



ASSOCIATION ACTUARIELLE INTERNATIONALE
INTERNATIONAL ACTUARIAL ASSOCIATION



Institute of Actuaries of India



SECTION SANTÉ DE L'AAI
IAA HEALTH SECTION

13th Global Conference of Actuaries 2011

Emerging Risks... Daring Solutions

**The importance of a robust
Enterprise Risk Management
framework in reducing complexity
and risk through operational
transformation**

Martin Sarjeant

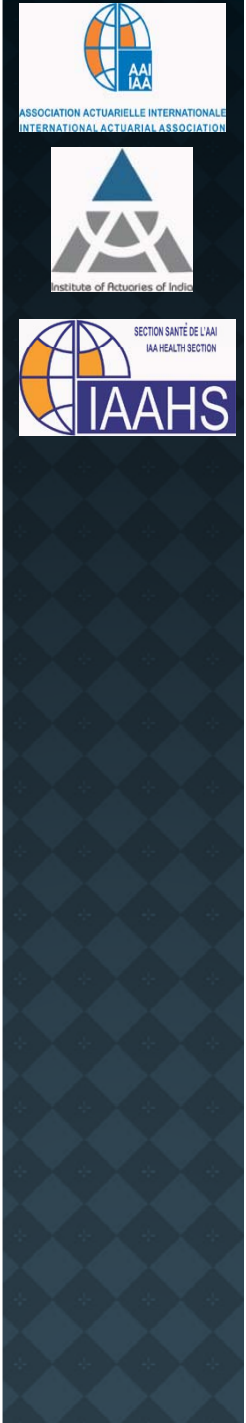
Head of Development, iWorks Prophet, SunGard

United Kingdom

February 20 – 22, 2011

Enterprise Risk Management (ERM)

- ◉ ERM is an activity to identify, quantify, control, monitor, mitigate, manage and report on all risks across an enterprise
- ◉ An embedded ERM framework allows company to actively manage, understand, control and mitigate the risks deliver increased shareholder value, competitive advantage and security and returns to policyholders
- ◉ ERM is being driven globally by regulatory and business drivers



Evolution of Actuarial Software

Actuarial Desktop (1980s)

Actuarial software platform for the desktop is born – control comes to the actuaries and away from IT. More power, modelling tools and freedom than ever before. Rate tables replaced with raw actuarial calculations complex projections now possible.

Parallelisation across network (1990s)

PCs speed quickens – stochastic pricing and stochastic valuations increase computational demands. Desktop PCs used “daisy chained” to form mini grids. Actuaries have more power.

1980s

1990s

2000s

2010+

Enterprise Level software (2000s)

Environment moved back to IT, controls, governance, mission critical, grid computing, governance, auditability, architecture to reflect mission critical nature.

Embedded into Enterprise Risk Management Framework (2010+)

Environment moved back to IT, controls, governance, mission critical, grid computing, auditability, architecture to reflect mission critical nature.

Complete end-to-end holistic risk solutions covering data in, modelling analytics, production runs and data out. Embedded in enterprise and actively used to manage business.



Actuarial systems used in practice today

Old World

- Complex systems grown in an ad hoc way
- Manual processes
- Poorly documented
- Poorly connected
- Not truly embedded
- In the corner of the actuarial department
- Disparate processes and systems
- Lack of change control and other IT disciplines



Risk to stakeholders

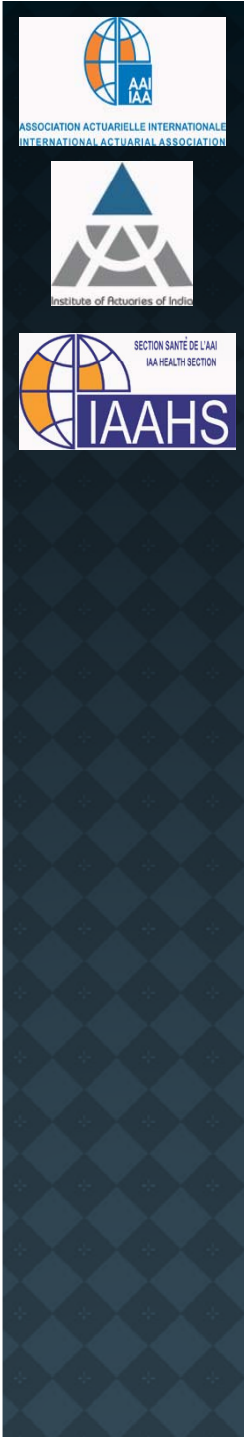


New World

- State of the art systems
- Controlled and automated processes
- Sophisticated risk models
- Documented
- Measurement and Management of risks
- Embedded in strategic decision making process
- Mission critical
- IT owned and supported
- Governance



Benefit to stakeholders



Enterprise Risk Management Framework

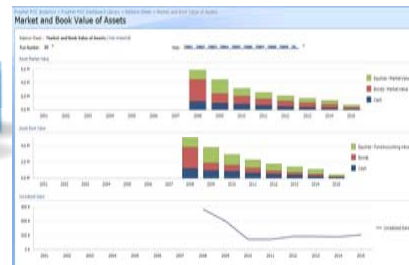
Enterprise Risk Management Framework

Enterprise Risk Management Process Control

Enterprise Risk Management Platform

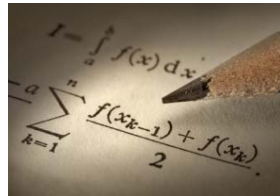
Data Sources

Data Warehouse



Services

Reporting Tools



Modelling Analytics



Enterprise Environment

Reporting and Dashboards

Technology Infrastructure & Framework

Mission Critical

Integration with Neighbouring Systems

Centralised

Distributed Processing

Security

Auditable

ETL

Reporting Tools



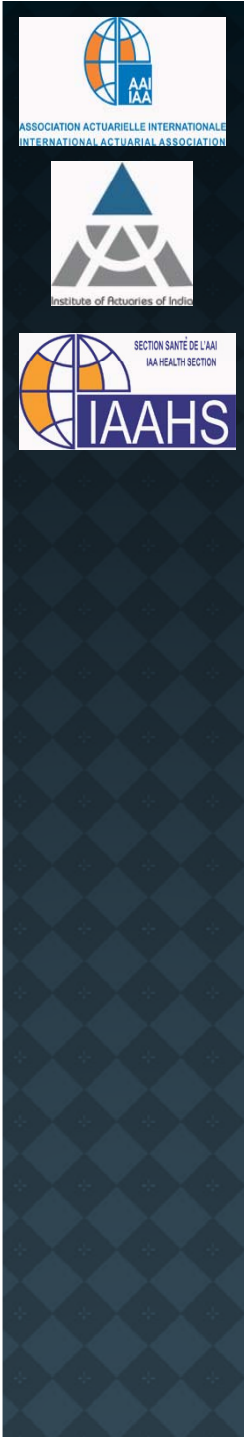
Why have systems and techniques evolved?

- ◉ Power
- ◉ Actuarial thinking
- ◉ Regulation
- ◉ Complex product design
- ◉ Competition
- ◉ Complex financial markets / investments
- ◉ Better risk management culture



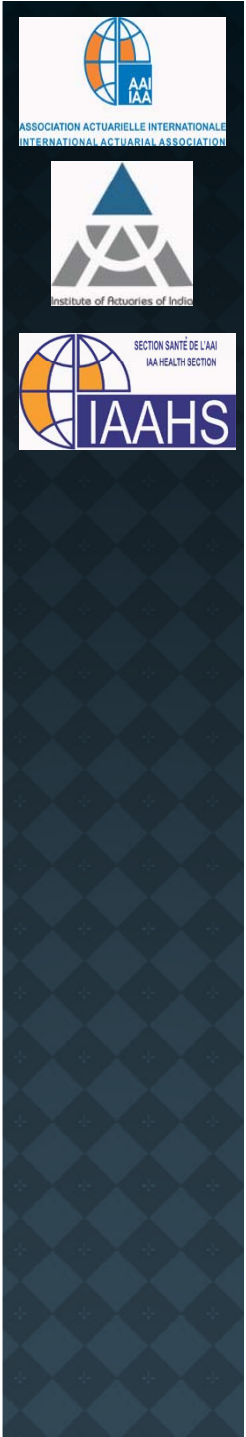
Key components of a good ERM Framework

- ◉ Mandate and goals
- ◉ Extensive models for all risks
- ◉ Well defined risk appetite
- ◉ Technology
- ◉ Processes
- ◉ People



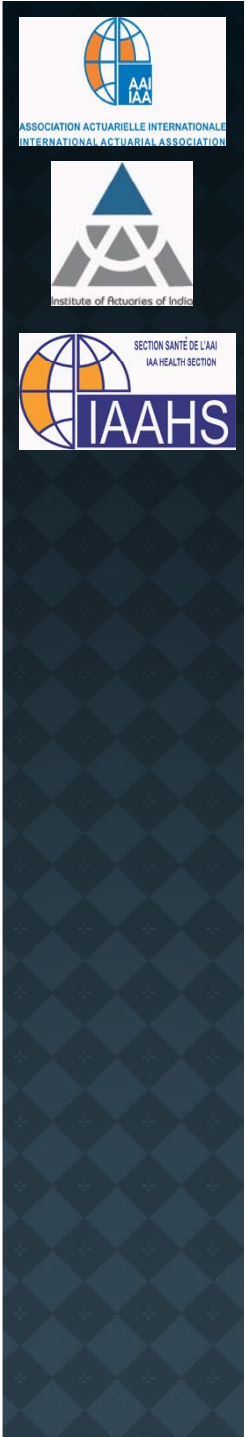
Key attributes of a good ERM Framework

- ◉ Auditable
- ◉ Accurate reflection of risks
- ◉ Holistic coverage of risks
- ◉ Usable and used!
- ◉ Robust
- ◉ Scalable
- ◉ Mission critical
- ◉ Embedded
- ◉ Information must be actionable, accessible and timely



Key benefits of a good ERM Framework

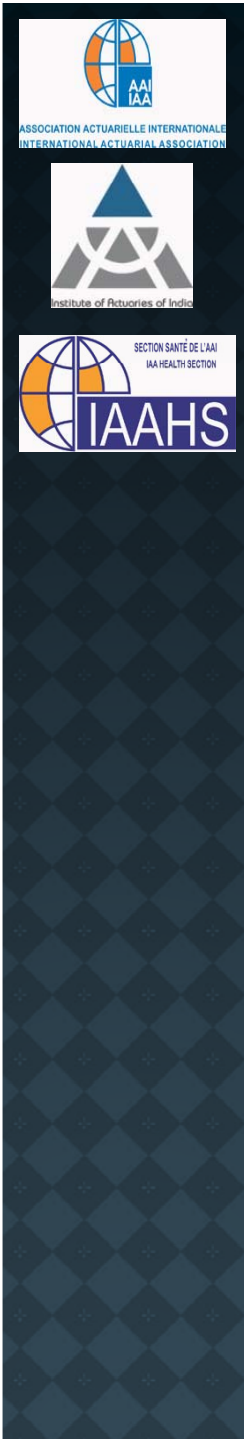
- ⦿ Aligning strategy with risk appetite
- ⦿ Better risk management!
- ⦿ Reduction in manual processes
- ⦿ Feeds into strategic decision making
- ⦿ Timely results
- ⦿ Aids accessibility and communication
- ⦿ Improvements to processes and control
- ⦿ Cost efficiency
- ⦿ Competitive advantage
- ⦿ Direct and indirect cost savings



First steps towards an ERM Framework

- ◉ Demonstrate long term value of an ERM Framework to key stakeholders
- ◉ Identify the current processes and gaps
- ◉ Evaluation current technology and skills
- ◉ Formulate strategy for execution with buy in from key stakeholders
- ◉ Realistic timeline for implementation

- ◉ Make the first step..





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