ERM Working Party
Plenary 5

Sejal Haria, George Orros, Michael Tripp (for the ERM Working Party)

4th October 2007

34th ANNUAL GIRO CONVENTION - 2007
Newport, Wales
Agenda

- Setting the scene
- Literature review
  - ERM vs ICAS
- What does this mean for us?
Who we are (were??)

- Cherry Chan
- Sejal Haria
- Paul Hewett
- Neil Hilary
- Kathryn Morgan
- George Orros
- Geoff Perry
- Kartina Thomson
- Michael Tripp (Chair)
What we produced

- Substantial review of the ERM literature
- Essays relevant to subject
- An outline ERM framework based on best elements of other frameworks
- Case studies to promote thinking
- Summary of worldwide actuarial education
- A vision to challenge & stimulate thought
- Summary & ideas for next steps
- Appendices with useful information

Will be on the GIRO website – READ IT!!
What ERM is

- At present there is no complete and widely accepted definition……
- In our view the best definition (COSO) : “Enterprise risk management is a process, effected by an entity’s board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.”

COSO, the Committee of Sponsoring Organizations of the Treadway Commission. A voluntary USA organization that aims to improve the quality of financial reporting through business ethics, internal controls and corporate governance
ERM Vision for 2025

Possible characteristics of an ERM system:

• Real time projections
• Forward looking
• Control of residual risks
• Tools to tailor / transform risks of increasing importance
Literature Review - top 12 ‘must reads’

2 Brehm, Paul et al. (2007). Enterprise Risk Analysis for Property & Liability Insurance Companies
3 Cabinet Office (2002). Risk Improving Government's Capability to Handle Risk and Uncertainty
7 Crouhy, Michel et al. (2006). The Essentials of Risk Management
8 Lam, James (2003). Enterprise Risk Management - from Incentives to Controls
9 Sharma, Paul et al. (2002), Prudential Supervision of Insurance Undertakings
12 Wang, Shaun and Faber, Robert (2006). ERM for Property-Casualty Insurance Companies
Literature Review


ERM impinges on 4 Main Board Functions
- Chapman locates ERM as axiomatic

Adapted from Garratt 2003, “The Fish Rots from the Head”
# Risk Management Processes

Chapman outlines 6-stage incremental & iterative process

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<tr>
<th>1. Corporate Governance</th>
<th>2. Internal Control</th>
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<td>(Board oversight)</td>
<td>(sound system of internal control)</td>
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<th>3. Implementation</th>
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<td>(appointment of external support)</td>
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<th>4. Risk Management Processes</th>
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<td>(incremental phases of an iterative process)</td>
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<th>5. Sources of Risk</th>
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<td>(internal to a business and emanating from the environment)</td>
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- Internal Processes
- Business Operating Environment
Methodology for each process stage & feedback control loops for entire risk management process - Chapman
Micro & Macro Risk - Chapman

Internal Sources of Risk
- Operational Risk
- Technological Risk

External Sources of Risk
- Economic Risk
- Social Risk
- Environment Risk
- Market Risk
- Political Risk
- Legal Risk
ERM Frameworks - COSO
Problem of Inductive Knowledge & Revision of Belief - Taleb

1,001 Days of History

Utility of Turkey vs. Days

Surprise!
Problem of Inductive Knowledge & Revision of Belief - Taleb
ERM versus ICAS

- The ICAS has been a step forward, but there are still gaps.
- Considered thinking only takes you so far…. ERM is far more than modelling.
- ERM incorporates both top down and bottom up approaches. There is not yet any one framework that provides the full answer.
- ERM is about adding value to a business and engages the Board ensuring real world insights.
- Solvency II (e.g. Article 43 & 47)
What does this mean for us?
Proposed next steps

- Form GIERM group
- Produce paper for Sessional Meeting
- Develop best practice, Solvency II compliant, Framework
- Participate in FIRM RMSIG and other groups
- More active links to USA, Australia and then India, China and other emerging countries?
- Challenge thinking about what an actuary is?
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