

Emerging Risk Management Frameworks

Reflecting on lessons learned from COVID-19 to aid emerging risk management

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COVID-19 has illuminated the wide-ranging impact that emerging risks can have on insurers across the globe. In this briefing note, we discuss how traditional emerging risk management frameworks may not fully capture the complexity of an emerging risk event, and what lessons can be learned from COVID-19.

The European Insurance and Occupational Pensions Authority (“EIOPA”) published guidelines on the system of governance¹ which define emerging risks as follows:

“Emerging risks are newly developing or changing risks which are difficult to quantify and which may have a major impact on the undertaking.”

The inherent uncertainty around these emerging risks requires considerable judgement – not just in identifying the events and risks themselves, but also wider considerations such as how to manage the potential impact of these risks, and how to communicate them to various stakeholders.

There is a grey area in recognising when an emerging risk has fully “emerged”, and how a newly emerged risk should be treated. It would seem logical that once an emerging risk has been realised, the subsequent monitoring and management should fall under a pre-existing risk management framework. However, as seen with the COVID-19 pandemic, the fallout from these risk events may require significant oversight. Simply assuming that an existing risk management framework will sufficiently handle the crystallisation of an emerging risk event may lead to a false sense of security.

As insurers deal with the challenges posed by COVID-19, risk functions can use the realities they are facing to validate their existing emerging risk framework. While operating during the pandemic has been, and will continue to be, a steep learning curve for insurers, it also presents an opportunity to re-evaluate existing emerging risks. It may be

more helpful to view emerging risks as “events” with knock-on impacts (e.g. pandemic, climate change, war), rather than being siloed into traditional risk categories which are sometimes considered at a somewhat less granular level (e.g. mortality risk, market risk). Under this approach, risk functions can build a narrative around newly emerged risks, mapping out their possible implications and understanding how different emerging risks could potentially influence one another. Instead of emerging risks being completely separate threats to the undertaking, in reality they may actually be interacting with each other to produce observable outcomes.

Put another way, often the “risk” which emerges can be categorised using existing labels (such as fraud, business interruption, etc.) but the emerging risk is showing a new way in which those outcomes can occur (pandemic, climate, cyber, and so on).

Not only is emerging risk management best practice, it is also a [regulatory expectation for EU \(re\)insurers](#), with the Solvency II legislation stating that:

“The risk management function shall include all of the following tasks: ... (e) identifying and assessing emerging risks.”

– Article 269 of Solvency II Delegated Regulation²

In Ireland, the Central Bank of Ireland (“CBI”) has highlighted emerging risks as a future point of focus. In a speech³ in May 2019, Deputy Governor Ed Sibley stated:

“...regulated firms can expect the Central Bank to increase its focus on the adequacy of firm’s emerging risk management. In particular, I expect firms to:

- *use scenario analysis and stress testing to help determine the potential impact of their exposure to emerging risks;*
- *evidence how they will mitigate these risks, including a credible plan in place for managing exposures; and*
- *disclose in a clear, meaningful and timely way, for example through the ORSA and SFCR.”*

¹ EIOPA Final Report on Public Consultation No. 14/017 on Guidelines on system of governance

https://register.eiopa.europa.eu/Publications/Consultations/EIOPA_EIOPA-BoS-14-253-Final%20report_Governance.pdf

² Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II):

http://publications.europa.eu/resource/ellar/e0c803af-9e0f-11e4-872e-01aa75ed71a1.0006.03/DOC_477

³ Address to Insurance Ireland Annual Lunch – Deputy Governor Ed Sibley: <https://centralbank.ie/news/article/address-to-the-insurance-ireland-deputy-governor-ed-sibley>

Emerging Risk Identification

FIGURE 1: CRO FORUM - EMERGING RISK RADAR

Source: <https://www.thecroforum.org/wp-content/uploads/2020/06/ERI-Risk-Radar-2020-update.pdf>



Since emerging risks are those risks that have not yet manifested themselves, it is important for the insurer to encourage people to think outside the box. Workshops and brainstorming techniques, such as PESTLE⁴ and SWOT⁵ analysis, can help structure horizon scanning investigations to identify the emerging risks that could have a major impact on the business. These exercises can also promote engagement of emerging risk management with various stakeholders throughout an organisation. There are useful resources available to stimulate discussion on emerging risk identification, such as the CRO Forum's Emerging Risk Initiative which produces a risk radar (the 2020 edition is shown in Figure 1 above).

At this early stage in the process, it is important to move beyond viewing emerging risks as separate threads and begin to consider how they may interact with each other.

While splitting emerging risks into single ideas (as illustrated by the risk radar above) is useful to initially identify them, the

reality is much more nuanced. Being cognisant of these potential linkages should guide discussions with stakeholders, to encourage them to think about the intricacies and interdependencies of different emerging risks and how a single event can lead to multiple risks occurring in parallel.

It is important to strike a balance between the number of emerging risks added to an emerging risk register, with the relevance of each of those risks to the business. The uncertainty associated with emerging risks can lead to an overwhelming and impractical number being included in a register. This can lead to an emerging risk register becoming static over time and simply "sitting on the shelf", rather than being an integral part of the risk management toolkit.

Instead, it may be more beneficial to distinguish between a "long list" and a "short list" of emerging risks, in which the

⁴ PESTLE analysis is a framework to analyse the key factors (Political, Economic, Sociological, Technological, Legal and Environmental) influencing an organisation from the outside

⁵ A SWOT analysis is a planning tool which seeks to identify the Strengths, Weaknesses, Opportunities and Threats involved in a project or organisation

most potentially material risks to the business can be assessed and monitored in greater detail.

Assessing and Monitoring Emerging Risks

The initial assessment of both the short list and the long list of emerging risks will typically involve categorisation by severity (e.g. high / medium / low) and time horizon to emerge (e.g. short-term / medium-term / long-term). As well as a time horizon assessment, it is important to consider the velocity of the risk as it emerges. The purpose of this is to capture, if a risk event were to occur, how quickly will it emerge and impact the business. For example, the outbreak of a pandemic will emerge more quickly than more gradual risks, such as climate change.



These initial assessments will need to be reassessed regularly given the dynamic nature of emerging risks.

An additional volatility metric can be applied to the severity, time horizon, and velocity metrics.

This can aid in quantifying some of the uncertainty around the impact that emerging risks can have on an organisation. Expert opinion is required to make judgements on emerging risks, and opinion can differ within any particular field. Being able to capture this variance can aid the assessment of emerging risks.

This has been evident throughout the Covid-19 pandemic. When looking at projected deaths, for example, some projections may see deaths tailing off at the end of the projection period, whereas other projections may not predict such a trend. As a result of this, different projections will give different outcomes, which makes it harder to quantify the severity, time horizon and velocity metrics. This additional volatility metric can therefore be used to reflect uncertainty a bit better and acknowledge that opinions on emerging risks will vary.

FIGURE 2: EXAMPLE ASSESSMENT FOR EMERGING RISKS

	Categorisation Metric	Volatility of metric
Time horizon	<5 years	Low
Severity	Amber	High
Velocity	Red	Low

The categorisation and volatility assessments discussed can be compared in a tabular format like the example in Figure 2 above.

KRIs and Other Techniques

Traditional Key Risk Indicators (“KRIs”) previously developed by insurers may not be suitable for monitoring emerging risks. Thus, it is important to reframe KRIs in the context of emerging risks. Rather than just monitoring specific underlying risk drivers, a suite of emerging risk KRIs could instead monitor changes to the metrics used as part of the initial assessment of emerging risk events: severity, time horizon, and velocity. As emerging risks can develop and change rapidly, these KRIs will need to have the capability to be updated frequently.

However, limited understanding and experience of emerging risks can cause difficulty when trying to calibrate appropriate trigger thresholds for these KRIs. Insurers must therefore consider other methods of obtaining relevant information about these risks, such as identifying patterns in unstructured data. Insurers could adopt more advanced, modern analytical techniques to extract valuable information from social media, websites, etc. to keep up to date with current trends and developments which would impact their emerging risk landscape.

In his paper, ["Emerging risk analytics: Application of advanced analytics to the understanding of emerging risk"](#), our colleague Neil Cattle delves into the sophisticated analytical techniques available to insurers “to identify emerging patterns within narratives playing out in the media and other digital forums”. His study shows that it is feasible to use unstructured data to spot the early development of an emerging risk, once the emerging risk itself is understood. These methods, in turn, will help an insurer to make sense of the potential “subsequent risks” an emerging risk could create. Such analytical techniques and “storytelling” exercises will also help insurers to translate a phenomenon, such as an emerging trend or movement, into something more tangible.

Monitoring changes in the severity, time-horizon and velocity aspects of emerging risks can help organisations see the wood from the trees.

Rather than looking at each of these categories in isolation, it can be a useful exercise for companies to identify those metrics that change more frequently or where there is a lot of activity. If there is volatility around the assessment of an emerging risk, then it may be appropriate to analyse this risk in more detail to understand the drivers of this volatility.

COVID-19 provides an opportunity for insurers to consider the potential effectiveness of the use of KRIs used for emerging risks. For example, if a KRI for pandemic risk had been focused on mortality rates, it may have provided only a one-dimensional (and purely retrospective) view of the associated insurance risk. On the other hand, a KRI metric linked to the public health notifications may have escalated the status of pandemic risk earlier and helped insurers to

also better acknowledge the non-underwriting risks associated with the pandemic, such as the operational and cyber risks resulting from insurers transitioning to a virtual work environment overnight.

Emerging Risk Register

In another article "[It was on the risk register](#)", Neil Cantle discusses the importance of risk registers in light of the COVID-19 pandemic. He notes that while a "pandemic influenza" was at the top of the UK's national risk register⁶, the national response did not quite materialise as one might have expected. He affirmed that this is commonplace for risk registers and refers to them as "a place to record things", and "not a good place to drive action". This highlights the importance of constantly learning about the dynamic risk landscape, challenging accepted understanding of the risks included, stepping through plans to ensure they are adequate, and having appropriate foresight to know the risks that could emerge in the future. It also highlights the need to integrate and embed the emerging risk register into the overall risk management framework.

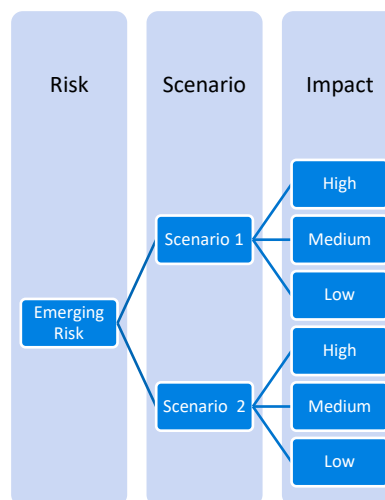
The article suggests a more active management of emerging risks through "story-telling" with ongoing engagement and conversation. For example, considering potential increases in cyber-crime and social unrest associated with the pandemic. This highlights the fact that while risks, such as cyber-crime or social unrest, can be categorised using existing labels, the emerging risk is showing a new way in which the outcomes can occur

Tools have been developed by insurers to mitigate the risks included on their risk registers. An organisation may not be able to effectively apply such tools to emerging risks, as there is considerable uncertainty as to how those risks would manifest themselves and what knock-on impacts they would have. Insurers need to move beyond considering the emerging risk register as a compliance exercise and use it as a source that drives action, resulting in more efficient management decisions being made.

Creating a story around emerging risks, using a structure like Figure 3, allows the short-listed emerging risks to be explored in greater detail using scenario analysis.

The first step is to investigate how the emerging risk event may arise. In some cases, this may be reasonably straightforward but for other risks, such as political instability, there may be a number of different scenarios which will then affect the impact that the risk would have on the organisation. In such cases, it may be more useful to focus on the most credible scenarios or try to group potential scenarios into higher-level categories.

FIGURE 3: SCENARIO ANALYSIS FOR EMERGING RISKS



Once the scenarios for the emerging risk events have been established, the different impacts can then be explored. Grouping these into broader categories can be helpful to add structure to the emerging risk register – categories such as mortality risk, morbidity risk, credit default risk, market risk, operational risk, etc. Each impact can then be assessed at different severity levels. Stress testing, or more advanced modelling techniques can be used to quantify these impacts. As has been seen with COVID-19, the impact of emerging risk events can have far ranging consequences, and so having a structure to scenario analysis can stimulate idea generation and lead to the development of more informed action plans.

Developing Emerging Risk Action Plans

Following from the scenario impact assessment, contingency plans and action plans will need to be devised.

Rather than integrating "emerged risks" into the established BAU risk management framework, bespoke action plans can be tailored to allow for the additional complexities associated with these events.

The time taken to implement an action plan should also be incorporated at this stage, allowing for the velocity of the risk once it has materialised.

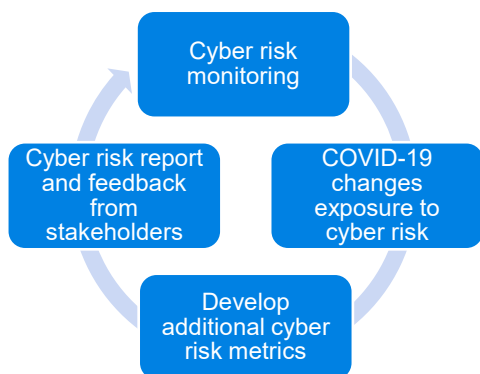
In reality, these events will play out differently than expected. The changes caused by COVID-19 have forced insurers to make accelerated decisions and approach the consequences of COVID-19 with a flexible, adaptive management approach. However, having properly considered all angles of emerging risks and having an existing emerging risk framework in place, an organisation will be better able to adapt and manage these risks if and when they actually materialise.

⁶ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/61934/national_risk_register.pdf

Feedback loop

An important component of an effective emerging risk framework is the application of a feedback loop to reassess the effectiveness and appropriateness of the framework, particularly as the outlook of emerging risks may change very quickly. Some of this feedback loop may be integrated into a regular periodic review, or through the monitoring process as a result of KRIs, but insights can also be gained from reflecting on an emerging risk event such as COVID-19 and seeing how the management of such an event could be improved upon.

FIGURE 4: CYBER RISK FEEDBACK LOOP



Re-evaluation of emerging risks will involve revisiting each of the stages outlined above. Assessment techniques discussed previously, and documentation of how the emerging risk landscape has changed over time, can help identify particular trends in risks that may not otherwise be noticed.

Firms can promote a cultural awareness of emerging risks through allowing staff across various departments to participate in this feedback loop. This process could benefit from actively seeking input from the first line to raise potential risks. An example of this is Swiss Re's Systematic Observation of Notions Associated with Risk (SONAR) approach⁷ to tracking developing risks in an attempt to "foster dialogue with all stakeholders to help insurers understand and manage emerging risks more effectively". This approach allows employees, who have access to the platform, to post and discuss potential emerging risks that they think are relevant to the business.

Emerging Risk Reporting

Developing the emerging risk register will involve engagement from various stakeholders throughout the process, including the Board, risk function and first line functions. Getting buy-in from all levels of an organisation, and ensuring that emerging risk management is viewed as a key component of the overall risk management framework (rather than a box-ticking exercise) is paramount. COVID-19 has given insurers the opportunity to reflect on how emerging risks are seen within the organisation, and how they are communicated.

This communication may include formal emerging risk management communication in Board papers and as part of the ORSA, as well as risk reports, internal management information and firm-wide communication to staff.

This could include communication during or after the risk event itself. Maintaining a detailed emerging risk register, which includes scenario and impact analysis, should improve reporting processes. Given the more abstract nature of emerging risks, visual aids and other communication devices can help an audience better understand the risks and potential impacts.

A crucial part of emerging risk reporting is highlighting actions that the organisation can take immediately. By testing the emerging risk framework to see if it is resilient or if there are sufficient resources and structures in place to respond to a risk, this then becomes a question of whether or not to do something today to improve the potential response if that risk were to occur in the future. This makes the conversation around emerging risks more proximate, which should result in better engagement from all levels within the organisation.

As seen with COVID-19, simply identifying an emerging risk does not lead to effective risk management. During a crisis, resources will be stretched, and pre-emptive considerations discussed in this note will reinforce stability and help companies adapt to change effectively, even while they face operational constraints. Developing a strong emerging risk management framework with a focus on prompting immediate action, and nurturing a culture which appreciates the impact that emerging risks can have on business, are vital.

⁷ <https://www.swissre.com/institute/research/sonar/sonar2020.html>

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