

**The Actuarial Profession**  
making financial sense of the future

Life conference and exhibition 2010  
Douglas Nicol and Mark Train



## Practical issues in implementing an ERM framework

7-9 November 2010

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## Introduction

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### Objectives

- Develop your understanding of an ERM framework
- Discuss how to design key stages of the ERM framework
- Share our practical experiences in implementing the ERM framework

### Agenda

- Designing the ERM programme
- Development of an appropriate risk appetite statement
- Governance and organisation
- Creation of effective risk MI

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1

## Practical issues in implementing an ERM framework

### Section One

#### “Designing the programme”

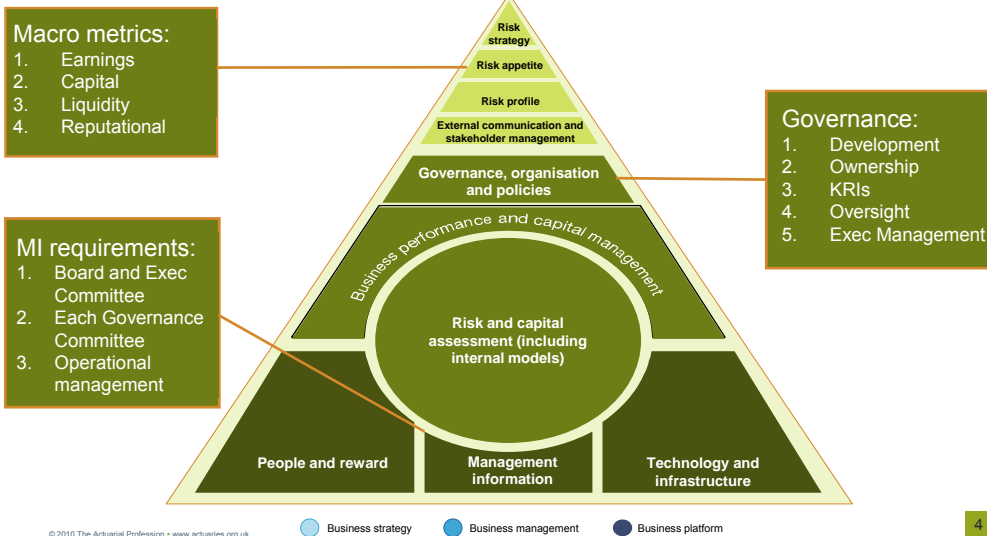
### Designing the programme

#### Drivers for change

- Compliance with Solvency II requirements
  - Art 41 – General governance – *“effective system for ensuring the transmission of information”*
  - Art 43 – Risk management – *“effective risk management system comprising strategies, processes and reporting procedures necessary to identify, measure, monitor, manage and report, on a continuous basis the risks, on an individual and aggregated level, to which they are or could be exposed, and their interdependencies”*
  - Art 44 – ORSA – *“compliance, on a continuous basis, with the capital requirements and with the requirements regarding technical provisions”*
- Increased focus on effective risk management
- Changing culture in the insurance industry

## Designing the programme

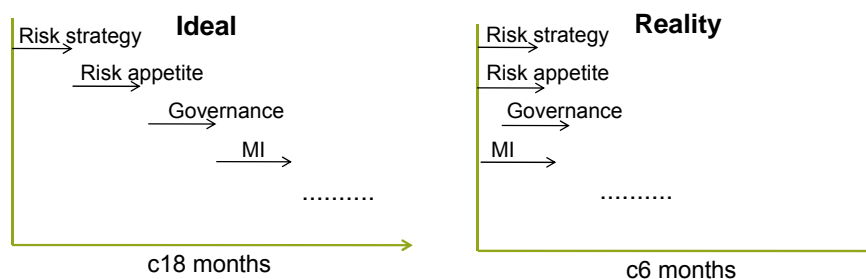
### The ERM framework



## Designing the programme

### Programme timing and structure

- Timing constraints meant some workstreams were accelerated significantly ahead of “ideal”



## Designing the programme

### Further considerations

- People
  - Resourcing BAU jobs
  - Key personnel have very limited time
- Systems
  - Existing systems inadequate
  - New technology solutions required
- Change
  - Managing change
  - Obtaining business buy-in
- Cost
  - Large programmes
  - Potentially significant costs in development

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6

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## Section Two

### “Risk appetite statement”

## Risk appetite statement

### Designing a risk appetite statement



- 1 Core statements sets overall tolerance and desire for risk
- 2 Core statement supported by a detailed sets of limits and triggers
- 3 Suite of potential management actions agreed in event of breach
- 4 Agreement of governance process for applying waivers

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8

## Risk appetite statement

### Core risk appetite

Capital	<ul style="list-style-type: none"> <li>• Risk appetite supported by available capital</li> <li>• Equilibrium between holding enough capital to withstand stress events and being over capitalised</li> <li>• Tension between different metrics</li> </ul>
Earnings	<ul style="list-style-type: none"> <li>• Clear set of profitability boundaries</li> <li>• Minimum long-term average return</li> <li>• Different measures – IFRS, MCEV</li> </ul>
Liquidity	<ul style="list-style-type: none"> <li>• Sufficient liquidity to withstand extreme liquidity stress scenarios</li> </ul>
Reputational	<ul style="list-style-type: none"> <li>• Identify risks which could negatively impact reputation or brand</li> <li>• Clearly communicate minimum standards to all staff</li> </ul>

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9

## Risk appetite statement

### Triggers

- Select appropriate parameters for the core risk appetite statements
- Design triggers for each core risk appetite statement
- Define the RAG tolerances for each risk appetite statement
  - Parameterisation and communication exercise

Statement	Green	Amber	Red
EEV Operating Profit	>£50m	≤ £50m	≤£45m
Solvency coverage under demographic stresses	>200%	>150%	<150%
Undiscounted payback period	≤9 years	≤10 years	>10 years
RoC	>15%	≥14%	<14%
Variance to plan of net non-underlying earnings	≤40%	≤50%	>50%
Quarter-end coverage ratios - 7 days	>1.75	>1.5	≤1.5
Project cash balance	≤180 days	≤365 days	>365 days

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10

## Risk appetite statement

### Management actions

- Determine possible management actions in event a trigger is breached
- Requires agreement and sign-off from Board

#### Example

Metrics	Risk Drivers	Suite of Management Actions
Capital	Credit spreads	<ul style="list-style-type: none"> <li>• Rebalance fixed income portfolio</li> <li>• Buy a hedge asset</li> <li>• Other risk transfer</li> <li>• Adjust capital plan</li> </ul>
Capital	Interest rates	<ul style="list-style-type: none"> <li>• Duration matching to minimise mis-match</li> <li>• Limit new business growth or sell off business</li> </ul>
Earnings	Longevity	<ul style="list-style-type: none"> <li>• Limit new business growth</li> <li>• Buy a hedge asset, subject to cost</li> <li>• Balance product portfolio mix</li> </ul>
Earnings	Persistency	<ul style="list-style-type: none"> <li>• Adopt targeted persistency management programme</li> </ul>

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11

## Risk appetite statement

### Governance of waiver process

- Waivers are granted to permit a breach in tolerance levels
  - Only acceptable when justified by a valid business reason
  - eg. Avoid crystallisation of losses on corporate bond portfolio, following widening in credit spreads
- For good governance you need to have a clear process
  - Define circumstances
  - Clear sign-off and evidence trail

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12

## Risk appetite statement

### Practical Issues

- How quickly can management actions influence the metrics
- Are risk appetite statements achievable or are they aspirational
  - If aspirational, then could constantly be reporting breach over short to medium term
- Are some risk appetites more important than others
  - E.g. breach of capital can close a business but breach of NB profitability will not
- Are there too many risk appetite statements (in particular on earnings)
  - Can lead to conflict with performance reporting
- How easy is it to change Risk Appetite and how does this look to regulator
  - Particularly given we have created hard numeric targets. Business could be hampered from exploiting good opportunities

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13

## Practical issues in implementing an ERM framework

### Section Three “Governance and organisation”

#### Governance and organisation ‘Three lines of defence’ framework

##### 1<sup>st</sup> Line of Defence Business Management

###### Key attributes

- Strong risk culture
- Strong culture of adhering to risk limits
- Ownership for risk
- Ongoing monitoring
- Portfolio optimisation on micro level

##### 2<sup>nd</sup> Line of Defence Risk Committees

###### Key attributes

- Overarching “risk oversight unit”
- Understand aggregated risk positions
- Objective oversight and challenge
- Supported by activities of the Risk function

##### 3<sup>rd</sup> Line of Defence Internal Audit

###### Key attributes

- Independent assurance
- Assessment of internal controls
- Link between business and risk with process and IT
- Board audit committee and internal audit function



## Governance and organisation

### Possible risk function structure



- Key considerations:
  - Sufficient resource to implement in a short time period
  - Larger team leads to increased profile of risk function
  - Each function receives appropriate attention
  - Considerable number of staff with potential overlap

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16

## Governance and organisation

### Roles and responsibilities

- Responsibilities for each function are:



- Independence of Risk function from Business and Finance functions
- Seniority of CRO in corporate structure

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17

## Governance and organisation

### Practical Issue

- Make sure roles are in place to make decisions. Ideally permanent Heads of areas should help design the program
- Committee structure is very important. Where do the decisions get made and what information is needed. Need to understand to progress MI
- New policies and procedures will be put in place. Need to balance the need for process and documentation with the ability to analyse data and take action
- Need to work together to ensure it doesn't just create another layer of governance
- If everything needs to be approved by different committees then by the time the information gets to the Board it can be significantly out of date

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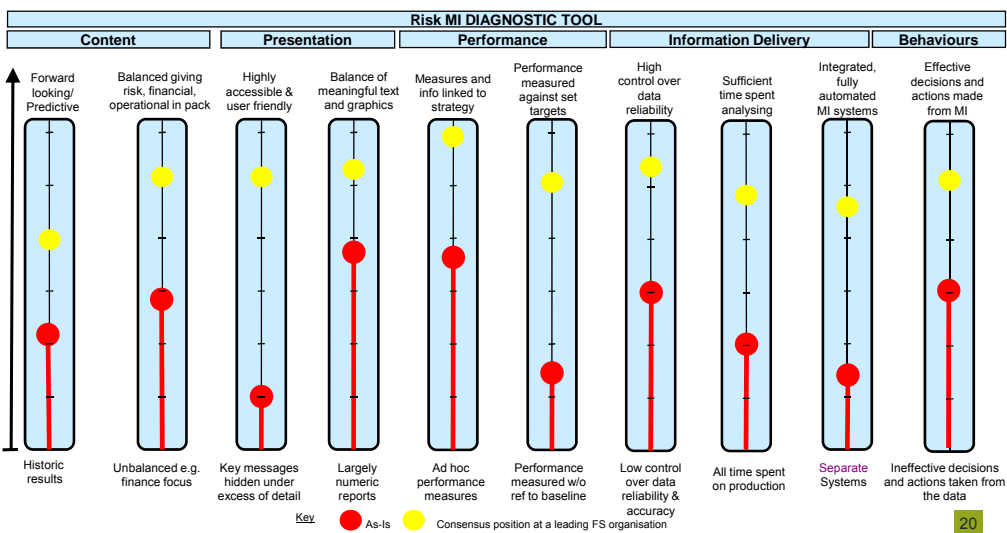
18

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## Section Four “Management information and risk metrics”

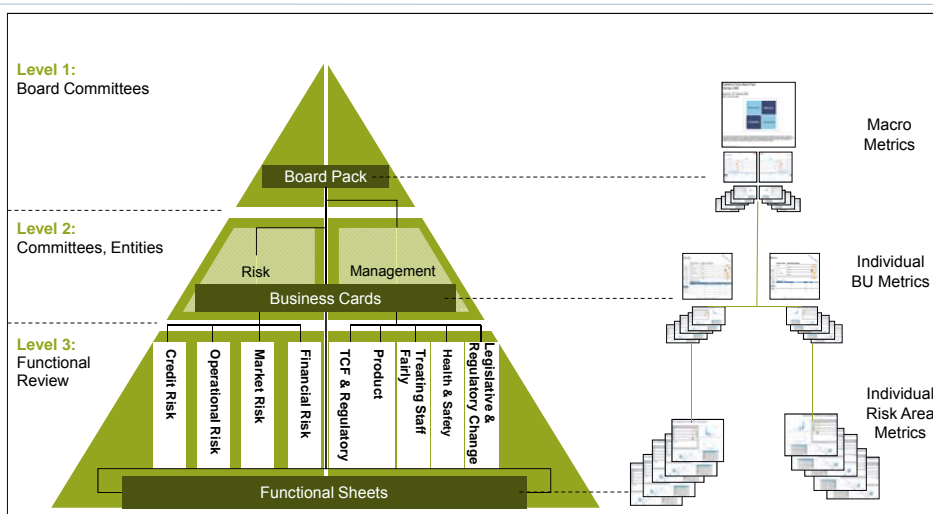
## Management information and risk metrics

### Snapshot across industry



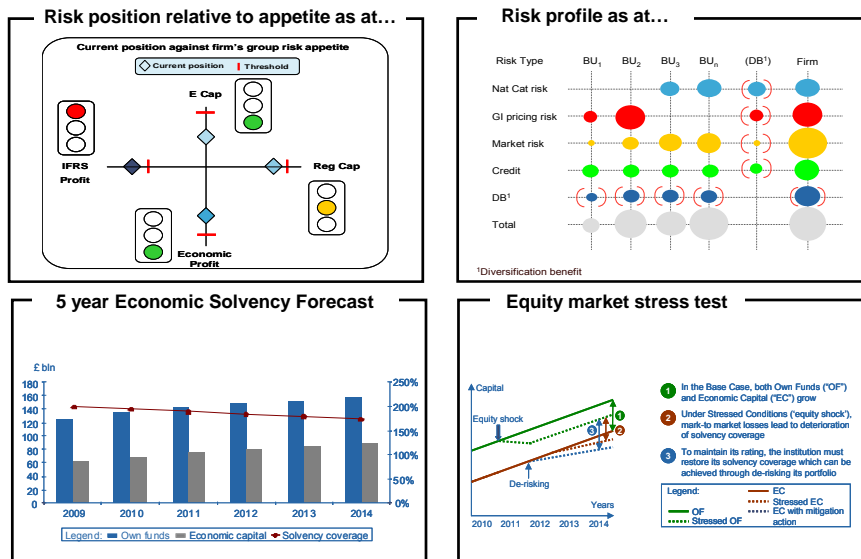
## Management information and risk metrics

### Defining granularity of needs



## Management information and risk metrics

### Dashboard content – some examples



22

## Management information and risk metrics

### Practical Issues

- Why does existing MI not deliver what is required?
- Should there be separate Performance MI and Risk MI?
- Balance between frequency of reporting and volatility of metrics (particularly on earnings metrics)
- Does every metric need to be produced every time - in some circumstances some metrics are stable
  - Ideally should we not understand the drivers of metrics and be able to identify issues before results are calculated
- If risk is truly embedded, should there even be separate Risk MI – why is there not one MI pack that covers performance and Risk
- How much does the Board need to know and how much education is required in order to understand

23

## Conclusion

- The implementation of an ERM framework is required in order to comply with Solvency II requirements
- Risk MI must allow users to link performance with risk appetite, risk policies and risk mitigation strategies
- As with any MI, credibility is key – this requires investment in processes and systems
- The embedding process will be time consuming and insurers will face a number of practical challenges
- Key outcome should be an improved understanding of the business and its exposures, both in Financial and Operational areas, by a much wider audience than in the past

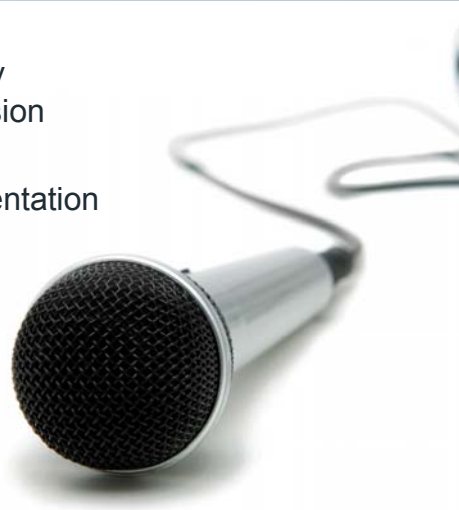
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24

## Questions or comments?

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25