



The Actuarial Profession

making financial sense of the future

GIRO 2011

KPMG – Andrew Clarke



Moving Across to the Risk Side

12 October 2011

Agenda

- Introduction
- Overview of traditional actuarial activities
- Actuarial function under SII
- Risk management
- CRO mandate and its evolution
- Actuarial CROs - Advantages and challenges
- Next steps - Moving across to the risk side

Overview of Traditional Actuarial Activities

Solvency II required activities	Other common actuarial activities
<ul style="list-style-type: none">• Coordinate and oversee the calculation of technical provisions• Ensure appropriateness of technical provision methodologies, models and assumptions• Assess data quality• Compare best estimates against experience• Report to management on reliability of technical provisions• Provide a view to management on underwriting policy and reinsurance• Contribute to risk management	<ul style="list-style-type: none">• Capital management• Risk quantification• Unit pricing• Bonus policy and surrender values• Pricing for underwriting• Input into mergers and acquisitions• With-profits management• ALM/investment policy

Actuarial function under SII

Actuarial function

Advising on

- Underwriting policy
 - Consistency of process for accepting risks with the risk appetite of undertaking
 - General comments on the process of accepting risks
 - Expected overall profitability of business to be written during next year
- Reinsurance policy
 - Treatment and effect of reinsurance on the estimation of net technical provisions
 - How coverage may respond under a number of stress scenarios
 - consistency of the reinsurance arrangements with the risk appetite of the undertaking
- The effective implementation of the risk management system
 - the risk modelling underlying the calculation of capital requirements;
 - contribution to the ORSA
 - development of the internal model
 - involvement in asset-liability management; and
 - involvement in risk mitigation arrangements
- Other risk-related issues to the CRO

Actuarial function under SII

Actuarial function

Co-ordinating

- The calculation of technical provisions in line with SII directive:
 - Understand different drivers of technical provisions and perform relevant analysis of data
 - Consult external market information as appropriate
 - Take account of limitation of data quality and granularity
- Methodologies, models and assumptions used to calculate the technical provisions:
 - Ensuring appropriateness of the methodologies and underlying models used as well as assumptions made
 - Regular review of methodologies
 - Stress and back testing of methodologies and models
 - Challenge all components of internal modelling (including integration and diversification effects)
- The production of “actuarial aspects” of external risk reporting and risk MI

Challenging

- Business strategy
- Risk management – risk mitigation, risk quantification, risk identification from technical provisions, internal model

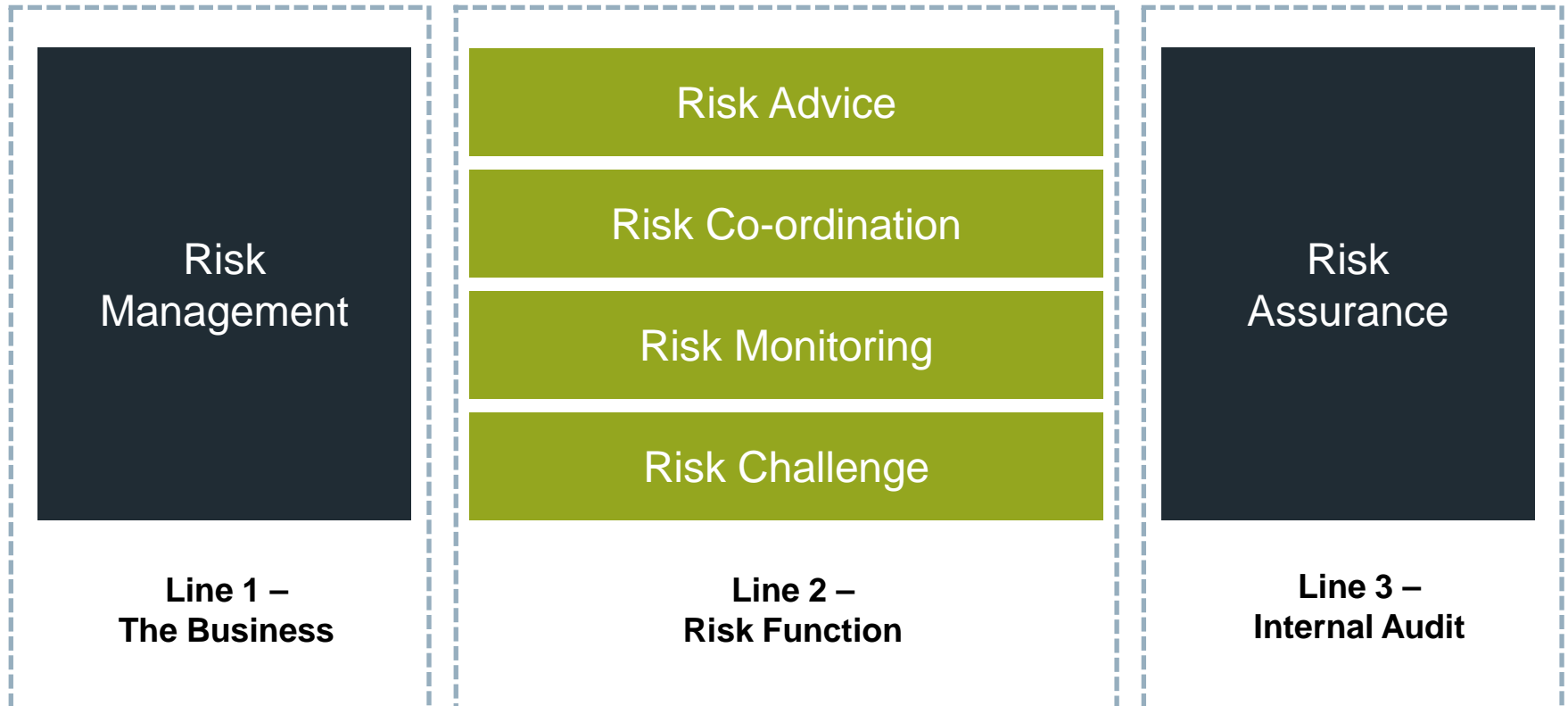
Risk management

- Increasing interest in risk management following various high-profile corporate failures
- Solvency II changing overall approach to risk management
- Increasing awareness of potential for use of actuarial skills in risk management.

Risk management system

- ❑ Covering at least :
 - Underwriting and reserving
 - Asset–liability management
 - Investment, in particular derivatives and similar commitments
 - Liquidity
 - Concentrations
 - Operational risk
 - Reinsurance and other risk-mitigation techniques
- ❑ Regularly assess overall solvency needs taking into consideration firm's own specific risk profile (ORSA).

CRO Mandate



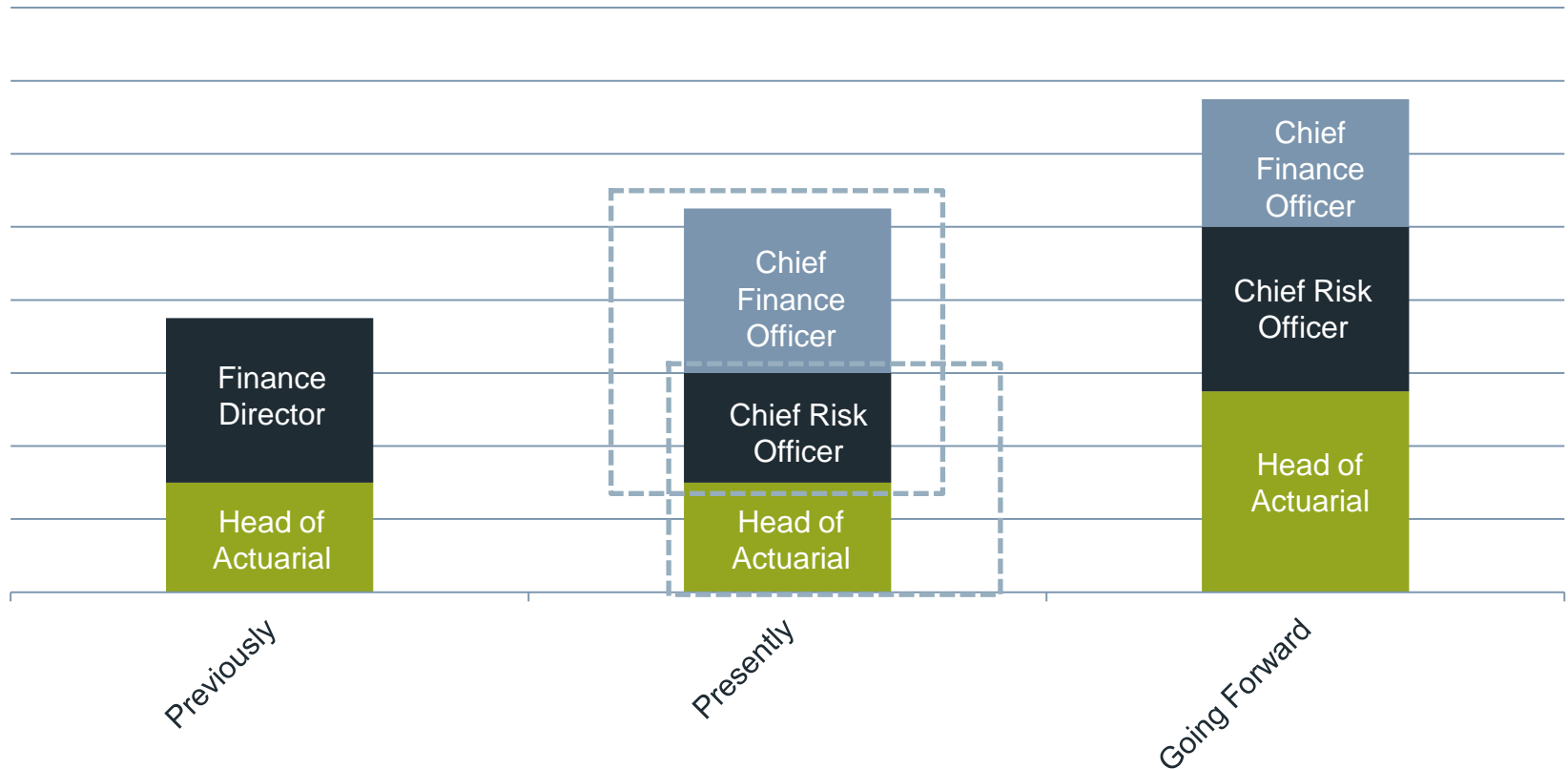
Source: FSA Role of Risk Function March 2011

Responsibilities of CRO

CRO Mandate

Advising on	<ul style="list-style-type: none">• Risk - strategy, framework, appetite and limits, mitigation• Key performance indicators along with targets, limits and thresholds• New product approvals• Stress and scenario testing• Model standards and governance
Co-ordinating	<ul style="list-style-type: none">• ICA and Solvency II• Risk reporting (both internal and external)• Response to regulatory changes• Training and knowledge management around risk
Monitoring	<ul style="list-style-type: none">• Firm wide risk management systems and controls• Risk capacity vs. risk profile• Breaches of limit• Escalation processes and findings• Line 1 performance
Challenging	<ul style="list-style-type: none">• Business strategy• Key/ emerging trends, variances and anomalies• Major projects/ change management programmes/• Major projects, M&A, etc

CRO – An evolving role



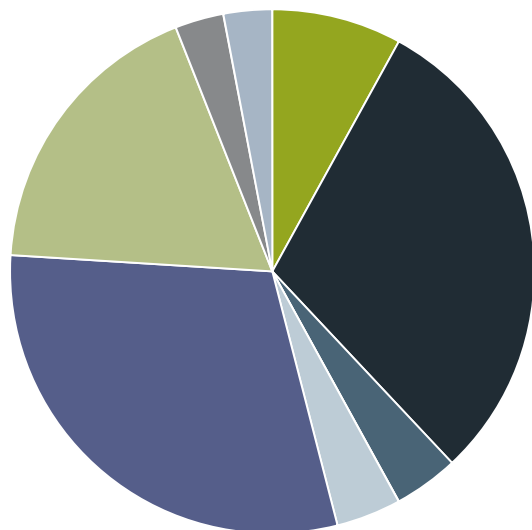
Source: FSA Role of Risk Function March 2011

Roles – CRO and Chief Actuary

Related duties	CRO	Chief Actuary
Business strategy	Challenging the business strategy	Assisting in the production and challenge of the business strategy
Risk management system	Oversight of firm wide risk management systems and control	Contributing to the effective implementation of the risk management system
		Express an opinion on the overall underwriting and reinsurance policies
		Ensuring that the model underlying the calculation of the technical provisions appropriately addresses main risk drivers and is robust.
External risk reporting	Oversight/validation of external risk reporting	Production of “actuarial aspects” of external risk reporting and risk MI
Risk MI	Ensuring adequacy of risk MI, analysis and training	Production of actuarial aspects of external risk reporting and risk MI
Risk appetite vs risk profile	Monitor / report on risk appetite vs risk profile	Provide expert advice to the CRO

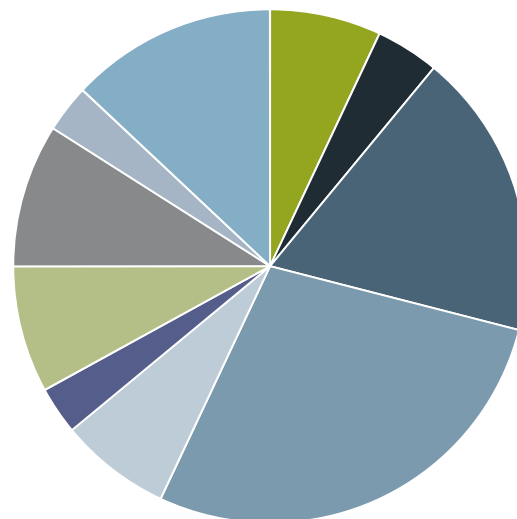
CRO background

Original Qualifications of the CRO



- Risk
- Finance/Accountancy
- Legal
- Audit
- Compliance
- Actuarial
- Insurance

Previous Role of the CRO



- CRO in another organisation
- Operations Director/COO
- Head of Risk/Risk Manager
- Chief Actuary
- Risk or Management Consultant
- Underwriter
- Broker
- Head of Compliance
- Lawyer

Source: IRM SIG solvency II survey – December 2009

Advantages of Actuarial CROs

- Strong understanding of financial risks
- Technical understanding of Insurance risk
- Strong technical understanding of the internal model
- The Actuarial examination process gives a broad view of the risks faced by insurers
- Able to provide the Board with guidance around the design of the risk management framework and its components
- Can communicate sophisticated concepts effectively.

Key challenges for Actuarial CROs

- Needs a wider understanding of risk
 - Capacity to understand the wider context of business
 - Oversee a range of risk types from insurance risk and financial risk, through to operation risk
- Need to understand the limitations of technical analysis
- Ability to focus on both the qualitative and quantitative assessment of risk across all risk types
- Business-focused with strong understanding of the core business and excellent relationship management skills
- Need to manage on areas where you are not necessarily the expert.

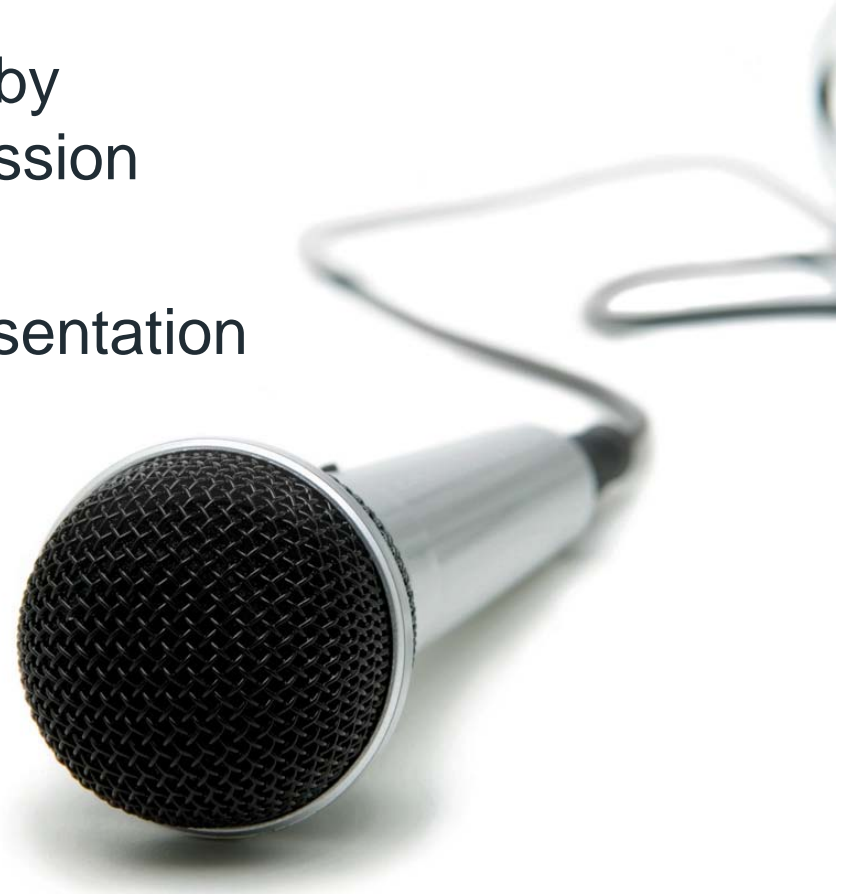
CERA (Chartered Enterprise Risk Actuary) Qualification

- A global risk management qualification
- Outline CERA qualification
- Discuss how this fits with the CRO role and how it could address some of the challenges outlined in the previous slide
- “The qualification is designed to equip actuaries to fulfil roles such as chief risk officer”.

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



Contact Slide

Presenters contact details

Andrew Clarke

KPMG LLP (UK)

020 7311 5305

andrew.clarke2@kpmg.co.uk