

KEY: Ⓞ = PAPER

MICROINSURANCE IN INDIA

M Ankolekar

Life Assurance; Short-term Insurance

Presentation only

Tuesday, 17 November | 03:05 PM | Bill Gallagher

Microinsurance, which is the insurance of low income individuals through the principle of charging a premium commensurate with the risks assumed, was identified as a separate business activity only in the last decade. In a developing nation such as India, the market for microinsurance solutions is extensive and has a vast scope for the application of actuarial expertise within this field.

When the Indian insurance industry was opened up for private participation in 2000, the Indian insurance regulator instituted guidelines governing rural and social sector targets for commercial insurers. In addition, the Indian insurance regulator has also implemented specific guidelines exclusively for microinsurance products; these products would typically make use of microinsurance agents and are open to a lighter sales process than what is traditionally seen within the industry.

An assessment of such microinsurance related activities as well as the corresponding cross-sectional performance of rural and social sector targets will be assessed.

Whilst the focus of market development and regulation has been on commercial insurance companies, other delivery mechanisms have alternatively emerged. Those of significance include (a) the provider model (b) the community-based or mutual model, and (c) the full service model. The relative advantages and disadvantages of the various delivery channels applied with each of these lines of business will be discussed.

The scope for actuarial guidance within the microinsurance context extends to advising these standalone informal underwriters on a range of topics including risk management, operational cost control, technology usage and prudential financial reporting.

Lastly, social or state subsidized insurance programmes, that are part of the social protection strategy, have gathered momentum in India. Many such social insurance programmes are operated through a PPP with the commercial insurers. An analysis of the recent experience of the Government subsidized crop insurance and health insurance programmes will be presented.

OUTCOMES:

- An understanding of the ten year performance of leading Indian life and non-life insurers on microinsurance products, rural and social sector targets.
- An appreciation of the Indian government's policy around financial inclusion and the role of insurance in social protection.
- Insights into the government subsidized crop and health insurance programmes and government publicised, but fully contributory micro-life, micro-accident and micro-pension programmes.

- A review of success factors and challenges of a current informal mutual insurance scheme.

Audience knowledge: All levels

SOUTH AFRICA: A LIFESTYLE TIME-BOMB?

P Appelo

Life Assurance; Healthcare

Presentation only

Wednesday, 18 November | 11:00 AM | Bill Gallagher

This talk explores the contribution of non-natural causes to mortality rates for the insured population in South Africa. Deaths caused by accidental events are analysed in detail to understand the profile of policyholder that contributes significantly towards these statistics. An assessment of the cost of these claims is also done - relative to what is observed for natural claim causes - to highlight the significant impact that these events have on the total cost of claims.

Poor outcomes for accidental deaths relative to other markets in the world are observed for South Africa and these variations are investigated to identify the driving causes. Comparisons are also made between what has typically been expected in the SA market and that which has emerged over the last few years. Differences between population statistics and emerging experience in the insured population are also examined.

Focus is then shifted to exploring how these results are currently taken into account in the life insurance industry. How effective are current underwriting practices in identifying these high risk lives? What scope does our industry have to try to better identify these lives during the initial underwriting process and to charge risk reflecting rates?

OUTCOMES:

- Awareness of extent of costs arising from lifestyle factors
- Understanding of the significance of costs of life insurance being driven by these factors
- How much scope is there to try to better identify these lives during initial underwriting
- What opportunities does this present to tailor products for better (or worse) risks

Audience knowledge: All levels

GETGUIDANCE.COM: LESSONS FROM AN ONLINE START-UP

G Becker, O Becker

Investments; Life Assurance; Finance and Banking

Presentation only

Tuesday, 17 November | 10:40 AM | Ballroom 1/50

Greg and Oliver Becker co-founded GetGuidance.com as a vehicle to help people make better decisions. We will explain how we applied the latest behavioural economics lessons to engage with people, and cover some low hanging fruit everyone should apply.

OUTCOMES:

Audience will get the views of people who have run a start-up, who have used the latest technology, who have applied leading behavioural economics and give insight into the future where advice may not look the same.

Audience knowledge: All levels

PRODUCT DEVELOPMENT: SOUTH AFRICA VS THE REST

G Becker, G Rutherford

Life Assurance; Short-term Insurance; Wider Fields; Healthcare; Finance and Banking

Presentation only

Wednesday, 18 November | 01:00 PM | Ballroom 1/50

Two actuaries who have worked in multi-national roles share their experience on working in different markets, and consider whether South Africa are net exporters of innovation or not, and consider some international innovations waiting to be imported.

OUTCOMES:

- See where South Africa is ahead (and pat ourselves on the back)
- See where South Africa is behind (and see what we can take back to South Africa)
- Look at the areas of innovation that should have got going in South Africa, but have not
- And a discussion of the reasons for South Africa being a hot-bed of innovation, but also the limitations of our market

Audience knowledge: All levels

THE SCIENCE OF CUSTOMER LOYALTY PROGRAMMES

S Burnstone

Life Assurance; Short-term Insurance; Wider Fields; Healthcare; Finance and Banking

Presentation only

Wednesday, 18 November | 01:00 PM | Ballroom 1/50

This presentation looks at the more financial and 'actuarial' aspects of designing, developing and tracking the performance of loyalty programmes. The following aspects will be considered:

1. Overview of loyalty programmes in South Africa: Overview based on recent company and customer surveys conducted by Eighty20
2. Designing a loyalty programme: Designing the programme rules and developing the business case
3. Measuring and tracking loyalty: Measuring customer behaviour change and tracking the 'shadow income statement'
4. Using loyalty programme data: Loyalty data as an important part of the big data story

OUTCOMES:

- Understanding of developing loyalty business cases
- Understanding of uses of big data in loyalty
- Understanding of personalisation techniques and targeted marketing

Audience knowledge: All levels

THE SOUTH AFRICAN REGULATORY CONDUCT LANDSCAPE: A GLIMPSE INTO OUR FUTURE

P Carswell

Life Assurance; Short-term Insurance; Retirement Matters; Wider Fields

Presentation only

Tuesday, 17 November | 01:25 PM | Ballroom 1/50

South African insurers are awaiting the creation of the new market conduct regulator who will have a more focussed mandate than the current FSB. For a good view of what is coming in our future, we can look at the recent past from the UK. This presentation will be of interest to product owners, actuaries involved in the area of giving advice and non-executive directors.

OUTCOMES:

- Understanding of market products
- Considerations for setting of pricing and reserving assumptions for different tranches of business based on the whether the product competitive landscape at the time of sale

Audience knowledge: All levels

LOW-COST HEALTHCARE COVER IN AFRICA: AN INVESTIGATION OF AFRICA'S ALTERNATIVES TO THE MEDICAL SCHEME MODEL AND REDEFINING "LOW COST"

K Chigiji

Healthcare

Presentation only

Wednesday, 18 November | 01:00 PM | Ballroom 2/3/4

South African medical schemes have recently embarked on a mission to introduce more affordable benefit options to increase coverage. However, are medical schemes the best structure to meet the health financing needs of the majority of South Africans with very thin budgets. And are the proposed pricing structures of these low cost benefit options truly affordable for the 'ultra poor' in South Africa? If not, then what are the alternatives?

Several African countries have introduced other models to provide healthcare finance for the ultra-poor. These models, though less formal, have achieved some success in delivering healthcare solutions to those who cannot afford to participate in the medical scheme model. Amongst the countries investigated are Uganda, Malawi and Botswana.

Community based health insurance and micro-health insurance have met the needs of millions of lives at a fraction of the cost of conventional health insurance products. The composition of the benefit packages offered by these alternative models, though thinner, provide adequate healthcare safety nets. Additionally, they offer inclusivity for the communities affected. Something which private healthcare is yet to address adequately.

They have however not been extensively tested in the South African environment. South Africa has the healthcare infrastructure and scale required to successfully implement these models. But do we adequately understand what is required to implement a simpler model, and what is required at a much greater scale?

This presentation will address the questions raised and draw lessons from some of Africa's healthcare financing models aimed to target those in 'low income' groups.

OUTCOMES:

- Think outside of the box of the medical scheme environment to delivering primary health care cover for millions who cannot be practically captured by even the lowest cost medical scheme options.
- Think of solutions for those who are not in formal and regular employment who are difficult to cater for via medical schemes.
- Redefine "affordable" for a nation in which inequality is one of the worst in the world (i.e. R350 is still not affordable for millions). How low can primary health care be provided at if we were to be frugal and learnt from other African countries?
- Consider healthcare in the context of the community and clinics as opposed to cities and hospitals, which in itself is a fundamental cost driver, driven itself by the perspective of our metropolitan lifestyles and perhaps not so much by real costs
- Understanding the real healthcare cost drivers (from both patients and providers) at a community level. These are very different from those witnessed in medical scheme environments, further supporting the idea of increased consumerism within healthcare and supplier-driven demand. The challenges are very different in rural and remote areas where millions do not have access to medical scheme cover or secondary/tertiary care.
- Therefore the same pricing rationale cannot be applied, opening doors for cutting premiums/contributions.
- Reassess the relationship between insurance and micro-insurance in the health context. Instead of "dumbing" one down to get to the other, perhaps more deep-rooted lessons can be taken from micro-health insurance to develop more sustainable and effective solutions in larger insurance contexts.

Audience knowledge: All levels

HAIL AND QUAKE IN SOUTH AFRICA: WHAT SHOULD YOU BE WORRIED ABOUT?

C Fasana, A Parmar

Short-term Insurance; Wider Fields

Presentation only

Wednesday, 18 November | 11:00 AM | Ballroom 2/3/4

In the last few years there have been some devastating hail storms that have made news headlines and cost the insurance industry in excess of R2.5billion. Whilst this may not be an issue for reinsurance vertical limits, it may be an issue for horizontal limits and also for attritional losses into the retention. In this session we will discuss ways in which South African short term insurers can determine their risk of hail losses, and compare these methods with those underpinning the SAM standard formula.

Additionally, we will share some insights into the research we have done regarding earthquake risk in South Africa, including the effects of mining activities near Johannesburg.

OUTCOMES:

- Do they have sufficient reinsurance cover?
- Are they modelling their catastrophe losses correctly?
- How to model hail losses in South Africa
- Pitfalls of South Africa earthquake models
- Limitations of SAM standard formula nat cat calculations

Audience knowledge: All levels

GETTING TO THE BOTTOM OF THE ECONOMIC BOTTOM LINE: EXPOSING THE QUANTIFICATION ISSUES, CURRENT ATTITUDES AND POTENTIAL GAINS TO USING THE ECONOMIC BOTTOM LINE

DJ Ginsberg, TL Reddy

Investments; Wider Fields

Paper with presentation @

Tuesday, 17 November | 01:25 PM | Bill Gallagher

The economic bottom line is not well-defined nor is it a widely used concept. The traditional financial bottom line is a measure of a corporate entity's profit only. On the other hand the economic bottom line aims to account for the environmental, social and economic externalities produced by the activities of a corporate entity. It is based on the concept that profitability is only one element of the economic dimension and that economics extends beyond the boundaries of a single organisation and is inextricably linked to both the environmental and social elements of sustainability. This paper aims to expose the:

- problems with the quantification of externalities;
- current attitudes toward the use of the economic bottom line by companies; and
- potential gains for a company to incorporate its externalities.

The fundamental differences between the economic and financial bottom lines are considered. Examples of current approaches to the quantification of the economic bottom line and the ethical issues that arise in this process are considered. The Environmental Profit and Loss Account system is identified as a possible viable method for measuring the externalities required to determine the economic bottom line. Legislative measures and voluntary regimes are identified as possible means to develop a more efficient adoption of the economic bottom line. The role of the actuarial profession in modelling externalities is also discussed.

OUTCOMES:

- Look to a revolutionary way of modelling true economic value added
- Grapple with ethics of trading off environmental, social and economic ideals
- Look to engage actuaries with sustainability
- Understand how the leading firms are beginning to incorporate externalities and manage them
- Understand the benefits and harms of externality management

Audience knowledge: All levels

TELEMATICS: DISRUPTING MOTOR INSURANCE IN SOUTH AFRICA

S Greybe, K Pather

Short-term Insurance; Wider Fields

Presentation only

Wednesday, 18 November | 09:30 AM | Ballroom 2/3/4

Telematics is a major international trend in motor insurance globally and a key strategic issue for players in the South African insurance industry at the moment.

In this TED-style talk, the authors explore scenarios on how the Telematics disruptor may change the future of the South African motor insurance industry. The scenarios, informed by research on international trends in insurance telematics and usage-based insurance, are contrasted with the South African insurance industry's thoughts on the matter.

The industry's collective thoughts were obtained by a survey which gathered participant's thoughts on three key issues relating to the topic: the value proposition of insurance telematics; its key challenges; and its likely adoption rate. Many short-term insurance companies with large personal-lines operations and vehicle-tracking service providers operating in South Africa participated in the survey conducted earlier this year.

The future of this space is somewhat unpredictable but the ideas presented promise to be food for thought.

OUTCOMES

- The state of the Telematics market in south Africa
- How this compares with international developments
- How South Africa is likely to develop given the above
- How actuaries could contribute to the industry on this journey

Audience knowledge: All levels

THE FLOURISHING FIRM

NB Hudson

Wider Fields; Investments

Paper with presentation ©

Wednesday, 18 November | 01:00 PM | Committee Room 4/5

This short opinion piece describes how several features of a particular private equity model might cause firms to flourish. These features are compared to common practice at public firms and to guidelines propounded by corporate governance codes. Potential philosophical and practical shortcomings of fashionable governance approaches are considered, with particular reference to the contest between the 'enlightened shareholder' and 'stakeholder inclusive' theories of governance. The key role that the widespread structural problems of fragmented ownership and short investor time horizons might play in undermining the objectives of both of these approaches is discussed. The private equity model is presented as resolving these problems by enabling clear and unflinching long-term sharing of outcomes to be set up, in a way that it is difficult to mimic in public firms.

OUTCOMES:

Insight into how the private equity governance model can work and how it differs from that for listed companies.

Audience knowledge: Intermediate level

AN ACTUARIAL PERSPECTIVE ON MEDICAL SCHEME BENEFIT DESIGN

J Kaplan, S Ranchod

Healthcare

Paper with presentation ©

Wednesday, 18 November | 09:30 AM | Committee Room 4/5

Healthcare actuaries in South Africa play a key role in advising medical schemes on benefit design. In this paper we reflect on the benefits offered by open medical schemes from a consumer perspective. We argue that the complexity of the benefits, the large number of available benefit options and the confusing terminology used in product documentation hamper consumer decision making. This is particularly relevant given the increased emphasis on the fair treatment of customers in financial services more generally.

We also argue that the proliferation of offerings and market confusion is a direct consequence of a weak regulatory environment with schemes clearly incentivised to compete on the basis of risk selection. Benefit design is a powerful tool for both risk selection and risk pool segmentation. The challenge faced by actuaries is to provide consumer value within this context.

OUTCOMES:

- Framework for understanding the philosophical underpinnings of benefit design
- Clearer understanding of the aspects of modern healthcare benefit design
- Insight into key regulatory limitations
- Understanding of inter-relationship between

- benefits, demographics and price of cover
- Application of TCF to medical schemes
- Understanding of risks associated with increased transparency and simplicity

Audience knowledge: All levels

THE ACTUARY IN MERGERS & ACQUISITIONS

D Kirk

Wider Fields; Investments

Presentation only
 Wednesday, 18 November | 01:00 PM | Committee Room 4/5

As an actuary, being involved in mergers, acquisitions, demutualisations and transfers of business can be intellectually and professionally rewarding as well as challenging. This presentation will discuss the extent of actuarial involvement, areas where actuaries can add particular value and areas where actuaries need to be especially careful not to overreach their expertise. The presentation will draw on real world examples to highlight some interesting challenges and pitfalls and encourage the audience to share their own experiences.

OUTCOMES:

- Corporate transactions present an interesting area for actuaries to apply their skills
- The mix of technical, commercial and professional matters requires particular care to get them all right
- Operating under time pressure with less information than one is used to raises dangers from implicit assumption
- Not all actuarial work is of equal quality
- Understanding of accounting, tax, competition rules and operational issues is extremely useful, but you're still unlikely to be the expert
- Perception and emotion matter more than you might expect in a transaction

Audience knowledge: All levels

AUTOMATED NEXT BEST OFFER FOR BANKING

S Laenen

Investments; Life Assurance; Finance and Banking

Presentation only
 Tuesday, 17 November | 10:40 AM | Ballroom 1/50

Next best offer is an interactive customer centric method that takes into account customer actions and behaviors and then generates a next best offer to the customer using customers preferred channel. This system learns customer behavior and then uses this knowledge to anticipate and predict customer needs and hence the offer that is most suitable for the client at that time. For the next best offer system to work, a single view of customer is needed for companies in their marketing analytics.

In banking, customers interact with us on a daily basis using different channels ranging from the branch network to online and mobile banking. An automated next best offer system will use behavioral propensity score modeling in producing propensity scores that

rank customers by products based on propensities to buy in selected banking channels using a logit or probit logistic regression models. This then assists the banks understand customer behavior for tailoring segment specific products and customer needs.

OUTCOMES:

- Using propensity models to make customer-centric marketing decisions
- The importance of system automation in extracting maximum business benefit out of an analytical solution
- Some of the conflicting factors to take into account when selecting the most optimal offers to display to customers
- An Insight into how actuaries can add value in retail banking

Audience knowledge: All levels

IMPACT OF INNOVATION ON CRITICAL ILLNESS PRODUCTS

S Lazic

Life Assurance; Healthcare

Presentation only
 Wednesday, 18 November | 11:00 AM | Bill Gallagher

We will be reviewing various medical advances and innovation in technology, and consider the impacts that these may have on the various aspects of Critical Illness products in the future.

The medical advances can be broken down into advances in screening, diagnostics and treatment. Our focus will be on those advances that affect core Critical Illness events, namely: cancer, myocardial infarction (i.e. heart attack), stroke and coronary artery bypass graft (CABG). Some of these advances are still in clinical trials, while others have already started to be applied in South Africa and their impact on claim experience is imminent. Examples here will include BRCA1 and BRCA2 gene mutation testing for cancer (which received recent attention in the media); personalised cancer treatments; and keyhole heart surgery. The aim will be to make the audience aware of the range of advances and how they may affect Critical Illness product design, be it in terms of possible anti-selection and underwriting requirements, or the recovery and financial implications on the policyholder when suffering from one of these events.

We will also consider what the recent hype around wearable technology may mean for the insurance industry and where devices such as FitBit, Apple Watches and Smart Bras may come into play.

OUTCOMES:

- Understanding of Critical Illness benefits
- Understanding of basic medical terms required when pricing, underwriting and handling CI claims
- Awareness of medical advances and impact on our industry
- Awareness of technology advances that will begin to affect our industry
- Awareness of the extent to which products such as Critical Illness need to evolve dynamically

Audience knowledge: All levels

PLANNING FOR A HAPPY RETIREMENT

J Legutko

Retirement Matters; Life Assurance

Presentation only
Wednesday, 18 November | 01:00 PM | Bill Gallagher

Retirement planning generally revolves around deciding how much to save, for how long, in what vehicles, and how to manage drawdown in retirement. These are important decisions, but holistic retirement planning needs to stretch out beyond accumulation and decumulation. What else can one do, before and during retirement, to make the retirement experience satisfying? This short talk highlights a number of findings from happiness literature and suggests how these findings may be applied to succeed in retirement. We also consider whether the pensions and insurance industries can develop products which fulfil these broader needs, improving retiree wellbeing.

OUTCOMES:

- Awareness of the financial situation of SA retirees
- The effect of this financial situation on retiree happiness
- Awareness of which other factors have an impact on the well-being of retirees
- Ideas for how retiree happiness could be improved in SA

Audience knowledge: All levels

THE SOURCES OF SOUTH AFRICAN EQUITY FUND PERFORMANCE

N Lester, D Corubolo

Investments

Paper with presentation ©
Tuesday, 17 November | 10:40 AM | Bill Gallagher

This paper aims to quantify some of the sources of South African equity fund performance. In particular, it aims to provide insights into the relative importance of sector allocation and stock selection as factors to consider in constructing actively managed portfolios. This analysis is done considering the constraint of a concentrated South African market environment. To partially account for this constraint, an assumption of three equity "super sectors" is made: namely a financials, industrials and resources sector.

To quantify the sources of equity fund returns, a geometric attribution analysis was conducted on the returns of seven South African equity unit trust funds. An attribution decomposition of the seven funds' tracking error and volatility was also performed to enable a risk adjustment to be made.

The results of these attribution analyses indicated that it is possible to source excess returns through both selection and allocation efforts. Furthermore, the attribution analysis also revealed different levels of success at earning excess returns per sector. South

African equity fund managers also demonstrated skill in reducing risk over the sample period, as the majority of the managers were able to reduce portfolio risk relative to the benchmark portfolio, but still source excess returns. It is, however, important to note that these results are influenced by market structure and manager practices.

OUTCOMES:

- A better understanding of the factors that drive equity fund performance
- Insight into the merits of stock selection and sector allocation
- Better understanding of attribution concepts
- Develop an appreciation for returns achieved on a risk-adjusted basis

Audience knowledge: Intermediate level

DEFINED-CONTRIBUTION RETIREMENT FUND INVESTMENT STRATEGIES: AN APPROPRIATE DEFAULT?

SM Levitan, RC Merton

Retirement Matters; Investments; Life Assurance

Paper with presentation ©
Tuesday, 17 November | 03:05 PM | Ballroom 2/3/4

In South Africa, defined-contribution funds dominate the retirement fund landscape. The members of these funds who refrain from exercising investment choice (where available), will automatically be enrolled into a default investment option selected by the trustees of their fund. The majority of these default arrangements result in an investment portfolio that is determined based on the member's age or their time until retirement (so called lifestage investment strategy). Historically, defined-benefit funds were designed and managed to provide members with a guaranteed income for life at retirement. For example, a member of a defined-benefit plan knew she could expect 60% of her final salary at retirement if she worked 30 years at the company. Most defined-benefit funds have now converted to defined contribution arrangements. Almost all defined-contribution plans are designed and managed with a focus on the fund credit. In this paper, we introduce design criteria for an improved defined-contribution retirement plan. We propose a goals-based default investment strategy whose core objective is to improve the likelihood of achieving an appropriate level of retirement income (much like the previous defined-benefit funds). The current lifestage default is evaluated against these criteria.

OUTCOMES:

- A lifestage approach to investing has several disadvantages
- The framework and objectives for a DC fund are important to establish in evaluating any investment strategy
- It is possible to improve on a lifestage investment strategy

- The universe of available securities (including long dated inflation-linked bonds) and the improvement in computing technology allows for more customized investment solutions and not a one size fits all strategy

Audience knowledge: All levels

PROFESSIONALISM AND OUR PROFESSION

P Lewis

Professional Matters

Presentation only

Wednesday, 18 November | 09:30 AM | Ballroom 1/50

This presentation will give some feedback from the ASSA Professionalism course, highlighting some recent developments and discussing the impact of future changes in Professionalism, Normative Skills, and ASSA as a Profession.

OUTCOMES:

Attendees will gain insight into:

- The professionalism course in its current format
- Emerging professionalism related trends with newly qualified actuaries
- Where professionalism education could be heading to

Audience knowledge: All levels

PROFESSIONALISM SYMPOSIUM

M Lowther, P Doyle, P Lewis, AF Marais

Plenary

Presentation only

Tuesday, 17 November | 04:15 PM | Ballroom 1/50

The Symposium theme is that professional development and education should make a difference - and so this Symposium should also make a difference! Nico van der Colff will challenge delegates not to count it for professionalism CPD until they have thought about the issues raised and applied any insights in their own professional practice. Well-known and respected Past President of the Actuarial Society, Peter Doyle, will look back at technical, normative and organisational aspects of his actuarial career (so far!). He will touch on the value of maintaining a personal development plan and work-based learning cycles.

Paul Lewis will then present his analysis of feedback data from participants on the professionalism course over the years. He will highlight delegate perceptions of good and bad development experiences, and how these insights could be incorporated into the new APP courses and CPD.

Francois Marais will present his ideas on ways that the Actuarial Society may improve the ethics content of actuarial education: in the university courses, in the APP curriculum, as well as in CPD. On the one hand this involves normative ethics (a combination of basic ethics teaching and case studies), aimed at motivating members to carry out the ethical duties contained in the Code of Conduct. On the other hand it involves applied ethics, aimed at providing members with a working knowledge of the major current issues in the field of business ethics, which should assist in developing leadership. Francois will develop his argument both

theoretically and by reference to the content of the ethics curricula of other professions.

Nico will refer to the Society's initial pilot CPD project where 30 members have been engaging in work-based learning cycles as their CPD requirement. He will alert members to the second pilot project about to start, which will be looking for about a hundred members to use and develop the revised CPD processes, which are aimed at 'making a difference'.

OUTCOMES:

- Identifying and investigating suspicious activity is a responsibility that protects all stakeholders
- Actuaries have a skill set to identify suspicious activity
- Stakeholders expect actuaries to notify them of suspicious activity
- Developing mechanisms to identify suspicious activity is an intensive process that requires financial and time investment
- Collaboration with non-actuarial specialists is vital to understand process and to make changes

Audience knowledge: All levels

TEACHING ETHICS TO ACTUARIES

AF Marais

Professional Matters

Paper with presentation ©

Tuesday, 17 November | 04:15 PM | Ballroom 1/50

The objective of this paper is to consider whether the Actuarial Society of South Africa is doing enough to ensure that actuarial students in South Africa receive an effective education in ethics. The need for ethics education in the professions is articulated. To provide a benchmark for the Actuarial Society, the ethics education required by other professions (the medical, engineering and accounting professions in South Africa, as well as the international CFA Institute) is considered. The research into normative capability training by the Actuarial Society, which resulted in the development of new Actuarial Professional Practice programme, is outlined. The difference between personal ethics and business ethics is considered. Three purposes of ethics education are discussed, namely cognitive competence, behavioural competence and managerial competence, with emphasis on the importance of cognitive competence. A view on how case studies may be used to embed ethical behaviour into actuarial education is discussed.

The paper concludes with an appeal to the actuarial profession to review the quality of the ethics education of actuaries in South Africa. It is suggested that the actuarial education should aim to improve both the cognitive competence and behavioural competence of our actuaries.

OUTCOMES:

- Greater awareness of need for business ethics in training
- Better understanding of issues involved
- More informed debate on matter
- Higher level of involvement by profession
- Move towards a consensus opinion
- High prominence given to business ethics in ASSA

Audience knowledge: All levels

OPERATIONAL STRATEGY: SUSTAINING CUSTOMER EXPERIENCE

Y Moodley

Life Assurance; Short-term Insurance; EFRM

Presentation only

Wednesday, 18 November | 11:00 AM | Ballroom 1/50

In the current Age of the Customer, value is derived from desirable, distinctive and consistent customer experiences. Businesses deliver these experiences through technology and client-facing operational teams. Operational strategy therefore aims to enable a business to deliver the intended customer experience, within a given risk and cost. This also positions the business for sustainable growth and innovation.

Life insurance companies face specific challenges in executing operational strategy, such as managing legacy business. This often relates to products that are closed to new business or administered with dated technology. These legacy products, platforms and processes can stagnate relative to changing stakeholder expectations. The consequent deterioration in customer experience may pose a risk to the value of the business and create an "operational drag" that can become a strategic risk or inhibitor. The challenge increases with the accelerated rate of change in customer expectations, as products sold today may quickly become legacy business in future.

In this presentation we assimilate information from customer experience experts and large South African life insurance companies, to explore:

- How customer experience can influence value and risk
- How legacy business can be managed to sustain customer experience over the contract term, while balancing other stakeholder interests
- How to reduce the risk of creating legacy business in future

We conclude by sharing ideas on how insurance operations can evolve with more customer-centric designs, thus supporting a fundamental and sustainable approach to Treating Customers Fairly.

OUTCOMES:

Operational strategy is a function of the business strategy. It should enable the business to deliver the intended customer experience. Long-term insurance can, and should, continue to deliver value to all stakeholders. Insurers will increasingly compete on operational efficiency. Actuaries can contribute to this area, as part of a multi-disciplinary team. Strong leadership and business development skills are a prerequisite.

Audience knowledge: All levels

IFRS 4 PHASE II IN SOUTH AFRICA: A PANEL DISCUSSION

Panel: H Muller, H van Wyk, M Fuchs, Q Greyling, R Bennett, J Menzies
Chair: P Tripe

Life Assurance

Presentation only

Tuesday, 17 November | 03:05 PM | Ballroom 1/50

Publication of the IFRS 4 Phase II insurance accounting standard is edging closer. The majority of the standard is now bedded down and the IASB is making significant moves to finalise the outstanding requirements for contracts with participating features.

In South Africa, as SAM is embedded and becomes part of business-as-usual operations, insurers are starting to look to the next wave of changes in financial reporting requirements which will be brought about by IFRS 4.

This discussion hosts a panel of seasoned IFRS 4 veterans cut across the South African industry as they discuss their (and ASSA's) history of involvement with the standard, their views on the requirements in their current form, the potential impact on the South African market, anticipated issues and challenges that will be faced with implementation and predictions for the future of the standard.

OUTCOMES:

- Gather some history of the impact IFRS 4 has had on insurers in South Africa
- Understand what the major players are currently thinking and doing about IFRS 4
- Gain an understanding of the major concerns and challenges posed by IFRS 4, from the practical perspective of those that are tasked with dealing with it
- Understand the potential future impacts and required next steps as we move towards IFRS 4 implementation

Audience knowledge: All levels

A RISK MANAGEMENT APPROACH TO THE ROLE LIFE INSURERS SHOULD PLAY IN THE RETIREMENT SECURITY

K Mungan

Retirement Matters; Life Assurance

Presentation only

Wednesday, 18 November | 01:00 PM | Bill Gallagher

Each and every person must answer a basic question, "How can I provide for myself when I no longer work?" To answer this question today, individuals must manage a collection of risks -- longevity, market, inflation and liquidity risk. In this session, we will examine the role that life insurers can play to help individuals solve this problem. In the past, insurers often hypothecated a representative individual and developed a product

that provided a standardized outcome which addressed all risks with a somewhat inflexible structure. Today, insurers are incorporating risk management into their products in new ways. They are creating building blocks that incorporate risk management into a range of investment and protection products. Customers, working with agents and financial advisors, can assemble these building blocks in a flexible way to create a strategy customized to each person's unique needs. We will review the advances in risk management and technology that have developed since the global financial crisis which facilitate this approach.

OUTCOMES:

The talk will cover the retirement security problem in general and how insurers can provide a very wide range of products by combining these different risk management capabilities in different ways and the regulatory aspects of all of this across different markets.

Audience knowledge: All levels

MANAGED CARE: THE ROLE OF ACTUARIES

CTM Murove, N Khumalo

Healthcare

Paper with presentation ©

Tuesday, 17 November | 03:05 PM | Committee Room 4/5

Managed Care is increasingly taking centre stage within the private healthcare market in South Africa, the key objective is to demonstrate value for every Rand spent on managed care through quality health outcomes and cost effectiveness. Managed care can vary from one service provider to the other. It often covers the following services: Hospital benefit management, active and support disease management, pharmaceutical benefit management as well as other areas such as dental benefits management. These services are often supported by different types of managed care arrangements. This paper focuses on active disease management with a particular emphasis on diabetes mellitus. The principles and lessons from this condition can be extrapolated to other areas of managed care.

This paper initially discusses the disease, diabetes, how it progress over time if well managed and also when not well managed. Key indicators of good quality of care are identified and also discussed. These are clinically proven and over time translate to improved quality of life and lower costs of care for the scheme.

The paper will further discuss how, as actuaries in collaboration with other stakeholders, we can play a role in having the right programmes for medical schemes. When a scheme considers appointing a managed care provider, actuaries can play an active role in assessing suitability of such entities – do they provide the right quality of care which in the long term will translate into savings and better quality health outcomes for the scheme.

Actuaries should also play an active role in ensuring that the managed care entity remains appropriate. Furthermore, actuaries should help assess if the clinical best practice are being adhered to and if outcomes are improving over time. Other value additions should also be considered.

Finally, we discuss how we should objectively determine the cost saving of a scheme should they contract a managed care entity.

OUTCOMES:

- More awareness of Actuaries responsibility in relation to MCO selection
- Better engagement by Schemes and MCO when discussing contracts
- More transparency by MCO on operational processes and costs
- More focus on quality of Care and better definition/scientific calculation of cost savings

Audience knowledge: Advanced level

AN INITIAL FRAMEWORK TO AID CHIEF RISK OFFICERS IN CONSIDERING WHETHER SOUTH AFRICAN INSURERS' CULTURE IS ALIGNED WITH ENTERPRISE RISK MANAGEMENT

K Nagar, M Hayes

EFRM; Life Assurance; Short-term Insurance

Paper with presentation ©

Wednesday, 18 November | 09:30 AM | Bill Gallagher

Solvency Assessment and Management (SAM) is a risk-based regulatory regime for the prudential regulation of the South African insurance industry, with its final implementation on 1 January 2016. Risk-facing firms are therefore focussed on the risk management processes and regulatory requirements in the implementation of these processes. The most evolving approach to risk management is Enterprise Risk Management (ERM), with the South African regulatory approach being the Own Risk and Solvency Assessment (ORSA). This paper aims to find the relationship between organisational culture and the principles of ERM, as an insurance company's organisational culture may affect the ease of implementation of ERM processes. A framework defining the typology of organisational cultures is discussed and the principles of ERM are presented in this paper. The paper presents a global view of this relationship since this research is the first of its kind. Through a questionnaire sent out to the South African insurance industry, this paper assesses and presents the industry's organisational culture and the link between their culture and the various principles of ERM. In addition to the initial goals of the questionnaire, the paper identifies a number of areas of further research in the subject of organisational culture in South African insurance companies. It is found that the characteristics of a communal culture is the overall culture of organisations within the South African insurance industry and it is also the culture that best help the ease of implementation of ERM in South African insurance companies.

OUTCOMES:

- Describe the types of organisational cultures
- Describe the core principles of Enterprise Risk Management
- Explain the links between organisational culture and Enterprise Risk Management
- Determine the SA insurance industry's culture and Enterprise Risk Management linkages

Audience knowledge: All levels

PROFESSIONAL AND ETHICAL CHALLENGES: A WEEK IN THE LIFE OF A CONSULTING ACTUARY

C Nel, D Ferreira, K Meissner-Roloff, N McGavin, C Basson

Professional Matters

Presentation only

Wednesday, 18 November | 09:30 AM | Ballroom 1/50

As a profession, we are required to adhere to high ethical and professional conduct standards. As consulting actuaries, we deal with multiple organisations and with various stakeholders within those organisations. The aim of the presentation is to provide insights into the various professional and ethical issues faced by actuaries in a consulting environment.

In this presentation, we take the audience through a week in the life of a consulting actuary by presenting various role play scenarios that illustrate some of these professional and ethical challenges. We will draw from our experience to present these scenarios (based on case studies, real life situations or hypothetical circumstances). We will aim to show how we manage diverse client relationships, where we regularly deal with several clients at the same time - often direct competitors of each other. We will also cover how we engage with the various stakeholders (sometimes with conflicting goals). The scenarios will show how we aim to act with integrity, maintain confidentiality and avoid conflicts of interest.

OUTCOMES:

- Share in the experiences of actuaries operating in a consulting environment, with their unique challenges from a professional and ethical point of view
- Become aware of additional professional and ethical issues that the consulting environment brings, which is distinct from a pure life office environment
- Gain an understanding of how to manage diverse client relationships, where clients are often direct competitors of each other
- Gain an insight into the various stakeholders that actuaries in a consulting environment come in contact with and how to deal with them

Audience knowledge: All levels

AN INVESTIGATION INTO LIFE ASSURANCE MARKETS IN AFRICA

KS Ngwenduna, MG Hayes, J Angove

Life Assurance; Short-term Insurance; Retirement Matters

Paper with presentation ©

Tuesday, 17 November | 01:25 PM | Ballroom 2/3/4

The life assurance industry has grown significantly worldwide and the African life assurance market has been one of the fastest growing assurance industries globally. Nevertheless, Africa's life assurance market remains under-developed and life assurance

contributes a small portion to Africa's economy. The research identifies several factors that drive life assurance consumption and the development of life assurance market in Africa. These factors include economic, demographic, social and institutional factors. A key outcome of the research is the development of a scorecard, based on these factors, for benchmarking the maturity and potential of life assurance markets in individual Africa countries. Countries are ranked according to their scorecard value, indicating their relative attractiveness for future life assurance business potential. The top and bottom five performing countries are explored further in more detail.

OUTCOMES:

- Insight into the factors that contribute to life assurance consumption in Africa
- Explanation of the scorecard for benchmarking the maturity or potential of life assurance markets in individual African countries
- Identification of the top and bottom five performing African countries in terms of business potential
- Insight into the factors influencing the scorecard value for these ten countries

Audience knowledge: All levels

AN ACTUARY IN THE DAMAGES SPACE: FINDING THE BALANCE BETWEEN THE CLIENT'S NEEDS AND PROFESSIONALISM

**Panel: A Nondwana, T Doubell, W Boshoff
Chair: W Loots**

Wider Fields, Professional Matters

Presentation only

Wednesday, 18 November | 11:00 AM | Committee Room 4/5

Actuaries acting as experts in litigation often find themselves faced with professional dilemmas regarding unusual client calculation instructions and regarding of another actuary's work.

Litigation privilege means that actuaries cannot interact with each other as they would in other fields.

Panellists will discuss how actuaries can maintain professional standards in the damages space, both in relation to the duty to our clients and to fellow actuaries.

Audience knowledge: All levels

INTERNATIONAL BENCHMARKING OF HOSPITAL UTILISATION: HOW DOES THE SOUTH AFRICAN PRIVATE SECTOR COMPARE?

S Ranchod, B Childs, M Abraham, R Taylor

Healthcare

Paper with presentation ©

Tuesday, 17 November | 03:05 PM | Committee Room 4/5

In this paper we compare the hospital-inpatient admission rates and length of stay of the South African medical scheme population with a set of international comparators. Such an international comparison is useful in developing reasonable expectations of the utilisation that can be achieved in the private hospital sector in South Africa, and as a means of identifying characteristics of the environment that are particularly unusual. It is particularly important that comparisons are on a like-for-like basis, and explicitly adjust for differences in data definitions, patient demographics and clinical case-mix. We used an economic basis for determining the comparator set as opposed to a health-systems basis. Considering two separate data sources, South Africa appears to have relatively high admission rates with low length of stays. On a combined basis, the bed days used per 1 000 for South Africa appears near the lower end of the spectrum which would indicate South Africa is making fairly efficient use of its hospital resources. In interpreting the results it is necessary to consider structural differences between countries.

OUTCOMES:

- Develop reasonable expectations of the utilisation that can be achieved in the private hospital sector in South Africa
- Able to identify Characteristics of the environment that are particularly unusual
- Understand implications of hospital environment for actuaries
- Able to understand ability of actuaries to influence hospital environment
- Think critically about international benchmarking

Audience knowledge: All levels

INSURANCE IN AFRICA: THE GOOD, THE BAD, THE UGLY

A Reinke

Life Assurance; Short-term Insurance; Retirement Matters

Presentation only

Tuesday, 17 November | 10:40 AM | Ballroom 2/3/4

For many, Africa is an unknown, scary and a different world better left alone or for the adventurous traveler to explore and tick off their bucket list. For us, Africa is a challenge worth pursuing and so over the last 4 years our team has travelled the length and breadth of Africa racking up close to 300 000 miles in order to understand how insurance works... and what doesn't work.

This is our story on the good, the bad and the ugly of insurance in Africa and what a massive difference actuaries can make to every facet of the industry if they are open to the challenges.

Our experiences are as much about a rapidly changing insurance industry as it is about the human, environmental and political elements of doing business in Africa. From Ebola to armed escorts, surviving deportation and food poisoning and feeling ashamed for the first time to be a South African when Xenophobia rears its ugly head. Africa is an ever changing melting pot.

We will delve into some of the obstacles that are present such as the lack of infrastructure and the lack of understanding and how this can lead to epic failures. But for every failure there are many more success stories and we will explore some of them.

Africa has the fastest growing population in the world and by 2040 the working-age population of Africa will exceed that of China. Yet Africa has the lowest insurance penetration rate at 1% (excluding RSA) and so the potential growth in insurance is simply staggering.

We are in a unique position in that we have one of the most advanced insurance sectors in the world and also a thriving actuarial community. This combination and the fact that we are IN Africa perfectly position us to grow the insurance industry to its full potential. But it's not only in the traditional areas that actuaries can provide assistance but also in areas such as systems, distribution channels and partnerships.

It only requires an open mind, patience and a valid passport to make a real difference.

OUTCOMES:

- Understand the challenges facing African countries, not faced in South Africa or globally
- Understand the insurance market in Africa and how different this is to the rest of the world
- Appreciate Africa for what it is and the endless opportunities that come with it
- Insight into our experience with clients in Africa, their needs, their hunger for knowledge and the impact we can make

Audience knowledge: All levels

DISRUPTIVE INNOVATION IN FINANCIAL SERVICES

L Rossouw

Life Assurance; Short-term Insurance; Wider Fields; Healthcare; Finance and Banking

Presentation only

Wednesday, 18 November | 01:00 PM | Ballroom 1/50

Disruptive innovation is reinventing traditional business models in a number of industries. Examples are Uber disrupting the taxi industry and Google Maps disrupting the in-car GPS navigation industry. Such disruption can occur slowly over time but can also occur as "big bang disruption". This presentation will cover what disruption is, the various types of disruption and also show some examples of disruptive innovation in other industries. It also discusses how the financial services industry shows all the hallmarks of an industry ready to be disrupted. The presentation closes with a discussion on how the technology behind the digital currency bitcoin could be disruptive to the financial services industry.

OUTCOMES:

- Insights into what disruptive innovation means
- Examples of disruption in other industries
- How financial services/insurance show the hallmarks of an industry that could face disruption
- Bitcoin and the potential for the technology behind it to disrupt financial services

Audience knowledge: All levels

INTRODUCTION TO THE PROPOSED NEW KENYAN MICROINSURANCE AND INDEX-BASED INSURANCE REGULATIONS

A Rowan

Life Assurance; Short-term Insurance; Retirement Matters

Presentation only

Tuesday, 17 November | 10:40 AM | Ballroom 2/3/4

The Kenyan insurance regulator (IRA) has embarked on a programme of re-writing their Insurance Act and Regulations, bringing it in line with the IAIS Insurance Core Principles. As part of the process, they have included specific provisions on index-based insurance and microinsurance.

This presentation summarises the key regulations and guidelines proposed for these two product types. The presentation will also discuss the key challenges faced by these insurance products and how the regulations and guidelines proposed aims to assist overcoming them.

OUTCOMES:

- Assist actuaries currently working in or planning to work in Kenya to
- Basic operation of Index-based insurance
- Understand the issues faced by the index-based insurance and microinsurance markets
- Know what regulatory changes to expect
- Understand the reason why the regulatory requirements to be implemented were proposed
- Help reopen the discussion about South Africa's draft microinsurance regulations, both the content and when it is expected to be enacted

Audience knowledge: All levels

SOLVENCY ASSESSMENT REGIME FOR SOUTH AFRICAN MEDICAL SCHEMES

GI Scott, AN Lowe

Healthcare

Paper with presentation ©

Wednesday, 18 November | 09:30 AM | Committee Room 4/5

The objective of this paper is to set out an alternative solvency assessment regime for medical schemes. The alternative proposed is adapted from the Solvency, Assessment and Management (SAM) regime instituted in the insurance industry in South Africa. SAM aims to be a risk-based assessment of the risks facing insurers, and this paper attempts to apply similar principles to medical schemes, with adjustments for the environment and the nature of medical scheme business.

In the paper, the solvency requirements are broken down into those reflecting liability risk, operational risk and asset risk. Further divisions are made within the liability risk and asset risk components. These risk

components are guided by the SAM framework, but adapted to allow for the specific conditions under which medical schemes operate. These components are then aggregated to generate the medical scheme equivalent of the solvency capital requirement (SCR). A discussion around economic capital and the Pillar 2 principles in SAM is also provided in the paper.

In addition to this, a standard framework is outlined in order to guide schemes in the economic capital assessment which would be required in a SAM-type system. It is, however, envisaged that schemes would need to consider their own unique competitive situation when assessing economic capital.

OUTCOMES:

- New methodology for analysing claim volatility
- Lessons for medical scheme pricing
- Lessons for medical scheme reserving
- Place for reinsurance

Audience knowledge: All levels

THE USE OF COGNITIVE MAPPING IN USER-BASED-INSURANCE

D Stone, A Potgieter

Short-term Insurance; Wider Fields

Presentation only

Wednesday, 18 November | 09:30 AM | Ballroom 2/3/4

Currently User-based-insurance (UBI) is based largely on how you drive OR how far you drive approach.

We propose to combine contexts consisting of:

PAYD and PHYD and Pay where, when and why you drive through in-stream cognitive computing and scoring techniques

This is through the addition of real time location-aware deep mining using advanced cognitive computing and artificial intelligence technology to enable advanced continuous risk monitoring and scoring for UBI and asset tracking.

We use biologically-inspired computing and swarm-intelligence to evolve predictive cause-effect models that evolve in real-time from patterns mined out of incoming streams such as sensor streams and adaptive feedback.

OUTCOMES:

- Use of in-stream big data for advanced scoring
- Geospatial profiling
- Context aware driver and vehicle profiling
- Continuous monitoring and early warning of emerging risks in asset tracking

Audience knowledge: Intermediate level

THE USE OF ARTIFICIAL INTELLIGENCE IN ARBITRAGE AND DIRECTIONAL TRADING

D Stone, M Potgieter, A Potgieter

Investments

Presentation only

Tuesday, 17 November | 10:40 AM | Bill Gallagher

Markets are NOT rational.

Using Artificial Intelligence software and techniques, we find actionable insights for arbitrage and directional trading strategies by:

- Applying non-linear cause-effect deep mining of real-time market streams
- Allowing for external data in enriching market data (e.g. weather/rainfall, social media etc.)

We explore trading strategies which are dynamic, through the use of Artificial Intelligence software and techniques, by real-time deep mining of temporal patterns in time series data and external data.

We will discuss examples of applying Artificial Intelligence techniques in:

- Volatility arbitrage
- Directional trading strategies

We aim to show:

- Possibilities for Artificial Intelligence to derive profit in a highly competitive market
- Value of external data in enriching market data (e.g. weather/rainfall)
- The impact of multiple markets with overlapping opening times and time zone
- The basis for the application of Artificial Intelligence in HFT (High Frequency Trading)
- Alternate trading strategies

OUTCOMES:

- Possibilities for artificial intelligence to derive profit in a highly competitive market
- Value of external data in enriching market data (e.g. weather/rainfall)
- The impact of multiple markets with overlapping opening times and time zones
- Alternate trading strategies

Audience knowledge: All levels

BEHAVIOURAL ECONOMICS AND ITS INFLUENCE ON INSURANCE

P Temple

Life Assurance; Short-term Insurance; Retirement Matters; Wider Fields

Presentation only

Tuesday, 17 November | 01:25 PM | Ballroom 1/50

The presentation will look at Behavioural Economics and the impact it has and could have on insurance. It will give some background to behavioural economics and the biases associated with our behaviours.

It will look at the studies done internationally in behavioural economics and insurance and draw lessons from them to consider for your business.

OUTCOMES:

- Learn about behavioural economic theory
- See your own biases in operation
- Food for thought on how behavioural economics could be used in insurance

Audience knowledge: All levels

HOW A SINGLE-FACTOR CAPM WORKS IN A MULTI-CURRENCY WORLD: RESULTS FROM THE LATEST RESEARCH

RJ Thomson, Ş Şahin, TL Reddy

Investments

Paper with presentation ©

Tuesday, 17 November | 10:40 AM | Bill Gallagher

At the Actuarial Society's convention in 2012, the authors presented a paper entitled "How a single-factor CAPM works in a multi-currency world". Some problems have since been found with the application of the methodology of that paper. In this paper the single-factor multi-currency capital-asset pricing model developed in the earlier paper is revised. A new approach is adopted, which resolves those problems.

As stated in the previous paper, the advantage in using a single-factor model is that it does not treat currency risks as carrying different weight from investment risks; regardless of its source, risk is measured as variance and weighted accordingly. The aim of this research is primarily to give actuaries a way ahead in the use of the single-factor CAPM in a multi-currency world for the purposes of the stochastic modelling of the assets and liabilities of long-term financial institutions such as pension funds, particularly for the purposes of liability-driven investments and market-consistent valuation, and the application of the model has been designed with that intention. However, it is envisaged that the model will also be of interest to other practitioners.

The authors' major original contribution to the literature is their proof that, for a single-factor CAPM to work in a multi-currency world, there is a necessary condition. Because of the revision of their approach, it has been necessary to restate that condition. As before, the theory is applied to two major currencies and two minor currencies, namely the USA dollar, the UK pound, the South African rand and the Turkish lira.

OUTCOMES:

- A better understanding of the SFM-CAPM
- Enjoyment of the elegance of the theory
- Interesting results
- The ability to apply the model in practice

Audience knowledge: Intermediate level

DOING INSURANCE IN THE REST OF AFRICA: A BRIEF SNAPSHOT

P Tripe, N Kelly

Life Assurance; Short-term Insurance; Retirement Matters

Presentation only

Tuesday, 17 November | 10:40 AM | Ballroom 2/3/4

Breaking into the African insurance market can be a daunting task. Registering and setting up a

new company is not straight forward whilst quality acquisition targets are hard to find. This talk will provide a high-level summary of the larger insurance markets in Africa, outside of South Africa, that we have worked in (Nigeria, Kenya, Ghana, Zambia, etc.). We will highlight the overall insurance landscape, including insurance regulations, predominant product types, and market complexity. We will also share our experience of working in the insurance markets in these countries, including some pitfalls and country-specific peculiarities.

OUTCOMES:

- Gain an overall high-level perspective of the main insurance markets in the rest of Africa
- Gain some appreciation for their size and complexity, especially relative to South Africa
- Gain awareness of some of the peculiarities and challenges associated with insurance in these markets
- Gain an awareness of the level and complexity of insurance regulations within those markets

Audience knowledge: All levels

RISK VISUALISATION: SEEING IS BELIEVING

H Van Rensburg

Short-term Insurance: Wider Fields

Presentation only

Wednesday, 18 November | 11:00 AM | Ballroom 2/3/4

We'll explore the power of data visualisation tools and techniques in assessing the risks facing insurance companies.

Models and tools used in the engineering field, such as geo-coding and mapping, have transformed the way catastrophe insurance risk is being assessed in the global market place. It has also been at the helm of driving improvements in data provided along with submissions to insurance firms.

Likewise, actuarial models are having a similar impact in the way risk and capital is being managed by organisations, and scrutinised by regulators. The complexity and the masses of data that these models generate can make it difficult for management to identify key drivers of risk and to make optimal decisions.

Visual dashboards and proxy models can bring significant clarity and provide insight in new and interesting ways... and more importantly can bring engagement from all levels of the business.

OUTCOMES:

Insight into GIS and mapping technology for modelling risk, catastrophe model workings, exposure management, interactions between pricing (risk level) and portfolio risk management, latest visual dashboards used in risk and capital functions.

Audience knowledge: All levels

FRAUD IN THE HEALTHCARE ENVIRONMENT: A CASE STUDY

S Windell

Healthcare

Presentation only

Wednesday, 18 November | 01:00 PM | Ballroom 2/3/4

Healthcare systems are struggling with rising costs and fraud is a contributing factor. There are multiple sources of fraud and it needs to be combatted with practical methods. The aim of this presentation is to discuss international and local environments in terms of healthcare fraud.

Internationally, law enforcement is involved in combatting healthcare fraud. The process involves multi-disciplinary teams to identify and investigate suspicious activity. Persecuting fraud requires the support of the law and practical solutions to correcting the behaviour.

South Africa has unique characteristics that mean that some international approaches aren't viable. International approaches that are viable should be tested and adapted to fit the unique environment.

Medical aids face challenges both in terms of the effect of fraud on their stability as well as their ability to combat fraud.

OUTCOMES:

- Identifying and investigating suspicious activity is a responsibility that protects all stakeholders
- Actuaries have a skill set to identify suspicious activity
- Stakeholders expect actuaries to notify them of suspicious activity
- Developing mechanisms to identify suspicious activity is an intensive process that requires financial and time investment
- Collaboration with non-actuarial specialists is vital to understand process and to make changes

Audience level: All levels
