Extending our risk intelligence

We address sustainability, cyber, political and emerging risks in our core business transactions. For this, we have developed specific tools and know-how.

Risk management is an integral part of Swiss Re's business model and key to the controlled risk-taking that underpins our financial strength. It is embedded throughout our business and ensures that the Group and the three Business Units have the necessary expertise, frameworks and infrastructure to support good risk-taking (see 2019 Financial Report, pages 52–53 and 61–77).

Sound risk management is essential for a re/insurer. Tight control of our risk exposures guarantees that we can fulfil our role in society as ultimate risk-taker and be a reliable partner to our clients when they need us. The core categories of our risk landscape comprise insurance risk (property and casualty, life and health) as well as financial market and credit risk. In addition, we consider it essential for a company committed to sustainability that it pays attention to further significant risks we may be exposed to, especially in the longer term.

Sustainability, cyber, political and emerging risks are particularly relevant in this respect. We have developed instruments and know-how that help us identify and assess all of them. This allows us to determine those risks we think we should avoid – because of their potential to increase losses, for ethical reasons or both.

In 2019, we placed special emphasis on taking measures that have the long-term goal of decarbonising our business model and addressing the carbon risks embedded in it.

Website

Learn more about how we address political risks at:
www.swissre.com/sustainability/risk-intelligence/political-risks.html

Towards decarbonising our business model

Swiss Re supports the worldwide reduction of greenhouse gas emissions and contributes to the goal of limiting global warming to 1.5°C above pre-industrial levels. We continuously review measures to assist the transition to a low-carbon economy and, formalising our commitment, in 2015 signed the Paris Pledge for Action (www.parispledgeforaction.org) to affirm our support for the Paris Agreement.

Our efforts to fulfil the Paris Pledge for Action include the development of suitable re/insurance solutions for our clients, our Responsible Investing strategy and reducing the footprint of our own operations. In our risk management, we focus on the carbon intensity and the associated risks embedded on the liability side of our balance sheet.

Our commitment to reach net-zero emissions

In 2019, we made a public commitment to reach net-zero emissions by 2050 across our whole business, by signing the UN Global Compact Business Ambition for 1.5°C. This joins our active role as a founding partner of the UN-convened Net-Zero Asset Owner Alliance, through which we have also made a net-zero commitment specifically for our investment portfolio by 2050 (see page 47).

In 2018, we introduced our thermal coal policy. Reducing our re/insurance cover to thermal coal utilities and mining is one of the steps we have taken towards decarbonising our business model.

Website

Learn more about our efforts to decarbonise our business model at: www.swissre.com/sustainability/risk-intelligence/decarbonisation.html

Thermal coal policy

Through our Sustainable Business Risk Framework (see pages 35–37), we continued with the implementation of our thermal coal policy in our underwriting, including direct, facultative and treaty business. We first introduced this policy in mid-2018, pledging not to provide re/insurance to businesses with more than 30% exposure to thermal coal utilities or mining.

For transactions located in low- and middle-income countries that derive more than 70% of electricity from coal, existing power plants (ie operational before 2018) can be covered until 2025 if there is evidence that the insured is implementing an effective emission reduction strategy. Implementation of the thermal coal policy for treaty business will follow a staggered approach until 2023.

With our 2019 net-zero commitment on the liability side and by joining the Powering Past Coal Alliance (poweringpastcoal.org/) in 2019, we are fully committed to a total phase-out of thermal coal from our business in the long term.

Carbon steering

The introduction of our thermal coal policy was designed as a first step towards the development of a comprehensive carbon-risk steering mechanism to measure our carbon intensity and associated risks embedded in our re/insurance business. In 2019, we helped launch a project with peers via the CRO Forum (www.thecroforum.org) to develop a robust carbon footprinting methodology to quantify these exposures. It is expected to serve as an industry-wide standard and thus support our carbon steering towards reaching net-zero emissions on the liability side of our business by 2050.

Phasing out the most severe climate-related transition risks

In 2019, we took another important step in our carbon steering mechanism and developed a policy to shift away from the most carbon-intensive oil and gas production.

From July 2021, we will no longer provide individual insurance covers for those oil and gas companies that are responsible for the world's 5% most carbon-intensive oil and gas production.

From July 2023, we will no longer provide individual insurance covers for those oil and gas companies that are responsible for the world's 10% most carbon-intensive oil and gas production.

Our Sustainable Business Risk Framework

In a market environment, profitable business activities create economic value. Occasionally, however, they may also have adverse effects on the environment and certain vulnerable groups. If such impacts are ignored, they may pose a threat to societies' long-term sustainable development.

For companies this situation can create dilemmas. A particular business transaction may be economically beneficial and in compliance with all legal and regulatory requirements, yet may have significant environmental or social downsides. Swiss Re recognises that such dilemmas exist and develops effective responses through a well-defined approach and by taking decisions based on ethical principles.

Our Sustainable Business Risk Framework is an advanced risk management instrument designed to identify and address the potentially negative effects of our transactions on local communities, workforces and the environment. This framework applies to all of our business transactions in re/insurance as well as investments, to the extent that we can influence their various aspects.

The Sustainable Business Risk Framework consists of:

- Two umbrella policies on human rights and environmental protection plus eight specific guidelines on sensitive sectors or issues
- The Sustainable Business Risk (SBR) process comprising an online assessment tool and a referral tool – due-diligence mechanisms to assess our business transactions
- Company exclusions
- Country exclusions beyond mere compliance with international trade controls (ITCs)

Policies and guidelines

Our Sustainable Business Risk Framework is based on the overarching principles of respecting human rights and protecting the environment, encapsulated in two umbrella policies that are valid for all our transactions. In addition, specific guidelines apply these overarching principles to eight sectors or issues in which we perceive major sustainability risks: the defence industry; oil and gas; mining; dams; animal testing; forestry, pulp and paper, and oil palm; nuclear weapons proliferation; and thermal coal.

We regularly review all the policies and guidelines of our Sustainable Business Risk Framework to ensure they stay abreast of relevant new risk developments and stakeholder expectations. In 2019, we continued with the implementation of our thermal coal policy, engaging with over 300 clients in the process, and revised our oil and gas policy. These improvements to the Sustainable Business Risk Framework form an important part of the efforts we have taken towards gradually decarbonising our business model (see pages 33–34).

The Sustainable Business Risk process

Each of the two umbrella policies and eight sector guidelines of our Sustainable Business Risk Framework contains criteria and qualitative standards which define precisely when a transaction may present a sustainability risk. We assess such transactions through our Sustainable Business Risk (SBR) process with its two due-diligence mechanisms.

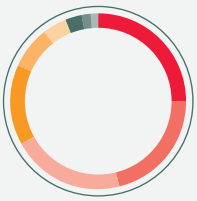
Website

Learn more about our Sustainable Business Risk Framework at:
www.swissre.com/sustainability/risk-intelligence/sustainable-business-risk-framework.html

Website

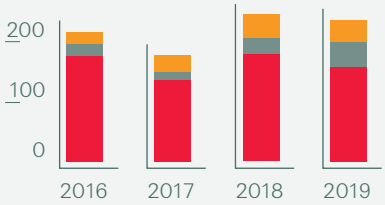
You can download a summary of our main human rights and environmental protection concerns at:
www.swissre.com/sustainability/risk-intelligence/sustainable-business-risk-framework/policies.html

Sustainable Business Risks referred to our expert team in 2019, by sector/issue



- **25.2%** Oil and gas
- **21.0%** Mining (excl. thermal coal)
- **21.0%** Thermal coal
- **14.7%** Dams
- **7.6%** Other: human rights
- **4.6%** Defence
- **2.9%** Other: environmental issues
- **1.7%** Forestry, pulp and paper, and oil palm
- **1.3%** Animal testing

Number of Sustainable Business Risk referrals and decisions taken



- Proceed
- Proceed with conditions
- Abstain

238

Sustainable Business Risk transactions referred to our team of sustainability experts
(247 in 2018)

The online tool stores the relevant sustainability risk information for these sectors and thus provides our underwriters with an efficient means to check the potential impact of their transactions on human rights, labour rights and the environment. For transactions that reveal low to medium risks, they need to carry out additional due diligence based on industry and country advice provided by the tool.

If the potential human rights or environmental risks of a transaction are assessed as high but the responsible underwriter wants to pursue it, it is automatically transferred through the SBR referral tool to Swiss Re's in-house team of sustainability experts. These specialists then conduct in-depth research to decide whether the transaction at hand is acceptable on ethical grounds.

This decision takes the form of a binding recommendation either to go ahead with the transaction, to go ahead with certain conditions attached or to abstain. If there is disagreement about the recommendation, the case can be escalated to the next management level and, ultimately, to the Group Chief Risk Officer and the Group Executive Committee.

Since we introduced the SBR assessment tool in 2015, we have continually fine-tuned it, thus strengthening our underwriters' ability to integrate sustainability risk assessments into their decision-making. Between 2015 and 2017, this led to a marked, and steady, decrease of SBR referrals to our in-house sustainability experts.

In 2018, however, the number of referrals rose from 178 to 247 (see chart above). This increase was mainly driven by the introduction of our thermal coal policy. Many of the coal-related referrals were submitted by our underwriters to have the thermal coal exposures of specific transactions clarified. In 2019, the number of referrals fell again, to 238 transactions. Of those we issued negative recommendations in 37 cases and positive recommendations with conditions in 42 cases.

Company exclusions

The policies of our Sustainable Business Risk Framework specify certain criteria that may lead us to exclude a company from both our re/insurance transactions and our investments, to the extent that such an exclusion is permissible (eg by virtue of mandatory law or internal policies) and possible (eg if existing documentation relating to such re/insurance transactions and investments provide for it). These criteria include: involvement in prohibited war material; verifiable complicity in systemic, repeated and severe human rights violations; causing repeated, severe and unmitigated damage to the environment; unregulated proliferation of nuclear weapons; and unethical/cruel animal testing practices.

Country exclusions

Swiss Re also excludes certain countries from its business that have particularly poor human rights records. This step goes further than compliance with ITCs. Our goal is to refrain from directly underwriting risks or making investments in entities that are based in these countries. We review the list of

excluded countries annually based on independent human rights assessments and update it if warranted.

As the Sustainable Business Risk Framework is based on the principles of respecting human rights and protecting the environment, the SBR process with its two due-diligence tools, company exclusions and country exclusions is our principal means to ensure compliance with the UN Global Compact in our core business.

Training

Ever since we introduced our comprehensive Sustainable Business Risk Framework eleven years ago, we have made considerable efforts to raise awareness of sustainability issues among our underwriters and client managers. Through training, we ensure that they know how to properly apply the framework with its underlying principles of respecting human rights and protecting the environment. In recent years, we have focused on high growth markets where we want to expand our business.

A couple of years ago, we developed a new eLearning course for our in-house training. While this continues to be compulsory for all our employees who work in underwriting and with our clients, it is now mandatory for all our new entrants, as well. In 2019, a total of 3 000 employees completed the mandatory training course.

Client and industry interaction

Over the year, we had a number of important external engagements on sustainability risks with clients, brokers, investors, industry peers and civil society groups such as environmental and humanitarian NGOs. We held in-person meetings with clients operating in sensitive sectors such as mining, forestry, and oil and gas, discussing potential measures they could take to address their sustainability risks.

As part of our ongoing efforts to implement our thermal coal policy (see page 34), we had over 300 engagements with clients across the globe in 2019. Many of them introduced a thermal coal policy themselves and in turn are helping us reduce our carbon exposure in our treaty business.

At Swiss Re's headquarters, our Energy line of business team held an in-person meeting with its broker community on the industry's journey towards net-zero emissions. The discussion centred on the question of how the oil and gas industry can embrace the low-carbon transition and how the insurance sector can offer support for this.

In partnership with other re/insurers, we are also developing risk assessment tools designed to help the industry better understand and manage sustainability risks. One of these ongoing partnerships is the UNEP FI Principles for Sustainable Insurance (PSI, www.unepfi.org/psi).

In 2019, the PSI launched the first guide for the re/insurance industry to preserve protected areas such as World Heritage Sites. We actively contributed to the development of this guide, which is a significant step forward in making the protection of World Heritage Sites a market standard. It confirms our long-standing commitment to preserve protected areas, enshrined in several policies of our Sustainable Business Risk Framework.

Cyber risks

Swiss Re has cyber risk on its radar and has implemented multiple layers of protection to minimise these risks. Correspondingly, we maintain a Group-wide Cybersecurity Programme designed to protect the confidentiality, integrity and availability of data and IT systems. Our Cybersecurity Programme is based on the ISO 27001 standard for information security management, which covers key areas of management, technical and physical controls, legal, compliance and business continuity management.

Effective governance of the programme is seen as crucial, which is why it is overseen by both the Group Chief Risk Officer and Group Chief Operating Officer, and is robustly implemented through a three-lines-of-defence model. Additionally, Swiss Re has a committee in place that provides Group-wide management oversight and direction in information security, cyber defence and data protection risks, with the Group Chief Information Security Officer ensuring that the Board of Directors is regularly informed on relevant matters.

A cyber risk assessment is conducted at least annually to inform senior management of the design and status of Swiss Re's Cybersecurity Programme. The assessment allows for the revision of controls to respond to technological developments, evolving threats and changed cyber risk exposures. Areas identified that require improvements are addressed to enhance Swiss Re's cyber security resilience.

Furthermore, Swiss Re issues an annual Service Organisation Controls (SOC) 2 report, which provides assurance to our clients that we provide our services in a reliable, secure and compliant manner. The SOC 2 report contains the opinion of an independent auditor who has tested the design and effectiveness of our controls according to international standards.

Emerging risks

Re/insurers operate in a rapidly changing and increasingly complex risk landscape. Demographic, economic, technological, socio-political, regulatory or environmental trends may change existing risks or create new ones. In addition, growing interdependencies between these developments can lead to accumulations of risk and create significant knock-on effects. People's risk perceptions are shifting, liability and regulatory regimes continue to evolve and stakeholder expectations are growing.

This complex landscape provides fertile ground for "emerging risks" – newly developing or changing risks that are not yet entirely understood and managed. Such risks are difficult to quantify, and their potential impact on society and the re/insurance industry is not yet sufficiently accounted for.

Detecting and investigating such risks early on forms an important part of our comprehensive approach to risk management. In analysing how risks are evolving and related to each other, we seek to assess their potential impact on Swiss Re. This is vital to reduce uncertainty and prevent unforeseen losses, raising awareness within the Group and across our industry.

Website

Learn more about how we address emerging risks at:
www.swissre.com/sustainability/risk-intelligence/emerging-risks.html

In many geographical areas climate change is leading to more frequent heat days. This is likely, eg, to increase the risk of strokes, cardiovascular diseases and accidents. At Swiss Re, we treat such climate-related implications on life and health re/insurance as an emerging risk.

Emerging risk case study: life and health implications of climate change

Swiss Re has highlighted risks from climate change since the 1980s and has achieved a reputation as a pioneer and thought leader on this topic in the re/insurance industry. Some climate change impacts, eg sea-level rise, are relatively easy to model accurately, and risk transfer offerings can be adjusted on a yearly basis. Other effects are more complex, however, because they involve knock-on and cascading effects. Such emerging risks may build up over a long period without any visible impacts, but when loss events are finally triggered, they can be severe.

An important area where emerging risks connected to climate change are likely to occur is life and health (L&H) re/insurance. Building on Swiss Re's own expertise and on our long-standing cooperative efforts with research institutions, we dedicated a special feature to this topic in our 2019 SONAR Report, with related content on interactive web pages. Its central piece is an infographic which depicts key factors producing impacts on L&H insurers and their respective lines of business.

Developing fast as a real and present-day problem, emerging L&H risks connected to climate change not only impact traditional L&H covers, but are also a concern in the context of workplace accident insurance. The most significant impacts are expected from the following causes: changing patterns in infectious diseases, which increase the likelihood of pandemics; more frequent heat days leading to more strokes, cardiovascular problems and accidents; and a rise in respiratory and other chronic diseases.

Major impacts are also expected for public health systems, eg due to famine and migration, and the vulnerability of the healthcare sector may thus increase. Hospitals and other critical health infrastructures are not only dependent on professional care providers, but also on basic sanitary conditions, power supplies etc – all of which are themselves becoming more vulnerable to climate change effects.

By providing financial risk transfer solutions to individuals, infrastructure providers and others, the insurance industry can support building resilience to emerging L&H risks on many levels. Importantly, this includes the provision of risk expertise and the fostering of risk dialogue.

For a pioneering research collaboration, see Climate Change Futures. Health, Ecological and Economic Dimensions. A Project of The Center of Health and the Global Environment, Harvard Medical School. Sponsored by: Swiss Re and the United Nations Development Programme, 2005.

In 2019, we contributed to a new position paper published by The CRO Forum's Emerging Risk Initiative: The heat is on – Insurability and Resilience in a Changing Climate, January 2019.

Our SONAR framework

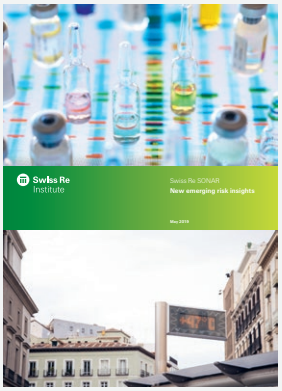
SONAR (systematic observation of notions associated with risk) is our Group-wide framework specifically designed to manage and communicate emerging risks. Firmly embedded in the Group's risk management organisation, SONAR allows us to identify, assess and report these risks in a timely manner and to factor them into our strategic business decisions.

The SONAR process involves several integrated layers. The first is an interactive intranet platform which enables our employees to share and discuss risk notions based on trends and developments in the re/insurance landscape. This allows for bottom-up identification and peer reviews.

Our emerging risk specialists periodically cluster and further assess these risk notions for their potential impact on our business. Further "early signals" are harvested from external research institutions and experts, and digitally enabled horizon scanning tools are also deployed. Finally, our specialists carry out in-depth investigations and internal reviews on selected topics.

Swiss Re SONAR: New emerging risk insights

Swiss Re's SONAR Report features emerging risk themes that have the potential to impact the re/insurance industry. These topics derive from our SONAR process and have been assessed by our emerging risk management experts in recent years.
www.swissre.com/institute/research/sonar/sonar2019.html



You can learn more about one of these topics – the life and health implications of climate change – in the case study on page 38. To share some of our key insights on these emerging risks with external audiences, we published the sixth edition of our comprehensive SONAR Report in 2019 (see to the left).

Further activities on emerging risks identified in the past

The emerging risks we have previously examined in more detail and featured in our former Corporate Responsibility Reports since 2007 are:

2007: Electromagnetic fields

2008: Critical infrastructure

2009: Carbon nanotubes

2010: Smart grids

2011: Cyber attacks

2012: 3D printing

2013: New forms of mobility

2014: Electronic cigarettes

2015: The Internet of Things

2016: Human-induced earthquakes

2017: Antimicrobial resistance

2018: Algorithmic decision-making

Since we first identified these emerging risks, we have followed up on several of them in our core business and together with our stakeholders, eg Critical infrastructure and Cyber attacks:

Website

You can read more about these activities at:
www.swissre.com/sustainability/risk-intelligence/emerging-risks/case-study-critical-infrastructure.html
and
www.swissre.com/sustainability/risk-intelligence/emerging-risks/case-study-cyber-attacks.html

Strategic foresight

Identifying and addressing emerging risks can be challenging. Their novelty and interconnectedness make it difficult to determine when a particular risk notion must be considered an emerging risk. Timing is of crucial importance. If measures to price and, eventually, exclude a particular risk are taken too early, we may not be able to offer our clients adequate re/insurance protection; if measures are taken too late, we may end up with increased loss potential. Given these challenges, we believe it is essential to foster risk dialogue with various partners. By sharing perceptions and assessments, all parties can gain a better understanding of potential emerging risks.

Website

You can read about our most important strategic initiatives concerning emerging risks at:
www.swissre.com/sustainability/risk-intelligence/emerging-risks/strategic-initiatives.html