

# Cover Story

## Risk management



# Taming threats

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TRANSLATION FROM FRENCH Martin Davies / Hannah Ekberg

**Our era is dominated by the uncertainty of tomorrow. The Covid-19 crisis has brutally reminded us all that the world's fragile equilibrium can be upended at any moment. Indeed, large-scale phenomena with the potential to upset the established order could easily proliferate and spread from one end of a globalised planet to the other. A variety of largely self-inflicted threats hang over humanity, making it essential to take the risks seriously, face them for what they are, prepare to live with them, and mitigate their consequences. Managing a business in this changing context is increasingly complex and requires being aware of the risks in order to both prevent them, if possible, or manage them when they arise.**

— The film 'Don't Look Up!' that came out on Netflix on 22 December 2021 reflected, many scientists have pointed out, certain similarities with reality as it shows what happens when threats are not taken seriously, when experts struggle to make their voices heard in the political world and when the collective interest is not the major decision-making factor. According to the United Nations (UN) report 'Shaping the Trends of Our Time', published for its 75th anniversary, the world today is in a somewhat similar situation to that described in the film, although facing not a meteorite but several threats of different sizes and progressing at various speeds, such as pandemics (this one has already struck), climate change, geopolitical crises, cybercrime, growing social inequalities, etc. ... the aim of this article is to take stock of these threats, to see how the world of insurance is adapting to their development and how companies can best prepare to build their resilience.

Every year since 2005, the World Economic Forum (WEF), the insurance groups Marsh and McLennan, SK, and Zurich Insurance, and academic partners (the Universities of Oxford, Singapore and Pennsylvania) have joined forces to conduct an international study on risk perception among some

thousand people, mainly from business, politics, academia and NGOs. This consultation has resulted in a report on the state and evolution of risks in the world. In parallel with this vast study, the WEF has questioned a network of risk managers on their state of mind, and, in recent years, this survey has been similar to a thermometer monitoring a rising fever. The latest report, published in early January 2022, showed 61% of respondents were 'concerned' and 23% were 'frightened' by the global outlook, leaving only 16% feeling 'positive' and 4% being 'optimistic'. When respondents were asked to express their outlook for the next three years, 42% foresaw a constantly volatile future revealing multiple surprises and 37% predicted a growing divide between winners and losers. These results were undoubtedly influenced by the current Covid crisis, which does not yet really show signs of running out of steam and whose end will not be the same for Western countries, with a high vaccination rate, when compared to the 52 poorest countries, which have had a very low vaccination rate of only 6% at the time of publication of the WEF report. The Covid crisis has also had consequences that in turn will create new crises: rising commodity prices, inflation, rising state debt. When we look at the main risks identified

by the UN and the WEF, one thing we almost immediately observe is their complex interaction, which makes the task of predicting their evolution all the more risky.

## Climate and environment are the top concerns

Themes related to the environment first appeared in the top 10 risks identified by the WEF study in 2011. Since then, they have not budged and this trend is increasing, especially with regard to long-term risks (5 to 10 years). At this time, five of the ten risks deemed the most important are related to the environment: failure of climate policies, extreme weather events, loss of biodiversity, crisis of natural resources and man-made environmental damage (industrial accidents, oil spills, trafficking endangered species, etc.). Extreme weather events have been ranked the most probable to occur since 2017 and indeed, they are already happening, all over the planet, in the form of droughts, fires, floods, etc. Several cities around the world have experienced unparalleled heat records in the past two years, including Madrid, which had a record of 42.7°, and Palermo, where the temperature rose to 48.8°. Hardly a week goes by without hearing about the unprecedented melting of a glacier, increasingly visible erosion of coastal regions, or endangered species.

The 2022 WEF survey contained a question on risk reduction efforts. When it came to preserving biodiversity and mitigating climate change, 77% of respondents believed



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*'61% of risk managers surveyed by the World Economic Forum in 2021 said they were 'concerned' and 23% 'frightened' by the global outlook.'*

that efforts are still in their infancy or have not started. Indeed, environmental risks require the greatest level of global cooperation because they go far beyond the scale of individual nations. The experts interviewed unfortunately observed an increasingly divided world, in which tensions, some of which are due to the pandemic situation, will not facilitate the necessary coordination of actions.

In addition to issues related to the climate and biodiversity, the themes of waste and pollution (of air, water and soil) are also very worrying. Cities generate between 7 and 10 billion tons of waste per year and this figure will surely increase further, or even double, according to UN forecasts, in certain African and Asian cities that have strong population growth and environmental policies that are still in their infancy. As the production of plastic has truly exploded starting in the 1950s, the presence of microparticles in the atmosphere and especially in the water has also increased exponentially and reached 3 to 5 million tonnes every year. Other problematic wastes also represent major

challenges, such as electronic waste and chemical and poisonous waste.

### **Technology: a two-sided coin**

If we are fairly unanimous in recognising the virtues of recent technologies that free us from troublesome tasks and provide solutions in all sectors of activity, they also bring threats, or at least challenges, which we are sometimes aware of, and sometimes less aware of. If cybercrime is, correctly, much discussed and monitored, we talk a little less about the dangers of the growing dependence of our societies on data and digital solutions as a whole, and also the digital divide, or even the absence of connectivity for a large part of the world's population (nearly three billion people have no internet connection), who are thus left on the wayside of the road, in terms of progress. Whilst we talk increasingly about artificial intelligence and controlling it through appropriate legislation, we have probably not yet taken account of all the possible consequences of its growing use, some of which will be more unfortunate than others.



Digital technologies, particularly all the terminals used to access them, are extremely energy-intensive and this is not the least of their setbacks. These terminals generally have a very limited lifespan, which causes a worrying accumulation of electronic waste (50 million tonnes per year). The consumption of Internet content, particularly videos, has a significant impact on greenhouse gas (GHG) emissions due to the copious quantities of fossil fuels used to power data centres. This phenomenon will experience a new level with the development of 5G (see the cover story devoted to this subject in the September-October 2021 Merkur) and artificial intelligence and the new possibilities they will open up.

The Covid-19 pandemic seems to have aggravated data security challenges and encouraged cybercrime on a global scale, thanks to accelerated digitalisation, the massive use of remote working, and other digital solutions. The figures are instructive, with a 600% increase in attacks recorded worldwide, and an explosion of ransomware (+800%) (source Gallice International). Here

**01.** In the movie 'Don't Look Up!' released on Netflix on 22 December 2021, a large meteorite is about to crash into the Earth to the chagrin of scientists who discovered it. Alerted decision-makers do not take the threat seriously... until it is too late. Many working scientists have drawn parallels between this fiction and what they experience in reality, especially when they activate the climate alarm bell.

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**02. 03. 04.** Extreme weather events such as storms, torrential rains and cold spells cause a variety of damage, the cost of which is increasingly high.

© 02: Casey Callahan/Unsplash  
03: Chris Gallagher/Unsplash  
04: Nikolas Noonan/Unsplash



**Marc Hengen**  
Managing Director,  
Luxembourg Insurance and  
Reinsurance Association (ACA)

***'The principle of insurance is based on modelling risks and their probability.'***

**What advice do you have for companies so that they know if they are well protected against risks?**

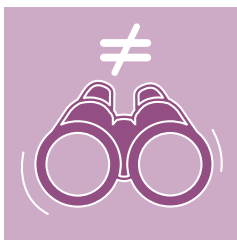
The first instinct to have is to contact an insurance broker or agent who can study the risks and the precautions to be taken and direct the company towards the best policies on the market. If the company is already insured, it can at any time take stock with its insurer and request quotes for possible extensions of coverage if its situation has changed. The law obliges insurers to provide their clients with quality advice. They are there to answer all questions and the client company is free to accept or refuse the coverage offered. Other professionals can provide advice in the field of security and protection. I am thinking of the Accident Insurance Association (AAA) or the Inspectorate of Labour and Mines (ITM) with regard to the health and safety of employees at work. It can also be firefighters for the prevention of fire risks or consulting engineering offices for advice on equipment for new buildings.

**Recently, in the context of the Covid-19 crisis or the floods in the summer of 2021, we have heard certain companies criticise their insurers for not covering operating losses. What do you think?**

The insurer can only cover the risks covered by the policies taken out. Business interruption insurance is already an optional accessory to fire or flood insurance. I understand that some companies are reluctant to take out such coverage because it represents an additional cost. We must seek the best balance between cost and benefit. As for flood risk, the experience of last summer showed that many more companies were exposed than we thought. This is probably a suitable time to review your insurance in this area.

**Is there an evolution in the skills and expertise needed in insurance companies?**

The principle of insurance is based on modelling risks and their probability. So, we do a lot of calculations to enrich our models. These are based on available or estimated data to which we apply adjustment factors. As a result, actuarial profiles are highly sought after. They are usually mathematicians, but they can be other scientists as well. More and more, our companies will need data analysts because the volume of data to be processed is greater and the models more complex. As this is the heart of our business, companies do not hesitate to invest substantial budgets in it.



### Prospective ≠ forecast

While forecasts are based on mathematical methods based on projections (scientific measurements of the past and present extended into the future), prospective tries to understand the transformations of society in order to explore possible futures. To do this, prospective also uses science, but it adds elements of imagination and intuition. Prospective writes several scenarios integrating systemic analyses, discontinuities, and behavioural responses to different hypotheses.

The horizon of the forecast is generally the short or medium term while that of the prospective is rather the long term.



### Principal commitments made at COP26

- India has pledged to achieve net zero emissions by 2070 and announced a target of 50% renewable energy by 2030. All major emitters have now agreed to start phasing out fossil fuels.
- 46 countries have pledged to switch from coal to clean energy by 2040.
- 104 countries have pledged to reduce their methane emissions by 30% by 2030. Methane is responsible for 30% of historic global warming.
- 141 countries, which have 91% of the world's forests, have pledged to end deforestation by 2030.



05

too, efforts should be united because as long as there are countries with permissive legislation, criminals will be able to hide and continue to operate. Indeed, virtual life will continue to experience risky developments such as the metaverse, a virtual world being developed by Marc Zuckerberg's Meta company, which will offer new possibilities to Internet pirates whose opportunism is not just a legend, as seen by attacks perpetrated on hospitals in the midst of the Covid-19 pandemic.

### Social risks and the rise of inequality

According to the WEF's Global Risks Report 2022, among the top five risks that have worsened since the start of the Covid-19 pandemic, three are social: the erosion of social cohesion, the subsistence crisis, and the deterioration of mental health. A similar observation was made in the latest report on inequalities published by the British NGO Oxfam in January 2022. According to this report, the pandemic saw the fortunes of the world's 10 richest people almost double whilst the vast majority of the world's population have seen their incomes fall. This is not a new phenomenon. The same

report states that since 1995, the wealthiest 1% have accumulated nearly 20 times more wealth than the poorest 50% of the planet. The UN, for its part, has observed a general decline in extreme poverty since its creation in 1945, but at the same time underlines the absolute necessity of tackling growing inequality because it acts as an obstacle to sustainable development (due to the impact on access to education and technology in particular) and generates discontent that is increasingly being expressed through violence.

The pandemic has exacerbated inequality, both between countries, according to their access to vaccines, and between individuals. In countries with developed economies, for example, employees are not all equal in terms of the possibility of working from home. Some professions that have found themselves on the front line (caregivers, maintenance staff, etc.) have had an exhausting increase in work even though many of these jobs are poorly paid.

The risks generated by societal imbalances are risks that must be resolved in the short term. Governments have therefore established safeguards to protect the most

**05. 06. 07.** In addition to air, water and soil pollution, a less visible pollution has now been added: pollution in space, where debris of several types accumulates. According to a count by the European Space Agency, there are 130 million objects orbiting the Earth.

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06: Naja Bertolt – Jensen/Unsplash



vulnerable sections of the population who are most affected by the current crisis. These necessary actions by governments could, however, prevent them from devoting the energy and resources to tackle longer-term risks such as those related to the environment. However, these risks could in turn cause setbacks in the social sphere and widen inequalities.

### Geopolitical tensions

Geopolitical risks may not register among the highest in the WEF rankings, having fallen behind the risks associated with the pandemic, but they have been identified as potentially having a strong impact, particularly on the availability of certain economically essential resources. Africa, for example, has seen many recent conflicts (the Tigray war in Ethiopia, conflict in Libya, coups d'états in Mali, Sudan and Guinea – the latter being a supplier of bauxite used to manufacture aluminium). Africa's large development potential and its richness in natural resources has also aroused the attention of stakeholders such as the Russians and Chinese. Elsewhere in the world, a military junta has taken power in Myanmar, the Taliban are once again controlling Afghanistan; in the Middle

East, Lebanon is sinking into crisis; in Latin America, Venezuela and the small countries of Central America are in the midst of an economic and migration crisis and Haiti is struggling to recover from the crisis caused by the assassination of its president.

The consequences of these crises include major population displacement (in 2020, there were 34 million displaced people worldwide) in a context where countries are tending to close their doors and adopt protectionist behaviour, which in turn aggravates tensions between countries and/or continents.

Europe is not exempt from these tensions with the countries in the south having to deal with large numbers of migrants without much support and the 'eastern front' experiencing potentially explosive situations in Ukraine and Belarus. The rise of nationalism and populist parties raises the spectre of European disunity at a time when we should be sticking together.

### Other trends

Beyond the risks already described that top the global agenda, other megatrends

are shaping the world today. From a demographic point of view, even if at a slower rate than in the 1960s, the world's population continues to grow. In 75 years, it has grown from 2.5 to 7.8 billion people and will continue growing until the end of this century according to UN forecasts. This poses increased risks to the availability and the depletion of natural resources. The imbalance between cities – increasingly populated – and rural areas is widening. At the same time, the world is experiencing an ageing population phenomenon, particularly in Europe, Australia/New Zealand and South and East Asia. This will create new types of challenges, including maintaining older people in economic activity and managing dependency and care, etc.

In a completely different area, the intensification of activity in space could create new areas of risk. Space is increasingly coveted for commercial and military purposes, without any coordinated international governance at the moment. One of the consequences of the growing exploitation of space is the increased risk of collisions between satellites, or with space debris or even asteroids. However, some orbits host key equipment for life on earth and climate monitoring.



08

**08.** The armed conflicts raging around the globe are the cause of many population displacements. In 2020, there were 34 million displaced people in the world.

© Levi Meir-Clancy/Unsplash

*'While the order may change depending on who is being asked, the same three big global risks are always on the list'*

### Perception and interconnection of risks

The perception of risks is very different depending on where you are in the world and who you are talking to. At the beginning of 2022, the WEF published the details by country of its Executive Opinion Survey (EOS), conducted among 12,000 decision-makers in 124 countries. From a list of 35, they were invited to choose the five risks they thought posed a critical threat to their country in the next two years. The responses were extremely varied from one part of the world to another. In the United States, the main fear lies in the possibility of witnessing the bursting of certain asset bubbles in major economies. The Russians are more afraid of conflicts between states; China, for its part, highlights extreme weather events; Brazil, prolonged economic stagnation.

AXA's Future Risk Report, which interviewed both risk experts and, for the first time in 2020, members of the general global public, showed that in the United States, the number one risk is related to cyber-attacks; in Asia and Africa the pandemic is still seen as the biggest risk and in Europe, climate

change holds that prize. Globally, the top three were climate change, cybersecurity and geopolitical risks. So, while the order may change depending on who is being asked, the same three big global risks are always on the list.

Within Europe, according to the WEF, concerns are varied as well. Belgium, the Netherlands and Germany share a fear of the failure of climate policies, while France is more worried about the erosion of social cohesion. Spain is alarmed by unemployment and the subsistence crisis; Portugal, like Brazil, by prolonged economic stagnation; and the United Kingdom attaches more importance to cybersecurity loopholes. Luxembourg shares the American fear of bursting asset bubbles but also worries about the failure of climate policies and the debt crisis in the major economies. ACA, the professional association of insurers and reinsurers in Luxembourg, conducted a survey as part of 'Insurance Days 2021', and invited participants to comment on their risk classification. Fear of cyberattacks were the major short-term fear, with climate change more worrying in the medium and long terms.



09



10

Most of the risks mentioned and other underlying ones are intimately interconnected by a subtle interplay of causes/consequences, with alternately positive or negative impacts. For example, climate change can have adverse consequences on infrastructure or supply chains, but also have a positive effect on the acceleration of certain innovations, particularly those relating to renewable energies. Recent technologies widen the gap between populations who have access to them and those who do not. Artificial intelligence algorithms and social network platforms create biases favouring certain discriminations or misinformation, but these same technologies make it possible to analyse substantial amounts of data, allowing decision-makers to devise, in principle, more informed policies. The aging of the population may accentuate inequality between men and women if the latter continue to be the main caregivers of elderly parents, but the countries with the most elderly populations will undoubtedly be more welcoming to possible immigrants.

These interdependencies and alternately positive and negative consequences show the extent to which things are changing and how unpredictable the future is.

09, 10. The proliferation of computer terminals demands a huge consumption of energy and, at the end of their life, a pervasive mass of electronic waste.

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**Marion Malchair**  
Senior Consultant, MindForest

*'Disruption can bring fatal risks or tremendous opportunities.'*

**How does your company help companies identify their risks?**

The question of risks and their management is crucial for companies. We find that one of the factors that promotes risk is the continuous movement of change that companies are experiencing today.

These can come from within (digital transformation, implementation of a CRM, organisational change, etc.) or from the outside (competition, technologies, regulations, etc.). Analysing the risks associated with these changes is an integral part of our support. We do this using a matrix that includes each risk, its cause, description, probability of occurrence, impact and actions to limit it.

**What type of recommendations do you make following a risk analysis process?**

From the construction of the risk matrix, we pull together different skills and knowledge. Those from our teams and those of our client. The risk matrix is validated by a group of people inside the company who form the 'Risk Committee'. One of our recommendations is to do regular monitoring over time to be effective. The matrix must be reviewed approximately every three months in order to monitor the impact of corrective actions on the evolution of risks. Beyond that, the recommendations may concern strategy, processes, roles and responsibilities, internal communication, training or human resources.

**With the Luxembourg School of Business, you are conducting a research programme around early warning signals. Can you tell us more?**

Some changes experienced by companies are provoked by external causes, disruptions coming from their ecosystem. However, these disruptions can carry fatal risks or tremendous opportunities. The advantage is then with companies that know how to detect the warning signs of these disruptions, the weak signals, and which make the necessary changes. Our goal is to strengthen the ability of our customers to decode these signals and then adapt, in order to reduce the risks associated with disruptions. We have completed a first phase of research, the first conclusions of which are already extremely enlightening. The second phase will end in mid-2022 with the drafting of a white paper containing practical recommendations for Luxembourg entities, which we will integrate into the support of our clients in terms of risks.





### The situation in Luxembourg regarding emerging risks

Luxembourg, like many countries, is still in the throes of the consequences of the Covid pandemic, which arrived like a 'black swan' (the term used by insurers to designate a very uncertain event with a very powerful impact) and which has important consequences for society and the economy. All the consequences are probably not yet known. Valérie Scheepers, member of the management committee of the *Commissariat aux Assurances (CAA)*, spoke during Insurance Days 2021 and reported that the immediate impacts of Covid for insurers were largely linked to event cancellations and operating losses suffered by many companies, provided that they had taken out this insurance coverage, and that this has had the effect of increasing the cost of claims on these categories. It should be noted that many companies, particularly in the Horeca sector, were not covered for operating losses. Valérie Scheepers has therefore reiterated the importance of insurers educating and explaining things to their clients. It is essential to be clear about what is covered and what is not, without any grey areas, in order to maintain trust between the insurer

and their commercial clients. The insurance world is aware of this and is trying to draft contracts in the clearest language possible, without ambiguity. It is also recommended that companies regularly check in with their insurance broker or their insurer, depending on the development of their situation, in order to be able to extend their cover if necessary.

Valérie Scheepers also mentioned the longer-term risks linked to the Covid pandemic, which are somewhat less predictable. These may be linked to cases of long Covid, to the still poorly measured impact on non-Covid operations and care that had to be delayed, or finally to the resultant deterioration of mental health. We see that what started as a health crisis has turned into an economic and social crisis that could have further health (or mental health) impacts in the longer term.

In Luxembourg, in addition to the current health situation, the most pressing and concrete emerging risks, according to insurance companies, are related to climate and cybersecurity. Climate change manifested itself with great violence during the floods of July 2021. These caused damage in nearly

the entire country, which was an unprecedented event. The ACA reported 6,500 cases of damage to homes and businesses, and 1,300 cases of submerged vehicles, which cost EUR 135 million to five insurance companies. In this specific case, the ratio between the premiums collected by the insurance companies and the compensation paid out was almost 1 to 10. The August 2019 tornado was another weather disaster, but far more localised, causing damage to fewer buildings and vehicles. Statec, which now closely follows certain meteorological indicators, reports that the year 2020 was the 8th consecutive year to beat heat records with 16 hot days exceeding the norm recorded between 1981 and 2010. At the same time, the year recorded relatively little rainfall, for the 7th consecutive year. Under these conditions, extreme events could increase. The 2021 floods are proof that you should not consider yourself immune just because you are not located near a waterway. It is therefore highly recommended that companies review their coverage with their insurance advisor.

Cyber risk is also at the top of the emerging risks monitored by insurance companies. Thanks to the pandemic and the massive



12

*'In terms of risks, all professionals agree that anticipation and preparation are the key words.'*

use of teleworking and digital solutions, the number of attacks has exploded. The Computer Incident Response Centre Luxembourg (CIRCL) recorded 180,000 cases in 2020 compared to 100,000 in 2019 and only 15,000 in 2018. Phishing and ransomware are the fastest growing attacks in Luxembourg. The victims are companies of all sizes and in all sectors. It is wrong to believe that only large companies are the targets of hackers. Medium and small companies are often less well protected, and they are often suppliers or customers of larger companies and so can serve as Trojan horses for attackers. All companies must therefore prepare for attacks because none are likely to be completely spared. To help them, the Chamber of Commerce has published a practical guide specially devoted to this: *Cybersecurity subject: Understanding, preparing for, and responding to an attack* (available for download or a print version can be ordered from [www.cc.lu](http://www.cc.lu)).

**11. 12.** Two trends characterise the demographic evolution at the global level: the population of cities, which is increasing rapidly to the detriment of rural areas, and the aging of the population in certain areas of the world (Europe, Oceania, Asia). These two trends will pose more or less long-term challenges.

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12: Philippe Leone/Unsplash



**Hajime Miyamae**

Founder and owner of the Kamakura restaurant, Luxembourg City, flooded in July 2021

*'The insurance covered the damage to stock, equipment, and furniture.'*

**Were you aware that you were at risk of flooding?**

Yes, I was because we had already suffered a flood in 1993 due to a sewer overflow. As I knew that a flood could happen, I have a special barrier to protect the door. We know that when the Moselle rises, the Alzette will follow. And that is what happened on 14 July, around 10 p.m., while we were full of customers. I had put up my barrier, but it only offers protection up to 70 cm while the water rose up to 1.60 meters that evening.

**What were your first reactions to the flood?**

Many French customers had long-standing bookings for Bastille Day and were still in the middle of dinner. I alerted them and made sure their cars were not parked in the Grönd. My first concern was to get them out of the neighbourhood safely. For the restaurant itself, it was too late to get sandbags. With the help of my team, we therefore rushed some precious documents and some equipment and furniture upstairs. And we stayed all night, sheltered in my accommodation which is above the restaurant.

**How did your insurer help you?**

In 1993, I wanted to take out flood insurance but at the time it did not exist. This policy has only existed in Luxembourg for four or five years. My agent offered it to me as soon as it became available, and I did not hesitate to take it. He contacted me immediately following the floods and an expert came very quickly. The insurance took care, with no difficulties, of all the damage concerning the stock of goods, the equipment, and the furniture. But on the other hand, nothing was compensated for the building, my front door in particular, because I had not subscribed to the property improvement. I did not know that existed.

**What would you do differently today to avoid such a situation?**

With the Grönd Residents' Association, we have submitted a request to the administrations concerned to obtain authorisation to reinforce our doors despite the fact that many buildings are listed. My door was smashed in by a plant container carried away by the current. If it had been shielded this would not have happened and I would not have had so much water in my restaurant. The association is also asking for valves for the sewers, a stock of sandbags and an alarm system between the inhabitants of the neighbourhood and the police.



### The 10 costliest natural disasters of 2021 (in billions of dollars)

1. Hurricane Ida, USA (late August early September): **65**
2. Floods in Germany, Belgium, Luxembourg and neighbouring countries (July): **43**
3. Storm Uri, United States, (February): **23**
4. Floods in Henan Province, China (July): **17,6**
5. Floods in British Columbia, Canada (November): **7,5**
6. Late cold spell in vineyards, France (April): **5,6**
7. Cyclone Yaa, India and Bangladesh (May): **3**
8. Australian Floods (March): **2,1**
9. Typhoon In-Fa, China (July): **2**
10. Cyclone Tauktae, India and Sri Lanka (May): **1,5**

Source: Christian Aid Annual Report 2021 (British anti-poverty NGO)



### Insurance: a long-established sector in Luxembourg

- The Paternelle, founded in 1843 in Paris, opened an office in Luxembourg in 1853, and became AXA Luxembourg in 1992 after several takeovers and mergers.
- In 1890, Bâloise was created with its target clientele being steelmaking and industry.
- Lalux was founded in 1920 and Foyer in 1922.
- In 1960, the sector had 30 companies in Luxembourg. There are nearly 100 today, employing more than 12,000 people.

■ More information: [www.caa.lu](http://www.caa.lu)

*'In the current context, cooperation between insurers and reinsurers is more important than ever.'*

**13. 14. 15. 16.** In Luxembourg, the tornado of August 2019 (#13 and #14) and the floods of July 2021 (#15 and #16, Echternach) left residents in disarray and insurance companies with unprecedented claims.

© 13: kaërljeng.lu  
14: Swisinfo  
15 et 16: Chambre de Commerce



In terms of risks, all professionals agree that anticipation and preparation are the key words, whether in private companies or within insurance companies that must continuously adapt their profession to ever changing risks.

### The insurance sector facing uncertainty

As Marc Hengen, Managing Director of the ACA, points out, *'risks are at the heart of our businesses, and they are constantly evolving. At the moment, we are in full pandemic crisis, but we hope to see the end of it. We know, however, that new risks will appear, and some others will diminish. If I take the example of traffic accidents, these are constantly decreasing thanks to effective prevention campaigns.'* We sometimes forget that the job of an insurer consists not only of repairing the consequences once a risk has become a crisis, but also of preventing risks and advising customers on the actions to be taken to limit them.

In the current context, cooperation between insurers and reinsurers is more important than ever because the reinsurers, which are generally large international groups, are building useful databases, based on a large amount of information from multiple claims and situations. This makes it possible

to model the risks in a more exhaustive and relevant way than a local entity can do. Working on a wider spectrum of risks and in more diversified geographical areas offers compensation and balanced financing at the international level.

The European Directive for regulatory reform for the insurance world, known as Solvency II, was adopted in November 2009 and took effect in January 2016. Its objective is to better adapt the level of capital required by insurance and reinsurance companies to the risks that they incur in their business. Thus, each insurer or reinsurer must be able to understand the risks inherent in its business in order to be able to allocate sufficient capital to cover them. To this end, the Directive encourages insurance and reinsurance companies to adopt a risk management approach coordinated by a risk officer whose mission is to draw up risk management procedures (including the roles and responsibilities within the company), to support managers in the development of their response and their tolerance to risks (direct assistance, training, etc.) and to supervise the risk management reporting process. This function has existed for a long time in insurance companies, but the Solvency II Directive has given it more weight because risks have become more complex over time, new ones have appeared and the



15



16

need to coordinate their management has become more pressing.

### Risk manager profession

To identify the risks to which a business is or could be exposed, the risk manager in an insurance company works in close collaboration with teams in the company's various departments. This involves assessing the insurable, financial, compliance, reputational and operational risks according to their probability and their direct or indirect financial impact.

The analysis of risks relating to insurance contracts taken out by policyholders is based on both the work of actuaries who are insurance mathematicians – they model the risks and calculate the level of premiums on that basis – and on the highly documented databases of reinsurers. Thus, for example, for climate risks, models have until now been based on past observations, and for floods, hydrographic maps were the preferred method to determine flood-prone areas.

After the floods in July 2021 in Luxembourg, 'we began to supplement the maps drawn up by the water management administration with our own maps taking into account the fact that floods no longer only happen near waterways', explained Annick Felten, Chief Risk Officer of Foyer Group. 'But let us be clear, at present, our simulations do not allow us to predict precisely what the consequences of global warming could be for our portfolio. To better understand the phenomenon, we mainly follow the work

of international reinsurers who have been doing research on the subject for years.' In Luxembourg, progress has been made on flood risk coverage following the events that occurred in 2017. It is thanks to this past experience that insurance covering flooding in the broad sense is offered and that last summer's claims were so well taken care of by local insurers. 'But if such episodes were to take place too close together, it would become very expensive to insure and finance them,' added Annick Felten. 'With regard to emerging risks, insurers can always imagine new products to cover new risks or better cover more frequent risks. For example, there has been a lot of talk lately about the insurance of operating losses in a pandemic or even cyber risks, which is a hot topic. But these risks have a certain cost that is still difficult to quantify today, and whether customers are willing to pay for this coverage depends on their sensitivity to risk.'

To return to the floods of summer 2021, given the small number of insurers active on the Luxembourg market, only five companies covered all of the insured losses. Annick Felten explained that, 'as long as the reinsurers support us, the risk is sustainable, but if one day they no longer do so, or if the price becomes exorbitant, another solution would have to be found to be able to continue to cover this risk.'

Risk managers are also found in large industrial, commercial and financial companies. They track and quantify the risks inherent in the company's business. They play a preventive role which can take various forms:

prescribing the implementation of physical or digital protection infrastructure, or adding protective clauses in certain contracts. They are also the natural interlocutors with insurance companies to develop specific guarantees and find the best rates. They are traditionally attached to the administrative or financial director, to the legal director or even directly to the general manager. (See interview with Marc Algranti, Group Risk Manager at Etex, page 50).

### Being resilient: best practices

Risks are often business-specific. However, a few good preventive reflexes can ensure their proper management. In general, cultivating long-term thinking that goes beyond the daily requirements of the company's operations to anticipate external and internal developments likely to have an impact on the activity, listening to the environment and its stakeholders, and having varied profiles in the company in terms of gender, age, origin, culture, etc. to encourage a diversity of approaches, can contribute to better anticipation of risks and to a better response when situations arise.

The WEF asked a group of risk managers to identify some best practices for improving business resilience. They recommend focusing first on failures that could compromise the company's fundamental objectives. This involves analysing the practices, processes and tools on which the company's efficiency is based to identify those that deserve to be redesigned or improved. At the same time, companies must monitor the broader ecosystem in which they operate and in



**Marc Algranti**  
Group Risk Manager, Etex

***'The first line of defence against risks lies in everyone's daily commitment.'***

### **What is the role of the risk manager in a company?**

It is a very transversal role. To understand risk exposure, it is necessary to establish a dialogue within the entire company, from top management to the most operational functions. The scope of action of the risk manager is variable. In my case, it covers all the risks. I have to help identify them and report them to management. On the other hand, it is not up to me to pilot them. This is the responsibility of each department concerned: Human Resources for personal risks, Production for industrial risks, Purchasing if it concerns supplies, etc.

### **How has this role and its place in the organisation evolved?**

In general, we are witnessing the professionalisation of corporate governance. Also, greater attention is paid to risks. Business leaders have increasing responsibilities, and this accentuates the need for understanding and controlling risks. The risk manager must provide a compliance response to regulatory, ethical and internal and external transparency requirements.

### **What tools do you use to identify risks?**

The preferred method is to develop a risk map. It is then necessary to conduct very open interviews with senior management in the various functions of the company. A long list is thus established, which is reduced by grouping the risks by domain. Then, they must be evaluated and positioned on a mapping integrating several criteria including impact and probability but also the vulnerability of the organisation. We deduce priorities and response plans with allocation of resources and means, without forgetting that the first line of defence against risks lies in everyone's daily commitment.

### **What types of actions do you take when you identify a risk?**

Increasingly, the consequences of risk reach multiple areas of a business. For example, the supply risk which primarily concerns the purchasing department is not limited to an impact on production. It also has consequences on sales and even on the reputation of the company. Since the risks are more complex, the responses to be provided are themselves more complex and must be developed collectively by mixing internal control, prevention, protection, insurance, etc. while respecting the company's strategy and its tolerance for each risk.



17

**17. 18.** Inequalities are widening between the countries of the world and within countries. According to the British NGO Oxfam, since 1995, the top 1% of the world's wealthiest have accumulated nearly 20 times more wealth than the poorest 50%.

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**19.** In companies, the cyber risk has increased with teleworking and nomadic working.

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**20.** Workplace accidents represent a risk, but prevention campaigns are very effective in limiting their number and severity.

particular their vulnerability to certain delays, breakdowns or inefficiencies of the third parties on which they depend and, in addition, measure the tolerance of the third parties who depend on them. Employee behaviour is decisive in crisis situations and their commitment is maintained on a daily basis through good leadership and effective communication. The risk resilience strategy can be linked to a broader CSR objective. For example, securing supplies by seeking nearby suppliers can also contribute to a better carbon footprint for the company. Maintaining honest and transparent relationships with the supplier network can help in developing collaborative responses to crises.

The most advanced companies in terms of risk management can also go as far as to conduct crisis simulation exercises, a kind of crash test to draw ideas for improvement to be brought to the organisation, using



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*‘Companies must monitor the broader ecosystem in which they operate and in particular their vulnerability to certain delays, breakdowns or inefficiencies of the third parties on which they depend’*

the same principle as widespread fire drill exercises.

Classifying the risks identified in a matrix with two axes (probability and severity) makes it possible to quickly tackle the most significant risks, i.e., those that are both the most probable and those whose consequences would be the most critical for the organisation. Once the analysis has been conducted, possibly with the help of a consulting firm, a battery of solutions can be put in place, ranging from the subscription of certain specific insurance policies, to working with a law firm, to modifying certain internal processes or organising the backup of company data.

Prevention can also take the form of a business continuity plan including the steps to follow in the event of an urgent crisis situation and defining the roles and responsibilities within the organisation: who does what? Who has the right to make such and such a decision? To sign such and such documents? Where is the critical information, etc. These procedures must exist in the company's information system but also in paper format because if it is a question of

countering a cyberattack, the information must be accessible even if the computer system is no longer accessible.

The Covid-19 crisis, which arrived suddenly at the start of 2020, served as a test for governments, businesses and citizens. Everyone will have learned useful lessons at their own level, for the future and the possible appearance of new risks. In particular, it highlighted the ability of certain governments to provide financial and organisational assistance and the ability of companies and citizens to innovate and show solidarity and inventiveness. The strength of the collective is one of the lessons to be learned, the one that should be implemented, at the global level, to mitigate the consequences of future climate risks. —



**How well do you know your global risks?**

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