Emerging Risks Working Party – draft sessional paper

Contents

1. Background

1.1. Introduction

- Emerging risks has become a hot topic in recent years, partly as a result of how quickly the world changes
- This has been reinforced by regulation – the ORSA requires firms to consider all material risks they may face on a qualitative and quantitative basis.
- EIOPA guidance specifically states the risk management policy should cover emerging risks
- Recent BoE letter (June 2015) noted many firms did not identify emerging risks, or, where they were identified, did not consider potential management actions to mitigate them
- Currently no prescribed regulatory methodology to dealing with emerging risk, but clear they must be considered and managed in some form

- Working party commenced in 2014 to research how emerging risks are identified, managed, quantified and reported
- Purpose to produce a framework to aid insurers in managing emerging risks and to feed into future strategy
- Group had particular desire to capture both upside and downside and consider risk as well as opportunity
- Paper covers research findings and sets out practical ways insurers can gain benefit from emerging risks analysis. Working party also considered ways to quantify emerging risks, to aid in meeting ORSA requirements
- There is no detailed discussion of specific emerging risks within this paper (other than through case studies)

1.2. Terminology and definitions

- There is no fixed definition for emerging risks, although most definitions revolve around speed of emergence of information.
    - Eg EIOPA: "Emerging risks are newly developing or changing risks which are difficult to quantify and which may have a major impact on the undertaking"
    - Eg Lloyd's: "An emerging risks is an issue that is perceived to be potentially significant but which may not be fully understood or allowed for in insurance terms and conditions, pricing, reserving or capital setting"
- Require a clear definition in order to build a cohesive framework. Working party agreed on common ground:
    - Emerging risks are not simply shock events as these may not have an emergence dimension (eg natural catastrophe is an extreme outcome of a known risk).
    - Emerging risks are also not things that you should know about but haven't discussed (reference risk elephants working party and paper). Can test whether this is the case by imagining we have all the information that is currently available, and ask if a particular topic is still an emerging risk.
    - Another way of saying this is that an absence of work or effort cannot be the reason something is an emerging risk. It has to be genuine uncertainty.
    - A further extension to this is that emerging risks are not internal events but external global events. This is because all the information for internal events can be found (quickly).
    - Emerging risks for insurance companies are split into two distinct areas: those that relate to insurance products and those that are more generic and affect other industries.
    - Emerging risks are two sided and also include emerging opportunities.

- Working party considered an approach to thinking about emerging risks is as modifiers to existing and future risk profile.
    - Basic premise - emerging risks are rarely really new risks, but rather represent the world moving around us.
    - This approach allows you to consider different aspects of an emerging risk so there can be overlap with strategic risk as well as insurance, market, credit and operational.
    - By trying to say they are different, you may lose the essence of the problem. By describing them as modifiers, you convey a clearer picture of an evolving world which needs constant vigilance.
- As a result, agreed the following definition:

Emerging risks working party definition:
"*Emerging risks represent new information which could significantly change how an existing risk is perceived, but where the impact or likelihood are currently highly uncertain*."
["risk" includes enterprise level risks such as strategy, solvency, reputation]

2. Opportunities and Challenges

2.1. The benefits of emerging risk analysis

- Even if insurers didn't have to consider emerging risks, would be wise to anyway
- The biggest risk to any company is becoming irrelevant – horizon scanning and adapting to change is the only way to ensure there is a future for your business
- Case study – HMV
  - Had 92 years of music production and retail experience when it entered administration in January 2013
  - HMV considered its strategy in 2002 and dismissed the risks of online retailers, downloadable music and supermarkets selling music as a loss leader as a short term craze and continued to focus on the traditional retail business.
  - Amazon - no infrastructure costs and minimal tax bill allowed price reductions in products
  - Internet as a medium for music downloads – further reduction in prices and the ability for consumers to access music immediately and in their own homes
  - HMV moved online too late and had already lost out – was behind on online infrastructure and customer base
- Conversely, if the emerging risks can be spotted early enough, it is possible to turn them into opportunity
- Case study: Lego
  - Established in 1932 producing wooden toys, expanding to produce plastic blocks in 1947
  - By 2003 on the verge of bankruptcy following macro trends in the toy market, including children with less play time, aging western population with fewer children, technical innovation and move to digital toys
  - Restructured and stabilised in 2004 following a management change. Expanded into key brands (City, Technic, basic sets), actively targeted adults and reviewed all product lines
  - Lego Movie helped propel the brand even further providing free advertising
  - Lego now continues to study emerging trends, investing in research of how children round the world play to tackle next developments. Also moving into the digital space.
- There will always be multiple factors that contribute to business stories, but it is clear that understanding future trends will be an advantage to any business.

2.2. Key challenges

- Amount of potential emerging risks – how can you identify them all (possibly infinite?)
- Once identified, what do you do with them as by definition you do not know what the impact may be…
- Similarly, how can you begin to quantify them?
- Acknowledge that this can still be difficult as things like 'pension reform' could be said to have had signals if you were listening hard enough...

1. Too many of them, a never ending list. What is a Board or Exec meant to do with a very long list of things which can go wrong? The nature of this means that a lot of energy and time can go into compiling the list, which leads to less time being available for actually managing the risks themselves. A very long list of emerging risks can also look like the Risk team are trying to cover their own back – listing all the things that can go wrong to show that they have raise them to someone's attention. But is this of much use in practice?

2. Hard to quantify and assign likelihoods to. Emerging risks tend to be extreme events - most won't happen but some will. Impacts will often be wrong, and be overstated as hard to imagine mitigating actions. In practice actions tend to be found to manage and mitigate major risks that can crystallise – so easy to state that something would break a business when in fact it won't. This leads to the process lacking credibility or being alarmist.

3. In a world of limited resources, why spend time on emerging risks over other more proximate risks? Emerging risks processes are often the first to be cut or slimmed down if money is tight – easy to cut and see no immediate loss to the business unlike other forms of risk management

4. Emerging risks processes tend to be run by the risk function and senior individuals across the business. This misses out a large number of people – such as younger employees – who may be better at spotting emerging trends. However, a process that involves too many people can also lead to problems – too many risks identified. Hard to strike a balance.

5. Short term nature of execs and boards, not much to be gained from considering something which is so unlikely. Why should a CEO or Board member take action to reduce the likelihood of a risk occurring in 10 years, when they are unlikely to be in the role?

6. For most emerging risks it is unclear if anything can be done, so what's the point? This is particularly true for risks which would require a cross-industry response. It is easy to have emerging risks meetings and discuss the topic, but harder to have actions coming out with clear owners and deliverables.

7. Taking actions will usually involve sacrificing profits or additional costs. It takes a brave CEO to sacrifice profits today to reduce the risk of an extreme event occurring.

8. If a risk impacts a whole industry then harder for an individual firm to be criticised. In practice emerging risks often impact a large number of companies, which can benefit from government help when the risk occurs.

9. All emerging risk spectrums look similar and tend to use the same sources. Group thinking means we miss the risks that nobody spots. How many emerging risk spectrums had a collapse in oil price on their list last year? The risks on everyone's list tend to be more closely scrutinised so then may in turn be less likely to occur!

10. A lot of emerging risks are a result of a chain of events occurring which is very hard to foresee, e.g. the sale of subprime mortgages in the US leading to the collapse of the Greek economy.

3. Identification

- Aim of risk identification is to generate a comprehensive list of threats and opportunities based on those events that might create, enhance, prevent, degrade, accelerate or delay the achievement of the agency's strategic objectives.
- Comprehensive identification is crucial, because a risk that is not identified at this stage will not be included in further analysis.
- Risk identification should include examination of the knock-on effects of particular consequences, including cascading and cumulative effects of actions.

3.1. General approach

- Integrate with the existing risk framework – ie use existing processes where possible and fit to risk category breakdown already used
- Consider emerging risks as part of strategic planning
- Ensure sufficient focus on the hardest risk categories
    - Strategic risks
    - Culture risks
- Consider known risks (based on risk register) and conduct a forward looking assessment… part of ORSA process
    - Consider what could materially change your view of risk
        - Significant changes happen to the nature of the risk which consequently may affect an organization's exposure.
        - New information has been received that increases an organization's understanding of risks
        - An organization's conditions and capabilities/resources have been changed
        - New regulations have been released
    - SWOT analysis / PESTEL analysis
    - Consider inherent uncertainties in strategy
    - Reverse stress test approach

Example [to be inserted covering scenario based FLA]

- Assess scenarios and circumstances that would render the business model unviable – aim to identify those emerging risk scenarios that can have an impact on the firm if they were to materialise.
    - Predictive scenarios describe and anticipate what will happen if the rules that have been governing the system's development thus far continue into the future. These types of scenarios tend to be described as business as usual.
    - Explorative scenarios acknowledge the possibility that different futures could develop from current conditions. Divergent futures may result from known or unknown trends and events for which a probability distribution does not exist.
    - Normative scenarios are usually based on back-casting. The first step in a back-casting approach is to define the desirable end-state, most often through a multi-stakeholder (participatory) process. Because of this visioning process, such scenarios are considered normative.

  [Probably not to include specifically, but for reference included PESTEL factors:
    - Current and future legislation
    - EU regulation/legislation
    - Environmental Laws
    - International and National Environmental Issues/regulations
    - Information and communication systems
    - Internet access and availability

    - Technological Developments
    - Media Views
    - Demographics/ Ethics
    - Buying Trends
    - Government Policies
    - Elections
    - Terrorism
    - Exchange Rates
    - Inflation
    - Taxation
    - Insurance Industry Cycle]

- Stay up to date with the news, carry out regular horizon scanning
    - Hot topics in the press
    - Industry forums etc
    - See useful tools below
- If large enough entity could consider a dedicated emerging risk team (may not be practical for smaller entities)

- Identification steps:
    - Assessment of type of risk – political, legal, economic, environmental, socio-cultural, technological the source of risk – external (political, economic, natural disasters) or internal (reputation, security, knowledge management)
    - Assessment of causes of the risk
    - Assessment of impacts of the risk – type of exposure (people, reputation, program results, priorities, funding, assets), and
    - Assessment of level of control – the degree to which the agency can influence, affect or manage the risk.

3.2. Identification framework

- Frequency of scanning – depending on the agency's context, environmental scanning may be undertaken continuously or periodically (for example, monthly or yearly)
- Timeframe – for example, policy development officers may be interested in developments over the next twenty-five years, whilst scanning that supports operational decision making may be restricted to a six month timeframe
- Scope – some agencies may be fairly inward-looking in their risk identification processes if they perceive that the major element of risk arises from within the agency; others may need to consider a much wider scope (including international, national or interstate) if they consider that they may face risks from a wider environment
- Opportunity/challenge – some environmental scanning is concerned mainly with spotting potential challenges, but it can equally be used to scan for opportunities ("positive risks"), and many challenges may be converted into opportunities if identified early, and
- Rigour/informality – environmental scanning varies in the extent to which it is structured and supported by technology, that is, some agencies may use sophisticated assessment schemes and information search technologies, while other agencies will rely almost entirely on informal networks of contacts and good judgement.

3.3. Useful tools

- External sources
    - Newspapers / articles / trade press etc
    - Emerging Risk reports and publications by various other international insurers and reinsurers (Guy Carpenter, Swiss Re, Allianz, Munich Re, Scor)

- Parliamentary processes and issues highlighted at Estimates Committee hearings media reports and commentary

- Internal documents, such as the strategic and operational plans, performance reports, budgets, and audit observations and recommendations

- Market working groups
  - The CRO Forum – Emerging Risk Initiative
  - Lloyds – Emerging Risks Team Reports
  - World Economic Forum
  - Emerging risk working party

- Internal workshops
  - Aim for cross-functional group of employees (at a similar level within the organization), using any or all of the following exercises:
  - Carry out a pre-mortem. Use a pre-mortem exercise to help colleagues think outside the box and identify previously-unidentified risks that could ultimately lead to the company's demise.
  - Use egg timer discussions. Discuss each risk using a three-minute egg timer. This helps break down emerging risks into components, mitigants and risk factors, and can help identify other emerging risks. Have subject matter experts (SMEs) on hand to develop a better understanding of specific risks and begin building an action plan
  - Encourage lateral thinking: requires participants to come at a problem from new directions.

- Surveys / questionnaires – either internal to gather information or external

4. Managing and monitoring emerging risks

4.1. Emerging risks framework

- Using risk causes / risk modifiers rather than creating new emerging risks
- Considering the emerging risk universe
- Case studies!!
- Something about dependencies between existing and emerging risk…

4.2. Classification of emerging risks

- Variety of ways to classify emerging risks
  - Internal / external
  - Near term / long term
  - Insurance / credit / market / operational

- Example: Internal / External risks.
  - Aids understanding of source
  - **Internal Risks** - risks that arise from sources within a firm and can be dictated by the mission, philosophy, strategy, products, portfolios and operations of the firm.
  - **External Risks** – risks that arise from sources that are external to a firm that can be dictated by the Political, Economic, Social, Technological, Legal or Physical environments that the Firm operates in. Emerging risks arising from external sources often tend to be of large impact, hard-to-predict and rare events.

- Use of emerging risks register?

4.3. Monitoring the framework

- Essential to monitor emerging risks:
  - Need to understand the circumstances that cause risk
  - provide an early warning to allow enough time to take remedial action
  - escalate new risks for internal discussions and the possible reappraisal of business model
  - provide a backward looking view so lessons can be learned from the past
  - provide an indication of the likelihood of breaching the risk appetite and tolerance levels

    - provide real time intelligence to decision makers

- Can be challenging to monitor effectively if list of emerging risks is long
- Need to ensure effective allocations of resources to ensure that people and technology are dedicated to managing these risks.
- Ideally split monitoring between simple data capture / KRI monitoring with no subjective input and regular, time intensive, detailed risk review
- Monitoring emerging risks not only involves assessing previous events to ensure an accurate picture of the risk landscape but also involves analysis of future trends

4.3.1. Early warning indicators / KRIs

- A KRI is a forward-looking metric that provides an early warning of potential changes in risk profile of the business and deviations from agreed risk appetites. KRIs are also used in management to assess the riskiness of an activity. It is also a measure of the possibility or likelihood of an adverse future event.
- The aim of KRIs is to allow more time for analysis and make better informed risk-based decision making to reduce the likelihood or impact of an emerging risk.
- Can signal potential risk exposures in various areas of the organization and can alert the management on trends that can potentially affect the achievement of organizational goals and objectives. Can also help the management in identifying potential emerging opportunities.
- KRIs are most valuable if they methodically link to business processes and enhance risk-informed decisions.
- An appropriate KRI should focus on the root cause of the emerging risks in order to provide sufficient early warning to take action
- KRIs should be SMART , i.e.:
    - Scalable—can be consistently applied throughout the organization
    - Measurable—can ideally be quantified but should be reasonably measurable
    - Actionable—should help management make decisions and take actions
    - Reliable—should enable monitoring and measurement on a recurring basis
    - Timely—should provide early warning signals of approaching risks or gaps in preparedness
- May alternatively be a proxy metric for risk
    - EG telematics: monitoring research into driverless cars, results from driverless car testing, draft legislation plans
    - EG cyber: number of virus attacks, number phishing attacks, new types of cyber attacks
- May be difficult to obtain current external data, however important to attempt for those emerging risks that have been identified as critical

- In general, KRI metrics must guard against these possible warning signs:
    - Irrational exuberance by market participants or management unwillingness to act
    - Herd behavior – if everyone else is in doing the same then we are okay
    - Excessive or super –normal profits (especially in a deteriorating economic environment) is a good indicator of risks of competition ahead or regulatory / political intervention
    - Making excuses for bypassing normal decision criteria
    - Decision makers' incentives not aligned to the long term (during which an emerging risk may crystallise).

4.3.2. Other risk monitoring approaches

- Risk register monitoring

- Ownership of emerging risks essential to ensure effective monitoring
- Assign an appropriate risk owner who will be responsible to track and evaluate the emerging risk as conditions change.
- This may include using risk scoring mechanisms for escalation
- Consider dedicated working group of risk owners with members drawn from across the firm to review log of emerging risks and new information

- Committee / Board oversight
  - Should also ensure sufficient time is given to discussion of developments in emerging risks at committee / board level
  - Specific agenda item at variety of meetings to get spread of input
  - Use risk dashboards to provide time series of data and trends / patterns

- Scenario analysis / stress testing
  - Use scenario testing conducted under identification step to drive key monitoring requirements
  - Refine the “what if” questions, and identify sensitive external environment factors that change over time.

5. Quantification

- SCR and ORSA requirements are based around a business plan given current expectations of the world. If emerging risks provide uncertainty around that expectation, should they then be quantified in these estimates?

5.1. General approach

- Materiality assessment, funnel approach
- Discussion about what we're quantifying and why
- Cost benefit analysis – is it worth the potential mitigating actions?
- Cashflow approach

5.2. Quantification tools

- High / medium / low
- Scenarios
- GLMs?
- Bayesian networks?
- Triggers

Quantification of emerging risks – discussion note for Emerging Risks Working Party

Quantification of risks

First question – why do we quantify risks at all?

Answer – to gain an estimate of the impact and likelihood of the risk occurring.

Emerging risks – the problems of quantification

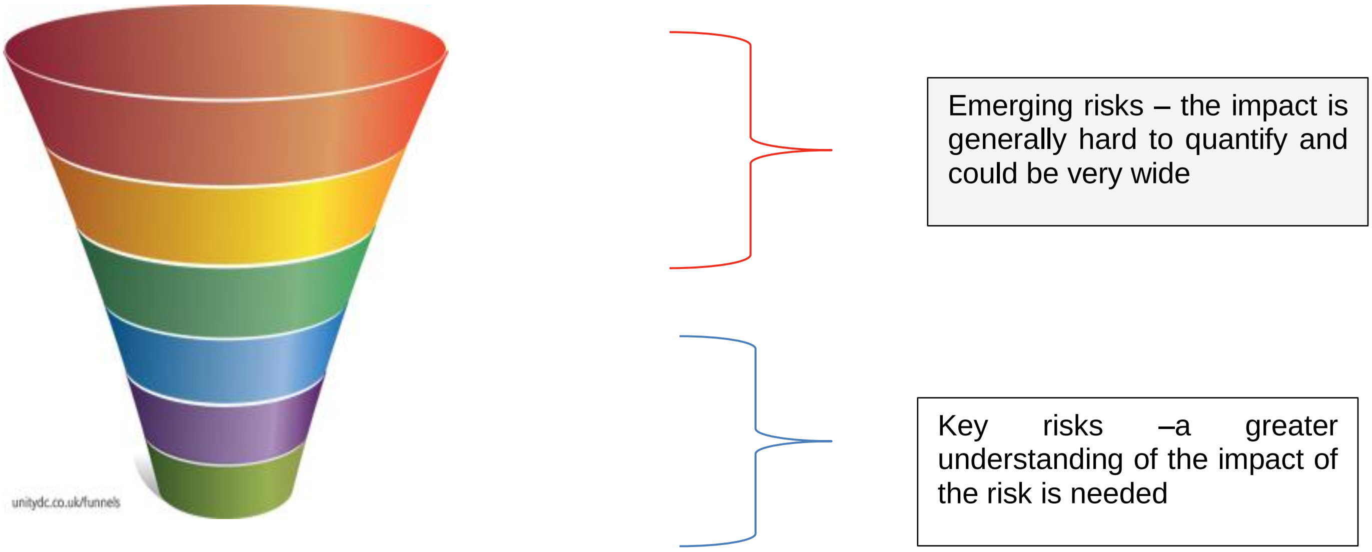
But for emerging risks this is hard because:

1. There are generally a lot of emerging risks for a typical insurance company and quantifying all of them would be very time consuming, especially given the time usually allocated to emerging risks

2. It is hard to estimate likelihood and impact as the risk may be uncertain or poorly understood. It will also be hard to estimate the impact of mitigating actions.

3. Quantification could be misleading – either being far too big and underestimating the mitigating actions that could be put in place or far too small and failing to spot a potential chain of events.

Can think of quantification like a funnel – as we move down the funnel the risk becomes more likely to occur, the range of outcomes narrows and it should be easier to quantify



Emerging risks - possible solutions for quantification

1. Only quantify a subset of emerging risks. These could limited to:
    a. Risks which are on the boundary between key and emerging risks – i.e. those which are becoming more likely (e.g. UK exit from EU could be in this category)
    b. Risks which may be unlikely but are big enough to break the business model (e.g. the legal risk of a ban on use of age as a rating factor)

2. Brainstorm the risk with the right subject matter experts – focus on what could happen and what mitigating actions could be applied. From this discussion it should become clear on the magnitude of the potential risk.

3. Instead of attempting a precise quantification focus on categorising the risks into broad categories of impacts – e.g. low/medium/high

Trigger points

Depending on the nature of the emerging risk it may be appropriate to establish trigger points for re-quantifying a risk. This could be for risks which are likely to change rapidly in the near future or risks which are deemed to particularly large or of concern.

It should be noted that emerging risks should, by their definition, not require active ongoing management (as otherwise they should be classed as key risks). If it is deemed that a trigger point for re-assessing a risk is very soon then it should be considered whether this risk is truly an emerging risk.

Possible Policy Principle

"Quantification can be useful for emerging risks, though the uncertain nature of emerging risks makes precise quantification difficult.

Most big companies will be exposed to a large number of emerging risks. Companies should therefore focus quantification on a subset of these risks:

a) Risks which are on the boundary between key and emerging risks – i.e. those which are becoming more likely

b) Risks which may be unlikely but are big enough to break the business model

Given that emerging risks will typically have a wide range of possible outcomes, companies should quantify emerging risks using broad categories (e.g. low/medium/high) rather than attempting to estimate precise impacts.

A brainstorming session with the right subject matter experts should be used to establish what the impact of a risk could be and the potential mitigating actions. The output of this session will assist with categorising the impact of an emerging risk.
Where appropriate trigger points for refreshing the impact of a risk may be appropriate. For example, for risks which are likely to change in nature rapidly over time."

Author: Kiran Kamath
Date: 12 January 2014

6. Communication

- Dashboards
- Summary information / factsheets
- Portal / radar

What is the importance of communicating Emerging Risks?

If the management is aware of the risks it can take action in a timely manner and avoid huge losses from an uncertain future event. This awareness relies on efficient communication systems.

The credit crisis showed that some banks managed to avoid the worst by spotting trends and taking action early.

MI can be used to convey the message on emerging risks. However, to be effective MI should have the following features:

- Be clear and easy to understand – avoid technical jargon as it will need buy-in from executive management and not just the risk committee

- Update on regular basis – quarterly?

The MI should include:

- Outcome of Braining storming different risks – internal and external; to raise discussions at senior level – highlight case studies of companies that faced similar risks in the past and their outcome → failed or successful in managing risks

- Heat map on Risks – based on impact and likelihood

- Quantification impact on risks with high likelihood (even if this is approximate) – especially risks on the boundary between key and emerging risks

- Risk Dashboard – by different risk categories used to classify emerging risks

- Outline Risk Elephant (risks not understood well) and Tigers (risks effectively managed and understood) to trigger discussions

- Past emerging risks which are now key risks – points to identify similar risks in the future → use these as examples positive impact or negative to avoid in the future

Producing MI is not the only manner of communicating Emerging Risks. To ensure appropriate communication need to have a positive risk culture embedded within the business. Discussions on risks should be frank and talked at every level within the organisation.

Communication of risks can be discussed with Credit Rating agencies and industry experts to ensure/develop best practice on emerging risks.

External communication on Emerging Risks:

- Include section on EM risks in the annual reports
- Publishing articles on management of ER

Example of Risk Heat Map