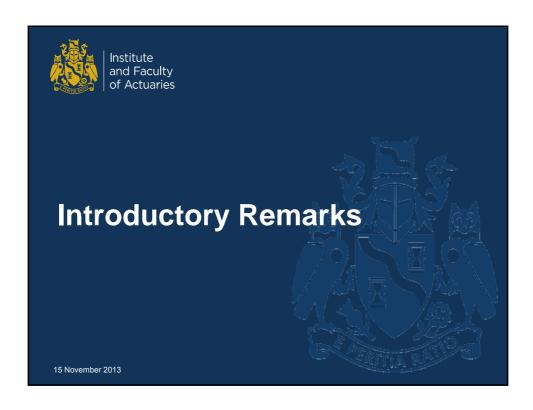


Agenda

- Introductory Remarks
- Background and Context
- Outlining the 3 LOD model and impact of Solvency II
- Challenges with the 3 LOD model and specific challenges for the CRO
- · Risk culture and the CRO role
- Adding value the role of the CRO
- Conclusion



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Introductory Remarks

- Significant changes have occurred in the whole area of risk governance over the past 10 years
- Insurance has always been ahead of the curve relative to other industries
- Risk management existed e.g.
 Appointed Actuary responsibilities but not in a formalised sense
- Increased recognition of the importance of risk management and governance
- CRO role, in particular, has been created and/or and elevated to C-suite
- The relative "newness" of the CRO role and the evolving nature of risk governance has meant that entities' focus on ensuring clearly defined roles and responsibilities for various function holders has not been a priority
- However, risk governance operating models are now reaching a stage of maturity where this is now becoming a priority



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Introductory Remarks

"its not enough that various risk and control functions exist - challenge is to assign specific roles and to co-ordinate effectively and efficiently among these groups so that there are neither 'gaps' in controls or unnecessary duplications in coverage."



Board and senior management are the primary stakeholders served by the three "lines" of defence. They have responsibility for the governance structures and processes required to achieve an entity's strategic objectives and the "three" lines of defence is best implemented with support and guidance of governing bodies.

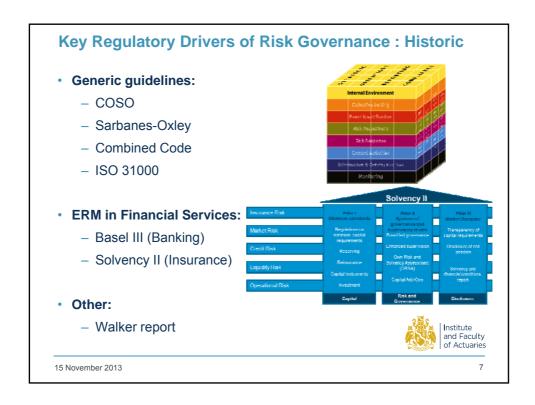
"not uncommon to find diverse teams of internal auditors, ERM specialists and other risk and control professionals working together to help their organisations manage risk. Each of these specialities has a unique perspective and specific skills...but because duties related to risk management and control are increasingly being split across multiple departments and divisions, duties must be coordinated carefully to assure that risk and control processes operate as intended."



Source: The three lines of defence in effective risk management and control (IIA – January 2013)

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Changing Risk Governance Expectations FSB Thematic Review on Risk Governance (Feb 2013)

- · A more holistic approach to risk governance is required
- · Sound risk governance practices recommended in relation to the Board are:
 - Ensuring the independence of the board and the suitability of it's composition
 - Consider the relevant types of skills the board should possess and the time commitment expected
 - Conduct periodic reviews of the training and skills needed by Board members
 - Assess if the level, type and frequency of risk information provided to the Board enables an effective discharge of responsibilities
 - Communication procedures should exist between the Risk Committee and the
 rest of the Board and across Board committees, most importantly audit and
 finance committees. Cross membership of audit and risk committees is a positive
 - The Board or audit committee should obtain independent assurance of the design and effectiveness of the risk governance framework on an annual basis

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9

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Changing Risk Governance Expectations FSB Thematic Review on Risk Governance (Feb 2013)

- · Specific recommendations in relation to the role of the CRO include:
- Specific recommendations in relation to the role of the CRO include:
- · Other recommendations:
 - Actively work to develop the 'risk culture' of the organisation and link risk management to performance management objectives
 - FSB producing report on how to formally assess risk culture
 - Ensure there is an appropriate attitude towards ownership of risk across the firm with the business lines firmly responsible / accountable for risks created by their activities

the mine frem prome moluting strategic planning and man

 Ensure there is an appropriate attitude towards ownership of risk across the firm with the business lines firmly responsible / accountable for risks created by their activities



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Changing Risk Governance Expectations

PRA and FCA regulatory approaches to governance

What the PRA is looking for

- Ensure individuals appointed to senior management positions are competent to fill such roles
- The Board should set strategy and policies clearly
- Clear accountability and delegation of responsibilities
- A culture that supports prudent management
- Remuneration and incentive structures should reward careful and prudent management
- The Board should hold management to account
- The PRA expects all boards of legal entities within groups to have regard to the PRA's objectives
- Open dialogue with the regulator

What the FCA is looking for

- Does the firm have the interests of its customers and the integrity of the market at the heart of how the business is run?
- "Senior management teams set the culture of their firms, so we test that the strategy and tone set at the top align with good customer outcomes"

Extract from speech by FCA, on 02/07/2013

Governance is one of the most common areas for PRA and FCA-mandated reviews





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Risk Governance Practices

Findings from the most recent Deloitte Risk Practices survey

Role of the board of directors

• Regulators are paying increased attention to the role of the board of directors in risk governance, i.e. providing direction to and approval of the institution's risk appetite and risk policy, and overseeing their implementation by management

Role of the board of directors

directors devoted more time to the oversight of committed considerably more time than before

- Regulators are paying increased attention to the role of the board of directors in risk governance, i.e. providing direction to and approval of the institution's risk appetite and risk policy, and overseeing their implementation by management
- 94% of the institutions surveyed said their board of directors devoted more time to the oversight of risk compared to five years ago, with 67% saying it committed considerably more time than before



demonstrates the responses to the question — which of the above risk oversight activities does your company's board of directors or board risk committee(s) perform?

ource: Deloitte global risk management survey, 2013 (86 financial institutions around the globe)



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Risk Governance Practices

Findings from the most recent Deloitte Risk Practices survey

Board risk committees

- Most institutions (62%) assign primary responsibility to risk oversight to one or more board committees
 that oversee risk management, including risk policies and the organisation's risk appetite
- Most common approach, adopted by 43% of institutions surveyed is to place the responsibility for risk Incorporating risk management into incentive plans
- Lately, more attention has been paid to the relationship between compensation plans and risk management in an effort to help increase alignment between incentive compensation and the institution's risk appetite. As a result, it has become a leading practice to incorporate risk management considerations into performance goals and compensation decisions
- In 2012, 45% of institutions indicated that reviewing the compensation plan to assess its impact on risk appetite was a responsibility of the CRO and the independent risk management function, up from 34% in 2010. More common at large institutions (52%) than at small institutions (29%)
- management in an effort to help increase alignment between incentive compensation and the institution's risk appetite. As a result, it has become a leading practice to incorporate risk management considerations into performance goals and compensation decisions
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Risk Governance Practices

Findings from the most recent Deloitte Risk Practices survey

Key role of the CRO

Key role of the CRO

with overall responsibility for oversight of risk management – d attention to risk considerations and implement consistent e organisation

- Most institutions cited a wide range of responsibilities for their CRO and independent risk management group. More than 80% of institutions said these responsibilities included escalating risk issues to the CEO and/or the board of directors, identifying risk concentrations, and identifying new and emerging risks. At many institutions, the CRO and risk management function also have more strategic responsibilities, indicating their higher profile in the organisation: assisting in developing the firm-wide risk appetite statement (87%), participating in executive sessions with the board of directors and/or board risk committee (79%), providing input into business strategy development and the periodic assessment of the plan (79%), and approving new business or products (63%)
- In the survey, 88% of institutions reported using a three lines of defence governance model, including 97% of large institutions
- Institutions said the biggest challenge they faced in using this governance model was defining and maintaining the distinction in roles between line 1, the business, and line 2, risk management (45%)
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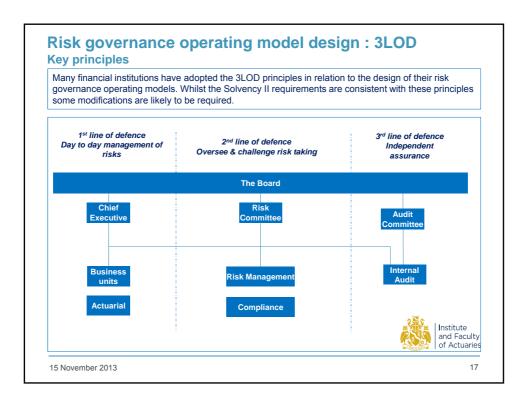
Conclusions and Challenges

- Regulatory change has been at an unprecedented level and has driven the introduction of risk governance operating models and greatly enhanced the role of the CRO
- The 3 Lines of Defence model has become the de facto standard in risk governance
- Many entities are also seeking to drive greater efficiencies and 'value add' from their risk governance model
- · These changes present a number of challenges:
 - Governance: How do we optimise the overall governance framework to:
 - · Ensure the CRO has an important and strategic role
 - · Avoid gaps and overlaps in roles and responsibilities
 - Operating Model: How do we ensure an operating model is established that helps to be a value creator for the organisation?
 - People: How do we optimise the use of resource and leverage the use of specialist skills to improve risk management?
 - Culture: How can we embed an appropriate risk culture throughout the organisation?



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Three lines of defence:
Outline & Impact of Solvency II



First Line of Defence & Interaction with CRO

1st Line: Responsible for owning and managing the risks of the business

Key Responsibilities of 1st line

- Board, supported by the Risk Committee, sets the firm's risk appetite and strategies and Interaction with CRO, who is responsible for:
- Oversight and challenge of 1st line
- Developing, training and maintaining skills required among the 1st line staff to define, assess and manage their day-to-day risks effectively and consistently
- Communicating to 1st line the alignment of the company strategy with risk management activities
- Ensuring awareness by 1st line (person, section, department) of their role within the company, risks they are facing and how those feed into the overall strategic objectives i.e. risk culture
- Collecting feedback from the 1st line and integrating it into the next risk management cycle
- Communicating to 1st line the alignment of the company strategy with risk management activities
- Ensuring awareness by 1st line (person, section, department) of their role within the company, risks they are facing and how those feed into the overall strategic objectives i.e. risk culture
- Collecting feedback from the 1st line and integrating it into the next risk management cycle



Second Line of Defence

2nd Line: Responsible for providing expert advice, oversight and challenge

- Responsible for oversight and challenge of the 1st line in its day to day management, control, monitoring / reporting of risks and independent of management / personnel responsible for originating risk exposures:
 - Advises on best risk management framework and facilitates its implementation by 1st line
 - Ensures1st line risk management tools and controls are properly designed and implemented
 - Assists risk owners in identifying risks, defining risk exposures, managing risk and risk reporting
 - Constructively challenges the actions and decisions of the1st line and assists the 1st line in considering risk when making key decisions
 - Identifies known and emerging risk issues or shifts in the entity's risk appetite
- Development and delivery of risk education / training across the firm i.e. risk culture
- Close working relationship with 3rd line
- Development and delivery of risk education / training across the firm i.e. risk culture
- Close working relationship with 3rd line



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Third Line of Defence & Interaction with CRO

3rd Line: Responsible for providing independent assurance on the effectiveness of the overall system of internal control, including risk management and compliance

Key Responsibilities of 3rd line Key Responsibilities of 3rd line

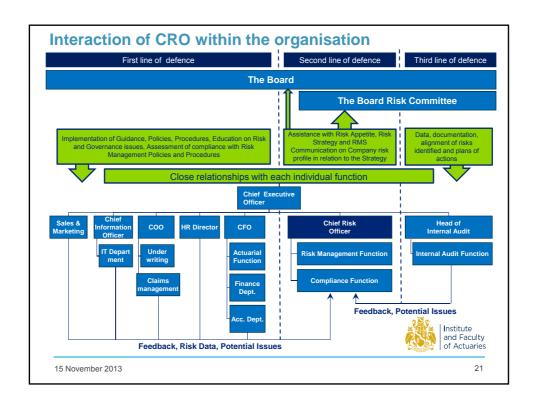
Audit Committee supported by the Internal Audit Function provides independent

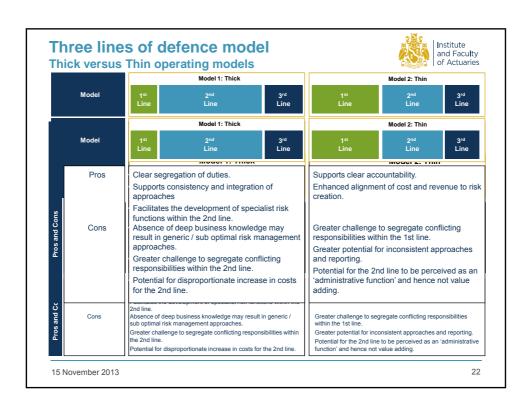
Interaction with CRO, who is responsible for:

- Ensuring Internal Audit has access to all relevant risk related information
- Co-operating with Internal Audit on aligning the Internal Audit and Risk Management plans with the entity's strategy
- Mutual communication of identified issues, risks, observation and trends in order to ensure that no risks are missed out
- Internal Addit is independent or both the business and control functions and reports
 directly to the Chief Executive (typically) and Addit Committee
- Recommend improvements to the design and operation of the ERM and/or internal controls framework
- Mutual communication of identified issues, risks, observation and trends in order to ensure that no risks are missed out

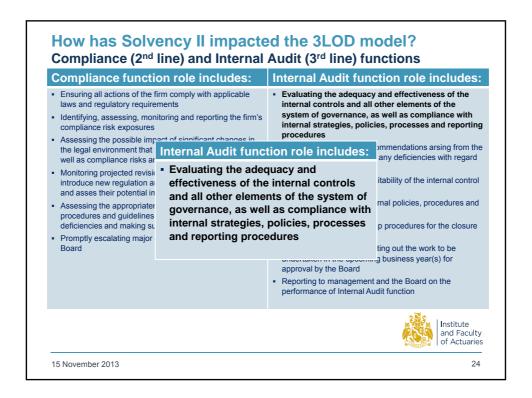
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How has Solvency II impacted the 3LOD model? Risk (2nd line) and Actuarial (1st line) functions Risk function role includes: **Actuarial function role includes:** Defining and documenting the risk management Coordinating the calculation of technical provisions strategy, including objectives, key principles, risk • Ensuring the appropriateness of the methodologies and appetite and assignment of responsibilities underlying models used and assumptions made in the Assisting the effective operation of an overall risk calculation of technical provisions Risk function role includes: **Actuarial function role includes:** · Designing, documenting, testing, . Contributing to the implementation of validating and implementing the an effective risk management system, internal model including the risk modelling underling · Integrating the internal model into the the calculation of capital requirements and the 'Own Risk Solvency internal risk management system Assessment' Analysing and reporting on internal model performance, suggesting areas needing improvement Assessment Analysing and reporting on internal model performance, suggesting areas needing improvement Institute and Faculty of Actuaries 15 November 2013



3LOD & the Solvency II Governance Model

Whilst the key principles of the 3 Lines of Defence model have been widely adopted, firms have tailored their approaches, resulting in differing allocations of responsibilities. As there is no single solution to the allocation of risk management responsibilities across a group or a single entity and a range of potential options exist.

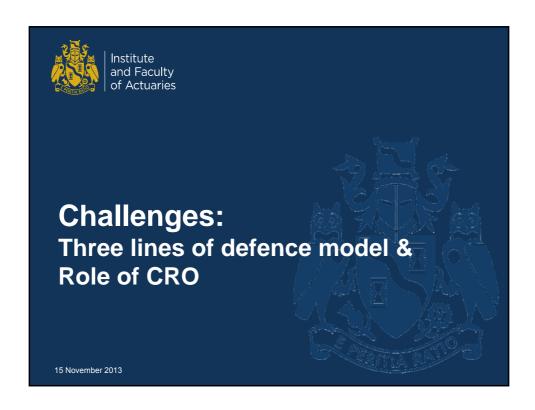
Key considerations include:

- The overall operating philosophy of the group or entity (e.g. thick versus thin approach)
- The availability of **specialist resource** and / or the need to optimise the use of specialist resource e.g. actuarial
- The maturity of the various risk management practices
- The need for specific and sophisticated risk management approaches that are more closely aligned to the nature and complexity of a given business
- The level of independence required in relation to the assignment of potentially conflicting roles e.g. the design and development of risk models versus their validation

Solvency II compliant governance frameworks also need to address a number of other key matters including:

- The Board, senior management and other staff have the requisite skills and experience to discharge their (new) responsibilities effectively; and
- Ensuring changes required to the governance arrangements are appropriately embedded and can be evidenced in operation as part of the firm's internal model application process





Risk Governance: Key Challenges Building a risk aware culture Institution-wide business strategies and objectives Roles, responsibilities, accountability and how this fits within the entity's RMS often unclear Committee structures, responsibilities and mandates lack clarity RMS is a continuous 2nd and 3rd line functions used as activity that aggregates and integrates risk management activities in order to better optimize management assurance and quality control functions Limited risk and control resources not risk-adjusted deployed effectively returns Communication paths not defined; arguments over whose "job" it is RMS not dynamic and fails to proactively Providing accountability and Supports decision making and capital identify and adapt to changing conditions and/or unexpected events Insufficient focus and time spent discussing risks across the entity Institute and Faculty of Actuaries 15 November 2013

CRO & Other Roles: Key Challenges

- · Overall, clarity on the roles and responsibilities of
 - each line of defence; and
 - each function within individual lines

is crucial

- · Specific challenges for CROs in terms of their roles and responsibilities include:
 - Dual Role or "Dual-hatting" CROs
 - Conflicts of interest
 - The Actuary as CRO



Clarity of Roles - General

- For the 3 lines of defence model to work effectively, each individual business unit / function must understand their role and responsibilities
- Collaboration between the lines is required but lack of a clear mandate can mean some risks 'fall through the gaps' or there is unnecessary overlap between functions
- Where 1st line functions perform some oversight functions (e.g. the Actuarial Function), you
 must clearly distinguish between 1st line activities and 1st line resources doing 2nd line
 activities:
 - Independence must be clearly demonstrated and documented
 - The biggest challenge institutions face in used the 3 LOD model is defining and maintaining the distinction between roles in the first and second line (Deloitte Risk Practices Survey 2012)
- · Role definition can be assisted by:
 - Having a clear policy for each function / role setting out roles and responsibilities
 - Accountability for risk management being included in 1st line performance appraisal
 - Ensure that no responsibilities are delegated to Internal Audit that could compromise their independent oversight function



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20

Clarity of Roles – Risk Function & CRO

- It is particularly important for there to be clarity on the role of the Risk Management Function
- Risk management must be seen as an imperative for the whole firm and not just the responsibility of the Risk Management Function
- 1st line must take ownership for risk management this cannot be seen as a 2nd line activity
- · Risk management must be seen as more than just about regulatory compliance
- An appropriate risk culture must be modelled by all key executives and the Board
- The CRO must also ensure:
 - They have the required profile throughout the business and are viewed as a peer with the rest of the 'C suite'
 - Direct reporting line to the CEO is preferred
 - Reporting to the Board Risk Committee



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Clarity of Roles - Actuarial Function

- Where do specialist functions like Actuarial sit in the 1st or 2nd line?
- If the Actuarial Function straddles the 1st and 2nd line in terms of the activities it carries out, then responsibilities and reporting lines must be very clear
- Where the actuarial function is 1st line, the Risk Management Function must have the necessary expertise to adequately oversee them
 - Must be able to demonstrate objective review and skilled challenge of key decisions
- · For actuaries in the 1st line doing 2nd line activities, accountability rests with the CRO
- Actuarial may provide management information and processes to support the 1st line in evaluating risk, while also providing oversight and challenge to business units (e.g. providing opinions on the underwriting policy)
 - Must collaborate and communicate with the 2nd line to ensure no overlaps



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21

Clarity of Roles - Ownership of the Internal Model

- Ownership of the Internal Model presents particular difficulties under the 3 lines of defence model. Under Solvency II:
 - Risk Function must ensure the effective design, implementation, testing, validation and documentation of the Internal Model
 - Actuarial Function also has specific responsibilities:
 - Ensuring the appropriateness of the methodologies, models and assumptions
 - · Data sufficiency and quality
 - · Opinion on underwriting and reinsurance
- If both Risk and Actuarial are involved in developing the model, who will validate it?
 - Separate people in the Risk Function
 - Internal Audit?
 - · Could create a conflict when it comes to reviewing controls later
 - External validation



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Duties	CRO	Chief Actuary	
Risk Management	Oversight of firm wide risk management systems and control	Contributes to the effective implementation of the risk management system Opines on underwriting and reinsurance policy Ensures the appropriateness of the methodologies, models and assumptions used in the calculation of technical provisions	
Internal Model	Ensures the effective design, implementation, testing validation and documentation of the Internal Model	Ensures the appropriateness of the methodologies, models and assumptions used in the Internal Model	
Risk MI	Ensures adequacy of risk MI and analysis	Production of actuarial aspects of risk reporting and MI	
Risk Appetite vs. Risk Profile	Monitors and reports on risk appetite vs. risk profile	Assists in monitoring risk appetite vs. risk profile by: Advising management on the risks the firm runs and the required capital Monitoring and reporting on those risks Escalating if there are any material concerns or if risk appetite / limits are likely to be breached	
Business Strategy	Challenges the business strategy	Assists in the production and challenge of the business strategy	
		Institute and Facul	

Dual Role CROs – Chief Actuary & CRO

- Clearly there is potential overlap between the two roles; this can create efficiencies but also may lead to conflicts of interest where roles are not well defined
 - Example: Actuarial function must express an opinion on the Reinsurance Policy but this may be set by the Risk Management Function
- Appointed Actuary & CRO; in some cases, actuarial function does not report to the Appointed Actuary (Ireland); entity size not always a factor
- Firms must be able to demonstrate that any conflicts of interest arising are formally acknowledged, managed and mitigated and that individual has capacity and skills to "dual-hat"
- Actuarial function may also perform other roles outside those outlined in Solvency II (e.g. pricing) which can create further conflicts
- Even within the 2nd line, independence within the structure is important, for example, if an internal model is used different people should be responsible for:
 - Designing and implementing the model
 - Testing and validating the model.



Dual Role CROs - Compliance & Other

CRO and Head of Compliance Function

- Natural fit between these roles?
 - CRO may be Head of Compliance or the Head of Compliance may report to the
 - May avoid duplication of operational controls
 - Integrated approach can lead to better risk management
- Danger that the CRO is seen as being narrowly responsible for regulatory compliance diminishing overall effectiveness unless separate compliance and risk teams report into CRO

CRO and Other Roles

- Key question: Is performance based on measures that could conflict with the risk and control duties of the CRO?
- If so, how is this conflict addressed and the integrity of the 3 lines of defence maintained Institute and Faculty of Actuaries
 - CRO and Head of Pricing?

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Conflict of Interest Checklist

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Question	Check	
What could go wrong?	$\sqrt{}$	
How much would such an event cost to rectify?		
Are there vested interests materially conflicting with responsibilities?		
Is there a misalignment between performance measurement / remuneration and responsibilities?	V	
Are the personnel responsible subject to professionalism requirements e.g. code of conduct?		
Are there executive / Board oversight committees in place?		
Is periodic external review in place?	√	
Could the entity define the conflict of interest if issues arise?		
Would the structure withstand regulator or media scrutiny?	√	
What would be the cost of full segregation of duties?	\checkmark	
Source: Society of Actuaries in Ireland	Institute and Facul of Actuari	

The Actuary as CRO

- Actuaries (or the actuarial function) have in reality been the financial risk function in (re)insurance companies for many years
- · Are actuaries the natural CROs for (re)insurers?
- · A wide understanding of the business and a range of risks is required.

Advantages

- · Strong understanding of financial risk
- · Technical understanding of insurance risk
- Technical understanding of the Internal Model
- · Strong understanding of the business typically
- Actuarial training gives a broad view of the risks insurers face and a framework for analysing those risks
- · Experience of communicating complex concepts to non-experts.



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37

The Actuary as CRO

Challenges

- May overly focus on what they know (i.e. financial risk) at that expense of other risks (e.g. operational)
- · CRO role is as much qualitative as quantitative
 - Must appreciate the limits of quantitative models (focus of CRO is on tail risk)
- Management of risk is about processes and controls
- Management skills managing risks / areas in which you are not an expert
- Excellent communication and relationship management skills wider range of stakeholders
 - High level of visibility required.



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CRO Role - Your "ideal" CRO

Key Attributes

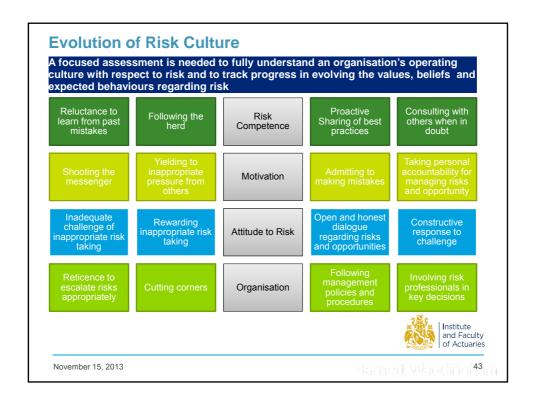
- Understands the (re)insurer's business strategy and plans
- · Understands how the business operates
- Understands the role of each function within the business and how each function interacts
- Must have a similar level of cross-functional knowledge as the CEO this is different to all other functions / roles
- Must be strong at communicating and building relationships, whilst maintaining independence
- Must be **credible** to all parties to enable working across cross-functional lines
- Must be technically competent











Maturity levels		
"Unaware"	It is a characteristic of the processes/practices at this level that they are either non existent, not implemented and/or not commonly/clearly defined. There is also a lack of formality regarding risk processes and the enterprise is not conscious or understanding of their importance	
Maturity levels		
"Unaware"	It is a characteristic of the processes/practices at this level that they are either non existent, not implemented and/or not commonly/clearly defined. There is also a lack of formality regarding risk processes and the enterprise is not conscious or understanding of their importance	
Optimised	It is a characteristic of the processes/practices at this level that they be well entrenched in business as usual, and that the focus be on continually improving them. The processes/practices are at the optimum level and enterprise is able to sustain and/or strengthen them	
	are consistent, effective and widely applied across the enterprise	
Optimised	It is a characteristic of the processes/practices at this level that they be well entrenched in business as usual, and that the focus be on continually improving them. The processes/practices are at the optimum level and enterprise is able to sustain and/or strengthen them	



Adding value - the role of the CRO

- Solvency II has shifted the focus and risk is now centre stage in the strategic management of the organisation
- Goal for the CRO should be for risk to be seen as a source of competitive advantage
 - Will help to ensure risk has a high profile and 1st line business units are bought in
- To achieve this the CRO must have an active role in strategic decision making, they
 must provide a forward looking risk perspective working in collaboration with their 'C
 suite' peers
- A good Risk Management Function should complement the activities of the 1st line, it should be seen not (just) as an enforcer but as a trusted advisor and enabler of best practice
- Risk management should be a 'centre of excellence' advising line management on the most appropriate risk framework and tools.
- CRO should be an enabler of change in the risk culture



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Adding value - the role of the CRO

- There are a number of key relationships that a CRO must cultivate in order to be effective. These include those with:
 - Actuarial Function
 - Finance Function (and CFO)
 - Compliance (if a separate function)
 - Internal Audit
 - CEO
 - Board (Risk Committee)
- Strong relationships between all parties with risk management responsibilities (everyone!) improves the effectiveness of the risk management system and reduces cost
- In many cases, several functions will be involved in 'risk management' of a particular business process.

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47

Adding value – the role of the CRO

Example: Underwriting

- Risk Management Function: analyses the impact of underwriting on the company's overall risk situation
- Actuarial Function: considers the interdependencies between the underwriting acceptance policy and reinsurance
- Internal Audit Function: considers the effectiveness of internal control system around the underwriting process
- Regular exchange of information is required to ensure consistent communication
- Where all of the functions work together, this can induce a positive feedback loop improving overall risk management.



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Risk governance systems are strongest when...

- · Clearly defined lines of defence (LOD) and risk governance framework
- Each LOD is supported by appropriate policies and role definitions
- Proper coordination between LOD ensures efficiency and effectiveness
- LOD not combined in such a manner to compromise their effectiveness i.e. "conflicts
 of interest" are managed
- Strong risk awareness culture, philosophy and "tone at top" risks managed through changing situations
- Clear view that its risk is managed by the first line
- · Strong internal cross functional relationships
- CRO role is important, proactive (e.g. involved in strategic planning) and reports to CEO
- · Alignment of risk appetite, limits, understanding, behaviours and incentives
- Informative, responsive, timely and frequent risk measurement, management and reporting

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