



ERM for Life & Health

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American Sign Language for Actuaries





The Usual Disclaimers





The Origin of Enterprise Risk Management



Today's Focus



Practical Issues





Some Definitions

- ERM is Enterprise ***Risk*** Management

- Risk Management Activities
 - Identification of risks
 - Evaluation of risks
 - Developing risk strategy
 - Monitoring risks



Some Definitions – 3 Lines of Defense

Peer Review

- Within the Business Unit
- Least amount of independence
- Sometimes limited resources

Enterprise Risk Management

- Some independence
- Often working amongst several areas
- Actuaries typically present

Internal Audit

- Reports to Audit Committee
- Actuaries may not be present



Identification of Risks - Categories

- Insurance Risk
- Investment Risk
- Market Risk
- Operational Risk
- Strategic Risk





Identification of Risks – Basics

- Survey all areas
- Issues
 - Level of Background
 - Priority
 - Overlap
- Examples from other companies
 - Newspapers
 - 10K's & earnings calls
 - Actuarial literature





Identification of Risks - Actuarial

- Pricing
- Reserving
- Models
- Actuarial Departments





Identification of Risks - Pricing

- What do big sales mean?
- Should ERM approve a pricing package?
- When should ERM become involved?
- What is the best way for ERM to be involved?





Identification of Risks - Reserving

- Have you seen the headlines?
- More & more judgment involved...
- Quarterly reviews – Who & what levels....
- How frequent for in depth reviews?





Identification of Risks - Reserving

- Who should set the assumptions?
- How are pricing and reserving coordinated?
- What is the risk of an assumption being wrong?





Identification of Risks - Models

- Models are complex
 - Inputs
 - Coding
 - Interpretation of Results
- Types of Reviews
 - Technical Reviews
 - Peer Reviews
 - Independent Reviews





Identification of Risks - Models

- SR 11-7
 - SIFI's must follow
 - Model development & implementation
- Independence required
 - Some models originate from ERM
- Written for banks
 - Longer timeframe for insurers
 - How does one judge validity?





Identification of Risks - Models

- New Models
 - Documentation, documentation
 - Enormous time saver
- Old models
 - Typical procedures
 - Current dilemmas
 - Conversion issues



Identification of Risks – Actuarial Dept.

- End to end reviews of actuarial departments
- Began with international operations
 - Actuarial departments aren't always actuarial departments
- Expanded to domestic departments





Evaluation of Risks - Basics

- Stress Tests – Pricing
- Stress Tests – Reserving
- CCAR
- Internal Capital



Evaluation of Risks – Pricing Stresses

- Common stresses
 - Investment yield
 - Lapse
 - Mortality
- Impacts
 - GAAP
 - Statutory
 - MCEV



Evaluation of Risks – Pricing Stresses

- Not so common stresses
 - Policy loans utilization
 - Annuitization
 - Spread
- History
 - ALM
 - UK
 - US



Evaluation of Risks – Reserve Stresses

- Many reserves/assets involve reevaluation
 - AG43
 - DAC
 - RBC C3 Phase II
 - SOP-03-1
- Common stresses
 - Lapse
 - GMWB Utilization
 - Hedge Effectiveness

Evaluation of Risks – Reserve Stresses

- Stresses serve as an early warning signal
- More time to react
- PBR is coming...



Evaluation of Risks – CCAR

- Comprehensive Capital Analysis & Review
- Systemically Important Financial Institutions
- Federally designed stress tests
- What if analysis
- Not just for SIFIs
- AOM relation



Evaluation of Risks – Internal Capital



- Possible forms (with or without modifications)
 - RBC
 - BCAR
 - S&P
 - European shock method
- Basic elements
 - Time frame
 - Confidence level

Evaluation of Risks – Internal Capital



- Used for
 - ROE
 - IRR
 - MCEV
- Is using varying levels of capital sufficient, or does one need to modify discount rates?
- Does one need a direct cost of guarantees, or is cost of capital sufficient?





Risk Strategies - Basics

- Reinsurance
- Hedging
- ALM
- Peer Review
- Product Mix
- Pooling





Risk Strategies – Location?

- Does hedging happen in ERM?
- Does reinsurance belong in ERM?
- Does ALM belong in ERM?
- Does product mix evaluation belong in ERM?



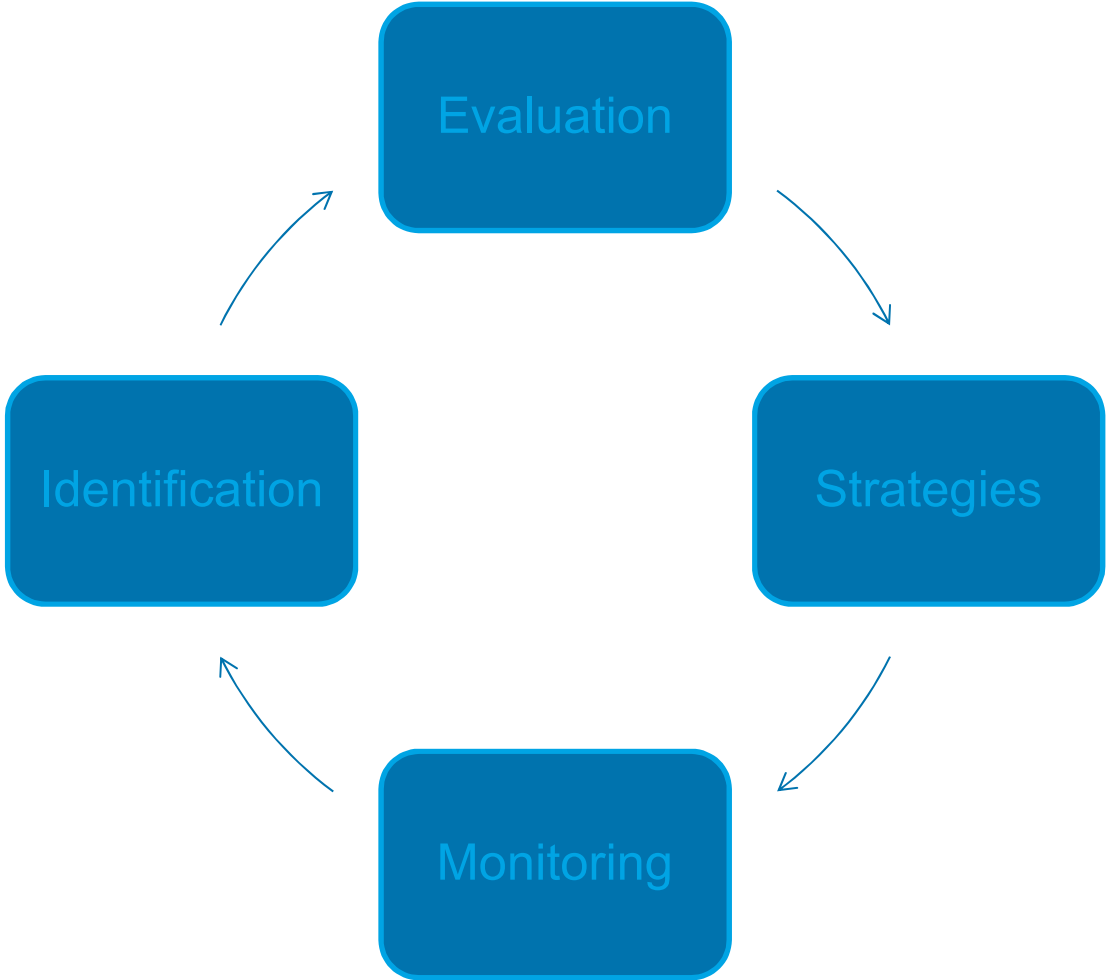


Monitoring Risks - Basics

- Quarterly or Annual or Monthly?
- Various reports
 - ALM
 - Hedging
 - Experience studies
 - Flavor of the month
- How wide of an audience?



Full Circle





Who's checking ERM?

- Origin of ERM
- Evolution of ERM
- Comparisons of ERM

