Agenda for this session

- An introduction and explanation of ERM
- The main components of ERM
- Impact of Solvency II
- What does it take to be a CRO
- CERA
- Opportunities for Actuaries
What is Enterprise Risk Management?

Three core themes

strike a balance between too much risk and not enough risk

risk-taking ..is aligned with its objectives

incorporating risk information into strategic planning, management decision making, product design and more.

UK Actuarial Profession

The Three lines of defence

A common model to separate activities

<table>
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<tr>
<th>The Board</th>
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<tr>
<td><strong>First line of defence</strong></td>
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<tr>
<td>• Day to day management, control and reporting of risk exposures in accordance with the risk appetite, strategies and policies set by the Board.</td>
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<td>• Monitors the overall risk profile</td>
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<td>• Ensures that adequate financial resources are maintained.</td>
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<td><strong>Second line of defence</strong></td>
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<td>• Assists the Board to formulate the firm’s appetite for risk, risk and capital management strategies, policies and limit structures.</td>
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<td>• Leads development, implementation and maintenance of risk frameworks</td>
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<td>• Objectively challenges execution of actuarial, risk and compliance strategies, approaches and related management information.</td>
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<td><strong>Third line of defence</strong></td>
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<td>• Provides independent assurance on the design and effectiveness of the overall system of internal control, including risk management and compliance.</td>
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<td>• Internal Audit is independent of the businesses, finance and actuarial functions and reports directly to the Audit Committee.</td>
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Effective ERM is an ongoing process

A possible ERM framework

Solvency II and Risk Management

Good Risk Management is important for Solvency II compliance

- Solvency II puts the management of risks at the heart of the regulations.
- The Solvency Capital Requirement is designed to be reflective of the risks that underlie the business.
- Risk Management is one of the 'required functions'.
- Solvency II will lead to improvements in:
  - Risk frameworks;
  - Embedding of Risk Appetite;
  - Demonstration of risk controls;
  - Improved Risk reporting; and
  - Documentation of risk policies
Own Risk and Solvency Assessment
The ORSA will become a key part the Risk Framework

- The ORSA process requires integration of:
  - Strategic planning,
  - Risk appetite,
  - Risk identification, and
  - Risk monitoring,
- As well as understanding of:
  - Short term and long term risks,
  - Emerging risks,
  - Interactions between risks,
  - Risk mitigation, and
  - Management actions

Risk Management and the Internal Model
Risk will have a key role in the Internal Model

- Risk Management has a role for Internal Model firms to:
  - Design and implementation
  - Testing and validation
  - Documentation
  - Performance analysis
  - Suggesting improvements

- Are all these tasks independent?
- What about the role of the actuarial function?
How can this be achieved in practice?
The coordination of validation approach

Board Governance
Report
Risk Management
Report
Internal Model Validation Coordination
Internal Audit Validation Activities
Risk Management Validation Activities
Actuarial Validation Activities

What is required to be a CRO today?
There are a number of skills required

UK Actuarial profession - key characteristics of an effective CRO were:

“Managerial thinking, including leadership, the ability to see the bigger picture, thinking outside the box and pragmatic judgement”
Ideal Skills of a CRO

• Effective politician
• Big picture thinking
• Thorough understanding (including technical detail)
• Knowledge of the business and industry
• Determination / Unswerving doggedness
• Gravitas and credibility
• Forward looking
• Imagination
• Commerciality

Ideal Skills of a CRO – Do Actuaries Match Up

• Effective politician ❓
• Big picture thinking ✓
• Thorough understanding (including technical detail) ✓
• Knowledge of the business and industry ✓
• Determination / Unswerving doggedness ✓
• Gravitas and credibility ✓
• Forward looking ✓
• Imagination ✗
• Commerciality ✓
Precursors to Being an Effective CRO

- Board access (membership is better!)
  - Minimum of membership of the senior exec committee
- Trusted advisor to the CEO
- Budgetary control
- Resources
- No ‘no go’ areas
- Healthy fear
- Supportive governance

Plan of Action – What to do first

- Ask the obvious questions
- Overview – dashboards
- Find the controls embedded in the business
- Know the timetables
- Business planning
- Know the exposures
- Transactions / Due diligence
- Culture
Three Lines of Defence Model – In Reality

• It’s only a model:
  – check what you’re doing
  – consider the risks as a whole
  – independently review their operation
• Time is better spent thinking about attack
• Should it be applied to whole departments?
• Is independence good?
• How can this work in multi-dimensional organisations?

Other Laws that Might Apply

• Heisenberg’s Uncertainty Principle
  – Measurement affects the system
• Quantum Entanglement (Schrödinger’s paradox)
• 1st law of Thermodynamics (Conservation of Work)
What is CERA?
A new qualification for actuaries as a route to CRO?

- Chartered Enterprise Risk Actuary
  - A new internationally recognised qualification
  - Designed to provide the skills to work in a risk function
  - Covers a lot of the core areas required
    - Risk Modelling
    - Risk management tools and techniques
    - Economic Capital models

- But...
  - Mostly focuses on technical skills
  - More ‘business savvy’ is required to be a CRO

Why should you consider CERA
Could be good for a career in risk

What CERA-qualified actuaries say

- "It opens the door to a wider risk management role outside the traditional actuarial life and pensions roles'"
- 'CERA is slightly different from the other subjects as involves more business knowledge and business experience and makes you stand out from the crowd and from other actuaries ...'
- 'If you look at the changes the EU is making ... there is a lot more focus on risk and risk management, so even in traditional areas we are having to think about a wider range of risks ...'

Enterprise Risk Management
Why should actuaries be interested

- The role of risk management is changing
- Actuaries have a mix of quantitative and business skills
- Financial Risk capability is moving to risk function
- Importance of CROs is increasing
- The risk-management function will be responsible for the design, implementation, testing, validation and the analysis of the performance of the internal model
- This is pushing many actuarial and risk functions to challenge their current operating model

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.
The views expressed in this presentation are those of the presenter.