



Emerging Risks Initiative

Major Trends and Emerging Risk Radar

2021 Update



Executive Summary

We are pleased to present the 2021 update of our Emerging Risk Radar.

The Radar is a summary of emerging risks and associated major trends that could affect the insurance sector over the next five years and beyond. Risks are classified low, medium or high according to their perceived materiality. Both the list of risks and the assessment of impact and timing are based on the expert opinion of the Emerging Risk Initiative (ERI) working group of the CRO Forum.

In addition to the effects of the pandemic, a recent focus was particularly on the increasing importance of ESG topics. This is a long-term trend that applies to many areas of the insurance industry. This circumstance was taken into account by including [ESG Issues](#) in the “Major Trends”.

Some new risks have been added to the radar:

- [Biodiversity](#), which recognises the decline in biodiversity and ecosystem services due to habitat destruction and overuse of natural resources, pollution or climate change.
- [Mental Health](#) was added in the light of a shift in insurance claims from somatic to mental illness, which will most likely receive a further boost from the Covid-19 pandemic.
- [Socio-economic Inequalities](#), have increased worldwide following the global financial crisis. More recently, the Covid-19 pandemic and the resulting economic recession have exacerbated the trend towards greater income inequality, both between and within societies..

In order to improve the clarity of the radar, efforts have been made to cluster risks and to combine them where appropriate. Therefore, the risks “GMOs” and “Synthetic Biology” have been included under the heading “Genetic Engineering”. The new title “Resource Management” includes the old risks “Resource Scarcity” and “New Frontiers for Resource Extraction”. 3D printing has become fully established in the industry in recent years and has transitioned into insurance as a standard risk. Therefore, it is no longer included in the risk radar this year.

We hope you find the report useful and welcome your comments and feedback.

Emerging Risk Radar

Trends

-  Ageing and Health
-  Consumer Behaviour and Digitisation
-  Economic Instability
-  Environment and Climate
-  Environmental, Social, Governance (ESG) Issues
-  Shifting Geopolitical Landscape
-  Technological Developments
-  Urbanisation and Social Change



Key

Impact assessment:

Bullet colour corresponds to expected impact of risk

- Risk category: High
- Risk category: Medium
- Risk category: Small

Time Horizon:

- Significant impacts already seen in insurance claims
- First significant impacts expected within 1-5 years
- First significant impacts expected within 5-10 years

* New risk in 2021

Major Trends Descriptions



Ageing and Health

Medical advances in diagnostics and treatment continue, improving morbidity and mortality. On the other hand, many societies are ageing and lifestyles are changing (including sedentary habits, poor diet, lack of sleep, substance abuse), contributing to the rise in chronic diseases. Physical health is closely linked to mental health, which is also deteriorating in many places. Infectious diseases are on the rise, linked to climate change, increased mobility and antibiotic resistance, but also to social aspects such as anti-vaccination movements. All of this can have a negative impact on morbidity and mortality, and it remains unclear whether medical advancement would counter-balance the impact from these lifestyle changes, especially considering the costs involved.



Consumer Behaviour and Digitisation

Customer expectations are changing in terms of delivery, product experience, and precision. This, coupled with being time-poor and having a large range of choices, leads consumers to gravitate towards dominant platforms and trusted brands with a shift from physical to digital trading. Disruptive digital technologies may change customer habits quickly. Expectations of simplicity and access are rising driven by the increasing use of smartphones, social media and data analytics with support of AI leads to increasing individualisation of offers; to protect consumers from being exploited, regulation of fairness and data privacy are on the rise.



Economic Instability

Post financial crisis there have been doubts about underlying growth and stagnant standards of living for many. Instability in economic systems is compounded by rising inequality. Politically these factors fuel the rise in populism and a reaction against multinational institutions, leading to nationalism and fragmented regulation. Also long-term low yields and the stimulus tool of massive quantitative easing may stoke inflation risks and create asset bubbles.



Environment and Climate

Environmental issues are now firmly in the spotlight, dominated by climate change, resource scarcity and pollution of the biosphere. There is growing concern about the consequences of the unchecked emission of greenhouse gases driving climate change, such as the occurrence of more extreme and frequent weather events. The pressure placed on the planet from a growing human population is causing resource scarcity, driven by unsustainable practices in mineral extraction, food and energy production. Anthropogenic activities are also polluting the land and sea with non-biodegradable waste such as plastics, and the air with particulate and gaseous pollutants. All forms of pollution are becoming ubiquitous, with harmful consequences for life on Earth including decline in biodiversity, which would disrupt entire ecosystems.



Environmental, Social, Governance (ESG) Issues

More serious impacts from the environmental issues and social inequality, but also a better understanding of their impacts on society bring ESG issues firmly into the spotlight, dominated by environmental challenges but also human rights violations, bribery, corruption, other social divides and unethical behaviour in terms of good corporate governance. They represent a major risk for the planet's balance, global society and the economy due to their systemic risk nature. With ESG issues also coming under increasing scrutiny from stakeholders such as investors, regulators and consumers, pressure on companies increases to not only to manage the risks they face from ESG issues but also to contribute to sustainable economic and social development, and include wider societal groups in their stakeholder management in order to maintain their own brand and reputation. This trend includes all risks associated with ESG influences or threats from outside or inside a company, regardless of general environmental and climate aspects.



Shifting Geopolitical Landscape

After the recent period of Western-based liberalisation and globalisation, there is movement towards a more multi-polar world and more assertive behaviours. This is visible through renewed protectionism, anti-global sentiment, Brexit, a resurgent Russia, and China increasingly flexing its economic and political clout. Heightened conflict risk is visible in many areas of the World, i.e. the Korean peninsula, South China Sea and Middle East tensions.



Technological Developments













Modern technology, digitisation, automation and robotics is boosting efficiency and displacing repetitive and tedious human tasks and is now progressing swiftly into automating more value-creating tasks. Transition to autonomous machines can be observed. Many processes are faster, cheaper and improved. At the same time talent needs and job mix are changing rapidly, creating the need for ongoing adjustments in the education system. The increased use of technology poses questions around data security and ethics.



Urbanisation and Social Change

Several societal trends are changing the way society functions. Among them are population growth, rising urbanisation and mobility, which affect how people work and socialise. On the other hand social cohesion is reducing in some countries and society is giving greater power to the individual. Meanwhile, the social make-up is changing, e.g. mass migration in some regions, and surging urban middle-class in higher-growth countries. Decreasing social mobility becomes more visible. Numerous conflicts as well as economic pressure have resulted in large-scale disruptive cross border migrations. The arrival of large numbers of migrants translates into increased pressure on welfare systems and infrastructure. This may result in socioeconomic and political consequences, which are not yet fully recognized or understood.

Emerging Risk Descriptions

TOPIC	ASSOCIATED TRENDS	DESCRIPTION	IMPACT ASSESSMENT	ERI PUBLICATION
Antimicrobial Resistance		Drug resistance occurs when microorganisms such as bacteria, viruses, fungi and parasites change in ways that render certain medications ineffective. When microorganisms become resistant to most antimicrobials they are often referred to as “superbugs”. This is a major concern because a resistant infection may cause significant human and financial costs.		
Artificial Intelligence		With progress in Artificial Intelligence (AI) and cognitive computing, machines may begin to make decision on behalf of humans. Decision transfer and lack of transparency or human oversight may result in unforeseen risks or unpredictable outcomes creating complex liability issues. Also ethical, social and market aspects linked to AI are getting more prominent.		2015
Autonomous Machines		Thanks to new developments in mechatronics, speed learning and artificial intelligence there has been rapid progress in the field of autonomous machines, affecting most industries, military and everyday life. Autonomous vehicles are particularly well publicised. This is likely to change the risk landscape for various lines of insurance business.		2017
Biodiversity (new risk)		All economic activity depends on natural assets - like water, forests or clean air. There is a continuous decline in biodiversity and ecosystem services by pressures such as changing land use, habitat destruction (e.g. deforestation), overuse of natural resources (e.g. overfishing), pollution or climate change. As the degradation happens gradually, simultaneously and globally it exposes the economy to sudden, unexpected shocks. Pandemics based on zoonotic disease are one example. As the shocks can affect larger regions, it can translate into losses in the areas of business interruption, casualty, life & health - at the same time where financial markets decline due to the economic shocks. This exposes the insurance industry on both sides of the balance sheet simultaneously.		
Climate Change Litigation		On the legal side: New regulatory developments, increased litigation activity and subsequent liability issues associated with climate change/greenhouse gas emission may lead to large losses under environmental liability, product liability and D&O/professional liability, particularly where the emitter is deemed to have misled.		2009
Climate Change Transition		Transition risks arise as the world aims to adapt to the warming climate and reduce the emission of greenhouse gases (especially CO ₂). This has implications for insurers in the product design and associated liabilities, plus the way they invest. One particular transition risk is the occurrence of stranded assets. These are assets that become obsolete due to policy changes (e.g. coal sector, diesel vehicles) or due to carbon pricing (e.g. surplus aircraft). They may not be climate-resilient and become uneconomic, risky or impaired by physical changes, or due to emerging liabilities e.g. for oil companies.		2018

 Ageing and Health

 Consumer Behaviour and Digitisation

 Economic Instability









 Environment and Climate











 Environmental, Social, Governance (ESG) Issues


















 Shifting Geopolitical Landscape









 Technology Developments

 Urbanisation and Social Change





TOPIC	ASSOCIATED TRENDS	DESCRIPTION	IMPACT ASSESSMENT	ERI PUBLICATION
Climate Tipping Points		In the climate system, most of the feedback mechanisms are of a gradual nature while tipping points arise where a critical threshold is crossed leading to a system change. Tipping points can trigger an acceleration of climate warming, for example, permafrost or glacial thawing. Some of these changes are reversible while others are irreversible. Sudden and non-linear changes are hard to predict and require a good understanding of climate systems and feedback loops. Therefore, monitoring tipping points is key to tracking climate risk. With emissions and warming continuing at near the highest IPCC projections, the risk of tipping points being triggered may increase in the long-term. An acceleration of climate-related effects could increase the severity and frequency of weather-related hazards (such as flood, droughts, heat waves and wildfires). In combination with the concentration of assets and people in exposed areas, such tipping points could aggravate economic and insured losses.		2018
Collective Redress		Collective redress is defined as a “procedural mechanism which allows, for reasons of procedural economy and/or efficiency of enforcement, many single claims (relating to the same case) to be bundled into a single court action”. The development of collective redress mechanisms in Europe can create an inflation of claims as seen with Class Actions in North America.		
Critical Infrastructure Blackouts		In many regions of the world, there is a chronic failure to adequately invest in, upgrade and secure infrastructure networks such as electricity provision, water supply, or transport infrastructure. The lack of capacity or outages results in blackouts. This could lead to a higher than expected frequency and severity of large property and non-property losses (incl. BI/CBI). Additionally the risk of natural catastrophes, solar storms or cyber attacks could impact the infrastructure, (incl. satellites, GPS and communications systems). Also energy transition may impact stability of energy supply. A smoothly functioning digital infrastructure is becoming increasingly important, especially in times of remote home office working.		2008 & 2011
Cyber Risk		The volume and sophistication of malicious cyber activity has increased substantially, and there are growing concerns regarding the security of proprietary corporate data and critical industrial control systems. Cloud computing poses elevated risks due to increased concentration and accumulations. Operational risks exist for corporations and could also lead to large property losses with high and previously unknown accumulation potential if industrial facilities were simultaneously attacked. The growing request for personal identification and authentication, the use of biometric identifiers and the multiple uses of identifiers will likely increase the risk of identity fraud and even theft.		









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Digital Currencies		Digital currencies are exclusively stored and exchanged in electronic form, differentiating them from electronic transactions underpinned by traditional currencies. Most digital currencies such as Bitcoin use “Blockchain” or distributed ledger technology. Due to the encryption employed they are also referred to as cryptocurrencies. Existing cryptocurrencies are not issued or controlled by governments or central banks and lack legal tender status. There are concerns that cryptocurrencies are extremely volatile and facilitate crime financing and money laundering. With the growing use of decentralized digital currencies, central banks are considering issuing central bank digital currencies (CBDCs), that would be issued and backed by an established central bank. Outside of small pilots CBDCs are still hypothetical and their benefits and risks only begin to be explored. Blockchain has wider application beyond digital currencies and is expected to be substantially disruptive to incumbent operators in a variety of markets, including insurance.		
Digital Misinformation		New digital abilities to manufacture faked contents (photos, videos, audio, text) are proliferating, and speed and effortlessness to produce and distribute sophisticated fakes are increasing. Deep fakes (e.g. AI-enabled simulated video) or fake news can be used for fraud, to harass individuals, defame social groups, blackmail organizations or destabilize political systems and markets. For insurance, social engineering/cyber and social unrest implications may be central, but there are also impacts on claims handling, and reputational risk. More generally, trust in objective evidence may be diminished.		
Endocrine Disruptors		Endocrine disruptors are substances, which can interfere with hormonal systems. If a direct link between such substances and human health problems could be established, this would have profound consequences for liability insurance throughout the entire value chain. In addition, it would have a negative impact on morbidity and mortality.		2012
Environmental Pollution		The International Agency for Research on Cancer (IARC), classified outdoor air pollution as carcinogenic to humans. Water Pollution is an endemic and growing issue. Noise pollution, light pollution and soil pollution - the latter including that from the widespread and growing use of pesticides - are having major damaging impacts on biodiversity and the environment. Plastic litter and debris of all kinds, including micro-plastic ‘smog’, is now ubiquitously found on all surfaces of the planet and in the food chain, with implications for human health and liability claims.		2009
Evolving Terrorism		The risk of terrorism has been evolving for the last two decades, making it difficult and subjective to assess. Its inventive and adaptive nature undermines probabilistic modelling inferred from the past. Therefore assessing the plausibility of a specific type of terrorist attack in the future largely relies on expert judgment. Potential threats are NBCR terrorist attacks (Nuclear, Biological, Chemical, Radiological) and other nonconventional terrorist attacks on computer systems and industrial installations (Cyber terrorism, Electro-Magnetic Pulse (EMP)).		2007





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Extreme Weather	 	Extreme weather refers to phenomena that are at the extremes of the historical distribution and rare for a particular place and/or time, making their behaviour difficult to assess. The effects and mechanisms are hard to isolate and fully describe. This presents challenges for measurement and modelling. However, the incidence and intensity of extreme weather is growing. Climate change is predicted to trigger more frequent severe events, especially floods, wildfires, heat- and cold waves. The increasing cost of claims is compounded by higher value insured properties concentrated in vulnerable locations (e.g. on the coasts).		
Food and Water Supply	    	As the world population reaches 7.7 billion inhabitants, there is an increased competition to satisfy basic water and food needs of large parts of the world population, leading to supply shortages and geopolitical conflicts. In many countries, supply infrastructure is ageing and efforts to limit waste are faced with tight budget constraints. This results in reduced quantity and quality of supply, with known adverse effects on health, urbanization, economic growth, and social and political stability.		2013
Genetic Engineering	 	Genetic Engineering is an umbrella term for the genetic modification of genetic material using traditional methods, gene therapy, CRISPR/Cas, synthetic biology and biohacking. What they all have in common is the modification of the genetic material. So far, claims has been seen mainly in gene therapy, in the field of gene foods, and in food mismatches with incompatibilities, ecological damage and various product recalls. There is not yet a sufficient claims history for CRISPR/Cas. Biohacking escapes general control. Overall, concerns were raised about possible environmental or health impacts, ethical issues and insufficient regulatory control of the new technologies.		
Geopolitical Conflict	 	Tensions between countries, resulting from shifts in the international order and the rise of a multi-polar world, increase the risk of inter-state conflict. Potential hotspots include the Korean Peninsula, the South China Sea, and the Middle East. In the case of the Middle East, the regional rivalry between Saudi Arabia and Iran is playing a key role in current conflicts including in Iraq, Syria and Yemen. The Covid-19 pandemic could have geopolitical implications by encouraging states to adopt more nationalistic policies.		
Growth of Leverage		Global debt has risen sharply over the past decade, from \$120 trillion in June 2008 to \$277 trillion at the end of 2020, according to the Institute of International Finance (IIF), equivalent to about 365% of the gross domestic product of the entire global economy. The increase has taken place across the government, corporate and household sectors driven by, variously, sluggish economic growth and the slow pace of fiscal consolidation since the Financial Crisis and loose monetary conditions, which has encouraged private sector borrowers to take on more debt. The increased indebtedness, however, leaves borrowers more vulnerable to changes in background conditions, such as a slowdown in economic growth, or higher interest; or to market shocks, for example, a further escalation of the trade war. This heightened credit stress could, in turn, have further negative consequences, including a spike in defaults (resulting in losses for banks and investors), or could lead to a period of forced deleveraging that would exacerbate any economic downturn.		

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Legal & Regulatory Uncertainty		Current regulatory trends have prompted companies to re-examine the effectiveness of their governance and oversight. The continued adoption of new or proposed regulations, capital standards or accounting changes (e.g. IFRS17) can lead to compliance challenges and to increasing regulatory complexity. Conduct regulation continues to gain prominence and is one key example of where this risk can emerge. Furthermore, over-regulation, mis-regulation but also non-regulation have been identified as risks in some areas.		
Medical Advances		Significant advances have been made recently in several medical specialties that can bring potential benefits in prevention, diagnosis and treatment of illnesses and thus can improve health and longevity. However, information asymmetry between insurer and applicant may arise, with impacts on availability, pricing and claims. At the same time, these advances could increase the cost of some insurance products, such as health covers, and present new opportunities for other products such as life insurance covers. For predictive genetic testing in particular, while improvements in data processing algorithms and Artificial Intelligence are expected to increase their accuracy and reliability, the legal landscape and related ethical implications are complex and in constant evolution.		2019
Mental Health (new risk)		Mental health is not just the absence of mental illnesses, but rather a complete mental ability and state of wellness. Accordingly, it is fundamental to be mentally healthy to be able to perform everyday activities. Yet, 20% of the world's population suffer from a mental illness at some point in their lives. Many mental health issues are not severe and lasting but mild to moderate short-lived mental health conditions such as depression, anxiety, stress, and burnout. Though most mental illnesses are treatable, it is estimated that two-thirds of those who suffer from mental health issues go unsupported. Furthermore, mental health risks are increasing worldwide. Mental stress and isolation caused by the Covid-19 pandemic outbreak will most likely exacerbate this trend. Consequently, an increase in claims related to mental health such as medical expenses for Health insurance, occupational Disability claims, Life insurance claims (because of higher suicide rates), and P&C claims (e.g. Worker's Compensation, Employers' Liability, Accident and Health, etc.) can be expected. This shift in insurance claims from somatic to mental health illnesses over the last years highlights the potential implications for insurers and their role in tackling the evolving risks related to mental health.		
Monetary Policies		The low interest rate environment that has prevailed in many advanced economies since the Financial Crisis (and is a function of the very weak inflationary pressures over this period) poses a variety of risks. For insurers, low interest rates increase the cost of funding guarantees embedded in life insurance contracts (which are typically benchmarked to long-term government bond yields). The problem for insurers is likely to become more acute, the longer the low interest rates persist. For financial markets and the broader economy, the low interest rates have also contributed to a build of imbalances: in equity and real estate markets (which have undergone sharp increases) and in increased borrowing by corporates and households. These imbalances leave markets and economies vulnerable to the risks that interest rates might need to rise sharply, say on signs of resurgent inflation.		

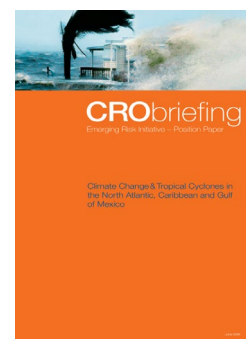
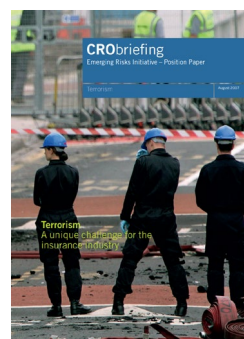
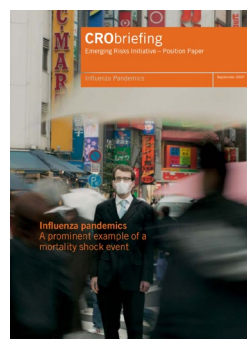
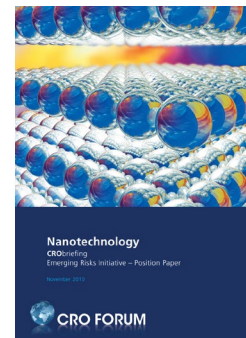
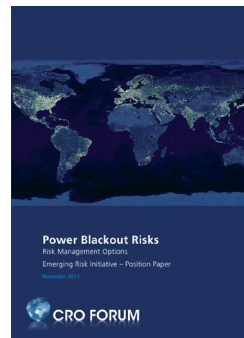
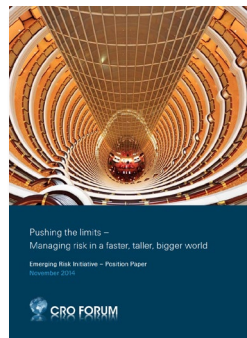
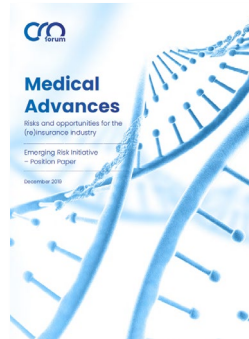
TOPIC	ASSOCIATED TRENDS	DESCRIPTION	IMPACT ASSESSMENT	ERI PUBLICATION
Nano-technology		The manipulation of matter on an atomic and molecular level raises concerns about nanomaterial toxicity, as inherent risk exposures are relatively unknown throughout the product life cycle. Similar to the asbestos case, there is potential for long latent large losses across various industries. However, nanotechnology related advances in medicine and healthcare could have an overall positive impact on mortality and morbidity.		2010
Obesity		The increasing prevalence of obesity has a direct impact on life expectancy as well as on healthcare costs, with the latter also subject to potential future changes in legislation regarding reimbursement. Liability might be affected where e.g. sedentary jobs or specific products consumed (e.g. sugars) can be directly linked to weight gain. Medical progress with the aim of reducing future obesity presents an opportunity especially for life insurers.		
Pandemics		Pandemics can have a significant effect on the whole economic and financial landscape. Current globalised modes of living, including the speed of global travel, enable pandemics that occur today to be spread more rapidly than in the past. Pandemics cause material risks with the potential to affect all lines of insurance business and investments through impacts on financial markets. The occurrence of pandemics can also reveal the vulnerability of the current globalised world and healthcare systems, impact ways of working, supply chains (with the potential to lead to significant business interruption) and cause changes in consumer behaviour. Notwithstanding medical developments and changes in healthcare, the way that individuals and authorities respond to a given pandemic event, can have a significant impact on the speed and spread of the pandemic, making it difficult for insurers to predict the severity of the overall impact of the next pandemic. There is an increased risk of the proliferation of new strains of virus that can infect humans, which is being exacerbated by the destruction of natural habitats and ecosystems. The Covid-19 pandemic has highlighted the vulnerability of networked structures in a globalized world. The massive disruption of supply chains, the collapse of entire national economies resulting in severe economic crises and the worldwide increase in social inequalities are, alongside the medical consequences, the most visible expression of the current pandemic events.		2007
Passive Investment		The dramatic expansion of passive investment management (where assets are not selected based on individual criteria, but a given index is mirrored instead) in recent decades poses risks to the stability and functioning of markets. In particular, market volatility could increase, and shareholder accountability decline (with negative implications for corporate governance). Competition could also be harmed as a result of the growing concentration of ownership of companies.		

TOPIC	ASSOCIATED TRENDS	DESCRIPTION	IMPACT ASSESSMENT	ERI PUBLICATION
Plastics and Microplastics		<p>Pollution of the earth's biosphere with plastic is a critical environmental and sustainability issue, in addition to being a possible threat to human health. Plastic pollution can exist both in the form of larger pieces of plastic litter and as microplastics (MP), which are small plastic particles in the environment that are less than 5 mm in diameter. MP can come from a variety of sources, including from the gradual degradation of larger pieces of plastic litter, or from cosmetics, clothing microfibers, and industrial processing, where microplastic beads can be used as abrasives. MP persist at high levels in all environmental compartments of the earth's biosphere, and have been found in water, soil and air. As plastic molecules are highly persistent in the environment, they can be ingested and incorporated into and accumulated in the bodies and tissues of many organisms. MPs can leach toxic chemicals, including endocrine disruptors such as Bisphenol A and phalates, persistent organic pollutants and various toxic metals. How MP behave and circulate in the environment is not yet fully understood. On a longer timescale, the move away from single-use plastics is also expected to have impacts on society and industry.</p>	●	
Political Instability		<p>Political instability and violent social unrest can appear suddenly and may spread rapidly if underlying structural causes are present. These include high food and energy prices, water scarcity, high unemployment, income inequality and poor public services. This is likely to impact insurance losses under property schemes (incl. BI/CBI and SRCC (strike, riot, civil commotion)), particularly in areas of high value concentration.</p>	●	
Protectionism		<p>The general shift of global economic power from the West to the East in a multi-polar world is increasing the complexity and instability of global power balances. Increasing bilateral or multilateral disputes between countries increases the risk of trade wars and military conflict, a risk which is compounded by nuclear proliferation and new military technology such as autonomous weapons. This threatens the stability of the world economy and particularly financial markets. The experience of the Covid-19 pandemic could intensify protectionist impulses as individual states seek to reduce vulnerabilities created by dependencies on cross border supply chains, particularly in strategic areas such as pharmaceuticals, medical equipment and food supplies.</p>	●	
Resource Management		<p>Any resource (clean air, raw materials, minerals, water, fuels) on which our global economy depends can suffer from scarcity if it is not managed sustainably throughout the cradle-to-grave product value chain. As the global economy continues to grow - driven in large part by rapid industrialisation and growth in developing countries - and the world's population increases, demand for natural resources also increases, putting pressure on limited resources. The increasing scarcity may lead to conflicts in the future. The increasing demand for natural resources leads to exploration in previously unexplored areas, resulting in potential ecological disasters and the destruction of natural habitats (e.g. drilling in the Arctic). Complex technologies used in extreme environments lead to increased risks. For example, the development and extraction of unconventional oil and gas deposits such as fracking, oil sands or undersea methane hydrates requires procedures and technologies that differ significantly from those for conventional resources. With the expansion of these techniques, concerns about environmental impact and sustainability are also increasing, as evidenced, for example, by increased criticism from activists and media coverage.</p>	●	

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Sharing Economy		The sharing economy is an economic system in which assets or services are shared between private individuals, either for free or for a fee, typically on the Internet. From UberPOP to Airbnb, customers are taking charge, and business models are shifting from B2B/B2C to C2B. New challenges arise from this shift away from classic to new business models in insurance services (e.g. peer-to-peer insurance).		
Shifting Range of Pathogens		Due to the impacts of climate change, trade and an ever greater density of global travel networks, many pathogens are expanding and/or shifting their range, with potential implications on human health and agricultural production.		
Skills Shortage and Reskilling		Skills shortages across different industries are difficult to identify and measure, resulting in the impact on insurance claims possibly going unnoticed and unattributed. Engineering and medical skill mismatches and shortages have been reported for decades and are now exacerbated by retirement waves and technological advances. In the absence of lifelong learning and adaptation to new technologies and work trends, more industries could see a growing skills gap. For Property and Casualty business, skills shortages may result in the inability to sustain risk prevention measures, longer business interruption periods and more product failures. Inappropriate decisions or mistakes made by inexperienced or overworked medical personnel, could lead to an increase in medical malpractice claims. For Life business, this could mean unanticipated deteriorations in mortality and morbidity. From an operational perspective, the insurance industry relies on highly skilled actuaries, loss adjusters, underwriters and asset managers. Mental health impacts on over-tired or under-skilled employees could be a longer-term consequence.		
Socio-economic Inequalities (new risk)		After the global financial crisis, economic inequality has risen further in countries worldwide. Digitalization and the rapid technological transformation, and more recently also the Covid-19 pandemic and the resulting economic recession, have exacerbated the trend to wider income and wealth gaps, both between and within societies. In particular, there is a widening difference in fortunes of younger generations - the Pandemials - for whom the impact of the pandemic has been significant in terms of education, job prospects, or mental well-being. Economic recovery paths after the pandemic will also differ: many countries have massively increased their debt levels and may be forced to thin out social safety nets and cut investments in infrastructure and education. In return, this limits their future growth potential as well as insurance demand. Insurance protection is also among the first things that lower to middle income private households cut out of their budgets in times of crisis.		

TOPIC	ASSOCIATED TRENDS	DESCRIPTION	IMPACT ASSESSMENT	ERI PUBLICATION
Substance Abuse		Currently the United States face a substantial “Opioid Crisis” with more than 2 million Americans suffering from an addiction to prescription opioids or heroin. Drug overdoses are the leading cause of death of Americans under 50. The numbers of death cases from drug overdoses are increasing year after year. Similar substance abuse crises may develop in other countries as well. Other substances at risk for abuse followed by severe health damage and even death are e.g. psychotropic drugs and alcohol.		
Supply Chain		Hyper-optimisation of supply chains due to improvements in technology and global logistics may increase vulnerabilities to disruption and concentrations of risk. The emerging regulatory system of corporate liability for human rights and other ESG issues, particularly with regard to supply chains, will be a key feature of international business in the coming years. Further risks arise from increased complexity resulting from the rise in interconnectivity. This may result in higher than expected accumulation and correlation of insured losses.		

Emerging Risks Initiative Position Papers published by the CRO Forum



Title	Year
Imagine all the people	2020
Medical Advances	2019
The Heat is on	2018
Autonomous Machines	2017
Water Risks	2016
The Smart Factory	2015
Pushing the Limits	2014
Food and its impact on the risk landscape	2013
Endocrine Disruptors	2012
Power Blackout Risks	2011
Nanotechnology	2010
Longevity	2010
Environmental Liabilities	2009
Critical Information Infrastructure	2008
Influenza Pandemics	2007
Terrorism	2007
Climate Change	2006

