CERA Module 1
Exam 2016

You can reach 90 points in total.
45 points are required in order to pass the exam.

Good luck!

Case study – Filling the role of CRO

Assume that you have been appointed CRO of the newly created subsidiary of a company that plans to become a player in the international reinsurance market. The parent company is a direct insurer with a licence to operate in Europe. When you arrive, the first reinsurance contracts have already been underwritten into the new legal entity.
As the company is a start up in a tight market, the organisation is optimised to acquire business and take contracts in the books and systems as slim as possible.
You are tasked to implement the parent company's ERM framework at the new subsidiary to assure a sustainable.

<u>1. Hurdles for ERM and potential solutions (12 P)</u>

Given high expectations and a tight market, there is pressure on the young organisation. Based on your experience in the insurance market, you are aware of typical substantial hurdles for an ERM implementation.
a) Describe in detail three general hurdles blocking any change in an organisation. (3 P)
b) Describe in detail three specific hurdles blocking the successful implementation of an ERM especially with respect to your start up situation. (3 P)
c) Name and interprete for each of these six hurdles actions how to overcome them relating those actions with your company as described above. (6 P)

Solution:
a) 1. organisational structure does not enable arena for generating common companywide understanding and objectives. Although setting up a company newly should provide openness to changes and therefore willingness to implement new structures etc right at the start and thus get them organically integrated, on the other hand there is high pressure on the organisation that might hinder it to leverage on this but rather focus on written business which could lead to divergent understanding and objectives.
2. thinking in silos: colleague looked at as a risk (for example no agreement possible on concurring targets like volume and profit). This especially holds true, when there are ambitious targets set for the new company to establish in the market.
3. fear of changes and threat of current status. While in the situation of a start-up change is daily business, changing processes that are not already fully implemented might increase negative perception of changes at all.

b) 1. risk model which is obligatory to use (for example standard model includes EU wide parameters which do not fit to all companies in the market) generates strange outcomes; this might especially be true when time series of a newly set up company are short – concerning inputs as well as results.
2. mathematical framework and details hard to understand and thus difficult to establish in an organisation with a small basis of experience.
3. added value of ERM is hidden (for example avoidance of realised risks looks as normality); in a newly set up company there naturally is a lack of historic experience that might help to motivate the implementation of ERM, furthermore as growth will (for a certain time) be the primary focus, the perception of ERM as hindering new acquiring business might be more challenging.
c)
1. Introduce cross-departmental working groups and brainstorming sessions
2. Provide opportunities to clarify common interests as a basis for common targets
3. Create a working climate of security and make clear that ERM is supporting the targets of the company
4. Clarify that especially in this start up phase a clear guidance by a risk model is necessary and therefore try to use USP to overcome internal criticism and ensure reasonable model output
5. Take all necessary time to explain that also non-mathematician are able to understand and make clear that the purpose of these tools is to help and give orientation which is even more useful in the situation the company is facing
6. Try to find examples of value creations by or at least with the help of ERM which are even more urgently needed where volume could look more important than sustainable results which are essential to get through the start up phase

[Classification: Learning Objective: 1 d Bloom's taxonomy: 3]

<u>2. Operational risk and ERM culture (10)</u>
As the CRO one of the risks you have to look at is the operational risk. You were asked by the board to explain some issues around operational risk and the relation to ERM culture. In this context,
d) Please name three examples of realized operational risks which could be relevant in such a start up phase. (3 P)
e) Determine three characteristics of operational risk and the related situation of your company and describe them briefly. (3 P)
f) Explain why ERM culture is closely related to operational risk. (4 P)

[Classification: Learning Objective: 1 d Bloom's taxonomy: 4]

Solution:
d) autocratic CEO whose organizational environment does not allow to challenge him (see RBS for example even later than start up) which might be especially an issue for a new company,

processes are not yet finally defined and not fully brought to life which could lead to a higher risk of failures (for example driven by somebody who is familiar with the safety arrangements to overcome them),
higher risk of false incentives by putting more value on volume as on sustainability because the first objective for a new company might be growth

e) *clear relevance of qualitative assessments/expert judgements, lack of data and their quality which is especially the case for a start up, insufficiency of pure quantitative methods/models, very low frequency/high severity events which might have then even higher impact for a new company*
f) *the more qualitative the approach the more culture comes into play, avoidance of mechanical use of quantitative methods which is in line with the orientation to the content vs pure formalism, weak ERM culture is a source of operational risk events (for example less companywide common understanding and objectives)*

<u>3. Risk communication (11 P)</u>
g) Develop two situations in your company in which risk-related communication takes place. (2 P)
h) For each situation, describe the implicit assumptions taken for the meaning of the term "risk" by (i) the party that issues the communication and (ii) the receiving party and why these parties takes this position. (6 P)
i) Analyse for both situations whether the concepts used by both parties match, and describe potential consequences if this is not the case. (3 P)

[Classification: Learning Objective: 1 b, d Bloom's taxonomy: 3]

Solution (examples, sketch):

g) *Reporting by the company to the local supervisor, e.g. RSR; presentation of the new company's concept to investors of the parent company.*
h) *Talking to supervisor: although the company as issuing party using ERM generally applies a two-sided meaning of risk as both upside and downside, for the reporting to the supervisor they need to restrict the focus to the downside to tailor the communication to the recipient. The supervisor as receiving party sees only the downside risk as relevant, due to the protection of insureds and monitoring of viability of the undertaking and no participation in upside.*
Talking to investors: the company as issuing party presents risk as two-sided, because it is the source of return and of interest to the receiving party. Investors expect two-sided risk information to judge the business model of the new subsidiary and attractiveness of investment.
i) *Reporting to with supervisor: company usually ensures that concepts match; if no match then supervisor can ignore just opportunity-related part. Presenting to investors: company usually ensures that concepts match; if opportunities not presented by company, investors will not appreciate business model of expansion into reinsurance, with potential negative impact on parent entity's share pricing, financing possibilities…*

<u>4. Long-term perspective (16 P)</u>
During a strategy meeting of the management, you are asked in your role as CRO to present a long-term view on the risks that your company might be exposed to.

j) Explain what the term “emerging risks” signifies. (2 P)
k) Describe two possible processes that you could use to prepare a list of emerging risks that might be relevant to your company. (4 P)
l) Describe in detail two concrete examples for emerging risks that are relevant to the insurance industry including their potential impact on insurance (8 P)
m) Name and describe an example of a topic that would have been seen as an emerging risk 20 years ago and which has emerged in the meantime. (2 P)

[Classification: Learning Objective: 1 a, b, c, n Bloom’s taxonomy: 2]

Solution (examples, sketch):

- *j) Topics that are difficult to quantify, where there is not enough historical data, that are new or that are changing rapidly, and that are expected to play out in the mid- to long-term.*
- *k) Expert brainstorming where company employees are gathered by the RM function in a meeting and their ideas are documented; reviewing external sources such as WEF publications for their applicability to the company.*
- *l) Nanotechnology, which includes the increased commercial use of very small particles in various consumer products, with a currently unclear potential impact on product liability and life/health covers; climate change, which has the potential to influence natural hazards and spread of diseases, impact on almost all LoB*
- *m) Cyber risk, vulnerability of undertakings to IT-based intrusion including cyber-ransom, data theft and business interruption.*

ERM and various stakeholders

<u>5. Capital, ERM and the stakeholder perspective (16 P)</u>

a) Examine the interrelationship between capital management and ERM by applying it to the situations of having too much and of having too little capital. (4 P)

b) List three stakeholders of an undertaking and explain how they base their actions on the quality of the ERM of the undertaking (i) in the case of the ERM being perceived as strong and (ii) in the case of the ERM being perceived as weak. Analyze how each of these six actions could impact the undertaking. (12 P)

[Classification: Learning Objective: 1 a, g Bloom’s taxonomy: 4]

Solution (examples, sketch):

a) Too much capital leads to dilution of (risk based) return, leading to negative perception by the investors. ERM can react by either accepting this for the sake of a better/more stable rating, or by mitigating, e.g. taking more risk, returning capital to investors.

Too little capital risks the maintenance of the target level of security or rating. Market perception might be negatively influenced, leading to less new business. ERM can react by recommending a risk transfer or change in the asset allocation to reduce the exposure, or a capital increase.

b) *Supervisor: (i) approves reporting, accepts more of company's arguments during discussions; impact is alleviated burden for undertaking, less cost for regulatory compliance (ii) might give capital add-on, increases frequency of reviews and on-site visits; impacts are constraints on operation, company loses flexibility, has to earn more absolute return to satisfy conditions.*
   Investor: (i) Prefers stock over other peers, supports potential capital increase measures; doesn't drop company during difficult times, which strengthens share price, external perception and gives more flexibility, (ii) Sells shares/ignores company, might not grant discharge to the board, act against management; which could lead to difficulties in performance, downwards spiral of stock sales.
   Employee: (i) acts more long-term and risk aware, complies with internal processes and adheres to risk strategy, spreads a positive picture of the company and attracts new employees; this makes company perform better, reduces operational risk and gives more alignment to target risk profile, (ii) acts on incentive that are harmful to the company's long-term objectives, ignores, circumvents or bends controls, high turn-over rate, can cause more costs, operational risks and financial distress.
   (Comment: other possible answers for stakeholders are management, customers)

<u>6. Regulatory requirements: Transition from SOX to Solvency II (25 P)</u>

As an internal auditor you are requested to analyse the transition from SOX to Solvency II becoming necessary as your company is about to enter the European insurance market and will have to comply with the regulatory standard that came into force on 01.01.2016. To set up the project within the company's risk based audit plan, based on a first inspection you are asked to outline your first findings, recommendations and next steps.

a) Give some key words on the historic background of SOX and its main focus with respect to internal governance and external audit. (3 P)
b) Compare the guiding principles of SOX, ERM and Solvency II and illustrate the different approaches via defining in key words your expectations for the process of introducing a new innovative asset class in your company's portfolio after the implementation of Solvency II. (10 P)
c) Internal Audit is one of the key functions of the system of governance of Solvency II. Please name the remaining key functions required and for each of them outline one of its main tasks defined by Solvency II. (6 P)
d) The person designated to be the holder of the actuarial function and his team are located in the department led by the actuary being also responsible for product pricing. Please analyse this constellation with respect to potential conflicts of interest, and develop a recommendation for mitigating measures. (6 P)

[Classification: Learning Objective: 1 c, e, f Bloom's taxonomy: 3-4]

Solution (draft only):

a) *SOX was especially motivated from failures of huge firmsin the first years of the 21st century (e.g. "Enron" and "Worldcom"). Based on the finding that essentially creative or even fraudulent financial reporting was one of the key issues, SOX is focused on the correctness of financial reporting to guarantee that it is fit for the purpose to inform shareholders and potential investors (main stakeholder for this standard) correctly* *and transparently about the financial position of the company. As inspecting the failures showed that management and supervisory board as well as external auditors were involved, SOX strengthened their accountability.*

b) *Concerning the two aspects of the exercise:*
   i. *Comparison: While the focus of SOX is financial reporting with shareholders as primary stakeholders, ERM takes a holistic approach covering all essential processes in the value creation chain with stakeholders within and outside the undertaking (shareholders, management, employees, …). The same essentially holds true for Solvency II but here the protection of policyholders is the motivation. Furthermore while ERM looks at both sides of risk (i.e. also opportunities), guiding principle for Solvency II is risk only.*
   ii. *Requirements for new asset class process: While SOX will focus on the correct valuation and financial reporting, Solvency II will require risk management elements to be integrated in the process including evaluation of impacts on solvency position, review within ORSA, ALM guidelines and via the prudent person principle governance for the investment process. Best case solutions will also include the following: Having in mind the wider requirements of IFRS on risk reporting and of auditing standards especially on auditing standards, SOX interpreted in a wider sense is not restricted to reporting only.*

c) *Concerning the two aspects of the exercise:*
   i. *The governance functions explicitly required by Solvency II beyond the internal audit are risk management function, actuarial function and compliance function.*
   ii. *The risk management function has to facilitate the implementation of the risk management system and in the case of an internal model especially design and implement this model. I.e. the risk management function has to assist the administrative, management or supervisory body and other functions in the effective operation of the risk management system; monitor the risk management system; monitoring the general risk profile of the undertaking as a whole. The actuarial function has to coordinate the calculation of the technical provisions and express opinions on the overall underwriting policy and the adequacy of the reinsurance arrangements. The compliance function shall advise the administrative, management or supervisory body on compliance with the Solvency II laws, regulations and administrative provisions adopted pursuant to the SII-Directive.*

d) *As the actuarial function has to express an opinion on the underwriting policy, having the head of pricing as disciplinary manager might affect the function to be free from influences that may compromise the function's ability to undertake its duties in an objective, fair and independent manner. This conflict of interest might be solved by changing the organisational structure and separate pricing and actuarial function. Another measure would be to implement a committee to which the actuarial function would report to and that helps to assure independency and objectivity.*