

Managing your risks

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Principal

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Agenda

- **Risk Management - what must you do?**
- Elements of Risk Management
- How to achieve effective risk management?

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Current Regulations

- Asset Management Guidelines
- Guidelines on Risk Management of Derivatives
- Reinsurance Guidelines
- Financial Condition Report every three years
- Not very integrated

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New Corporate Governance Code

- Risk Appetite
 - Board need to establish documented risk appetite
 - Qualitative and quantitative
 - Address short, medium and long term horizons
- Regular reporting on compliance with appetite
- Material deviation from appetite
 - Communicate to Central Bank within 5 days

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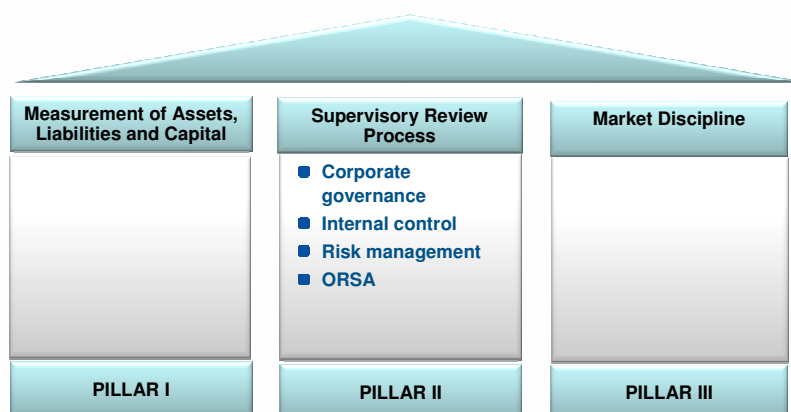
New Corporate Governance Code

- Control functions independent of business units
- Remuneration Policy
 - Ensure practices don't promote excessive risk
- Risk Committee
 - Advise Board on risk appetite and tolerance
 - Ensure effective risk management system
 - Oversee the risk management function
- Applies 1 January 2011 and 6 months to implement

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Solvency II – Pillar II



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Solvency II

- Risk management system
 - Strategies, processes and reporting procedures
 - Identify, measure, monitor, manage and report on risks and their interdependencies

- Cover at least
 - Underwriting and reserving
 - Asset-liability management
 - Investment
 - Liquidity and concentration risk
 - Operational risk
 - Reinsurance and other risk-mitigation
 - Responsibilities, goals, processes and reporting procedures

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Solvency II

- Risk Management Function

- Risk Appetite
 - Express in limits, earnings or capital volatility
 - Quantitatively or qualitatively

- Own Risk and Solvency Assessment (“ORSA”)
 - Continuous compliance with capital requirements
 - Assess solvency needs
 - Does risk profile deviate from assumptions underlying SCR calculation?
 - Integral part of business strategy
 - Forward looking - requires ability to project capital requirements

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Elements of Risk Management

- Framework
- Strategies / Policies / Procedures
- Risk Management Process

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Framework – 3 Lines of Defence

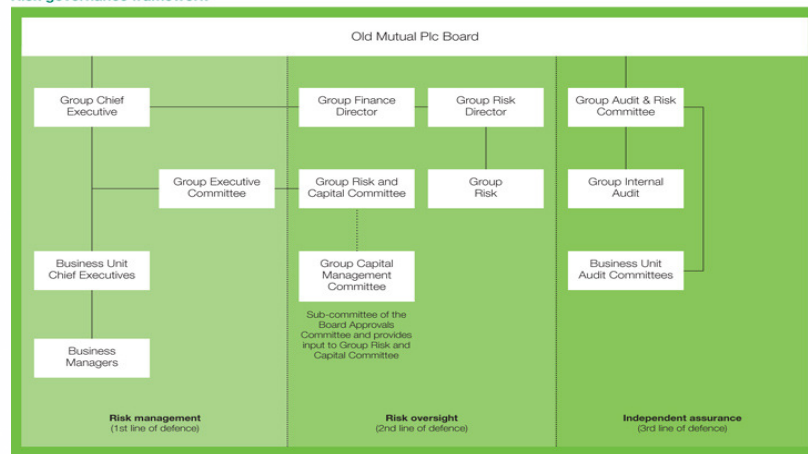
1. Risk Management
 - Primary responsibility of front line managers
 - Activities which involve actually taking risk
2. Risk Oversight
 - Independent of business activities
 - Risk management and compliance
3. Risk Assurance
 - Assurance that risk management environment operating effectively
 - Internal Audit

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3 Lines of Defence

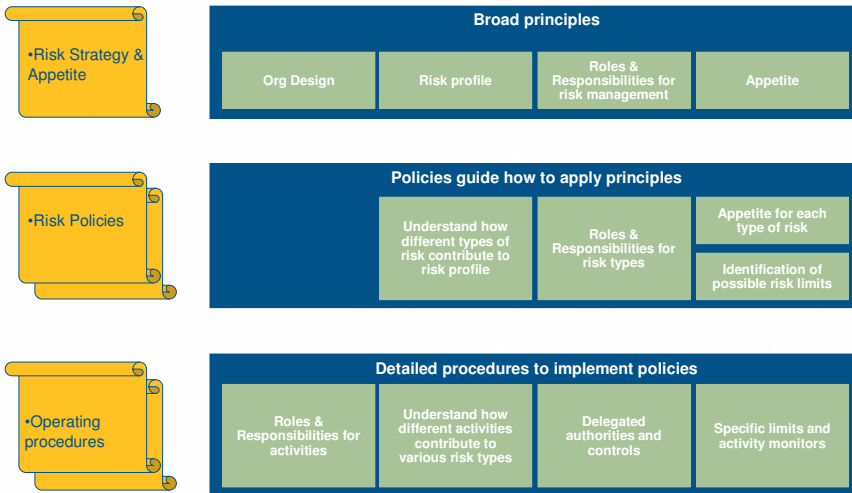
Risk governance framework



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Strategy, Policies and Procedures



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Risk Appetite

- Insurance companies in business to take risk
 - Which risks do you want to run?
 - Which risks do you want to minimise?
 - How much risk do you wish to take?
- Board responsible for defining
- Quantitative or Qualitative

Quantitative
 Capital sufficient to absorb all losses over next year with 99.5% probability

Qualitative
 Don't wish to take longevity risk

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Risk Appetite

- What level of confidence to use?
 - 1 in 200 or 1 in 10
 - Capital at risk or Earnings at risk

- Difficult to define for certain risks – e.g. operational risk
 - “Applying a risk appetite to operational issues has proved challenging for most firms” FSA November 2006

- Need to translate appetite into risk limits

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Risk Management Process

- Risk Identification

- Risk Analysis and Measurement

- Risk Monitoring

- Risk Management
 - Avoid / Transfer / Retain / Reduce
 - Risk mitigation
 - Risk Control

- Risk Reporting

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Risk Identification

- Risk Workshops
 - Interviews
 - Questionnaires
 - Surveys
- Risk Register
- Record of Loss Events
 - Include near misses
- Emerging Risks
 - Developing risks
 - Difficult to quantify using traditional risk assessment

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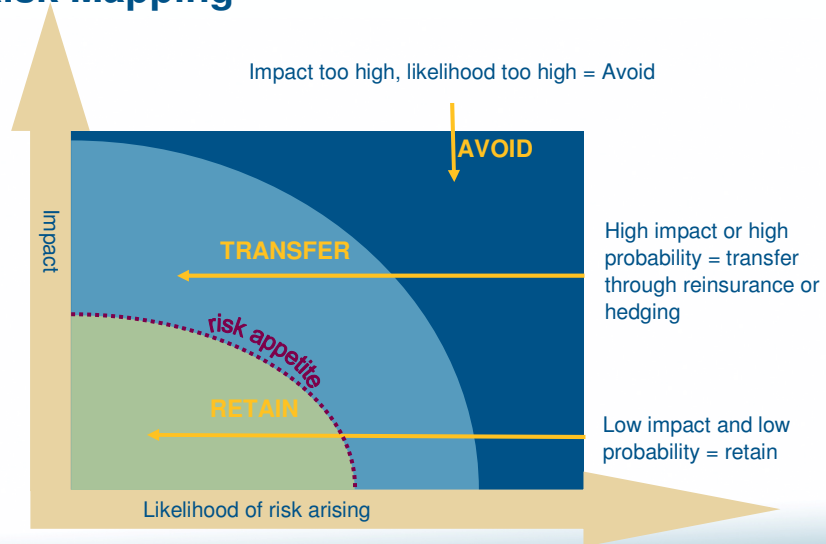
Risk Analysis and Measurement

- Economic Capital
- Likelihood and Impact
- Stress Testing and Scenario Analysis
 - Reverse stress testing; what are the killer scenarios?
- Key Risk Indicators
 - Complaints
 - Staff turnover
 - Error rates
 - System availability
 - Claims rate

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Risk Mapping



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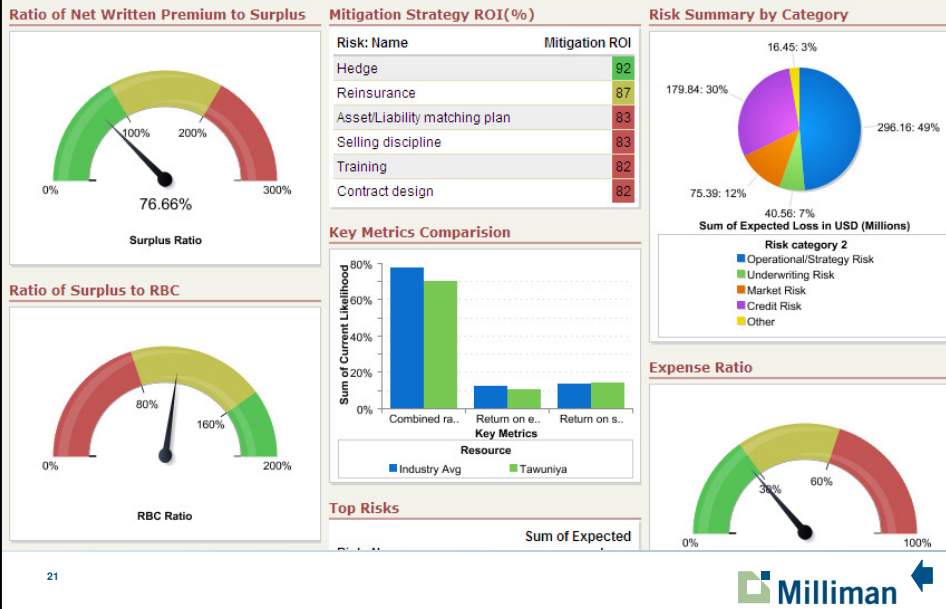
Risk Reporting

- Risk Dashboard
 - Current and emerging risks
 - Trends
- Variety of measures
 - Economic capital
 - Key risk indicators
 - Key residual risks
- Tailored
 - Internal
 - External

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Executive Dashboard



Agenda

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Effective Risk Management

- Not possible to legislate
 - No silver bullet
- Board's attitude critical
 - Effective RM not possible absent appropriate attitude from Board
 - Attitude to risks being raised?
- Board is responsible for:
 - Developing risk culture
 - Setting risk management strategy and risk appetite
 - Ensuring appropriate risk management system
 - Appropriate recognition to risk management function
 - Understanding risk profile

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Individual Responsibility

- Appointed Actuary system replaced by Actuarial Function system
- Great strength in requiring individual to sign
 - More powerful than collective responsibility?
- Fit and proper requirements
 - Should have appropriate qualifications, skills, experience
 - Should be honest, fair and ethical
 - Implications of not adhering to these standards?

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Risk Management Function

- Sufficient seniority
 - Able to challenge management?
- Freedom to raise questions
- Independent of business activities
- Skills needed include:
 - Quantitative skills
 - Modelling skills
 - Business Awareness
 - Influencing
 - Communication – explain complex issues to Board

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Lessons from crisis

- Importance of liquidity
 - Risk management needs to address
 - Property / Hedge funds / Private Equity
 - Margin calls on derivative positions
- Solvency II uses 1 year time period
 - Assumption capital can be raised
 - What if all companies in same situation?
 - Value in longer term projections
- Credit spreads
 - AIG 2007 VAR model didn't allow for movements in credit spreads
 - Could any company justify not considering impact on their company?

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Lessons from crisis - Models

- Useful, but...
- Not representative of real world
- Limitations
- Need to interpret



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Lessons from crisis – Closer to Home

- Unit-linked low risk?
 - Tracker Bonds
 - Cash funds
- Sufficient challenge of new products at design stage?
 - Extent of policyholder understanding?
 - Who takes the loss if the worst happens?

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Questions?

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