

GIRO – ERM Working Party Overview and Summary: July 2007

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OVERVIEW - Summary

Introduction

The GIRO ERM working party was originally formed at Blackpool in October 2005. It produced a number of short essays on aspects of ERM and ran a workshop last year in Vienna. The essays cover specific aspects of risk management and did not get published last year.

Background

Actuarial thinking tends to be analytic; our basis for ‘making sense out of an uncertain future’ is mathematical. Whilst this is a vital aspect of ERM, many other aspects feature with equal importance such as wider decision making ability and flexibility in adapting to real changes quickly and efficiently. Actuarial thinking in respect of ERM is necessary but not sufficient.

Since Vienna, the working party, with a slightly revised membership and terms of reference, has continued to discuss and research this very important subject. They have developed a wide range of resources which will be offered for reading/download as appendices (listed to the end of this short summary) from a GIRO website and are referred to in this short overview. Readers are urged to explore the appendices when published and in doing so are almost bound to find something new and of considerable help in either a practical or theoretic context. There is a variety of thoughts in these appendices, some of which may be inconsistent as they are sourced from different times, regimes and people. Subject to reaction at GIRO in Newport, the working party believes that there is more than enough material which with some review and focus could form the basis of a paper (or even papers) to the Institute.

We start our resource pool with a review and summary of 41 texts. They consist of a wide ranging bibliography which extends the horizons, both summary form (APPENDIX 1A) and full form (APPENDIX 1B). This reading list is aimed at General Insurance Actuaries (and students) who would like to have a synopsis of introductory publications and references in the field of ERM. Based on this reading list, we have summarized some of the emerging frameworks (see again APPENDIX 1A). This then leads to an attempt to provide a series of definitions (APPENDIX 2A).

In an attempt to help provide us with a debating point around where the actuarial profession is and scenarios about where it might go in the future, we provide a pen portrait or VISION of the year 2025 (APPENDIX 6). This is meant to be thought provoking and to stretch imaginations. It is then associated with some observations on what this might mean for actuaries (APPENDIX 7A) and a review of current developments in actuarial education worldwide (APPENDIX 7B).

Key Observations

We have summarised a few key observations that act as high level summary of our findings.

Key Observation 1

At present, there is no complete and widely accepted definition of ERM, but a series of 10 or more definitions that we found have similar themes. Since there is a core consistency between these definitions and we ultimately agree with the main message, we feel that there is no real need to produce our own UK Institute definition. Emerging from these definitions we provide some thoughts and a distillation of themes (APPENDIX 2B).

We have also provided our own initial Framework (APPENDIX 2C). Against this framework, we provide a series of checklists. The checklists provide features we would expect an industry naïve, an industry standard and an industry advanced organisation to exhibit. This checklist (APPENDIX 2D) should help readers take stock of their own organisations and develop prioritised views on what improvements are needed.

An overview of the key checklist topics is as below:

- Processes – this includes process mapping, impact of processes, understanding key objectives and general approaches
- People – this includes training and awareness, resource planning and structures and reporting lines
- Specifics – this includes specific risks such as insurance risk, market risk, operational risk and reputational risk
- Planning – this includes planning cycle and its key components and strategic developments
- Risk management – this is predominantly the risk management cycle which includes risk identification and understanding through to risk controls
- Modelling – this touches on general modelling approach which includes DFA, ranges of the models and transparency and buy-in to modelling

We have also included a series of specific essays on a range of topics from last year's working party:

- An example based on a derivatives firm (APPENDIX 3A)
- Comments on underwriting and pricing risk (APPENDIX 3B)
- Risk aggregation management (APPENDIX 3C)
- Reserving Risk (APPENDIX 3D)
- Market Risk (APPENDIX 3E)
- Operational Risk (APPENDIX 3F)
- Strategic Risk and an amusing case study (APPENDIX 3G)
- The Planning Process and ERM (APPENDIX 3H)

Each of these should help improve understanding of a given ERM component.

Key Observation 2A

ERM has to incorporate both the top down and bottom up approach to give a solid understanding of the risk management process. All key areas and units need to work together and continuously to achieve the strategic outcome. Similarly, short term and long term strategies need to be set with input from individual business units and area so that the risk is understood and buy in can be achieved. At present, there is no one framework that provides a full answer. We need to develop a series of Principles against which practitioners can determine what they need to do next.

Key Observation 2B

Increasingly ERM is seen as a way of adding value to an enterprise (about identifying opportunities as much or more than mitigating the downside of risks). The full engagement of the Board is therefore essential, and the ERM process has to provide real world insights to assist in this involvement.

Outline key principles.

With this in mind, we then provide two highly practical and light-hearted but informative case studies (APPENDIX 4A and APPENDIX 4B). These should give anyone taking stock of the ERM in their organisation and trying to think what to do in a practical sense some useful pointers.

Key Observation 3

This leads us to key Observation 3, namely **planning and analytics, the traditional actuarial ground are by no means the full answer to ERM – considered thinking, whilst essential, takes you only so far and the unexpected will still happen** (APPENDIX 5). **ERM is far more than modelling.**

ERM is not a fool-proof approach. However, it is a process to gain understanding of all the risks posed to a company. With this, we can address key issues and minimise the ‘unexpected’ events. Key mitigation plan can be put in place to react to these risks. Even if the risks are not fully mitigated, it can be identified and/or controlled.

As a process, ERM ensures that we avoid complacency and encourages us to react positively to any events that may happen. It also ensures that we learn from our mistakes and use the past to help companies understand the future better.

Key Observation 4

Key observation 4 is that **as well as understanding and modelling risk, we need to consider how control frameworks mitigate risk. It also highlights how deliberate decisions to live with risk affect interlinkages and dependencies, and how cause and effect analyses might give greater insights. In general, we need to understand how to relate to other risk experts in an open and understandable manner.**

Key Observation 5

This moves us to key Observation 5. **Currently actuaries focus on modelling, the use of analytic techniques to inform risk management and in particular focus on the tail of the distribution of outcomes. They can be seen as specialists operating black boxes. To progress as a profession, we strongly feel that we should develop our core skills to include wider understanding of the market. We also need to be more convincing in our flexibility and speed to react to change and our ability in decision making and leadership skills. ERM requires interpretation of the full range of outcomes – not just the extreme ‘right hand tail’.**

Whilst modelling and quantification of risk is a key grounding in the ERM procedure, it is not the whole process. The core actuarial skills serve well in this sub-process. However, if we are to rise to the challenge of being risk managers, we, as actuaries need to develop other skills react to the other subsets of the ERM process.

Parallel Development

ERM continues to hold an important leading role on the stage of actuarial thinking. Alongside premium rating and reserving, risk in its various forms is at the heart of general insurance actuarial work. The development of actuarial thinking is an increasingly global activity – and ERM has very much become part of this global movement. The CAS takes a major role and has an ERM Liaison forum. Development of the thinking is by no means limited to insurance or even financial services businesses. In the USA COSO, the Committee of Sponsoring Organizations of the Treadway Commission, have published an excellent framework. The subject has become so large that the CAS have found it necessary to hold separate conferences on it, alongside conferences on rating and reserving; will we need to do the same? In the UK, our own Institute’s FIRM initiative has gained support and momentum. The exam system will start to include elements in respect of risk management from 2008. On a wider front the Office of Government Commerce (OGC) who originated tools such as Prince 2 for project management have launched M_o_R, a Management of Risk framework. There is even an emerging British Standard (from the BSI).

We suggest that our profession is reaching an interesting moment in its life. We have options around:

- Do we need to be one truly global profession, or are we well served as a number of large and important national bodies working together
- What industrial scope is appropriate? Many ideas emerge from banking and indeed non financial services businesses. Are we well served with our focus on life, general and pensions including financial sector?
- What is the right balance of mathematical theory and practical management? The UK has in some sense prided itself on being commercial and practical, not getting lost in abstract mathematical work, and this seems to have stood us well.

- Do we need a broader set of contributions? Is there an emerging and important role for more intuitive based thinking, especially given the highly complex interrelationships on any ERM system, the effect of the unpredictable and the need to understand human behaviour and its influence on future outcomes?

APPENDIX 8 sets out this and last year's working party members; APPENDIX 9A an extract from the original COSO Control Framework (1995) and APPENDIX 9B the most recent COSO ERM framework. APPENDIX 10 shows ORIC's Operational Risk categories.

The resources presented aim to provide readers with an overview of current ERM thinking, to excite interest in what is a vital topic and in particular to provide practical guidance and help. The case studies and the maturity profiles should give readers a series of checklists to assess where their organisation is on the path to 'perfect ERM' and hence to determine what needs doing next in a prioritised manner. The bibliography should afford a comprehensive view of current thinking. The framework, the aspects of actuarial thinking and the vision should get readers thinking about the way the subject is developing and excite further interest. Something for most GIRO attendees!

We hope you accept this report as work in progress, enjoy it and we look forward to discussion, feedback and debate. With GRIT and GRIP surely we need GIMER (General insurance management of enterprise risk).

APPENDICES – TO BE PUBLISHED VIA GIRO WEBSITE

OVERVIEW – summary

APPENDIX 1A – summary bibliography

APPENDIX 1B – full bibliography

APPENDIX 1C – frameworks based on bibliography *(to follow)*

APPENDIX 2A – definitions

APPENDIX 2B – distillation of themes

APPENDIX 2C – framework for GIRO

APPENDIX 2D – maturity profile and checklist

APPENDIX 3A – example of ERM in derivatives company *(to follow)*

APPENDIX 3B – underwriting and pricing risk *(to follow)*

APPENDIX 3C – aggregation risk *(to follow)*

APPENDIX 3D – reserving risk *(to follow)*

APPENDIX 3E – market, credit and liquidity risk *(to follow)*

APPENDIX 3F – operational risk *(to follow)*

APPENDIX 3G – strategic risk *(to follow)*

APPENDIX 3H – planning and ERM *(to follow)*

APPENDIX 4A – case study 1

APPENDIX 4B – case study 2

APPENDIX 5 – ERM: beware!

APPENDIX 6 – What ERM might look like in 2025

APPENDIX 7A – What does this mean for actuaries *(to follow)*

APPENDIX 7B – current educational developments

**APPENDIX 8 – working party members 2005/06 and 2006/07
*(to follow)***

APPENDIX 9A – COSO extracts from original control framework
(to follow)

APPENDIX 9B – COSO extracts from recent ERM framework
(to follow)

APPENDIX 10 – Operational Risk information (ORIC) *(to follow)*