Reinsurance as a Strategic Risk Management Tool for Underwriting Profitability

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CONTINENTAL REINSURANCE

Pan-African commitment made local

Presentation Outline

- *Introduction*
- Our Business World Reality – Scenarios and Opportunities
- ERM;

  DFA (Dynamic Financial Analysis);

  ALM (Asset Liability Management)
- Reinsurance
- Risk Management For Insurers
- Reasons for Reinsurance
- Loss Probability Distributions
- Conclusion

A Business Reality

"Of the 100 companies comprising the [FTSE 100] Index at the end of 1988, only 33 remain at the end of 2008. Of the other 67 companies, 15 were either acquired by, or merged with, another current FTSE 100 company, 42 were taken private or acquired by a non-FTSE 100 company, three have been demoted, four broken up and three ceased trading." [1]

An Old Proverb - 14th century

For want of a nail the shoe was lost,
For want of a shoe the horse was lost,
For want of a horse the rider was lost,
For want of a rider the battle was lost,
For want of a battle the Kingdom was lost,
And all for the want of a horseshoe nail.

Reminding us to proactively plan and to be highly observant of the seemingly unimportant matters of business.

Clearly the above 'military' scenario warranted effective Operations Management.

In our insurance business replace 'nail' for 'risk' and let's talk about Strategic Risk Management to avoid the unforeseen and unpleasant consequences and to secure the balance between the security expectations of the policy holders and capital risk-return objectives of the company shareholders.

Our Reality

Examples of major changes over last 25 years[2]:

- End of cold war
- Rise of international terrorism
- Global warming
- Increasing life spans and ageing populations
- HIV, AIDS, and increasing risk of pandemic virus outbreaks
- Unpredicted major developments in IT, telecommunications, internet
- Globalisation and greatly increased interdependence of economies
- Emergence of giant multi-national companies

Our Reality

Examples of major changes over last 25 years cont'd:

- New rapidly-developing nations
  - China, India, Russia and Brazil and indeed 'African Nations'
- Steep rises and falls in fuel and commodity prices
- Energy scarcity
- Widespread camera surveillance in shops and public places
- Breakdown of banking systems
- Global economy going from boom to bust in just a few months
- Rapid falls in interest rates to very low levels
- Free movement of labour/ migration
- Emergence of online shopping

Our Reality

And what then are our future 'changes'?[2]:

- New weather patterns - storms, floods, drought, cold winters, heat, infestations
- Prolonged shortages – oil, gas, food, credit, trained staff, steel, cement
- Nuclear or bio-terrorism in cities
- New infectious diseases emerge (deaths, loss of workforce, social changes)
- Internet disintegrates
- Breakdown of law and order
- Cyber Attacks
  - Virus embedded in widely-used operating system destroys most computer programs and data simultaneously
  - physical damage to machinery/property

Our Reality

And what then are our future 'changes' cont'd?:

- Internet makes great technical leaps forward
- All new mobile phones incorporate option of viewing caller on screen
- Cancer and heart disease beaten
- Electric cars (driverless cars) perform better and become universal
- Big infrastructure investment programme (houses, roads, railways, schools)
- New carbon-friendly energy sources open up era of cheap fuel and promise an end to global warming
- Credit becomes plentiful and property values rise as economic boom returns
- Families show greater readiness to save
- World disarmament
- Robots performing menial tasks become commonplace in everyday life
- Far-reaching simplification of statutory rules and regulations
- World poverty eliminated

Opportunities Towards Sustainable Growth

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Risk Management is more than mitigating against risks

- In the Context of:
- Our known Reality
- The above perceived scenarios (likely or unlikely)
- Our known Growth prospects
- Consider: One issue alone - Nigeria presently has about 3,600MW (say 4,000MW) of Power Supply. Authorities are indicating a 10,000MW total supply by 2015? and 20,000MW by 2020.
- Without investment and reform in the power sector, the Nigerian government estimates that the annual lost economic growth is as high as US$130bn
- The size of the insurance sector in Nigeria was about 1.5% of GDP (0.6% rebased) in 2013.
- The implications for the Nigerian Insurance sector and where are the opportunities and how do we secure a better performance as opposed to market talks about mere **Survival**?

Nigerian Economy: GDP by Sector (%)[3]

	2008	2013
Agriculture, Hunting, Forestry, Fishing	32,9	22.0
Of which fishing	1.0	0,5
Mining and Quarrying	37,6	14,5
Of which oil	37,4	14,4
Manufacturing	2,4	6,8
Electricity, gas and water	0,2	1,3
Construction	1,2	3,1
Wholesale and retail trade, hotels and restaurants	14,8	17,5
Of which hotel and restaurants	0,4	0,5
Transport, storage and communication	3.0	12,2
Finance, real estate and business services	6.0	14,6
Public administration, education, health and social work, community, social and personal services	0,7	3,6
Other services	1,2	4,4
Gross domestic product at basic prices/factor cost	100.0	100.0

Opportunities Towards Sustainable Growth

- If we accept that opportunities prevail, the focus for us as Insurers then becomes:
  - How do we benefit and how do we secure and spiral sustainable growth?
  - Secure the necessary capital to underwrite the growth trend and indeed jealously protect our shareholder's capital interests?
- We are all in the business of risk so we should have within our organisations strong and entrenched cultures of Risk Management.
- Here are three different but meaningful approaches and processes used to manage the business and financial objectives of an enterprise essentially dealing with comprehensive risk management dynamics
- They need to be buzz words that become part of our everyday life!

ERM - Enterprise Risk Management

- Enterprise risk management (ERM) is the process of planning, organizing, leading, and controlling the activities of an organization in order to minimize the effects of risk on an organization's capital and earnings. Enterprise risk management expands the process to include not just risks associated with accidental losses, but also financial, strategic, operational, and other risks.
- Industry and government regulatory bodies, as well as investors/boards, have begun to scrutinize companies' risk-management policies and procedures.
- Since they thrive on the business of risk, financial institutions are good examples of companies that can benefit from effective ERM. Their success depends on striking a balance between enhancing profits and managing risk.
- One of the advantages of ERM is that it considers risk holistically and can therefore identify those operational risks which are relatively small in the context of the overall risk which the business faces and hence no longer need to be Reinsured, thus saving some money even after allowing for the cost of meeting the claims direct.

DFA – Dynamic Financial Analysis

- DFA is an analysis of the financial results of a company under a large number — hundreds of thousands — of possible outcomes simulated by fast computers. Each simulated outcome produces the values of all unknowns of the company: insured losses, investment returns, defaults of counterparties, and others.
- A good Dynamic Financial Analysis (DFA) model can answer the most essential questions related to Enterprise Risk Management (ERM):
  - What amount of capital does a company need to cover its risks?
  - What is the best strategy to maximize profitability while properly managing risk?
- **Most insurers and reinsurers are very conservative investors who prefer to take risk on the liability side of their balance sheets.** How can financial modelling software help them manage the underwriting risk and prepare for the next Hurricane Katrina or asbestos?
- In a good portfolio model, some of the simulated scenarios will produce large losses such as those from the hurricanes or from asbestos. Financial modelling software can help companies design efficient strategies to deal with such adverse loss scenarios; for example, through purchasing reinsurance or through financial risk transfers[4].

ALM – Asset Liability Management

ALM is essentially the practice of managing risks that arise due to mismatches between the assets and liabilities.

ALM as a process is arguably at the crossroads between risk management and strategic planning.

It is not just about offering solutions to mitigate or hedge the risks arising from the interaction of assets and liabilities but is focused on a long-term perspective:

Success in the process of maximising assets to meet complex liabilities may increase profitability.

- One important aspect of ALM is to optimize the Reinsurance structure so as to maximize return and/or minimize the volatility of results

Reinsurance

- In determining its premium an Insurer's objective is to secure adequate revenue (upon which is added investment income) to pay all claims as they fall due (≈ cash flow) and to cover necessary management/operational expenses.
- Additionally and Importantly an Insurer needs to secure a Profit:
  - To provide its Shareholders with the expected value-add they believe is fairly warranted as a 'return on investment' (≈ cost of capital)
  - To expand its business and systematically grow (≈ entering a virtuous cycle of attracting any further capital required)

- Sustainable Profits are easily secured if the Insurer knows with fair certainty the probability of the losses occurring and the severity of those losses – so as to determine the required premium.
  - to which expenses and profits can be easily added

Reinsurance

- The winning formula then - is for the Insurer to have their actual claims costs very closely track its Loss Expectancy experience. [Assumption: past experience provides a good guide for future losses (≈ driving forward by looking at the road traversed through the back-window); that is, conditions (the road alignments) do not change?]
- But this not true – fluctuations are our Reality [increase in loss frequency or in severity and a major catastrophic loss event in an underwriting year]
- Astute u/writers could indeed be proactively pricing correctly (for the perceived and expected future change) and if not, then at least ‘sand-bagging’ (contingency reserving) for such ‘unlikely’ claim eventualities.
- But alas! Intense Market rivalry and competition restricts such opportunities and noble considerations?
- So clearly some other form of protection is necessary and this is where Reinsurance comes to the fore (though NOT for operational inefficiencies and poor pricing or ‘Broker-Insurers’ merely fronting for commissions).

Reinsurance

- The technical role of a Reinsurer is to protect the Insurer from financial distress and indeed insolvency by smoothing out the high variances in their claims costs.
- To introduce stability by making unknown 'variable' claims costs into known 'fixed' (reinsurance) costs per se.
- Revenue (correctly priced) less Costs (of which the greater part is represented by 'known' fixed costs instead of 'uncertain' variable costs) = underwriting profitability!
- Reinsurance also provides additional capacity to accept larger risks where the claims variability is less pronounced and hopefully where the pricing is at a premium. And then when the large claim occurs - Reinsurance protection is assured.
- It allows (smaller) Insurers to strategically move into new opportunity strategy zones: "Old Products New Markets" or "New Products Old Markets" or better still "New Products New Markets" as opposed to being stuck in "Old Products Old markets". Think first mover advantages with new products – innovation.

Reinsurance

- But Reinsurance has a very important financial role as well arising from Regulatory frameworks and controls.

- Reinsurance allows an Insurer to underwrite greater volumes of business at a faster take one rate than would be possible without it securing the commensurate supporting increase in its Capital.

- Solvency Margin
  - [The surplus of Assets over Liabilities] / [Net Written Premium]
  - Reinsurance reduces the denominator and so increase the solvency.

Reinsurance

- Finally, Reinsurance provides beneficial access to the broader and deeper aspects of the various classes of business (more especially the specialty classes) of the Insurance market – where profitability is usually more assured.
- Apart from advice on how best to secure a more perfect fitting reinsurance programme towards improved underwriting profitability;
- Reinsurance also provides in-depth expertise on Underwriting and Training (elements that arguably enhance the top-line Revenue of the Income Statement)
- And services in Risk Management (risk surveys) and Claims Handling (element that arguably contain the Costs of the Income Statement)
- All contributing to affirming that **"Reinsurance <u>is</u> a Strategic Risk Management Tool for Underwriting Profitability"**

Risk Management for Insurers

An insurer has several possibilities to mitigate overall business risk:

- Buy reinsurance
- Change investment strategy
- Raise capital
- Change underwriting policy

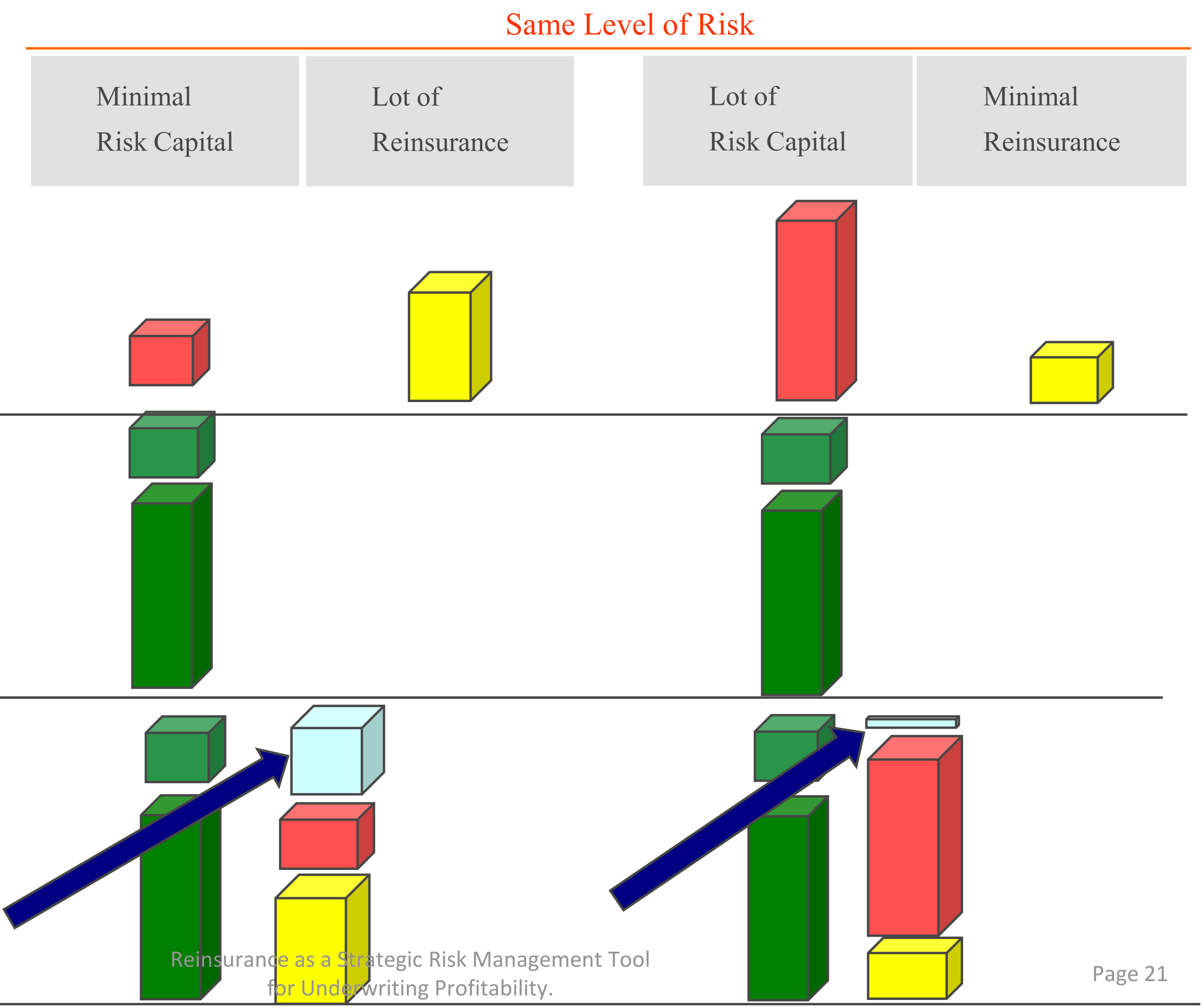
Short term

↓

Long Term

For an insurance company, reinsurance is a substitute for capital. We judge the efficiency of a reinsurance-cover against the cost of capital saved by it[5].

Illustration: Trade-off Between Risk Capital and Reinsurance[5]



Cost of Servicing Risk Capital

Cost of reinsurance

Underwriting Results

Investment Income

Excess Return = Added Shareholder Value

An Economic View on Reinsurance

- Conventionally, reinsurance premiums are perceived as isolated costs related to the reduction of insurance risk. Accordingly, recoveries and premiums should balance on the long run.
- However, this view misses the fact that **reinsurance is a substitute for risk capital**.
- Risk capital is not for free. Investors expect an adequate return on their investment. By substituting risk capital, **reinsurance is lowering capital costs**.
- The basic idea: Reinsurance should be structured to leverage reinsurance premiums and capital costs optimally, which means reinsurance should be structured **to minimize the total cost** of capital and reinsurance.

Source of Risks for Insurers[6]

1. **Environment**: Natural, Political - volatile, uncertain and unforgiving ...
2. **Products**: Complex, wide range, rapid innovations
3. **Consumers**: Segments, structures, awareness, attitudes
4. **Distribution**: Channels, mix, quality of agents and sales process
5. **Supervision/Regulation**: Insurance law, supervisory authority, resources, knowledge, effectivenesss and efficiency
6. **Capital markets**: Stock markets, degree of advancement of available financial instruments
7. **Technology**: Quality, costs, appropriateness
8. **Systems/Processes**: Structure, management
9. **Talent**: Expertise, experience, availability

What Reinsurance Does Not Do!

- Reinsurance is not a silver Bullet!
- It cannot turn an insurable risk into an insurable one
- It cannot reduce (or increase) the probability of losses
- It cannot reduce (or increase) the magnitude of a loss

As some clients might think

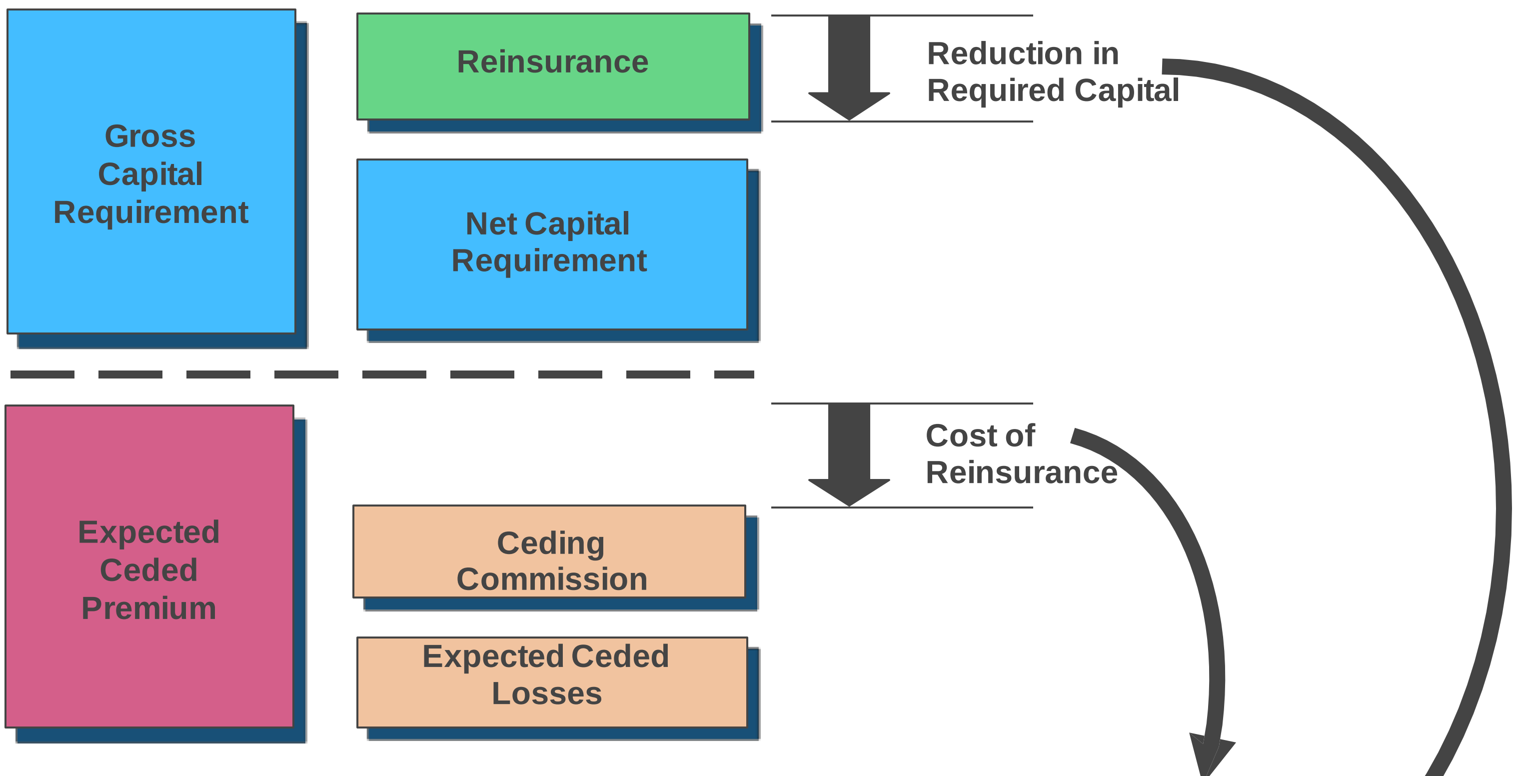
- It cannot revert “bad” business into “good business”!

Reasons for Purchase of Reinsurance

1. Transfer of Pricing risks (modelling, volatility, trend, and parameter risks) associated with new business.
2. Enhancement of large line capacity
3. Financing of growth through surplus relief
4. Stabilization loss experience and smoothening of profits
5. Catastrophe Protection/shock scenarios, e.g. Storm, pandemic risks
6. Access to expertise on underwriting and other technical issues

A good reinsurance relationship with a strong, reputable and stable reinsurer should meet all of the above needs

Reinsurance is “rented” capital



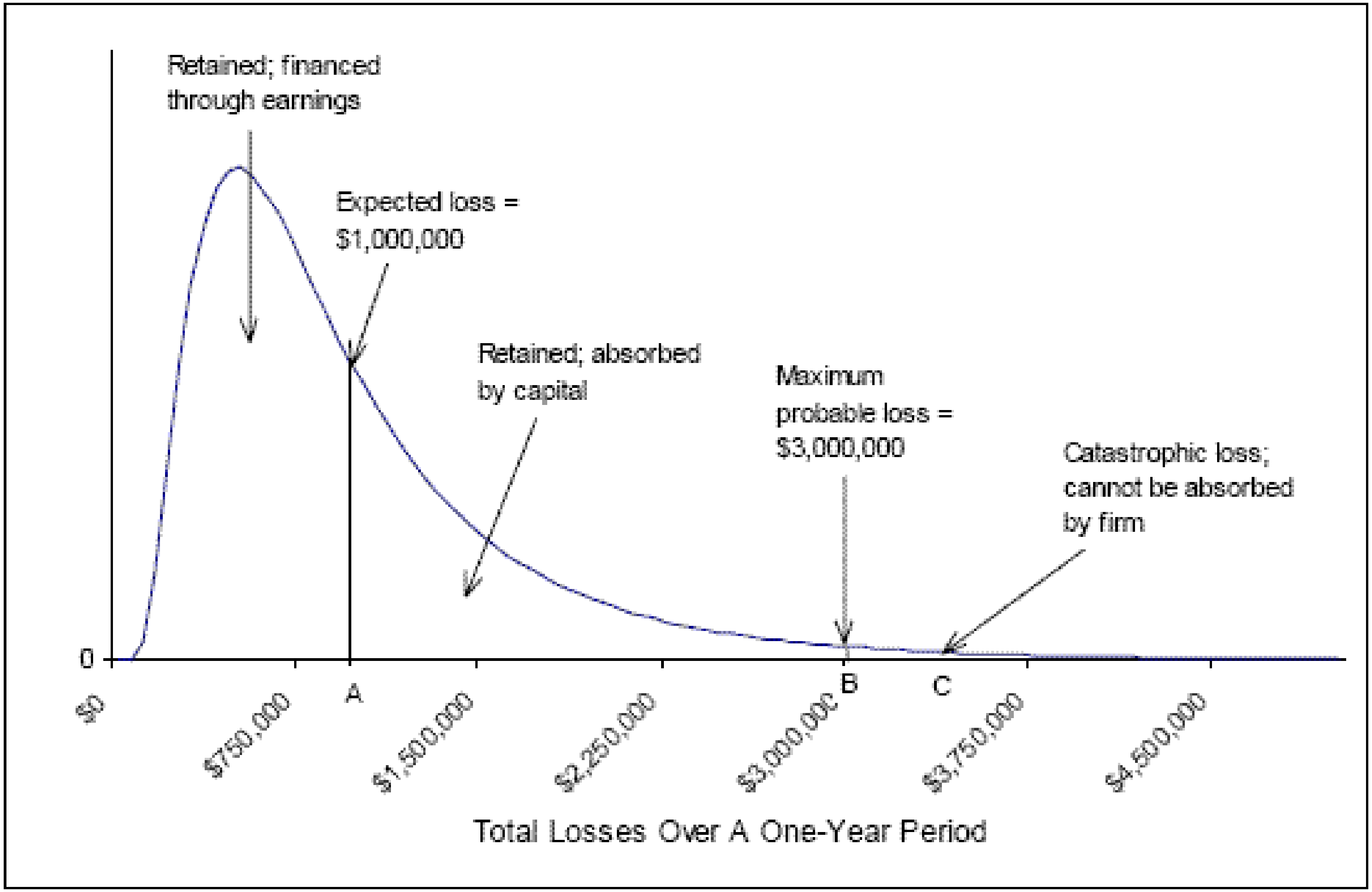
$$\text{Cost of “Rented” Reinsurance Capital} = \frac{\text{Cost of Reinsurance}}{\text{Reduction in Required Capital}}$$

Reinsurance is a cost effective source of capital because its cost is usually below the cost of alternatives

Typical Loss Outcomes of an Insurance Company

- The possible outcomes can be represented by a Probability Distribution.
- Reinsurance essentially serves to deal with the most adverse outcomes reflected in the 'tail' of the curve.
- Standard deviation helps to look at year to year fluctuations and smoothness.
- And percentiles help with the potential for large losses and profitability being negatively impacted.
- How much reinsurance do you need to purchase?

Typical Probability Distribution of Losses[7]



Conclusion

- Enterprise-wide risk management is also about **strategically** managing all risks. What needs to be emphasised is that it certainly is not about managing all risks in the same way.

- It is more about a focus on protecting and growing assets as opposed to simply limiting Liabilities. This introduces the entrepreneurial element to the strategy – where the focus is on positive outcomes of growth.

- So, it is not just about avoiding risks. And by the way if you talk about a change in strategy and find you doing nothing in respect of 'change' in resources (redeploying or utilising new resources) I am not sure you actually will be changing your Strategy.

Conclusion

Reinsurers Provide Critical Added Value

- A core component of a reinsurer's offering is provision of expertise
- Underwriting and claims management
- Risk management, Risk surveys, loss control and post-loss surveys
- Development of underwriting manuals
- Actuarial pricing due to insights from large volumes of data, experience, studies and trend analyses
- Support with product development and strategic advice
- Advise on more rational approaches to accounting, reserving, and capital management
- Reinsurance optimization
- Training

Conclusion

- Risk transfer and capital benefits provide guaranteed benefits and certainty, and allow insurers to operate profitably in a volatile environment and a competitive market

Reinsurance should be an integral part of all insurers' business strategy!

Sources

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OUR BRAND DRIVERS

I

WE'RE COMMITTED
TO THE LONG-TERM PROSPECTS OF THE INDUSTRY AND OUR CONTINENT.

OUR BRAND DRIVERS

2

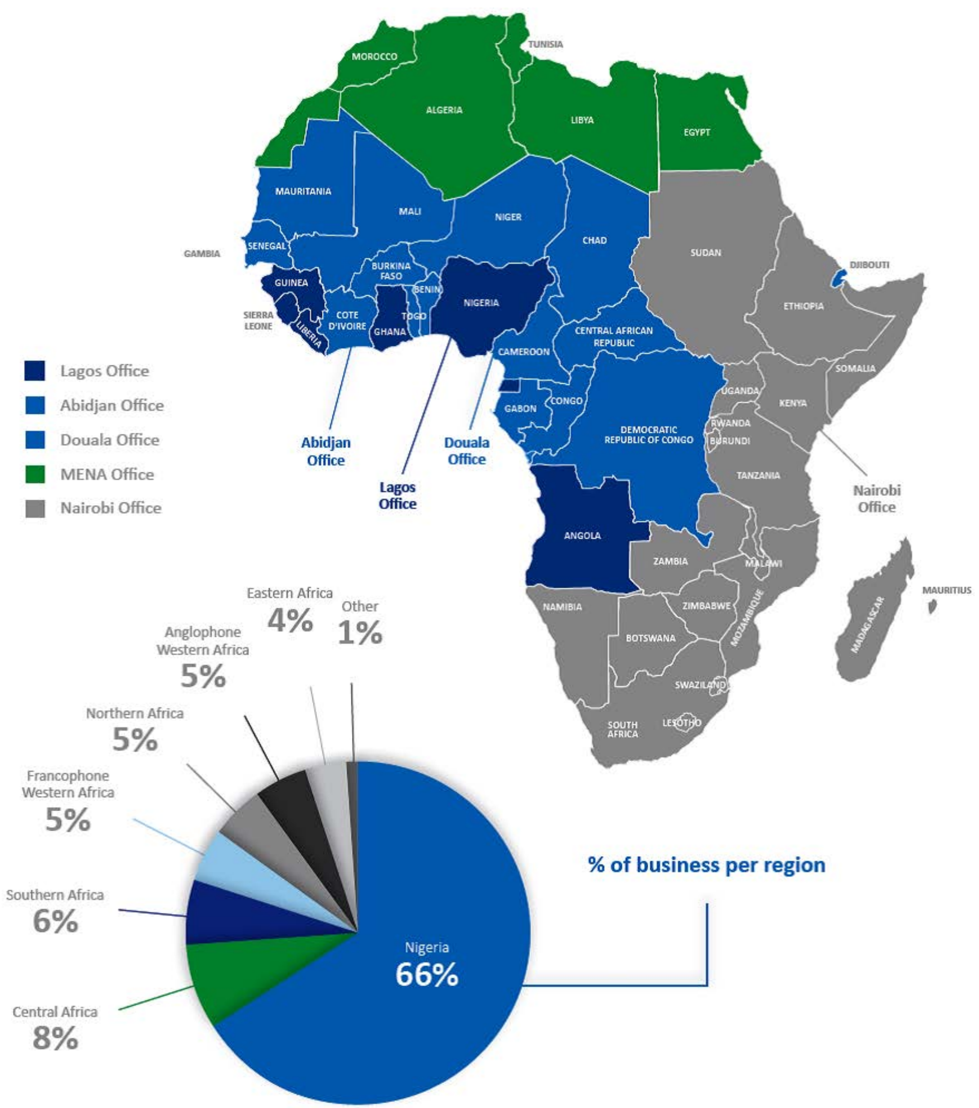
WE'RE COMMITTED
TO TRUSTED CLIENT AND PARTNER PAN-AFRICAN RELATIONSHIPS.

OUR BRAND DRIVERS

3

WE'RE COMMITTED TO SUSTAINABILITY BY BUILDING CAPACITY.

Our Pan-African Footprint



Thank You