess this risk and consequently avoid a high underestimation of the probability of death. This risk can in part be controlled by excluding some sub-standard risks. Exclusion clauses may target people who have had medical surgery.

In the long run, with the option of reinsurance cover, the insurer may be protected against an increase in loss experience. This would limit the risk incurred by the insurer, as part of the risk is transferred to a specialised company: the reinsurer.

Concentration risk

The second type of risk that could be encountered is the concentration of insured risks. It could happen that an insurer covers death risks of employees of the same company, who may be on the same plane.

In this case, the insurer does not have the actual contractual means of reducing such risks except to limit the covers, which the forces of competition may not allow him to do.

On the other hand, an adequate reinsurance cover may ensure that the risk is shared between several insurance and reinsurance companies.

Pension risks

In retirement policies or life annuities, the insurer protects the insured against the "risk" of survival.

Consequently, this type of policy suffers annuity risks when the number of surviving persons is more than what was projected when pricing, i.e. when insured persons do not die as quickly as expected using the mortality table. Thus, there is a drop in mortality.

Drop in mortality

The drop in mortality is tied to the general improvement in living conditions. In the 20th century it has resulted in a high increase in life expectancy.

In order to take cognizance of and even forestall this trend, insurers have to use specific mortality tables known as prospective life tables (e.g. TPRV93, cf. Chapter 2 appendices) to price and constitute reserves for annuities. Unfortunately, this table does not exist in the CIMA zone. Insurers are still pricing annuities for life risks based on CIMA TV code.

Anti-selection

Moreover, the drop in mortality can be explained through the anti-selection phenomenon.

Definition

Anti-selection occurs when the insurance conditions, price or marketing method ends up making the policy more attractive to clients with sub-standard risks and less attractive to clients with low or average risks.

This phenomenon can also be observed in life annuity policies where beneficiaries averagely live longer than the rest of the population. Life policies do not only contribute to the insured's good health, but because the insured persons knowing their poor health (therefore constituting a low risk… for the insurer) are not interested in tying down capital in a life policy.

Financial Risks

The notion of financial risks cannot be reduced to just volatility of financial results.

In reality, the actual benchmark in financial management is constituted by the insurer's liabilities. The financial risks discussed subsequently are those that can create an adverse disparity between the value of assets and that of liabilities.

The financial risks incurred by the insurer differ depending on the type of liabilities: cash-valued policies or units of account. The two categories of contracts are redefined below.

Definition

Cash-valued policies are characterised by the fact that the cover is expressed in monetary terms.

For the insurer, this cover always means liability in terms of financial yields for the client (if not a 0% return liability!).

Definition

A units of accounts policy is a cover expressed in given units of account (shares, bonds, OPCVM etc…)

In other words, the insurer, in return for premiums, guarantees a given number of securities without any commitment on the final value of these securities.

Policies in FCFA

The financial risks on currency-based policies can be classified into three categories:

- Exchange rate risk which has to do with the respective currency fluctuations;
- Solvency risk or credit risk, which have to do with a deterioration in the issuer's solvency; and
- Interest rate risk.

Exchange rate risk

This risk arises when the assets are expressed in one currency while the liabilities are expressed in another. Exchange rate risk does not present an actual cost value in insurance in that the insurer is required by regulation to make his investments in the currency of the contract (or in the unit of account which is used to index the contract).

However, in France, some flexibility has made such a risk possible. In effect, some insurance companies can cover their liabilities with up to 20% of their "incongruent" assets. In other words, the insurer can retain his assets in a currency other than that of the liabilities accepted from policyholders provided that they are not more than 20% of the value of the liabilities. The CIMA insurance code does not contain this provision.

Solvency risk

This risk relates to the solvency of the bond issuer as well as the market perception of this solvency.

Indeed, financial players will not wait for a payment default much less a declaration of bankruptcy before interpreting stock prices as a deterioration in the issuer's capacity to pay back his debts.

In addition to the perceived risk attached to a particular issuer, the market can generally adopt a different attitude towards private issuers; in that case, the difference between the interest rate on Government bonds and the rates of private bonds widens (this can be termed "spread risk").

In order to limit such risks, regulations impose a number of investment constraints, which include:

- Spreading the investment amongst different issuers;
- Selecting values based on their legal nature and according to the type of market where they are negotiated.

The legal limit of 5 % per issuer, in principle, allows insurers a minimal diversification of investments. A stricter limit is applied to unlisted securities and further strengthens that legal provision.

For instance, in France, most insurance companies have introduced internal rules for selecting instruments and fixing appropriate limits for bond issuers in a way as to enhance the financial security attached to investment transactions.

Interest rate risks

These are risks related to the interest rate fluctuations on the money market. They can be analysed by breaking them into two categories:

Reinvestment (or rates cut) risk

Definition

Reinvestment risk occurs when the returns on which future investments are based are lower than the guaranteed returns on insurance contracts.

This risk materialises when there is a drop in interest rate, reduced returns on investment, the more so as assets are "shorter" than liabilities;

In other words, when a bond matures, the insurance company proceeds to reinvest the reimbursed nominal value. However, in the case of a reduction in rates, the company will not find investments as profitable as the previous one (flat risk). In some cases, a negative balance may occur between the rate of investment return and the interest rate guaranteed to policyholders. This differential will reduce quickly moreover as the average tenor of the investment is shorter than the liability period.

Example

Reinvestment risk can be illustrated using for instance an 8-year life policy at a rate on line of 3%, on the basis of which the insured paid CFA 10,000; which to simplify issues, excludes administrative charges. At subscription, the interest rates stood at 3.5 % and the insurer invested the premium in 4-year "zéro-coupons" (a "zéro-coupons" is a type of bond in which the interests are not paid periodically but capitalised and included in the value of the final capital sum). With supposedly stable rates during the first four years, the value of the insurer's investment increases more than that of his liabilities. At the end of 4 years, the "zéro-coupons" are redeemed and the interest rate then drops to 2%. The insurer invests the redeemed value in "zéro-coupons" for another 4 years. During the last 4 years of the policy, the growth value of the insurer's investment is no longer sufficient to meet his liabilities.

In addition, the risk is more tangible as nothing in the law prohibits ownership of an investment portfolio with a much lesser maturity period than the liability period ("short-tail" assets management).

However, interest rate risks are moderated through the interplay of some financial reserves such as profit-sharing reserves (the proportion of financial income, which belongs to the insureds and retained under non-personal headings). These reserves ensure a stability of the financial yields of the contracts, within the limits of established reserves.

Liquidation (or rates increase) risk

Definition

Liquidation risks arise when the bonds are liquidated before they mature, even though the bonds have depreciated compared to when they were bought.

If the insured liabilities expire before the bonds are redeemed, then the bonds must be liquidated. If the interest rates rise, the bonds bought previously have depreciated.

Liquidation risk results from rather "long" assets compared to liabilities. It becomes tangible where interest rates rise as a result of depreciation.

Liquidation risks can arise as policyholders are allowed to sell bonds prematurely. Based on this scenario, the insurance company may end up buying bonds which depreciate more or less in proportion to increase in interest rates (deductions made from the reserves constituted precisely for depreciation of securities may eventually compensate the capital loss). Unfortunately, the phenomenon of increased premature liquidation coincides with increase in interest rates, as it is more profitable in such a context.

Example

Liquidation risk can be illustrated using the instance of an 8-year life policy at a guaranteed rate of 3% on the basis of which the insured pays FCFA 10,000. At inception, interest rates stood at 3.5 % and the insurer invests the premium in 15-year "zéro-coupons". Interest rates rise to 4.5% sharply after acquiring the "zéro-coupons". The return on the insurer's investment is higher than the guaranteed rate given to the insured, however, 8 years later, he would have to bear the depreciated securities due to increase in interest rate. The insurer can no longer meet his liabilities.

Where is the safe middle?

As we have just seen, a life insurance company's profitability logically depends on the gap that exists between the cost of its funds (determined by its pricing policy) and the profitability of its financial investments. Interest rate risk can be controlled by comparing the duration and yields of liabilities and assets.

From the preceding paragraphs, the reader would have understood that securities should preferably be managed in such a way as to ensure that they are liquidated at the time when the policyholders' liabilities expire.

Thus far, it has been demonstrated that where the client opts for premature liquidation, there is really no reliable way to measure the duration of obligations against liabilities.

Other options available to clients such as additional premiums, interrupting fixed payments or extending the existing contract only further complicate envisaged maturity dates.

It should be noted that when liabilities are very long (as the case with some annuity funds that exceed 15 years on the average), it is practically impossible to create and efficiently manage a securities portfolio of equal duration.

Policies in units of account (UC)

Policies in units of accounts are indexed on the market value of one (or several) asset(s), which are units of account. These are generally SICAV, commonly invested funds or shares in real estate companies. There are also policies known as "multisupports" where the client can spread his investment between different assets, which sometimes include cash-valued policies.

The basic principle supporting the financial logic of a unit of account denominated policy is that of an asset rated according to market value and a liability whose growth is wholly tied to that of the asset in question. On that basis, the market risk associated with the increase in the cost of funds is mainly borne by policyholders.

Despite this initial observation, the insurer still has to confront occasionally high risks associated with:

- Regulations, which allow the policyholder the right to cancel his policy a month after subscription (Article 65 of the CIMA code),
- The illiquidity of certain investments such as real estate, which have been accepted as units of accounts,
- The imbalance between assets and liabilities, which may result from a disparity between the date in which the unit of account was purchased and the effective date of the policy or an operational error; and
- Some covers with minimum repayment value (termed "floor").

Cancellation risk

Policyholders are allowed by regulations to cancel their policy within 30 consecutive days.

For certain policies, that time limit may run indefinitely due to the inadequacy of contractual information provided to the policyholder at the inception of

contract.

Generally, it should be noted that a normal units of account depreciation risk occurs within the 30 days, whereas the client can cancel his policy and have his premiums reimbursed.

In order to protect themselves against such risks, insurers generally arrange for such funds to be temporarily invested in a monetary fund, which is unaffected by the market fluctuation risks.

Illiquidity risk

The insurer cannot disengage himself from his liabilities by handing over the units of account to the insured. He must pay the euro equivalent of the securities (except if the insured explicitly requests payment through units of account).

For the insurer, illiquidity risk means his inability to sell off the unit of account when the policy matures. This risk can materialise during a financial crises period as the case for the real estate market in the early 90s. Such a risk can have its full implications where policies tied to such units of accounts are redeemed prematurely.

One of the rare counter-actions is for the insurer to acquire the units of accounts for himself using his shareholders' funds or the equivalent contract value in euro.

It goes without saying that a company where the balance sheet reflects a high proportion of illiquid units of account-based policies and which in addition has a foreign currency funds, might run into great difficulties.

Asset-liability imbalance risk

This risk is evident when the asset composition for the policies in units of account does not accurately match the insurer's units of account denominated liabilities.

The risk occurs when the insurer does not buy (or sell) on time, the outstanding number of assets, which emerge from the differences in liabilities in units of account.

A simple example

A policyholder pays a premium of FCFA 10,000. The payment is converted into units of account. However, when posting the purchase details into the computer, an error is committed on the number of units to be acquired.

A more detailed example

General insurance conditions specify a value date, i.e. the date (for instance Monday at the opening of market) in which the payments (for the previous week for instance) are converted into "nombre ducs" However, the insurer must send in his purchase or sales order before this date (Friday by 12.00noon for instance). In addition, he must prepare his orders based on estimated price as at the value date. As a result, there is always a disparity between orders placed and those that are supposed to have been placed.

This imbalance between assets and liabilities expressed in units of account may have the following implications:

- Exposure to bearish markets in the event of over-insurance, i.e. when the number of assets representing the liabilities in units of account is higher than the number of liabilities taken by the insurer;
- Exposure to bullish markets in the event of under-insurance, i.e. when the number of assets representing liabilities in units of account is lower than the number of actual liabilities taken by the insurer;

Minimum benefits risks

In general, such covers guarantee the repayment of a minimum sum in the event of death, but also sometimes in the event of survival.

The insurer is exposed to an amount equal to the positive difference between the lowest value and the acquired value, which in itself is determined by market trends.

Here, the problem arises from the combination of two independent risks, the one relating to the human life span and the other to the financial markets environment.

Although the first case is easier to understand statistically, it is not the same for the second, moreover as the usual financial methods used are inconsistent with the long term conditions which generally prevail in Life assurance.

However, it should be noted that most of the time,

insurers include certain protective measures in the contract such as:

- Maximum age beyond which the cover cannot be granted;
- Limits on terms of benefits;
- Limits on the period of cover
- Limits on choice and type of units of account.

It should be noted that in the case of Life covers, based on the given deadline, minimum benefits can prove to be financially burdensome for the insurer, unlike death risk covers, because after this deadline, it only depends on the insured's goodwill. The policyholder will naturally claim his reimbursement whenever it serves his interests best, which in this particular instance are quite contrary to those of the insurer.

As it will be seen, there are other cases where the clients' options may be used to the detriment of the insurer.

HIDDEN OPTIONS

An overview of hidden options

The hidden options are not secret neither are they deliberately concealed from the different stakeholders (policyholder, insurer, auditors).

Definition

Hidden options are guarantees or privileges granted by the law to policyholders by way of contractual clauses and intended to make the policy more flexible and attractive; there are no distinct reserves in the insurer's accounts for these options.

Although these covers can in some instances constitute a significant expense for insurers, they are not ordinarily included in identified accounting provisions and therefore perfectly deserve to be called "hidden options".

Often, they occur depending on the policyholder's decision (they should really be called "insurance contracts options"); to that end, these options are a contingency.

Observations

Hidden options also include insurance contracts that are comparable to normal financial options (sales, purchase or exchange of securities, minimum or maximum rates, minimum guaranteed rates, indexation options etc), within the context of Life assurance, these options sometimes occur due to uncertain non-financial circumstances.

The hidden options make it difficult to assess the financial risks incurred by the insurers. Indeed, they are numerous and very difficult to assess. Furthermore, they are rarely standardised and based on the contract design adopted by the insurer, can either be totally harmless or very dangerous in certain instances.

Here is a list of possible (inexhaustible) options in an endowment policy:

- **Cancellation:** This is the legal option given to clients enabling them cancel their contract and recover their investment one month after subscription.
- **Cash surrender value:** This buyback option allows clients to use all or part of their available savings (generally mathematical reserves) before the normal expiry of contract and in most cases, at any time without any penalty on the insured.
- **Transfers, arbitrages:** The arbitration option is granted to clients within the context of multi-supported units of account to enable them modify through their insurer the asset composition used to index their contracts. These changes sometimes attract costs and the amounts or duration can be limited.
- **Extension:** When the contract expires, the covers can be renewed for another year or several years. The extension can be automatic or on client's request.
- **Reinvestment and/or upfront payment of guaranteed interest rates:** This has to do with the opportunity given to policyholders to pay additional premium during the course of the contract. The rates applied to such premiums can be the ones specified from the beginning of the contract or the ones obtainable as at time of payment.
- **Paid-up:** This is the option whereby clients can cancel payment of future premium for contracts which provide for periodic premium, but a reduced

sum assured becomes payable on maturity or earlier death.

- **Loans:** Such loans are granted to clients who apply within the limits of a portion (80%) of their savings with an insurance company. The loans are subject to professional recommendations under the form of ethical codes regarding the rates of returns and duration.
- **Conversion into annuity:** When the policy expires, the client has the option of converting all or part of his capital into annuity. This means using the accumulated capital to buy an annuity. The annuity is calculated based on rates (mortality table and technical rates) predetermined at the inception or otherwise, fixed when the policy expires.

The following covers are independent of the clients' decisions, but are born out of the same problems as the preceding options (contingency, lack of accounting provisions on expiry).

- **Minimum guaranteed rates:** This indicates the minimum annual returns on cash-valued policies.
- **Hedge effect:** Hedging allows the client, in the same way as guaranteed interest rates, to enjoy a minimum rate below which the value of his constituted savings cannot drop irrespective of subsequent market developments.
- **Floor value:** This is the minimum repayment or buyback value indicated in some units of account-denominated policies.

THE INSURER'S OPTIONS!

For cash-based policies, the insurer's contractual liabilities generally determine the profit-sharing rates. On the other hand, the insurer reserves the right to select placements (within rather flexible regulatory limits).

Therefore, the insurer's first option is the free choice of financial policy, which however directly influences the policyholders' future participation in profit-sharing. For instance, the insurer may prefer fixed income investments, or otherwise, seek to increase his capital gain, which enables him "manage" the performance of his contracts.

In addition to this determining factor, the insurer also possesses "hidden options". These options have value and in terms of complexity are no different from those of the insured:

- By opting for capital gains on investments, the insurer can partially control the return on his assets;
- Depending on the circumstances, he may decide on reserves or recover from capital reserves by selling depreciated or appreciated securities;
- The insurer may defer or accelerate profit-sharing by making use of profit-sharing reserves;
- And then, except where there is strict control, the insurer is allowed to spread profits over different policies.

It can therefore be observed that if there is a natural connection between the financial results of the insurer's capital and the profit-sharing rates given to policyholders, then the connection is far from straightforward.

This has been a description of the main risks facing a Life Assurance company. These risks, which compromise both the technical and financial balance of Life insurance results, should be specially managed using the actuarial management tools of the balance sheet. Therein lie all that is needed for asset-liability management.

In practice, the expression "Asset Liability Management" (ALM), which is used by bankers, has become a household term. Even modern regulations use the terms "asset" and "liability" simultaneously:

This represents a set of forecasting methods, risk analysis tools, and management techniques intended to control all manners of financial risks. Consequently, Asset-Liability Management connotes:

- A permanent assessment procedure for the above-mentioned risks
- A decision process which will enable the insurer confront these risks

In order to clarify the subject, several definitions of Asset-Liability Management have been given in this paragraph.

Asset-Liability analysis is first of all a management

tool to draw up financial, technical and marketing policies. Furthermore, Asset-Liability Management first of all concerns mainly economic and financial issues, as it adds prospective meaning to solvency by adds prospective meaning to solvency. To that end, an Asset-Liability Management Committee should exist, terms of reference drafted and an active, independent supervisory unit established.

Definition

In its broader sense, asset-liability approach involves assessing every management decision within the framework of the active harmonisation of the balance sheet.

This definition is too general to be useful (almost every management decision will have an impact on the balance sheet), however, its advantage is that of emphasising the general characteristics of the asset-liability method.

Definition

In a narrower sense, asset-liability management involves studying and controlling financial events.

The financial events in question are significant movements in economic indices or market rates and actions. Asset-liability management is concerned with the accounting and financial implications of these events.

This second definition implies that priority should be given to financial strategy issues, i.e. strategic asset allocation issues. By strategic asset allocation, the author means:

- Distribution of assets between classes;

- Selecting sensitive interest rates products.

This definition equally emphasises risk control and insolvency risks in particular. However, this is not to say that questions cannot be asked on how to optimise the profitability of the insurer's business or how different financial parameters impact on his results.

As asset-liability analysis must also feature in liability management, the second definition remains insufficient for the technical definition of insurance products and interest rate policy used generally.

Moreover, several financial decisions can influence balance sheet risk significantly and the border line between operations for which the funds manager is solely responsible and those that must pass through the asset-liability analysis test is blurred.

Asset-liability management is a general tool for both technical and financial departments. It contributes to decision-making and risk control, in terms of strategy and sometimes tactics.

It should therefore be expected that asset-liability management will provide information and prospective studies that will help to:

- Define financial policies (asset allocation);

- Define reinsurance policies;

- Define products (covers, rates, innovations);

- Define contract remuneration policies;

In addition to these standard areas, asset-liability analysis can extend to how to optimise both profitability and overall risk for the insurer. A broader analysis is needful and not only in terms of the volatility of financial results. Asset-liability techniques must ensure periodic assessment of balance sheet risks and this assessment can be included in the guidelines for general management.

Also, actuarial literature has produced three generations of tools and a fourth is in the making.

First generation tools

The first generation tools are directly inspired from early banking control tools for interest rate and liquidity risks. They are based on projections and by comparing financial flows of assets and liabilities.

These projections are generally made statically, that is from the asset and liability stock as at a given date, without taking into account production and subsequent investments:

- For liability, actuarial models are used to estimate inflows;
- For assets, financial front and back office tools are used to estimate securities-related inflow.

Cash flows can be compared using a semi-banking perspective; that is, measuring the following for

different maturities:

- Cash flow surpluses or deficits;
- Capital financing cost (for the insurer the average rates used),
- Profitability of working capital (financial assets profitability ratio).

This generation of tools equally include general interest rates assessment concepts, the calculation of actual net values of financial inflows and sensitivity, duration and interest rates immunisation concepts.

Observation

These last methods are very similar to actuarial techniques for calculating the intrinsic value of contract portfolios.

Second generation tools

The second generation tools are balance sheet simulation models. These models allow for the projection of financial and accounting results and balance sheet growth based on a set of detailed scenarios determined by the user.

These sets of scenarios involve economic, financial environments as well as production and clients' behaviour.

The second generation models are known as "deterministic models" or "deterministic scenario models" as opposed to third generation models.

Deterministic asset-liability models can be more or less complete and detailed. Generally, they ensure:

- A forecast of the entire balance sheet using a dynamic approach; that is by taking future production into account;
- A simulation of asset-liability interactions and accounting provisions;
- Testing of different financial policies.

Deterministic models are mainly used to forecast results from a budgetary perspective, and also to test the strength of the balance sheet against adverse financial conditions.

Compared to the first generation, studies do not reveal just "interest rate risk indicator" but a wider range of asset-liability risks.

Third generation tools

Third generation tools are "stochastic models". They use simulation techniques similar to those of deterministic models, but in this case the economic and financial scenarios are no longer directly determined by the user.

The model itself generates a large number of risky scenarios and calculates the results of all the scenarios. The basic principle behind all these selections called "Monte-Carlo method" is to consider the randomly produced scenarios as "equiprobable".

Thereafter, it could be possible to systematically calculate the expected average results, confidence intervals and measure the distribution of results. Different risk indicators, such as the probability of production results falling below a certain threshold, can be obtained.

For these models, there are also several degrees of development, mainly as regards the description of financial scenarios. These random selection methods can vary from the simplest to the most sophisticated.

While waiting for the fourth generation

A fourth generation shall be achieved by defining an objective function for the insurer and by programming optimisation algorithms. These algorithms shall automatically call up asset allocations and "best" rates policies for clients.

This area of research is vast and interesting, but it requires perfect knowledge of 2nd and 3rd generation models. Each generation tool capitalises on the experience gained whilst developing the previous generation.

The optimisation methods can only be profitable if the stochastic financial scenarios used adequately represent middle/long term risks. This is not in any way a trivial problem and still requires serious research efforts from the industry.

HOW APPROPRIATE IS WESTERN LEADERSHIP STYLE IN AFRICA?

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I. INTRODUCTION

An article on Leadership could be presented from different perspectives. It could require a general discussion on its definition, classification and attendant constraints or its manifestations or how leaders go about the attainment of objectives?

This presentation will be limited strictly to leadership style.

However, it would be useful to settle for one among the several definitions of leadership and discuss the leader's functions before dedicating the bulk of our presentation to leadership styles. The article will conclude by stating how appropriate each of the styles is to the African continent, its culture and customs.

II.DEFINITIONS, FUNCTIONS AND FOUNDATION OF LEADERSHIP

Theoreticians and practitioners of modern management have discussed the issue of leadership at length but no single definition has been universally accepted. Three of the definitions would be reviewed:

- The concept of Leadership as enunciated by Peter Druker (cf-Peter Druker: *Practice of Management* - New Delhi- Allied Publishers Put Ltd, 1970 – P. 159), which states that « Leadership is the lifting of man's vision to higher sights, the raising of man's performance to high standard, the building of man's personality beyond its normal limitations ».
- On their part, Alford and Beatty (L.P Alford and H.R Beatty: *Principles of Industrial Management* – N.Y. Ronald press 1951, P. 11) define it as the ability to voluntarily obtain tangible actions and results, without coercion.
- Finally Keith Davis (« *Human Behaviour at Work* » N.Y MC Gray Hill 1967 P.96) considers leadership as the persuasive force by which others can be made to enthusiastically adopt pre-determined objectives. Thus, according to this author, it is the human factor that unites and motivates a group towards the achievement of objectives.

These three definitions clearly reveal that there is a difference between a leader and a manager. Whereas a leader can exert influence without formal power, the Manager always requires formal power to stamp his authority.

In other words, whereas Management handles complexities and therefore ensures the emergence of large industrial and financial organisations in the modern age as well as order and consistency in the quality and profitability of products, Leadership deals with changes, which explains its importance in the past few years of serious competition in the economic world, following a multiplicity of factors such as accelerated technological changes, increased international competition, market deregulation, excess industrial capacity, and high capitalization in the service sector, etc.). That is why it has become necessary for any enterprise that seeks to survive and remain competitive in the new environment to adapt. Stated briefly, the more the changes required, the higher the level of leadership.

With regard to the functions of the leader, they may vary based on the above-mentioned economic and sociological factors, current situation (economic crisis or growth), organizational modalities (unitary structure or subsidiaries), size of the company (multinational, sub-regional, local) and the activity sector (industry, services, agriculture) involved.

Nevertheless, it should be noted that the essential function of leadership is to bring about change, which is to say that defining the direction of change is one of the essential missions of leadership. Defining the

direction does not signify planning. Rather, it implies an inductive gathering of a wide range of data so as to arrive at models, patterns and relationships through which a situation can be explained. Defining the direction does not result in a plan, which falls under the Manager's prerogative. It creates a vision, which spells out the medium and long term future of the enterprise, technology and corporate culture. It also formulates a realistic strategy to actualize the vision.

Thus, the role of planning is to complement and not substitute the definition of direction. Indeed, it helps in controlling and adjusting the defined orientation to reality. Similarly, when the direction is well defined, it guides the planning process towards a given objective.

These two functions, namely, defining a direction and planning its implementation are what differentiates a leader from a manager. As the aim of this presentation is to discuss how appropriate western leadership style is in Africa, an attempt will be made to describe the leader's personality and role before getting to the substance of the topic, rather than dwell on the details of the distinction between a leader and a manager.

III.LEADERSHIP STYLES

In this article, the word styles would be emphasized because nowhere in the world, neither in the West nor in the Far East nor in Africa, is there a unique leadership approach that is applicable to all situations and entities. Researchers and practitioners agree that the major role of a leader is to obtain results. However, despite the high number of studies, the diversity in range of training and increased specialty in Management, a number of people have not yet adequately grasped what leads to leadership efficiency. In fact, two schools of thought exist on that issue: While one school believes that leadership skills are inborn, the other suggests that they can be acquired. Based on research with 3000 American Chief Executive Officers, Daniel Goleman, an American Psychologist and Consultant and author These of several Best Sellers including Emotional Intelligence, Working with Emotional Intelligence and co-author of Leading with Emotional Intelligence distinguishes 6 leadership styles, each of which is a product of individual emotional intelligence. Each of these styles would now be reviewed with a view to stating whether they are appropriate to African culture, social organisation and genes, as some would want to believe. It is the author's belief that there is no African style of leadership different from that of Europe or America, of Japan in particular or Asia in general. There are universal styles of leadership that are applicable, with variations that are specific to a given cultural, ethnic and religious environment.

Furthermore, studies have shown that the most successful leaders are not those that stick to a particular leadership style. They combine several styles within a short span of time depending on the circumstances, comparable to a golf player with 13 sticks. As will be demonstrated, Africa is not an exception to this rule.

Thus, according to Goleman, a leader can be coercive or commanding, authoritarian, affective or affiliative, democratic, pacesetter or pedagogic (trainer or coach).
In addition, it has been proven that leaders whose style positively impact on the working climate of a company are likely to be more successful than others.

A.Coercive or Commanding Style

This style demands an immediate and total submission. It leaves no room for personal initiative and consequently scuttles creativity and motivation. This is the least effective of all leadership styles because it inhibits flexibility and sense of responsibility. In addition, it has an adverse effect on the staff reward system, as financial gain is not the only motivating factor for staff. The satisfaction derived from contributing an individual quota to the shared general goal is also important if not fundamental.

However, coercive style can be effective in a scenario where a company is to be turned around or during a hostile take over bid as it puts an end to bad habits to bad habits and compels the staff to adopt new work methods.

Some people may think that due to the high rate of illiteracy or low level of education, Africa would be the

ideal testing ground to validate this model. However, four decades of coercive and indeed, dictatorial political leadership have only yielded disastrous results in the countries where they were adopted. Therefore, it is not surprising that the most laudable economic performances in the continent have been recorded by countries where democracy is better entrenched such as Botswana and Mauritius. Meanwhile, this truism in public governance is also valid for micro-economic management.

B. Authoritarian Style

This is different from the coercive style in that it involves persuading colleagues that a vision, which must be both clear and enthusiastic, is correct. It has been established that of all the six leadership styles, this is the most effective by virtue of its positive impact on the working climate. It offers the following advantages:

- **Clarity**: the authoritarian leader is a visionary who motivates his team by making them perceive their mission within the wider context of the whole organisation;
- **Commitment**: the staff understand the objectives and meaning of the strategy. Thus, the norms and value of the leader's vision are well defined and the staff imbibe them.
- **Flexibility and Initiative**: the leader specifies the purpose of a mission but gives his colleagues the liberty to choose their means of reaching the target.

Nevertheless, despite these merits, authoritarian leadership has limitations if the colleagues are experts or more experienced than the leader. They may consider him just adequate or outdated. In addition, the situation should be avoided where other staff will feel rather arrogant in their perception of the leader.

These notwithstanding, it still remains the most effective style. It also seems to be the most appropriate in Africa as it does not kill initiative and has proven effective in some regional organisations where their multicultural nature requires the adoption of different methods in choosing the resources needed for the achievement of the goals of the industry or company. In these organisations, authoritarian leadership was applied at given moments in the life of the institutions, within the context of growth in operation and in consolidating the culture of good corporate governance. In that respect, example can be given of Chief Executives of some insurance companies who radically transformed their companies, after the staff had accepted and imbibed the vision.

C. Affective or Affiliative Style

This type of leader creates personal bonds and harmony. He lays more emphasis on people and their feelings than on tasks or objectives, pays attention to the happiness of his employees and endeavours to create harmony between them. In certain ways, this style of leadership is paternalistic. Having created strong affective bonds with his subordinates, this type of leader reaps the fruit of his investment by gaining the unflinching loyalty of his staff. Other advantages of this leadership style are that mutual confidence is sustained and staff are encouraged to be innovative and to take risks. It also results in increased flexibility as unnecessary rules are not prescribed as to how tasks should be accomplished and staff are given considerable liberty on measures that they should carry out in order to fulfil their mission. Thus, it creates a sense of belonging. Generally, this style has a positive impact, which makes it applicable in all circumstances. It is specially recommended where there is need to improve communication and harmony within the group, lift staff morale and restore confidence.

However, despite these advantages, this style cannot be used exclusively. Indeed, the fact that it depends on positive response does not enable it to correct negative performance. Thus, there is a great danger that staff may construe it to mean that mediocrity is tolerated. In situations where clear instructions need to be given, this style leaves subordinates without direction, as they had been left on their own. Therefore, it is most effective when combined with the autocratic style.

Affective leadership is the style most commonly adopted by African Chief Executives, who given the various forms of social pressure from the family and tribe, shirk their leadership responsibilities and establish

closer personal relationship with their staff than necessary. Being a chain in a long line of parentage, they succumb very often to the siren songs of ethnic solidarity by adopting this style, thereby destroying the advantages described above. Similarly, as members of a society with strong oral tradition, African leaders tend to withhold information, by releasing it only sparingly, thereby creating imprecise objectives and confusion in hierarchical and personal relationships. Everyone may recall having adopted the affective leadership style in certain situations and even taking things to excess, even if it had yielded appreciable results. Emotional intelligence, which is characterised mainly by empathy suits our environment well because of the enormous recourse to team work. Globalisation and the increasing need to recruit the services of tested talents validate this method.

D. Democratic Style

This leadership style seeks to build consensus through participation. By taking the time to listen to others, the leader creates an adherence to a vision. By encouraging his colleagues to express their opinion and thereby participate in decision making, the leader creates an atmosphere of confidence, respect and commitment and further reinforces flexibility and sense of responsibility, thus keeping the staff morale at a very high level.

The weakness of this system is that its influence on the working climate is not as positive as other styles, as there is the propensity for an interminable series of meetings, synonymous with the traditional African village meetings. Some Chief Executives take recourse to this practice to delay crucial decisions, hoping that the adage that « discussions illumine the mind» would prove true and an ingenious idea would become obvious to all. Such a situation would amount to shirking responsibilities.

The tradition of consultation or discussion known as the village square meeting in sub-Saharan Africa or "Jamaa " in the Arab world favours the discussion of all important subjects by the community until a consensus is reached. How many times have African Chief Executives not taken recourse to this style, when bereft of ideas and seeking that the staff participate in the life of the entreprise, they nurse the secret hope that a solution will eventually be found for a difficult situation. Another weakness of this style is that it is inadequate when staff are not competent enough to treat the subject at hand or when, for lack of information, they cannot provide appropriate solutions. Similarly, in moments of crisis, the search for consensus can prove inappropriate. The adoption of a procedure manual would remedy this sociological heritage.

E. The Pace-setter's Style

The leader looks for excellence and autonomy. He sets high performance criteria, which he also exemplifies. He always seeks to do things better and faster and imposes the same exigencies on his colleagues. This method does not always produce excellent results given that it destroys the working climate as staff may feel overstretched by the quest for excellence and ultimately their morale might drop.

Furthermore, even if directives are clear in the mind of the leader, they are not always limpid to the staff. Similarly, the staff often feel that their efforts are not recognised or rewarded since the leader often takes over the employees assignments as soon as he feels that they are not measuring up to expectation. In addition, the subordinate may not be able to identify his personal contribution to the general, shared objectives.

However, this method is effective in an environment where the staff are highly qualified, motivated and competent. Therefore, it would be appropriate in the Research and Development Departments of insurance institutions as well as legal and Chartered Accounting or Actuarial firms. In such organisations, tasks are well executed and in their due time.

In Africa, where the notion of time is elastic because it is not always considered as a quantifiable factor, a judicious adoption of this style would further inculcate the culture of efficiency, result, profitability and personal responsibility.

Therefore, leaders are ardently encouraged to adopt this style from time to time, so as to further develop the culture of excellence in the continent.

F. Pedagogic Style (Trainer or coach)

This leader trains his colleagues with the future in mind. He helps them to become conscious of their strengths

and weaknesses and sharpen their personal and professional aspirations. He motivates them to set long term developmental objectives for themselves and a plan of action on how to attain them. Thus, each of the players (the leader and his staff) assumes specific roles and responsibilities. In addition, the leader delegates freely, thus affording his staff assignments that also pose as challenges.

Of all the leadership styles, this is the least used because the leader normally does not have enough time to train his subordinates, although it is the most effective because the staff ego would be massaged knowing that the Manager has confidence in them and that would sometimes encourage them to exceed their potentials. It works well where the employee is conscious of his weaknesses and seeks to overcome them. On the flip side, it would lose its usefulness where there is reluctance to change or learn. Similarly, if the leader himself lacks experience, the effectiveness of this style would be limited as he would be unable to assist his subordinates.

Therefore, this style is not very common in Africa as the leaders are in a hurry to fulfil several responsibilities, with no prospects of immediate tangible results.

IV. CONCLUSION

Several studies carried out on this subject reveal that the leader's effectiveness is directly proportional to his ability to vary his style. Any leader that masters at least four styles (authoritarian, democratic, affective and pedagogical) would obtain excellent results and gain in efficiency if he knows how to alternate the different styles to suit the needs of the moment. Although ambitious, a measure could be put in place through the recruitment of immediate deputies who possess any of the styles that the leader lacks, while the leader would play the role of a coordinator and head of the Management for whom he takes responsibility.

Leaders also exist in Africa, who while not abruptly adjusting their style to a series of given situations, adopt a fluid process, being very sensitive (empathy) to the impact of their method on others, which they adapt imperceptibly and frequently to obtain better results. However, empathy (sensitiveness to how others feel), being the characteristic of an affective leader is an indispensable tool to all leaders who seek to be efficient in Africa, irrespective of their style. The aptitude to become easily and intimately acquainted with people and forge strong relationship, although innate can be acquired by training and practice. It is essential for anyone who aspires to lead an organisation in Africa because African companies, while diverse, are built on common foundation, which accords priority to communal existence, mutual confidence, joint responsibility, respect and responsiveness.

Contrary to the opinion expressed by the Cameroonian economist, Daniel Etounga Manguelle - author of the book *«"L'Afrique a-t-elle besoin d'un ajustement culturel?* Does Africa Need Cultural Adjustment,"» in the 1980s, during the era of the structural adjustments imposed by the Bretton Woods institutions on our countries, African culture is not incompatible with development, efficient management and profitability. It certainly harbours several negative aspects that need to be dropped as Africans come in contact with other cultures, so as to pave the way towards what the Poet President Léopold Sédar SENGHOR referred to as "the universal civilisation, that is sustained by giving and receiving."

SUMMARY OF **THE SIX LEADERSHIP STYLES BY DANIEL GOLEMAN**

	Coercive / Commanding	**Authoritarian**	**Affective/Affiliative**	**Democratic**	**Pace-setter**	**Coach/ Performance**
Operational mode of the leader	Demands total submission	Mobilises the staff in support of a vision	Creates harmony and affective bonds	Forges consensus through participation	Sets high performance norm	Develops talents for the future
Summary in one sentence	« Do what I say »	« Follow me »	« People first »	« What do you think? »	« Now, emulate me »	« Try this »
Attendant Emotional Competence	Desire to achieve, initiative, self control	Self confidence, empathy, motivates changes	Empathy, ability to build relationships, communication	Co-operation, directing the team, communication	Conscience, desire to achieve, initiative	Development of others, empathy, self consciousness
Favourable Context	In times of crises, to turn around a company or control difficult employees.	When changes call for another vision or when a new clear direction is necessary	To bind the team or motivate the troupe in moments of difficulties	To favour bonding and consensus and qualitative contribution from staff	To obtain fast results from a highly motivated and competent team	To help the staff to improve his performance or develop his long term goals
General Impact on working environment	Negative	Extremely positive	Positive	Positive	Negative	Positive
** Adaptability in Africa*	Applicable despite the above negative conclusion but it should only be used occasionally and only when no other alternative exists.	Highly recommended because it seamlessly emulates the traditional concept of a leader who consults and then decides for the community	Agrees with the cultural and sociological environment of the continent where empathy is a celebrated virtue and accepted as a characteristic of great leaders	In line with the African practice of the village square and the Arab Jamaa but should be used with moderation	Good for « start-ups » and situations of urgency: time gain and reduction of the cost generated by style number 4	Also suitable for family business and for smooth succession

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SOLVENCY AND SOLVENCY MARGIN

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INTRODUCTION

Deregulation, which has affected practically every market, coupled with the globalisation of the insurance industry, has led to structural changes in the insurance sector. Over the past few years, consolidation has been observed, mainly in reinsurance markets - a trend which has been reinforced by losses caused by natural catastrophes and terrorist attacks.

In this difficult context, insurer and reinsurer solvency has become a major preoccupation.

I. SOLVENCY

1. Definition

The solvency of an insurance company relates to its ability to settle liabilities. If the asset value of the company is inadequate (over indebtedness) or can never be accessed at the required moment (lack of liquidity) to settle claims, then the company is insolvent.

Primarily, the solvency of an insurance company depends on the constitution of adequate technical reserves to meet the contractual liabilities and the existence of shareholders' funds that would guarantee security.

2. Factors that determine Solvency

To a certain extent, the balance sheet or final results can throw light on the financial state of a company. To analyse the solvency and adequacy of the shareholders' funds, it is necessary to analyse the risks inherent in the operations of the company.

All the sub-headings of the balance sheet and the final accounts are subject to variations and uncertainties, which should be taken into consideration in assessing solvency.

3. Evaluation of Solvency

The most important aspects when analysing the balance sheet and final results by traditional methods are:

Solvency Ratio = Shareholders' funds/ Net Premium

Ratio of Technical Reserves = Technical Reserves/ Net Premium

Retention Ratio = Net Premium/Gross Premium.

The risks involved in a business are determined by analysing the ratio of the shareholders' funds to premium. The higher the ratio, the higher the capital available to absorb any negative results.

However, where the Technical reserve is not taken into consideration, the margin may not be conclusively determined.

A relatively high solvency margin might turn out to be inadequate if the technical provisions are too low. In contrast, a rather low solvency ratio may prove sufficient if the reserving policy is very prudent. That is why both the shareholders' funds and technical reserves are often linked to the net premium.

Thus, the entire shareholders' funds and available assets can be analysed based on the risks underwritten.

As the solvency margin as well as the ratio of technical reserves are calculated on the basis of the net premium, it would also be appropriate to take the retention ratio into account.

This relates to the dependency on reinsurance and retrocession. The higher the ratio of net premium to the gross premium, the higher the risks assumed and the less the company would depend on the solvency of its reinsurer. However, this indicator has several disadvantages.

For several reasons, the volume of premium is not a sufficient criterion for determining the risks underwritten. Distortions could mar the results if the

premium rate is not commensurate with the risks. Very low pricing results in a low level of premium and thus an increase in the solvency ratio whereas the exposure is unchanged.

It is indispensable to know the portfolio composition. At the same level of premium, the capital needs of a company that writes mainly property business will be generally lower than those of a company in the liability business.

II. SOLVENCY MARGIN

1. Definition

Solvency margin refers to the shareholders' funds defined as the excess of assets over liabilities, i.e. all the resources, made up mainly of the paid-up capital, the free reserves, and the latent capital gains or losses, that are meant to remedy the inadequacy of the technical reserves.

2. The need for Solvency Margin

The main preoccupation of lawmakers in defending the interest of the insureds is to ensure the ability of the insurer to meet its liabilities at all times. To that end, they set out the rules for determining technical reserves and establish the principle whereby these reserves are covered by matching assets. What then would happen if these reserves are inadequate? In such a case the insurer would be compelled to provide additional resources that would enable it to remedy any inadequacy.

3. Components of the Margin

These include the components of the net situation:

- Paid-up Capital (or start off funds)

- Statutory or non statutory reserves

- Carried Forward

- Fictitious assets

- Structural expenses related to the establishment or growth and received but not yet amortised commissions.

- Shareholders's bonus

- Gains resulting from the under valuation of assets or over valuation of liabilities.

4. The minimum limit of the margin

The aim of lawmakers is to define a minimum margin that corresponds with the operations of the company, which are determined either by the premium income or the loss charges net of reinsurance.

5. Parameters for determining the minimum margin

- Production for the expired year

- Average loss charges for the three previous years

- Retention Ratio expressed as a ratio of the net loss incurred to the total loss charges of the previous year.

- Production x 20%

- Losses x 27%

- Adjustment of the result to take into account the retention ratio, the incidence of which should not be lower than 50% (0.5)

- The choice of a higher figure resulting either from the production figure or the average loss charges.

III. REGULATORY APPROACH TO SOLVENCY CONTROL

1. Solvency Control

The main objective of solvency control by the Authorities is to protect those who take up insurance from the consequences of payment default.

Solvency control is first and foremost an issue of financial control. Solvency rules should enable the supervisory Authorities to intervene at a time that the assets available can still cover the liabilities.

These rules therefore constitute a warning system.

2. Technical Provisions

Apart from the solvency rules, the solvency of insurance companies can be guaranteed mainly by regulations on the constitution of technical reserves and investments.

Solvency prescriptions are complemented by detailed rules on the compilation and placement of technical reserves.

The company is bound to evaluate the technical reserves as per the method of average cost observed over the years or on a case-by-case basis or by the chain ladder

method.

3. Investments

The State controls the level of technical provisions and decides on the forms of investment authorised. Assets should be invested based on the principle of congruence: service provided in a certain currency must correspond with the investment made in the same currency. In addition, companies should ensure some diversification in order to ensure the security, profitability and liquidity of investments. Too much dependence on certain categories of instruments is not tolerated and the rate of diversity would ensure this does not happen. In Morocco, for example, the domestication rules require that assets covering risks be invested within the same country.

IV. IMPACT OF THE VARIATION OF TECHNICAL RESERVES

1. Impact of the variation of reserves on shareholders' funds

The following example highlights the possible impact of the underestimation of Technical reserves on the shareholders' funds:

Shareholders' Funds = 1

Net Premium = 5

Technical Provisions = 10

In terms of ratio:

- The ratio of reserves/net premium is 200%

-The ratio of shareholders' funds/net premiums is 20%

If the reserves vary by 5%, the variation in the shareholders' funds would be 50%

In other words, a 5% underestimation of the reserve would lead to a 50% increase in shareholders' funds.

2. Impact of the Variation of Technical Reserves on the Result

The result of companies with identical portfolios will vary with the level of reserves. The way each company evaluates its reserves is therefore important as can be seen in the following example:

Company A evaluates its reserves correctly

Company B overestimates by 30%

Company C underestimates by 30%

Company D overestimates by 10% at 31/12/ but correctly in the beginning of the year.

	A	B	C	D
Premium	100	100	100	100
General Expenses	20	20	20	20
Claims Paid	70	70	70	70
Increase in Outstanding Losses	10	13	7	17
	80	83	77	87
Result	-	-3	3	-7
Result as % of premium	-	-3%	+3%	-7%
Outstanding Losses 01/01	60	78	42	60
Outstanding Losses 31/12	70	91	49	77
Increase in Outstanding Losses	10	13	07	17

3. Impact of the increase in Production on the Shareholders' funds

The mechanisms of the margin is such that growth in production should be qualitative enough to ensure that the profit would cover the additional allocation in shareholders' funds in such a way as to maintain the ratio F=20% of net production. If «t» is the increase from year n to year n+1, the formula for the increase in t=5 for year 2 over year 1 would be:

F1 (FP year 1) = 20% of net Production

F2 (FP year 2) = 20% of net Production + 5 x 20% of net production

Increase: F2-F1=5%x20% of net production = 5x20% =1

The provision for shareholders' funds as a ratio of production for year n+2 is equal to 1/105 i.e. 0.95%

The following table applies the method in respect of Years 2,3,4 and 5.

Value of t	Increase in Shareholders Funds 20t	Relationship b/w the increase and the premium income	
5	0.1	1/105	0.95%
10	2	2/110	1.81%
15	3	3/115	2.60%
20	4	4/120	3.33%
25	5	5/125	4%

It can therefore be observed that the rate of increase of the premium income is conditioned by the profit making capacity of the premium income if the company does not want to undermine its margin.

V. SANCTIONS – THE CASE OF MOROCCO

In the case where the solvency margin fails to meet the required minimum, the Authority would compel the company to submit a financing plan for a maximum of 3 years, specifying measures that would enable the company reconstitute its solvency margin. That plan should envisage the increase of the authorised capital or establishment funds. However, should the solvency margin fall short of 1/3 of the required minimum, the financing plan period would stand at 3 months.

Should the Authorities reject the financing plan, it could:

- either prevent the company from writing new contracts
- or compel it, by expedited mail to submit a turn around plan which should contain measures to be taken to revitalise the company.

As soon as the company receives the letter, every decision taken by its General Assembly or supervisory and Management organs, other than the day to day management of the company must be submitted to the Authorities for approval before they are implemented.

If the Authorities accept the turn around plan, they will specify the duration and implementation modalities. They could also prescribe to the company the increase of its capital, prohibit the disposal of movable and fixed assets and the constitution of personal guarantee by the Executive Directors up to an amount not less than 1 000 000 Dirhams.

If the plan is not implemented within the specified period, the Authorities could:

- appoint a provisional administrator

- decide on the immediate transfer of the portfolio of unexpired contracts and losses

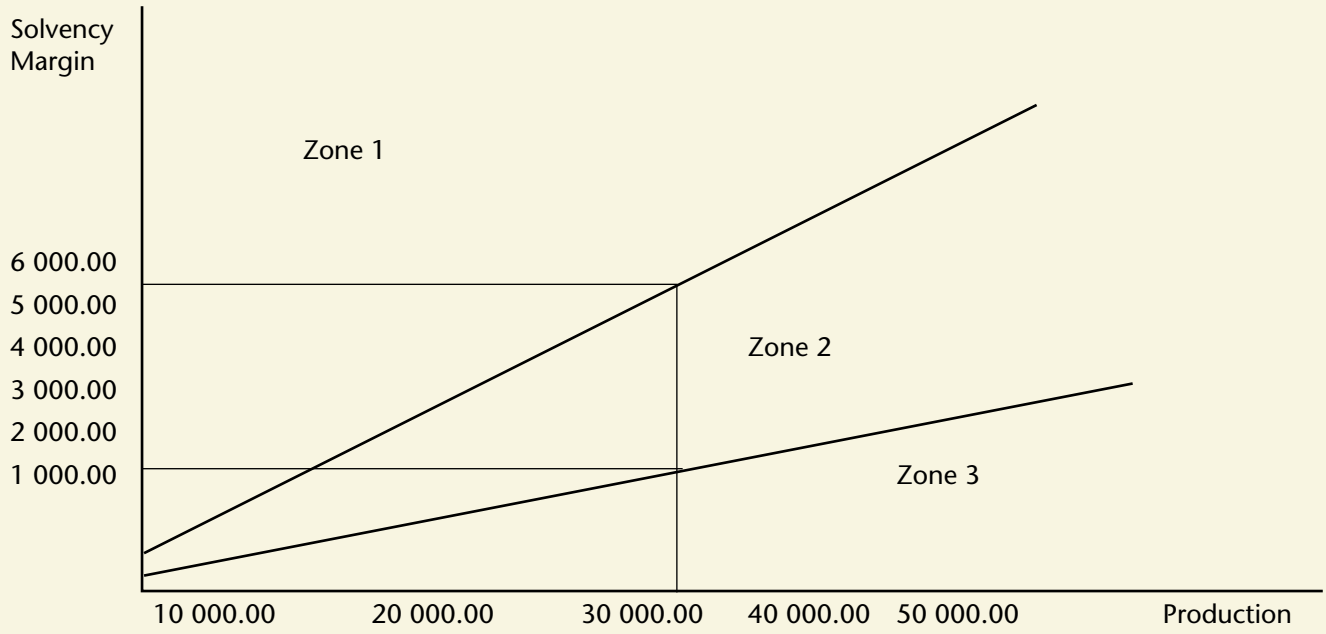
- effect a partial or full withdrawal of license

CONCLUSION

The evaluation of the solvency of an insurer is becoming more and more prominent. Methods of evaluation are very diverse. This article was based on simple balance sheet indicators, while highlighting the correlation between insolvency risks, the under estimation of technical reserves and the increase in the premium income based on under tarification.

Meanwhile, since state control had all along curbed undue competition, the lifting of this control and the opening of the markets would certainly amount to an increase in cases of insolvency.

The following graph illustrates the various situations that a company may find itself with regard to solvency margin.



Zone 1	Adequate Margin
Zone 2	3-Year financing Plan
Zone 3	3-Month financing Plan

THE INSURANCE SECTOR AND THE E-COMMERCE RACE IN AFRICA

By
Gabriel OPADOKUN
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The overwhelming majority of European, Asian and American companies are now embracing e-Commerce according to an Andersen Consulting study released recently. Significantly, the report finds that the key driver of e-Commerce initiatives is fear of competition. Established businesses in these regions are trying to keep up with the competitors, and seeking to secure a strategic position in their industry.

It is however important to note that no mention was made of African companies' participation in e-Commerce throughout the report. This is so because, short of pockets of such activities in South Africa, it is practically non-existent in the continent.

This paper therefore intends to give a brief insight into how the insurance sector could sensitise the public into embracing the newest trend in computing, e-Commerce.

Reinsurance and insurance companies could seize the Internet opportunities to enhance interactions amongst themselves and other sectors of the economy, within and outside Africa, by exchanging business information more effectively.

A private initiative by some software design experts puts the reinsurance company at the centre in its design of an Internet-based software application, a package meant for the reinsurance companies to gather business information and share it amongst their various clients.

Why start with a package for the reinsurance sector and not any other sector?, one may ask. The reason is not far-fetched:

- An initial study revealed that the reinsurance and insurance practices are very well organised and follow established standards that are almost the same across the continent. This characteristic is a great asset to the software designers. It makes computerisation much easier. The same is not the case in other sectors where standards are not as easy to come by.
- The reinsurance practice is in the business-to-business class, where trust amongst clients is more guaranteed than in the business-to-consumer class. The trust and guarantee of security is an essential factor in e-business transactions.

The project, when completed, will include the development of interfaces with existing applications of potential beneficiaries. This becomes necessary because the adoption of the internet-based application does not necessarily replace the in-house systems.

The processing of inward businesses is one of many tasks in a reinsurance company and the analysis of information flow in the process can be categorised as shown below. However, this list is in no way exhaustive.

Category	Direction
New business offers	Cedant-to-Reinsurer
Confirmation of Offers	Reinsurer-to-Cedant
Rejection Information	Reinsurer-to-Other players in the industry
Returns from Accepted offer	Cedant-to-Reinsurer
Claims Information	Cedant-to-Reinsurer Cedant-to-Other players in the industry
Statement of Account	Reinsurer-to-Cedant
Other Reports and information to be shared with other players in the market	Reinsurer-to-Cedant Reinsurer-to-Other players in the industry
Payments	Cedant-to-Reinsurer Cedant-to-Bank Cedant-to-Other players in the industry Reinsurer-to-Cedant Reinsurer-to-Bank Reinsurer-to-Other players in the industry Bank-to-Cedant Bank-to-Reinsurer

Database tables are created and set up for each of the information flow categories in such a manner that information is not duplicated and should originate from only one clearly stated source. Each participant could then take responsibility for his actions or inactions.

The design principle requires that access to each category listed above is by a click of the mouse via the dedicated and secured website of the reinsurance company. Access will however be controlled by strict security measures that will be put in place at various levels of processing. Access limitations could be best described by the three samples of data access permissible per participant in the business process as given below.

Cedant Log-in Screen

New business Offers (Edit & View)	Returns from Accepted Offers (Edit & View)	Returns from Accepted Offers (Edit & View)
Confirmation of Offers (View only)	Claims or Loss Information (Edit & View)	Other Reports (View only)
Rejection Information (View only	Payments to Reinsurer (Edit & View)	Banks Confirmation of Receipts and Payments (View only)
	Receipts from Reinsurer (View only)	

Bank Log-in Screen

		Other Reports(View only)
Confirmation of Receipts and Payments (Edit & View)	Payments to Cedants(View only)	
	Receipts from Reinsurer (View only)	

Reinsurer Log-in Screen

New business Offers (View only)	Returns from Accepted Offers (View)	Statement of Account (View only)
Confirmation of Offers (Edit & View)	Claims Information(View only)	Other Reports (View only)
Rejection Information (Edit & View)	Payments to Cedants (Edit & View)	Banks Confirmation of Receipts and Payments (View only)
	Receipts from Cedants (View only)	

Other players Log-in Screen

New business Offers (View only)	Claims or Loss Information (View only)	Other Reports (View only)
Rejection Information (Edit & View)		

This type of project offers many advantages:

- Reduction in manpower hence in staff expenses as the cedant will be directly responsible for processing of own data;
- Statements of accounts and other reports are up-to-date and available online for the cedants and other players in the market, where permissible, to guide in decision-making;
- A data bank is maintained for use by other institutions, government or private, in formulating policies relating to the insurance and reinsurance sectors;
- Individual company's offers and the entire African insurance market are automatically open to the rest of the world.

An internet-based project of this type requires an efficient telecommunication system and electricity supply system in African countries that may wish to benefit from the scheme.

Indeed, as the state of these infrastructures in some countries is below the efficiency level, players in the insurance industry could influence and encourage the government to address these problems. Another way would be for the sector to take up the initiative to drive and directly participate in investments in the required facilities. When fully implemented, such a project could be the African insurance sector's response to RINET in Europe.

However, invitation to participate in a project of this magnitude could not be limited to the insurance industry. Other service providers that will benefit directly or indirectly from the scheme should also be accommodated, while the insurance sector retains the lead. These include:

- Banks
- Government institutions (such as local insurance commissions or ministries)
- Telecommunication companies
- Internet service providers
- Software engineering companies, etc

The cost of maintenance and future enhancement of the facilities could be derived from the installation fee and annual subscription.

An active involvement of African governments and established businesses is needed if the continent is to make the best of Internet opportunities and compete with the rest of the world. Collective participation with a high level of commitment will ensure that all parties adopt uniform processing and reporting standards across the board.

The internet-based project will open the African insurance market to its counterparts in Europe, America and Asia. This is a challenge the industry should accept to lead the race. Other sectors will surely follow, and the continent is bound to gain from it.

This could also be the required impetus for Governments to develop the much-needed infrastructure in the areas of telecommunication and electricity supply.

Most businesses could be reduced to forms amenable to internet-based designs. This has been done in America, Europe already has its RINET, and Asia has reached an appreciable height. Africa can also do it and the insurance sector could play a pioneering role.

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THE TUNISIAN INSURANCE MARKET

By
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INTRODUCTION

A Favourable Economic Environment for the Growth of the Insurance Industry

The Tunisian economy has been undergoing a process of reforms and liberalisation after 10 years of state regimentation.

A prudent economic and fiscal agenda has resulted in sustained economic growth for over 10 years. Historically, Tunisia's growth is strongly tied to oil, phosphates, agriculture (olives, olive oil, oranges and dates) as well as tourism (close to 5 million visitors a year). The textile and mechanical (motor spare parts) industries also play an important part in the export sector. Tunisia is one of the few countries in the region that are listed in the medium income category.

In 2005, economic activity was satisfactory due to the performances recorded by some sectors such as service, agriculture, mechanical and electrical industries. Economic growth stood at 5.7% in 2005 as against 5.1% in 2004 and 4% in 2003.

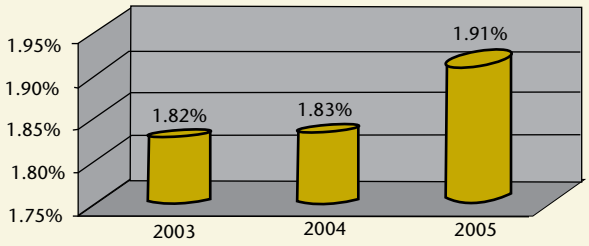
The Tunisian insurance market has posted remarkable growth as written premiums, at TD 712m, increased by 10.61%.

Penetration Rate below expectations

In millions of TD

Years	2003	2004	2005
GDP (Current price)	32.261	35.143	37.202
Penetration Rate	1.82%	1.83%	1.91%

Penetration Rate



OVERVIEW OF THE TUNISIAN INSURANCE MARKET

Legislative and regulatory framework:

A well-regulated sector, which has always prompted legislative innovation:

- The Insurance Code, promulgated by Decree n° 92-24 of 9 March 1992, complemented and modified by:

- Decree n° 94-10 of 31 January 1994 on construction insurance

- Decree n°97-24 of 28 April 1997 on export insurance

- Decree n° 2001-91 of 7 August 2001

MARKET STRUCTURE AND EVOLUTION

A structured sector that is growing on a sustained basis

The market comprises the following

- Insurers: 17
- Reinsurers: 1

- Insurance/Reinsurance Brokers: 40
- Off-shore companies operating with non residents and mainly involved in reinsurance: 7
- Other support services: 580 general Insurance agents, 20 Life agents, etc…

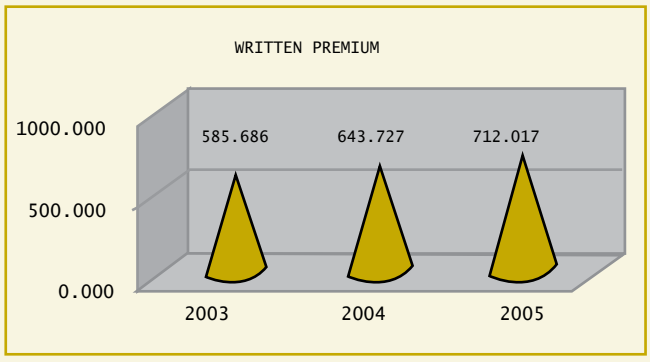
In millions of TD	2005	2004	Variation 05/04
Written premiums	712.017	643.726	10.61%
Claims	426.477	382.872	11.39%
Investments	1,149.150	1,042.811	10.20%
Shareholders' funds	252.920	245.208	3.15%
Net results	11.721	-9.112	228.63%

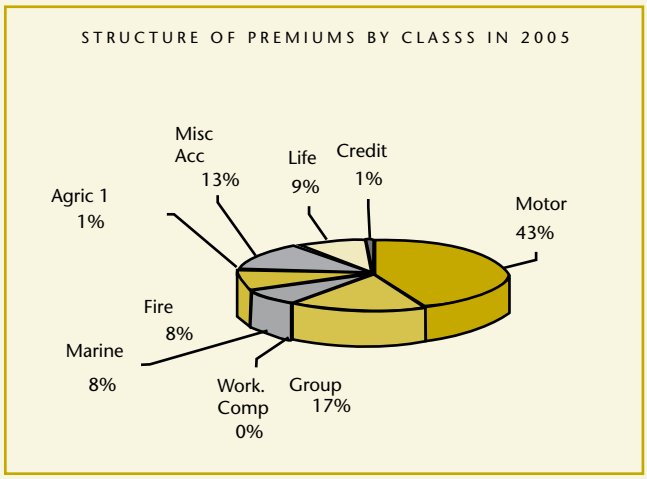
Evolution of major business indicators in the market:

In 2005, the major business indicators in the market were as follows:

Evolution of written premium by class of business in 2005 stood as follows

	2005		2004		variance	2003		variance
Class	Written premium	%	Written premium	%		Written premium	%	
Motor	308.654	44%	275.360	43%	12.09%	247.968	43%	11.05%
Group	117.175	17%	110.414	17%	6.12%	99.670	17%	10.78%
Workmen compensation	-0.015	0%	-0.001	0%	1400.00%	0.004	0%	-125.00%
Marine	57.802	8%	56.309	9%	2.65%	55.577	10%	132%
Fire	59.089	8%	54.266	9%	8.89%	50.160	9%	819%
Agric	4.003	1%	3.637	1%	10.06%	4.289	1%	-15.20%
Misc. Accident	90.383	13%	75.375	12%	19.91%	70.516	12%	6.89%
Life	63.568	9%	56.493	9%	12.52%	46.347	8%	21.89%
Credit	6.360	1%	6.276	1%	1.34%	5.116	1%	22.67%
Total	707.019	100%	638.129	100%	10.80%	579.647	100%	10.09%
Reinsurance	4.998		5.598		-10.72%	6.039		-7.30%
Grand total	712.017		643.727		10.61%	585.686		9.91%





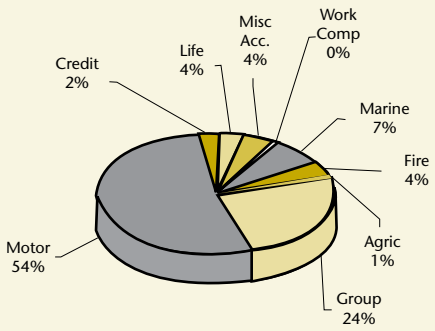
- In 2005, technical reserves increased to TD1,328.374m (including outstanding claims for Non Life TD 888.013m and outstanding claims for Life TD 12.668m) compared to TD 1,149.878m in 2004 (representing a growth of 15.52%)
- Management expenses in 2005 increased to TD 117.374m compared to TD 103.568m in 2004 (representing a growth of 13.33%)
- Reinsurance cessions attained TD 146.511m in 2005 compared to TD 129.361m in 2004 (representing a growth of 13.26%)
- Investments increased to TD 1,149.150m in 2005 compared to TD 1,042.811m in 2004 (representing a growth of 10.20%)
- Net Underwriting Results: a surplus of TD 11.721m in 2005 compared to a deficit of TD 9.112m in 2004
- Balance sheet results: a profit of TD 7.978m in 2005 compared to a loss of TD 15.457m in 2004.

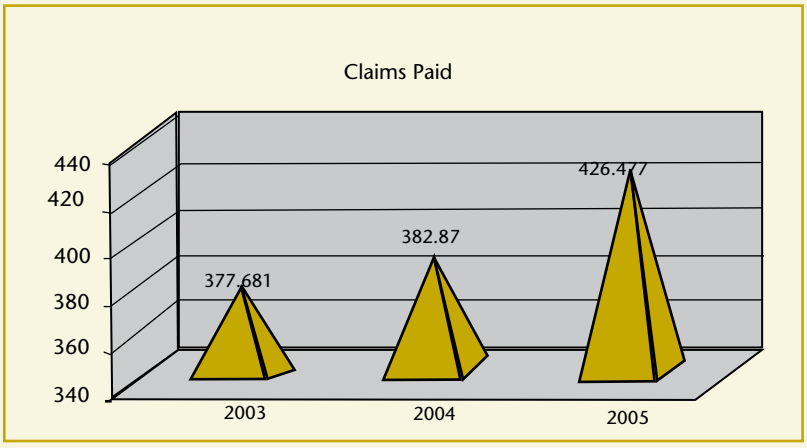
In 2005, claims paid increased to TD 426.477m.

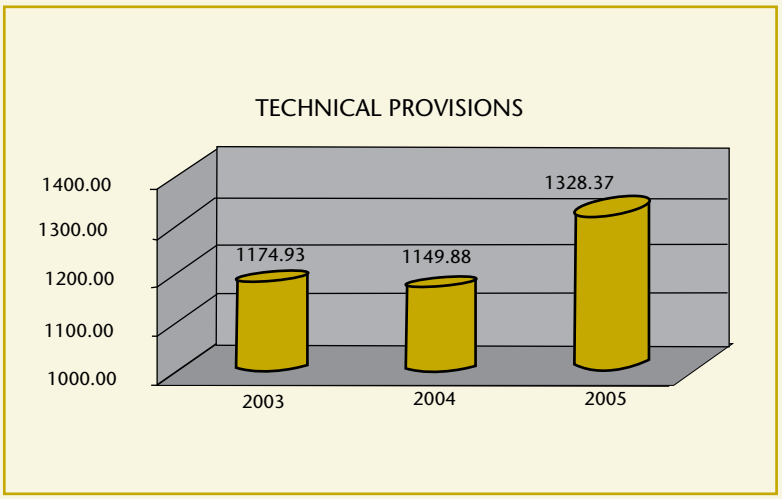
Evolution of claims paid by class (in millions of TD)

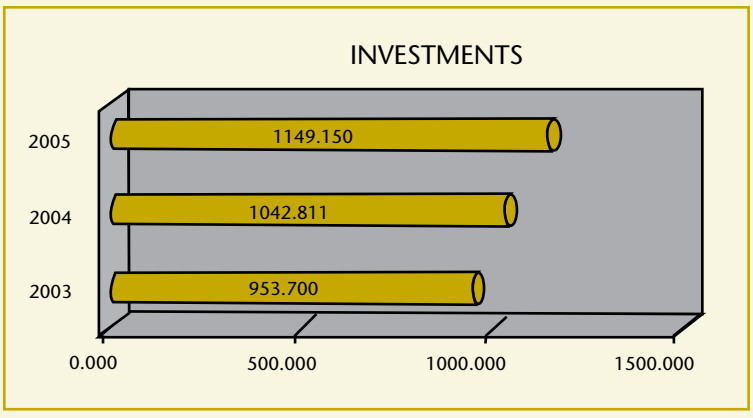
	2005		**2004**		**variation**
Class	Claims paid	%	Claims paid	%	
Motor	226.362	54%	199.304	53%	13.58%
Group	102.053	24%	100.152	26%	1.90%
Work. comp.	4.853	1%	5.161	1%	-5.97%
Marine	29.794	7%	8.756	2%	240.27%
Fire	15.374	4%	14.928	4%	2.99%
Agric	2.476	1%	3.556	1%	-30.37%
Misc. Accident	16.939	4%	17.960	5%	-5.68%
Life	17.312	4%	23.524	6%	-26.41%
Credit	7.882	2%	5.486	1%	43.67%
Total	423.045	100%	378.827	100%	11.67%
Reinsurance	3.432		4.043		-15.11%
Grand total	426.477		382.870		11.39%

BREAKDOWN OF CLAIMS BY CLASS IN 2005




Claims Paid
440
420
400
380
360
340
377.681
382.87
426.477
2003
2004
2005


TECHNICAL PROVISIONS
1400.00
1300.00
1200.00
1100.00
1000.00
1174.93
1149.88
1328.37
2003
2004
2005


INVESTMENTS
2005
2004
2003
1149.150
1042.811
953.700
0.000
500.000
1000.000
1500.000

THE ROLE OF TUNIS RE IN THE TUNISIAN INSURANCE MARKET

In 2005, Tunis Re's premium income stood at TD 53m out of which 69% emanated from the local market, representing a market share of 25%.

In 2006, its paid up capital increased to TD 35m and its shareholders' funds stood at TD 44m.

Indeed, the company offers its cedants a wide range of services, the most important of which are:

- Prompt settlement of claims
- Placement of large risks through support from a network of international partners
- Designing and leading some reinsurance programmes
- Providing Quotations for proportional and Non-Proportional treaties
- Pool Management (Decennial Liability, Marine, Aviation…)
- Providing technical assistance to its partners.

PROSPECTS

Reforms initiated

Flexible legislation, which follows the evolution of the sector and encourages its development:

The insurance sector in Tunisia has witnessed continuous major reforms since 1992, few of which can be cited as follows:

• **1992:** Promulgation of the Insurance Code (implemented in 1993), which mainly aims at clarifying the contractual relationship between the insurers and the insureds, regulating insurance-related professions, and establishing prudential rules for insurance companies.

• **1993:** Lifting of prior approval for the transfer of reinsurance balances.

• **1994:** Promulgation of a law on compulsory decennial liability insurance within a single contract for the construction sector. This law aims at protecting national assets by engaging stakeholders' liability and favouring prompt compensation in the event of claims.

• **1997:** Promulgation of a law on export insurance and its incorporation into the Insurance Code. This law basically aims at eliminating monopoly and opening up that class of business to all insurance companies as well as opening the export insurance sector to non-resident exporters, and then providing cover for pre-shipment risks.

• **1997/1998:** The tax laws applicable to insurance contracts (Financial laws for the budget years 1997 and 1998) were reviewed, thereby making it possible to simplify the tax scale applied to the different insurance categories (2 applicable rates; i.e. 5 % for marine and air transport risks and 10 % for the other classes instead of the previous 6%), reduce the rates and remove taxes on Life assurance. Export insurance, decennial liability as well as agricultural insurance written with specialised mutual companies, were also tax exempted. In addition, the ceiling on deductibles for Life assurance was raised (TD 2,000 instead of TD 500) and registration fees waived on succession. The insurance tax system also includes a contribution to the Civil Protection and Road Safety Funds as well as the Motor Guarantee Insurance Funds.

• **1999:** The introduction of an export financing pre-shipment cover (Decree n° 99-95). This enables SMEs in the export business to access bank financing without having to provide collaterals (mortgages and other forms…)

• **2000:** Establishment of an accounting scheme that incorporates the accounting standards applicable to the insurance sector.

• **1998 –1999- 2000:** Preparation of a general study on insurance sector development, the outcome of which would serve as the basis for a comprehensive reform of the insurance industry.

• **2000:** A study aimed at determining the weaknesses of agricultural insurance and developing that class with a view to facilitating access to financing.

• **2003:** Health Insurance

• **2004:** Bancassurance, defined as the marketing of insurance products through distribution channels such as banks and postal services, aims at developing Life business, mobilising savings and protecting human capital.

• **2005:** Motor Insurance: The new law of 15 August 2005 seeks to improve the underwriting results of the class so far characterised by chronic deficit and accelerate the claims payment procedure

• **2006:** Decree n°2006-2336 of 28 August 2006, on the intervention modalities of the Road accidents prevention fund, its mode of operation, financial base and contribution rates to the fund.

ENVISAGED REFORMS

The reforms shall focus on two key areas

Reinforcement of control

In the first instance, the control function needs to be separated from the regulatory and sector development function. To that end, the Insurance Department, which serves as the supervisory body, was transformed into a general insurance commission, where supervision plays the paramount role.

Therefore, an Insurance Supervisory commission was created mainly to ensure constant supervision of insurance and insurance-related professions.

This also meant improving the normal control procedures by way of eliminating pre-control notification in line with international standards.

Development of insufficiently exploited Classes of insurance:

This mainly concerns agricultural insurance, Life assurance and personal lines.

Agricultural Insurance

A number of measures have been taken:

- Alleviating the cost of insurance by integrating it into the agricultural investment scheme thereby enabling farmers to enjoy subsidy;

- Improving on rates of cover by extending insurance to all agricultural business financed through bank loans;

- Bridging the gap between insurance providers and farmers by authorising bancassurance for agricultural risks;

- Improving insurance services by designing multi-risk contracts adapted to the needs of farmers and the peculiarities of the regions, simplifying procedures and reducing delays in risk surveys and claims payment, granting a 50% advance to farmers on the amount of estimated damage advised by the adjuster in the event of litigation, so as to enable the farmer prepare for the next crop season;

- Encouraging group insurance for agricultural risks by applying preferential rates;

- Reduction of taxes on agricultural insurance for non mutual companies from 10% to 5%.

Life Assurance

With regard to Life assurance, contrary to the pattern in developing countries where this class occupies a large proportion in the insurance sector, its weight in Tunisia still remains low. In 2005, it accounted for 9% compared to a world average of 60%. Life assurance, a major tool for mobilising savings, has enjoyed a series of tax incentives, resulting in total exemption, irrespective of the type of contract, individual or group. The Finance Law of 2002 removed obstacles that up till then discouraged employees and employers from subscribing group policies. This law provides that premiums paid for insurance be deducted from taxable income accruing from the total amount of the employer's taxable profit and by extension the employee's share to be deducted from the total amount of his taxable income.

As part of efforts to encourage group life policies, the new insurance code has instituted a precise legal framework to regulate that class of business. Mechanisms other than tax-related incentives have also been explored to develop Life assurance.

A number of such mechanisms include: the introduction of bancassurance as a means of marketing Life products, supporting life policyholders by granting them higher privileges if the insurance company encounters difficulties. These came in addition to maintaining strict control on Life and Non Life reserves. The new insurance code also envisages the constitution of specific prudential rules for Life business and softening of operating conditions for Life insurers.

Personal Insurance

As the Motor Insurance services improve, a higher potential for risk development for individuals on the Tunisian market will emerge.

THE SENEGALESE INSURANCE MARKET

By

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Managing Director, SONAM Assurances S.A
Dakar

INTRODUCTION

We will approach this presentation of the Senegalese insurance market by providing a few highlights on the economic and social environment on the one hand and the evolution of data on the sector itself, on the other hand. In providing the statistics, we will limit ourselves to the five-year period 2001-2005. By way of introduction, we will briefly recall the historical background of the sector and the conclusion will discuss the growth prospects.

I/ REVIEW OF THE MILESTONES IN THE EVOLUTION OF THE MARKET FROM INDEPENDENCE TO THE PRESENT DAY:

- In the wake of independence, insurance activities were carried out by branches, agents and subsidiaries of several foreign companies;

- In 1963, the Mutuelle Agricole du Sénégal (M.A.S) was established as the first Senegalese insurance company;

- From 1961 to 1972, the number of companies dropped from 99 insurers with a premium income of 1.343 billion to 39 companies with a production of F CFA 2.645 billion;

- In 1981, the number of companies fell to 22 with an income of F CFA 10.163 billion;

- In 1988, la Sénégalaise de Réassurance (Sen Re) was established to increase the national premium retention capacity;

-In 1993, the number of companies stood at 18 with a premium income of FCFA 20.123 billion;

- In 1995 (the date of entry into force of the CIMA Code), the same companies produced a premium of F CFA 26.119 billion;

-In 1998, the licenses of 2 non-life and one life companies were withdrawn and the total premium income for the market was F CFA 28.635 billion;

- In 1999, a new non-life company was created in the market and the premium income for the market stood at F CFA 33.714 billion;

- In 2000, another non-life company was added to the market and the total premium income for the industry stood at F CFA 38.420 billion;

- In 2002, there was an increase in the number of companies with the arrival of a new non-life company and the market premium income stood at F CFA 48.636 billion;

- In 2005, the market was structured around 18 companies, five of which were life companies. These companies recorded a premium income of 62.092 billion. Insurance was distributed by a network of intermediaries made up of 44 brokers.

We will end this brief historical background by quickly reviewing the different operational structures in the market:

- In 1991, the Insurance Companies' Committee (le Comité des Sociétés d'assurances) became the Federation of Senegalese insurance companies (la Fédération sénégalaise des Sociétés d'Assurances (FSSA) ;

- In 1991, the Insurance Department was created as a separate entity;

- In 1991, the Marine Hull Insurance Pool (Pool d'Assurances maritimes Corps de navire (AMCO) was established;

- In 1997, a new public transport Motor Pool (Pool TPV Transport public de voyageurs)) was created by companies that specialise in the Motor class;

- In 1994, the Motor Guarantee Fund (le Fonds de Garantie automobile (F.G.A)) was created to cater for the compensation of victims of bodily injury resulting

from motor accident whose culprits are unknown or uninsured;

- In 2002, la Nouvelle Prévention Routière du Sénégal (NPRS) was established and assigned the mission of sensitising motorists on road traffic dangers.

II/ECONOMIC AND SOCIAL ENVIRONMENT

Emphasis will be on the aspects that relate to employment in the sector, insurance contribution to the GDP, insurance contribution to investments and the insurance density.

A/EMPLOYMENT WITHIN THE INSURANCE COMPANIES

1/ ALL COMPANIES

Year	2001	2002	2003	2004	2005
Senior Staff	153	162	161	182	177
Support Staff	227	247	225	291	302
Manual Staff	175	179	207	144	159
Total	555	588	593	617	638

Source: FSSA Reports

2/ NON-LIFE COMPANIES

Year	2001	2002	2003	2004	2005
Senior Staff	132	140	140	160	155
Support Staff	179	204	182	243	253
Manual Staff	153	151	178	118	124
Total	464	495	500	521	532

Source: FSSA Reports

3/ LIFE ASSURANCE COMPANIES

Year	2001	2002	2003	2004	2005
Senior Staff	21	22	21	22	22
Support Staff	48	43	43	48	49
Manual Staff	22	28	29	26	35
Total	91	93	93	96	106

Source: FSSA Reports

During the period under review, there was a sustained increase in the number of staff employed by both the Non-life and Life companies. For instance in 2005, the number of staff employed by all the companies stood at 638 out of which 532 was by non-life and 106 by life companies. This, obviously, has not taken into account the staff employed by the intermediaries.

B/ CONTRIBUTION OF INSURANCE TO THE GDP

In F CFA millions

Year	2001	2002	2003	2004	2005
Non-life Production	34,810	41,231	44,241	49,461	51,415
Life Production	6,505	6,600	7,029	8,820	10,677
Total Production	41,315	47,831	51,270	58,281	62,092
GDP	3,575,470	3,717,640	3,960,840	4,198,470	4,536,000
Rate of penetration	1.16%	1.29%	1.29%	1.39%	1.37%

Source: FSSA and DPRS Reports

The rate of insurance penetration improved during the period 2001-2005. From 1.16% in 2001, it increased to 1.37% in 2005. The positive trend is attributable to the dynamism of the sector as well as the favourable economic environment. It should be recalled that apart from Côte d'Ivoire, Cameroon, Gabon and Togo, the ratio for most CIMA member countries falls below 1% and the African average in 2002 stood at 4.45% (Sigma report by Swiss Re).

C/ CONTRIBUTION OF INSURANCE TO NATIONAL INVESTMENT

With regard to investment in the sector, we will limit ourselves to the assets represented as regulatory liabilities.

In F CFA million

Year	2001	2002	2003	2004	2005
Value of represented Assets	74,834,201	89,600,502	97,872,540	107,885,250	116,108,054
Gross Fixed Capital	812,520	922,700	843,450	961,920	1,080,900
Rate of Contribution	9.21%	9.71%	11.60%	11.22%	10.74%

Source: FSSA and DPRS Reports

The above statistics reveal that the insurance sector contributed significantly to national investment with an annual average rate of more than 10% for the period under review. It should be noted that, over the same period, the entire private sector contributed close to 75% of the Gross fixed capital.

D/INSURANCE DENSITY

The following data present the insurance density:

1) THE ENTIRE SECTOR

In F CFA million

Year	2001	2002	2003	2004	2005
Production	41,315	47,831	51,270	58,281	62,092
Total Population	9,817	10,029	10,288	10,564	10,818
Contribution per Head	4,208	4,769	4,983	5,517	5,740

Source: FSSA and DPRS Reports

2) NON LIFE INSURANCE

In F CFA million

Year	2001	2002	2003	2004	2005
Production	34,810	41,231	44,241	49,461	51,415
Total Population	9,817	10,029	10,288	10,564	10,818(1)
Contribution per Head	3,546	4,111	4,300	4,682	4,753

Source: FSSA and DPRS Reports

3) LIFE ASSURANCE

In F CFA million

Year	2001	2002	2003	2004	2005
Production	6,505	6,600	7,029	8,820	10,677
Total Population	9,817	10,029	10,288	10,564	10,818
Contribution per Head	663	658	683	835	987

Source: FSSA and DPRS Reports

There was an increase in the average contribution per head within the period 2001-2005. On the average, it stood at F CFA 5,043 per head. That represents an encouraging rate of growth. It should be recalled that the density for the entire CIMA zone was F CFA 4,209 in 2003. However, Côte d'Ivoire, Cameroon, Gabon and Congo Brazzaville recorded much higher values: Côte d'Ivoire F CFA 6,903, Cameroon F CFA 5,253, Gabon F CFA 39,944 and Congo Brazzaville F CFA 5,919 (cf FANAF Report of February 2007).

III/ SECTORAL HIGHLIGHTS

This section will provide statistics on Production, Losses, Regulatory Liabilities, Underwriting results and outstanding premium.

A/EVOLUTION OF PRODUCTION

1 / EVOLUTION OF MARKET PRODUCTION

In F CFA million

Year	2001	2002	2003	2004	2005
Market Turnover	41,315	47,831	51,270	58,281	62,092
Growth Rate in%	-	15.77	7.19	13.67	6.54

Source: FSSA Reports

2/ EVOLUTION OF NON LIFE PREMIUM

In F CFA million

Year	2001	2002	2003	2004	2005
Market Turnove	34,810	41,231	44,241	49,461	51,415
Growth Rate in%	-	18.45	7.30	11.80	3.95

Source: FSSA Reports

3/ EVOLUTION OF LIFE PREMIUM

In F CFA million

Year	2001	2002	2003	2004	2005
Market Turnover	6,505	6,600	7,029	8,820	10,677
Growth Rate in%	-	1.46	6.5	25.48	21.05

Source: FSSA Reports

The above tables reveal an increase of more than 50% of the market turnover during the period under review. That period was characterized by a more favourable economic environment with an average growth rate of more than 5% per annum.

Non-life insurance accounted for 80% of that growth while the life sector accounted for 20% with variations of 47.13% and 64.13% respectively in the turnover

4 /PRODUCTION BY CLASS OF NON LIFE BUSINESS

The evolution by class of business was as follows:

Year	Personal Acc & Health	Motor	Fire & Property Dam	General	Aviation	Marine	Other Transp.	Others Direct Risks	Phy. Dam. Rein	Others Liab	Total
2001	6,221.50	10,000	4,485.90	5,252.20	1,134.80	801.90	5,419.70	30.10	967.50	495.90	34,809.50
2002	6,724.20	11,223.80	5,061.90	6,597.50	1,473.80	1,674.80	6,151.00	94.40	1,690.00	539.20	41,230.60
2003	6,510.90	12,491.80	5,530.50	7,353.10	1,774.60	1,862.40	5,919.80	703.30	1,435.20	659.10	44,240.70
2004	7,697.90	13,051.70	5,784.00	8,108.00	2,093.20	1,978.30	7,674.60	3.20	1,493.20	1,577.40	49,461.50
2005	8,298.60	12,720.60	6,548.60	8,595.30	1,873.40	1,987.80	8,390.70	186.30	2,023.30	790.00	51,414.60
5Yr average	7,090.62	11,897.58	5,482.18	7,181.22	1,669.96	1,661.04	6,711.16	203.46	1,521.84	812.32	44,231.38

Source : FSSA Reports

The dominant classes in the non-life sector are:

- The Motor class which leads as in all the other CIMA markets with an average market share of 39.51%. This predominant position by that class is attributable mainly to the compulsory Motor liability insurance;

- The Marine class ranks second with an average market share of 19.29%. The growth of this class is partly driven by the law on the domestication of imported cargo and Hull business;

- The Fire and other property classes, ranks third with a market share of 16.16%;

- Health and personal accident class occupy the fourth position with an average market share of 16.12%;

- The other classes take up the residual market share of 8.95%.

5/ EVOLUTION OF LIFE PREMIUM

In F CFA million

Year	Individual	Group	Addition. risks	Other	Capitalis.	Reins.	Total
2001	2,006.80	2,158.80	143.10	70.40	2,080.40	45.90	6,505.40
2002	1,699.50	2,266.60	95.20	73.80	2,410.80	54.20	6,600.10
2003	1,669.70	3,009.90	95.20	90.00	2,119.60	44.30	7,028.70
2004	2,374.60	4,267.70	59.70	81.10	1,965.30	71.90	8,820.30
2005	2,709.10	5,788.10	61.70	111.50	1,910.00	96.40	10,676.80
5 yr Average	2,091.94	3,498.22	90.98	85.36	2,097.22	62.54	7,926.26

Source: FSSA Reports

The above table indicates that:

- The group class comes first with an average market share of 42.59% during the period under review. This class has grown enormously in recent times partly because of the favourable economic environment characterised by tax incentives in the management of retirement provisions. These incentives encouraged the managers of these funds to externalise them with insurance companies through a product known as "Terminal Benefits" and partly by the dynamism of the life companies.

- The Capitalisation class then follows with an average market share of 27.77%, which is trailed by Individual Life with a market share of 26.53%;

B/ EVOLUTION OF LOSSES

The following tables present the data on losses under the evolution of Loss charges and the evolution of the Earned Premium/Loss ratio and the simplified combined ratio for the Non-life and Life classes.

1/ EVOLUTION OF LOSS CHARGES (NON-LIFE)

In F CFA million

Year	2001	2002	2003	2004	2005
Losses paid	14,506,647	17,190,548	20,409,989	16,065,706	18,530,635
Provisions	3,553,703	2,073,875	-1,263,787	2,957,203	7,842,200
Loss Charge	18,086,477	19,264,423	19,146,202	19,022,909	26,372,835
Rate of evolution	-	6.67%	-0.61%	-0.64%	38.64%

Source : FSSA Reports

2/ EVOLUTION OF LOSS CHARGES (LIFE)

In F CFA million

Year	2001	2002	2003	2004	2005
Losses paid	3,543,655	4,203,200	4,486,028	4,447,311	5,188,370
Provisions	644,171	102,751	884,967	2,072,400	2,577,077
Loss Charge	4,187,826	4,305,951	5,370,995	6,519,711	7,765,447
Rate of evolution	-	2.82%	22.91%	21.39%	19.11%

Source : FSSA Reports

3/ EVOLUTION LOSS/PREMIUM RATIO AND COMBINED RATIO (NON LIFE)

In F CFA million

Year	2001	2002	2003	2004	2005
Loss Charge	18,060,350	19,264,423	19,146,202	19,022,909	26,372,835
Earned Premium	34,474,637	40,230,120	43,233,901	47,451,451	50,624,227
L/P Ratio	52.39%	47.88%	44.28%	40.09%	52.09%
Combined Ratio	86.39%	83.88%	79.28%	81.09%	90.09%

Source : FSSA Reports

4/ EVOLUTION LOSS/PREMIUM RATIO AND COMBINED RATIO (LIFE)

In F CFA million

Year	2001	2002	2003	2004	2005
Loss Charge	4,187,826	4,305,951	5,370,995	6,519,711	7,765,447
Earned Premium	6,505,401	6,600,109	7,054,290	8,820,323	10,676,862
L/P Ratio	64.37%	65.24%	76.14%	73.92%	72.73%
Combined Ratio	93.37%	93.24%	106.14%	99.92%	97%

Source : FSSA Reports

The above tables show that loss charges were relatively stable during the period under review. For the Property damage class, there was a drop between 2002 and 2004 before it increased sharply between 2004 and 2005. Indeed, large losses were recorded in 2005 especially in the Technical risks, Fire and Liability classes. With regard to the Life class, there was relative stability with effect from 2003. Nevertheless, the market underwriting results, for the non-life class, have been rather satisfactory.

Indeed, at 48%, the Loss/Premium ratio for the period under review is lower than the generally accepted norm. The simplified combined ratio stood at an average of 85% over the period, an indication of substantial technical profit.

With regard to Life business, the results are not as good with a Loss/Premium ratio of about 71% for the period. The simplified combined ratio stood at almost 98% for the period resulting in low technical profit. Details of the results by class of business are contained in the annexed tables.

C/ COVER FOR REGULATORY LIABILITIES

The three tables that follow present the cover for regulatory liability for the entire market as well as for the Non-life and life companies:

1/ COVER FOR REGULATORY LIABILITIES FOR THE ENTIRE MARKET

In F CFA million

Year	2001	2002	2003	2004	2005
Total Liability	67,717,195	73,789,313	74,213,783	81,455,936	94,273,544
Total assets accepted As representation	70,357,850	77,892,275	81,936,000	86,915,373	93,668,504
Surplus (+) or Deficit (-)	+2,640,655	+4,102,962	+7,722,217	+5,459,437	-605,040

Source : FSSA Reports

2/ COVER FOR REGULATORY LIABILITIES (NON-LIFE BUSINESS)

In F CFA million

Year	2001	2002	2003	2004	2005
Total Liability	46,076,773	50,537,552	49,733,366	54,869,207	64,642,776
Total assets accepted As representation	51,664,651	54,485,570	57,263,686	60,773,103	64,896,462
Surplus (+) or Deficit (-)	+5,587,878	+3,948,018	+7,530,320	+5,903,896	+253,686

Source: FSSA Reports

3/ COVER FOR REGULATORY LIABILITIES (LIFE BUSINESS)

In F CFA million

Year	2001	2002	2003	2004	2005
Total Liability	21,640,422	23,251,761	24,480,417	26,586,729	29,630,768
Total assets accepted As representation	18,693,199	23,406,705	24,672,313	26,142,270	28,772,042
Surplus (+) or Deficit (-)	-2,947,223	+154,944	+191,896	-444,459	-858,726

Source: FSSA Reports

As in the other CIMA markets, regulatory liabilities for the period under review were covered satisfactorily. Indeed, for the entire market the average rate for the cover of regulatory liabilities was 105.18%, despite the slight deficit noticed in 2005. That deficit which is traceable to the life class was due to the sharp increase in the turnover from that class of business with a ratio of more than 18% for 2004 and 2005 mainly as a result of the writing of the terminal benefit contract.

D/ NET OPERATING RESULT

Net underwriting results for the Non-Life and life classes evolved as follows:

In F CFA million

Year	2001	2002	2003	2004	2005
Non Life Companies	2,987	3,674	5,187	5,796	4,607
Life Companies	937	1,003	554	356	1,528
Total	3,924	4,677	5,741	6,152	6,135

Source: FSSA Reports

The market recorded satisfactory average annual results of F CFA 5.3 billion for the period 2001 to 2005. This was due to satisfactory loss charges, the control of charges and the recording of appreciable investment income.

E/ DUE FROM AGENTS AND THE INSURED (NON-LIFE)

Balance with the agents and the insured for the non-life class was as follows:

In F CFA million

Year	Written Premium net of cancellation	Due from the insureds and agent	% of writtenPremium
2001	34,781	15,374	44
2002	41,175	16,924	41
2003	43,841	17,253	39
2004	58,196	19,918	34
2005	61,981	23,581	38

Source: FSSA Reports

During the period under review, there was a drop in the rate of outstanding premium. From 44% in 2001, the rate of premium receivable reduced to 38% i.e.a 6% drop. The positive trend could be attributed to regulatory constraints in that area and the will of the companies to sanitise their portfolios.

IV/ PROSPECTS

As already indicated in the above table, the Senegalese insurance market recorded an interesting growth with an average growth rate of almost 9% for the period 2001-2005. That accounted for why the market has climbed from the 4th ranked CIMA market to the 3rd position in 2004. The desire of the insurers is to have this evolution translate quickly to a turnover of about F CFA 100 billion. Thus, apart from the important opportunities that results from normal economic activity, potentialities have been created, which can be classified into two categories.

A/ Short Term Opportunities

With the large ongoing and short term future projects especially in the area of infrastructure in preparation for the large international summits, there would be a boom in technical risks and in particular Contractors All Risks, Erection All Risks and Decennial Liability which would further boost the market turnover.

B/ Medium and Long Term Opportunities

1) In the non-life class, the Marine, Engineering Risks, Health and Motor insurance classes should grow as expected. Indeed, specific actions and special measures have been put in place to achieve that aim.

a) Marine Insurance

The ongoing project to integrate marine insurance into the import and export automation process by the Customs Department (ORBUS System) should have a positive impact on the development of that class of business. The waste associated with the existing manual system would therefore be eliminated.

b) Engineering Insurance

Within the framework of the Building Code that is currently being prepared, this class of insurance could be made compulsory by law. This would naturally lead to serious growth in the insurance of construction related risks such as the Contractors' All Risks and Decennial Liability.

c) Health Insurance

There is an increasing demand for Health cover especially by Workers' unions, thus indicating a major prospect in that sector.

d) Motor Insurance

There are positive prospects for growth in the market owing to the increasing demand for Motor vehicle insurance cover by the State and its constituents.

e) Life Assurance

The introduction of a compulsory endowment related retirement scheme and some incentives and/or tax privileges outlined by the industry should enable Life Assurance to sustain the trend of growth observed recently. Finally, it would be necessary to point out the great potentials of the informal sector on which serious reflection has started.

CONCLUSION

The insurance industry is playing a major role in the Senegalese economy: job creation, institutional investment and the protection of the tools of production. However, the market still harbours great potentials for growth which can be explored through the involvement of all the market players: Public Authorities, Insurance companies and those involved in the distribution chain. As insurance is still relatively unknown, the initiatives already taken need to be backed by a strong public enlightenment campaign. That way, the insurance sector could fully play its role of a veritable fulcrum for economic growth and development through its ability to protect and finance the national economy.

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

In F CFA million

Year 2001	Pers. Acc.& Health	Motor	Fire & Property	Gen. Liab.	Aviation	Marine	Other Transp	Other Direct Risks	Prop/Liab. Rein. Accptnces	Others
Claims Paid	3,910,969	3,871,185	799,567	1,539,763	422,332	864,700	2,001,434	87,562	393,338	615,796
Provisions	117,621	2,147,321	-347,348	1,614,157	293,122	-434,278	327,082	-123,336	-231,268	190,629
Loss Charges	4,028.59	6,018,506	452,219	3,153.92	715,454	430,422	2,328,516	-35,774	162.07	806,425
Earned Premium	6,372,684	9,836,911	4,397,806	5,220,997	1,110,755	711,761	5,383,786	25,816	914,581	499,538
L/P ratio	63.22%	61.18%	10.28%	60.41%	64.41%	60.47%	43.25%	-138.57%	17.72%	161.43%
Ratio of U/W charges	98.22%	100.18%	44.28%	91.41%	105.41%	72.47%	71.25%	-102.57%	55.72%	203.43%

Source : FSSA Reports

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

In F CFA million

Year 2002	Pers. Acc.& Health	Motor	Fire & Property	Gen. Liab.	Aviation	Marine	Other Transp	Other Direct Risks	Prop/Liab. Rein. Accpts	Others
Claims Paid	4,161,436	5,062,559	817,219	3,528,245	207,377	4,699	2,306,221	9,821	516,084	533,942
Provisions	479,095	62,722	1,620,363	1,024,484	-575,252	92,607	-431,067	-170,232	205,049	-21,847
Loss Charges	4,640,531	5,125,281	2,437,582	4,552,729	-367,875	97,306	1,875,154	-160,411	721,133	512,095
Earned Premium	6,474,083	11,471,617	5,130,712	6,422,773	1,284,245	1,614,751	5,954,359	-236,872	1,608,873	541,134
L/P ratio	71.67%	44.68%	47.51%	70.88%	-28.64%	6.03%	31.49%	67.72%	44.82%	94.63%
Ratio of U/W charge	106.67%	86.68%	84.51%	112.88%	6.36%	21.03%	56.49%	102.12%	69.82%	156.63%

Source : FSSA Reports

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

n F CFA million

Year 2003	Pers. Acc. & Health	Motor	Fire & Property	Gen. Liab.	Aviation	Marine	Other Transp	Other Direct Risks	Prop/ Liab. Reins. Accpts	Others
Claims Paid	4,343,133	6,585,635	577,648	3,980,499	388,490	153,970	3,043,137	426,003	263,329	648,146
Provisions	-104,776	680,170	112,030	-1,652,284	-346,888	-137,604	-286,440	227,280	50,982	193,742
Loss Charges	4,238,357	7,265,805	689,678	2,328,215	41,602	16,366	2,756,697	653,283	314,311	841,888
Earned Premium	6,396,984	12,239,118	5,437,868	7,304,630	1,703,868	1,836,705	5,923,078	706,036	1,023,141	662,472
L/P ratio	66.25%	59.36%	12.68%	31.87%	2.44%	0.89%	46.54%	92.53%	30.72%	127.08%
Ratio of U/W charges	101.25%	102.36%	44.68%	69.87%	48.44%	.89%	74.54%	97.53%	51.72%	179.08%

Source : FSSA Reports

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

In F CFA million

Year 2004	Pers. Accid & Health	Motor	Fire & Property	Gen. Liab.	Aviation	Marine	Other Transp	Other Direct Risks	Prop/Liab. Reins. Accpts	Others
Claims Paid	4,404,581	5,679,759	550,195	1,900,249	643,089	4,119	1,688,475	7,370	423,288	764,579
Provisions	-21,977	2,037,508	-1,336,792	687,018	267,474	437,938	509,445	-4,095	275,722	142,062
Loss Charges	4,382,604	7,717,267	-786,597	2,587,723	910,563	442,057	2,197.92	3,275	699.01	906,641
Earned Premium	7,427,618	12,556,108	5,718,730	7,647,196	1,931,658	1,979,965	7,251,803	3,118	1,363,531	1,571,725
L/P ratio	59.00%	61.46%	-13.75%	33.84%	47.14%	22.33%	30.31%	105.03%	51.26%	57.68%
Ratio of U/W charges	96%	112.46%	20.25%	82.84%	100.14%	25.33%	61.31%	146.03%	95.26%	106.68%

Source : FSSA Reports

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

In F CFA million

Year 2005	Pers. Accid & Health	Motor	Fire & Property	Gen. Liab.	Aviation	Marine	Other Transp	Other Direct Risks	Prop/Liab. Reins. Accpts.	Others
Claims Paid	4,464,067	5,010,765	660,772	1,414,891	712,253	572,645	3,726,157	24,305	1,051,721	893,058
Provisions	157,237	39,411	338,988	4,107,968	-963,289	3,048,737	724,134	93,784	206,301	73,592
Loss Charges	4,621,304	5,050,176	999.76	5,522,859	-251,036	3,621,382	4,450,291	118,089	1,258,022	966.65
Earned Premium	8,061,800	12,507,986	6,760,485	8,445,256	1,959,228	1,758,261	8,507,949	152,273	1,676,831	794,155
L/P ratio	57.32%	40.37%	14.79%	65.39%	-12.81%	205.96%	52.31%	77.55%	75.02%	121.72%
Ratio of U/W charges	94.32%	85.37%	46.79%	110.39%	27.19%	207.96%	87.31%	122.55%	120.02%	147.72%

Source : FSSA Reports

ANNEXES

EVOLUTION OF THE NON-LIFE L/P RATIO PER CLASS OF BUSINESS

In F CFA million

Year 2001	Individual	Group	Additional	Other risks	Capitalisation	Reinsurance Acceptances
Claims Paid	1,657,913	885,229	15,149	9,545	925,867	49,951
Provisions	-317,915	-56,782	-38,402	-1,521	1,053,267	5,524
Loss Charges	1,339,998	828,447	-23,253	8,024	1,979,134	55,475
Earned Premium	2,006,766	2,158,794	143,144	70,371	2,080,386	45,941
L/P ratio	66.77%	38.37%	-16.24%	11.40%	95.13%	120.75%
Ratio of U/W charges	102.77%	69.37%	29.76%	28.40%	115.13%	160.75%

Source : FSSA Reports

ANNEXES

EVOLUTION LIFE L/P RATIO BY CLASS OF BUSINESS

In F CFA million

Year 2002	**Individual**	**Group**	**Additional**	**Other risks**	**Capitalisation**	**Reinsurance Acceptance**
Claims Paid	1,920,004	994,292	9,668	26,543	1,200,317	52,376
Provisions	-210,430	-220,360	-	3,732	529,674	0,134
Loss Charges	1,709,574	773,932	9,668	30,275	1,729,991	52.51
Earned Premium	1,699,470	2,266,599	95,214	73,817	2,410,808	54,200
L/P ratio	100.59%	34.14%	10.15%	41.01%	71.76%	96.88%
Ratio of U/W charges	136.59%	63.14%	66.15%	59.01%	93.76%	131.88%

Source : FSSA Reports

ANNEXES

EVOLUTION LIFE L/P RATIO BY CLASS OF BUSINESS

In F CFA million

Year 2003	Individual	Group	Additional	Other risks	Capitalisation	Reinsurance Acceptances
Claims Paid	1,992,158	1,601,774	9,668	50,836	820,377	11,214
Provisions	-51,520	275,385	-	7,241	607,531	46,331
Loss Charges	1,940,638	1,877,159	9,668	58,077	1,427,908	57,545
Earned Premium	1,669,694	3,009,927	95,214	89,969	2,119,625	44,314
L/P ratio	116.23%	62.36%	10.15%	64.55%	67.37%	129.64%
Ratio of U/W charges	153.23%	92.36%	66.15%	83.55%	88.37%	267.64%

Source : FSSA Reports

ANNEXES

EVOLUTION LIFE L/P RATIO BY CLASS OF BUSINESS

In F CFA million

Year 2004	Individual	Group	Additional	Other risks	Capitalisation	Reinsurance Acceptances
Claims Paid	1,722,489	1,710,665	19,462	12,759	906,633	75,303
Provisions	543,319	1,122,251	1,124	7,871	397,835	-
Loss Charges	2,265,808	2,832,916	20,586	20.63	1,304,468	75,303
Earned Premium	2,374,638	4,267,659	59,681	81,067	1,965,328	71,950
L/P ratio	95.42%	66.38%	34.49%	25.45%	66.37%	104.66%
Ratio of U/W charges	128.42%	94.38%	106.49%	41.45%	77.37%	127.66%

Source : FSSA Reports

ANNEXES

EVOLUTION LIFE L/P RATIO BY CLASS OF BUSINESS

In F CFA million

Year 2005	Individual	Group	Additional	Other risks	Capitalisation	Reinsurance Acceptances
Claims Paid	2,029,279	1,862,726	17,287	31,018	1,132,809	115,251
Provisions	32,055	1,891	-0,149	-2,514	48,211	8,474
Loss Charges	2,061,334	3,753,726	17,138	28,504	1,781.02	123,725
Earned Premium	2,709,082	5,788,122	61,704	111,544	1,909,993	96,417
L/P ratio	76.09%	64.85%	27.77%	25.55%	93.25%	128.32%
Ratio of U/W charges	108%	87.85%	100.77%	40.55%	107.25%	183.32%

Source : FSSA Reports

ANGLOPHONE WEST AFRICA

1. Major Losses

Nigeria: Collapse of the Bank of Industry building "NIDB House" with a provisional loss estimate of =N=800 million.

2. Executive Appointment

Nigeria: Alhaji Ibrahim HUSSAINI has been appointed as the Acting Commissioner of Insurance to replace the former Commissioner, Chief O. E. Chukwulozie.

3.Others

The recapitalisation exercise in Nigeria has been completed. 43 companies were recertified to write Non-Life business, 26 were recertified to write life business, while 2 reinsurance companies received approval to continue as reinsurers.

FRANCOPHONE WEST AND CENTAL AFRICA

1. New Companies

- Côte d'Ivoire : AIA (Africa International Assurances)

- Gabon : COLINA

-Senegal : C.G.A. (Compagnie Générale d'Assurances)

- Bénin, Togo and Gabon: the NSIA Group has been licensed to conduct Life business

2. Withdrawal of License

- Cameroon: License withdrawn from 2 companies, SATELLITE Insurance (Non-life) and ASSURAMA (Life)

3. Executive Appointments

- Mr. Erard MOUTASSIE, former Secretary General of CIMA, has been appointed as the Managing Director of COLINA Gabon

- Mr. Ali ADOUM DJAYA, former Deputy Managing Director has been designated as the Managing Director of STAR Chad, following the appointment of Mr. Rakhis MANANNY as Minister.

- Mr. Mohamadou NOBA, former Secretary General of la Fédération Sénégalaise des Sociétés d'Assurances (the Senegalese Federation of Insurance Companies), has been appointed the Managing Director of CGA.

- Mr. Pierre BAYOKO AKA, former Internal Auditor of MCA (Mutuelle Centrale d'Assurance, Côte d'ivoire), has been appointed as the Managing Director of AIA

4. Others

The NSIA Group has been licensed by the WAEMU Banking Committee to oversee the operations of BIAO Côte d'Ivoire.

THE MAGHREB REGION

1. New Companies

Algeria

- A French insurer, CARDIF, an arm of the BNP Paribas group, has opened a subsidiary in Algiers;

- COFACE has opened an office in Algiers.

Mauritania

A new insurance company, GAMA, started operations in September 2006.

Libya

A new company, « Trust» was established in 2006 and started operations in January 2007.

2. Legislation

Algeria

Law N° 06-04 of 20/02/2006 was promulgated in February 2006 to amend and complement Insurance Act N° 95/07. The new law:

- Separates Non-life operations from the Life business;

- diversifies distribution channels through the introduction of bancassurance windows;

- increases the demand for insurance by opening up the Algerian market to foreign insurance and/or reinsurance companies

3. Others

Morocco

- The liberalisation of facultative placements with effect from January 2006.

- In October 2006, CNIA acquired 100% of the capital of Es Saada.

- In December 2006, AXA Assurance, Morocco became a fully owned subsidiary of AXA France following the withdrawal of O.N.A. (Omnium Nord Africain) from its shareholding.

NORTH EAST AFRICA

1. New Companies

Egypt

The Egyptian Government has established a new Holding company, the Holding Insurance Company, to run the 4 Government owned companies. Mr. Mahmoud Abdallah has been appointed as the Chairman and Chief Executive Officer of the new entity.

2. New Legislation

The Egyptian Insurance Supervisory Authority has submitted two draft laws to the Egyptian Parliament for approval: a draft law to organise the broking industry in Egypt as well as a draft law to put a maximum limit for the compulsory motor insurance liability.

3. Others

Sudan

A new Executive committee has been elected by the Sudanese Insurance Federation

THE INDIAN OCEAN ISLANDS

1. New Companies

Madagascar

Two new companies, namely AGF and Colina, have established offices in Madagascar,

2.Others

Seychelles

State Assurance Corporation of Seychelles has been privatized and renamed State Assurance Company of Seychelles

Mauritius

La Prudence Mauricienne Assurances Limitee acquired 100% share of Island General Insurance Company Limited.

Mauritius hosted the 6th edition of the AIO Life conference

EAST AND SOUTHERN AFRICA

1. Legislation

Kenya

1. The Insurance (Amendment) Act 2006

This amendment of the Act touched on the following among others:

1.1. Capping of third party bodily injury claim to Kshs. 3,000,000 (US$42,500) per person from previously unlimited amount.

1.2. Introduction of "cash and carry" system for motor and fire insurance premiums.

1.3. The setting up of an autonomous Insurance Regulatory Authority away from the Ministry of Finance.

2. The Kenya Shilling continued to appreciate by almost 10% in 2006.

3. Association of Kenya Reinsurers (AKR) has been re-activated.

Tanzania

Mandatory cessions to Tan Re increased from 10% to 15% from 2007

2.New Companies

Tanzania

- Madison General (MGEN) Insurance established to commence business in 2007

- Golden Crescent Insurance Co. established to commence business in 2007

Rwanda

- Phoenix Assurance of Kenya established a subsidiary in Rwanda

3. Major Losses

Zambia

- KCM (Konkola Copper Mines) – collapse of open pit on 08.04.2001 paid by consent judgment (ex-gratia) in October 2006. Total loss amount US$2.5 million.

Kenya

International House fire loss in August 2006. Total loss amount US$1.7 million.

Uganda

Rosebud house storm damage in March 2006. Total loss amount US$705,000.

Tanzania

TPC Sugar Factory Fire in July 2006. Total loss amount US$3million.

Ethiopia

Ethiopian Electric Power Authority - Damage to turbine generator loss on 30.11.2003. Total loss amount US$2.5million

AFRICA RE MANAGERIAL STAFF

HEADQUARTERS

Executive Management	Managing Director	Bakary KAMARA
	Deputy Managing Director Operations	Haile M. KUMSA
	Deputy Managing Director Services	Ganiyu MUSA
Secretariat	Ag. Corporation Secretary	Mamadou DIALLO
	Assistant Director, Secretariat & Languages	Sunday UDOH
Administration	Ag. Director of Administration, Human Resources & General Services	Muhammed ALI-KOTE
Finance & Accounts	Asst. Director, Finance & Accounts	Silifat AKINWALE
	Asst. Director, Treasury & Investment	George AMOAKO-TEMENG
Information Technology	Assistant Director	Gabriel OPADOKUN
Technical Operations	Director, Central Operations and Inspection	Alain G. RAVOAJA
	Director of West Africa & Special Risks	K. AGHOGHOVBIA
	Asst. Director, Oil & Energy	Olusina ELUSAKIN
Internal Audit	Director of Internal Audit	Ike O. UDUMA
REGIONAL OFFICES		
Casablanca	Regional Director	Lazhar CHARFEDDINE
	Assistant Director, Finance & Accounts	Ousmane SARR
	Deputy Directors, Underwriting & Marketing	Mohammed KANNOU Mohammed BELAZIZ Fuad ELGDERI
Nairobi	Regional Director	George OTIENO
	Assistant Director, Operations	R. RAMAMONJIARISOA
	Assistant Director, Finance & Accounts	Ibrahim A. IBISOMI
	Assistant Director, Internal Audit	Sere Mady KABA
Abidjan	Regional Director	Béné B. LAWSON
	Assistant Director, Finance & Accounts	Assemian O. ASSEMIAN
	Assistant Director, Operations	M. HAIDARA
Mauritius	Regional Director	Ms. E. AMADIUME
	Assistant Director, Finance & Accounts	Eshan GAFFAR
Cairo	Regional Director	Omar A. H. GOUDA
	Assistant Director, Finance & Accounts	Austine IKHEKUA
	SUBSIDIARY	
South Africa	Managing Director	Paul RAY
	General Manager, Operations & Marketing	Daryl de VOS
	General Manager, Finance & Accounts	Godfrey WAWERU