# Extending **our risk intelligence**

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

**Sustainability risks**
We define sustainability risks as ethical concerns related to potential environmental and socio-economic impacts of our business transactions, and the reputational risks they may entail.

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 2016 Financial Report, pages 54–55 and 63–79).

Sound risk management is essential for a re/insurer. Tight control of our 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 responsible company to pay attention to further significant risks we may be exposed to, especially in the longer term.

Sustainability, political, regulatory and emerging risks are particularly relevant in this respect. We have developed instruments and know-how that help us to identify and assess all of them. This allows us to determine the specific risks we think we should avoid – because of their loss potential, for ethical reasons, or both. This extended risk awareness is also key to managing our assets responsibly. The risk assessments we make through our Sustainability Risk Framework, in particular, flow directly into our investment decisions.

## Our Sustainability Risk Framework

In a market environment, profitable business activities create economic value. Occasionally, however, they may also adversely affect 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 specific 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 Sustainability Risk Framework is an advanced risk management instrument, specifically 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 Sustainability Risk Framework consists of:

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

Illegal, uncertified or insensitive logging can have serious consequences on local environments and on the climate. A dedicated policy of our Sustainability Risk Framework clearly states when our underwriters need to carry out due diligence checks.

## Policies and guidelines

Our Sustainability 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 seven sectors or issues in which we perceive major sustainability risks: the defence industry; oil and gas (including oil sands and hydraulic fracturing); mining; dams; animal testing; forestry, pulp & paper and oil palm; and nuclear weapons proliferation.

For more information see **swissre.com/corporate_responsibility/managing_env_risks.html**

We regularly review all the policies and guidelines of our Sustainability Risk Framework to ensure they reflect important new developments.

You can read a summary of the main concerns they currently address on page 30.

## The Sensitive Business Risk process

Each of the two umbrella policies and seven sector guidelines of our Sustainability Risk Framework contains criteria and qualitative standards which define precisely when a transaction may present a "sustainability risk". We assess such transactions through our Sensitive Business Risk (SBR) process, which consists of two due diligence mechanisms – the SBR online assessment tool and the SBR referral tool.

The online tool, which we first introduced in mid-2015, enables our underwriters to screen all transactions for their possible impacts on the local environment and on the human rights of the people and workforces affected. It is easy to access, provides clear guidance on what to assess in further detail and ensures consistent documentation in our standard underwriting tools. At the same time, it enables our central sustainability management unit to incorporate relevant new information by adjusting key policy parameters and making these effective "at the push of a button".

## Main concerns in key sectors

### Respecting human rights and protecting the environment

- Human rights violations and abuses such as murder, torture, deprivation of liberty, forced labour or harmful child labour;
- Countries that lack an operational, effective and internationally recognised government;
- Companies that are causing ongoing, severe and unmitigated damage to the environment, flora and fauna of a particular place and biodiversity in general, especially in industries and activities that have had a problematic track record in this area in the past.

### Defence industry

- Particularly cruel weapons that inflict indiscriminate harm to humans and the environment, often after a conflict has ended;
- The provision of certain services by private security companies.

### Oil and gas

- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted.

### Mining

- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted;
- Poor occupational health & safety record and risk of increasing HIV penetration.

### Dams

- Human rights abuses;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages (in particular, indigenous people) are impacted;
- Non-involvement of relevant stakeholders;
- Non-involvement of affected neighbouring states.

### Animal testing

- Unethical and inhumane treatment of animals.

### Forestry, pulp & paper and oil palm

- Illegal logging;
- Uncertified logging and timber/oil palm processing in sensitive regulatory environments;
- Greenhouse gas emissions from peatland conversion, timber processing activities and/or forest clearance using bushfires;
- Significant adverse environmental or social impacts, particularly where critical natural habitats, vulnerable groups and/or critical cultural heritages are impacted.

### Nuclear weapons proliferation

- Activities associated with nuclear energy or similar in countries that are outside the established framework and international regime of global non-proliferation efforts.

If the initial screening reveals any potential issues, our underwriters carry out further due diligence measures. Finally, they transfer the most critical transactions through the SBR referral tool to our team of sustainability experts, who conduct targeted research to decide whether the transaction at hand is acceptable on ethical grounds.

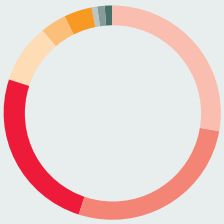
This decision takes the form of a binding recommendation either to go ahead with the transaction, to go ahead with certain conditions attached, or to abstain. If there is disagreement about the recommendation, the case can be escalated to the next management level and, ultimately, to the Group Chief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

The online SBR assessment tool is now fully implemented. In 2016, our underwriters used it to carry out sustainability checks on 7 137 transactions. As the tool precisely identifies those transactions that require further assessment from our sustainability experts, the number of referrals has fallen since its introduction in mid-2015. Of the 219 transactions referred in 2016, we issued negative recommendations in 21 cases and positive recommendations with conditions attached in 20 cases.

When making these decisions, we refer to internationally recognised ethical principles. Swiss Re complies with the UN Guiding Principles on Business and Human Rights (the Ruggie Framework) and is a signatory to the UN Global Compact, which derives its human rights principles from the Universal Declaration of Human Rights, its labour principles from the ILO Declaration on Fundamental Principles and Rights at Work, its environment principles from the Rio Declaration on Environment and Development and its anti-corruption principles from the United Nations Convention against Corruption.

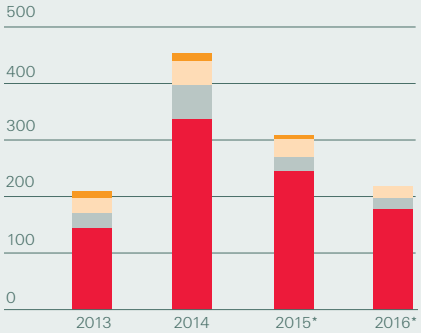
This web of ethical principles helps us to make decisions that are aligned with universal fundamental rights. However, this is not sufficient for decisions in a business context. We also need to consider the social and economic

**Sensitive Business Risks referred to our expert team in 2016**



- 28% Oil and gas
- 27% Mining
- 25% Dams
- 9% Excluded/critical country
- 4% Human rights
- 4% Defence
- 1% Animal testing
- 1% Environmental issues
- 1% Forestry, pulp & paper and oil palm

**Number of Sensitive Business Risk referrals**




- Proceed
- Proceed with conditions
- Abstain
- Not materialised

* Starting in mid-2015, we have refined our SBR process, which has led to a decrease in the number of referrals

219

Sensitive business transactions referred to our team of sustainability experts

(309 in 2015)

7 137

Due diligence checks carried out by our underwriters to detect potential sustainability risks

(3 550 in second half of 2015, after introduction)

implications of our decisions in their respective cultural contexts and, last but not least, the implications for our business. Balancing these different aspects requires us to carefully and consistently assess transactions and their local effects, often in collaboration and dialogue with external experts and local stakeholders.

Thus, our decisions are neither subjective nor entirely objective. In essence, they reflect our recognition of global fundamental rights, of human suffering and our commitment to limiting unwanted negative impacts of our business transactions, either by withdrawing or by influencing our clients' behaviour.

### Integrating anti-bribery & corruption guidance

Swiss Re prohibits all forms of bribery and corruption, as expressed by our Code of Conduct. We clearly state this position and explain what it means for daily business conduct through our Group Anti-Bribery and Corruption (ABC) Policy and detailed Group ABC Guidelines (see page 76). In 2016, we took further steps to mitigate our potential exposure to bribery and corruption risks by integrating corresponding guidance in our SBR assessment tool, thus ensuring appropriate due diligence on our counterparties.

This guidance specifies both the countries and industries with a heightened risk of bribery and corruption, and instructs our underwriters how to carry out additional due diligence in order to assess the risk. In grave cases, our due diligence procedure leads to an automatic requirement to abstain from the transaction. If there is disagreement about this, the transaction needs to be discussed with our internal legal and compliance team who can provide additional advice.

### Company exclusions

Our Sustainability Risk Framework policies 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 international trade controls (ITCs). Our goal is to refrain from directly underwriting risks or making investments in entities that are based in these countries. At the end of 2016, the list of excluded countries comprised the Central African Republic, Chad, DR Congo, North Korea, Somalia, Sudan (both North and South) and Syria. We review this list annually based on independent human rights assessments and update it if warranted. The review carried out in 2016 did not produce any changes.

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

**Independent internal assurance**

In 2016, we further strengthened our internal procedures to monitor compliance with the Sustainability Risk Framework. This is now part of the remit of Group Internal Audit (GIA), an independent body whose responsibility is to ensure that internal control processes and risk management are operating effectively.

**Training**

Since we first introduced our Sustainability Risk Framework in 2009, 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.

In 2016, 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 total, 2 712 employees completed the mandatory training course in 2016.

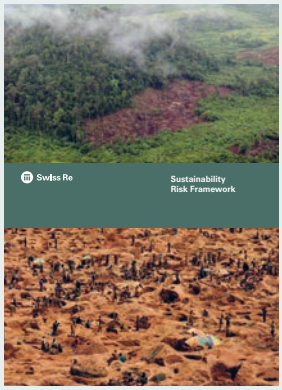
Complementing this eLearning course, we provided instructor-led training personally or via web-based conference to 205 experienced underwriters and graduates.

**Client and industry interaction**

Efforts to address environmental and social risks are obviously more effective when many companies join forces. This is why we are keen to further promote sustainability risk management within the re/insurance industry.

In 2016, our sustainability risk management unit decided in 20 SBR assessments to proceed with conditions. In most cases, these conditions required the particular underwriter to engage with the client on specific questions about human rights issues or environmental protection, in line with the requirements

**Sustainability Risk Framework**
The revised version of our publication on the Sustainability Risk Framework explains how we define such risks, provides a detailed description of the framework's policies and guidelines, and illustrates how we apply these in practice.
swissre.com/library/archive/sustainability_risk_framework_sustainable_business_is_good_business.html




of the Ruggie Framework. In addition, we engaged with strategic clients that have a comparatively low sustainability performance. This open dialogue allowed us to explain our own positions on human rights and environmental protection, and draw attention to specific practices we consider problematic.

On an industry-wide basis, we have played a major role in establishing and advancing the Principles for Sustainable Insurance (PSI) introduced in 2012 by the UN Environment Programme Finance Initiative, UN EPFI (www.unepfi. org/psi). We were one of the initiative's original signatories and currently act as one of its board members. The PSI address environmental, social and governance (ESG) issues in the re/insurance industry, spanning risk management, underwriting, product and service development, claims management, sales and marketing, and investment management. Our Public Disclosure of Progress for 2016 is included in this report on page 86.

Two years ago, we partnered with the UN Environment Programme (UNEP) to co-host a roundtable on "Insurance 2030: Policies and partnerships for sustainable development" at our Centre for Global Dialogue near Zurich. Around 60 leaders and executives from re/insurance companies and regulatory bodies, the UN, governments, think tanks and civil society reflected on the policies and partnerships needed to realise the full potential of re/insurance in promoting sustainable development.

In 2016, we participated in a practical follow-up event held in Munich, entitled "Insuring for sustainable development: Making it happen". Its key objective was to assess and discuss progress on the initiatives launched after the 2015 roundtable to further mainstream sustainability across the insurance value chain.

We also participated in the UN Forum on Business and Human Rights in Geneva where we presented our Sustainability Risk Framework and explained the fundamental role that the principle of respecting human rights plays in the way Swiss Re does business. The event provided a valuable opportunity to bring various stakeholders together and gain further insights on our own approach.

Supporting our efforts to promote best practices in sustainable risk management, we updated and expanded our publication on the Sustainability Risk Framework in 2016.

## Political risks

In today's increasingly integrated world we need to be aware of any political developments, actions and decisions that may affect our business. Within our risk management organisation, we have a team of specialists who look at a wide range of political risks at global, country and business transaction levels.

These specialists identify, assess and monitor political risks on an ongoing basis, so the Group understands their implications and can initiate appropriate mitigation measures if required. They pay particular attention to developments in high growth markets and to cross-border issues such as terrorism, energy, multi-national institutions or international trade.

Our understanding of political risks is also highly relevant to ensuring sustainable business operations in line with ESG principles. Several of the sectors and issues covered by the umbrella guidelines and policies of our Sustainability Risk Framework (see pages 29–31) have a significant political dimension. Implementing these policies, both through SBR assessments and exclusion policies, thus requires a solid grasp of political risks. This is particularly true with regard to human rights violations, the proliferation of armaments in conflict areas and the identification of areas prone to civil unrest.

Furthermore, we seek to raise awareness of political risk within the re/insurance industry and among the broader public, and engage in dialogue with our clients and other stakeholders. We also distil our ongoing assessments of political risks into country ratings which support our risk control frameworks.

## Regulatory risks

Regulatory risk represents the potential impact of changes in the regulatory and supervisory regimes of the jurisdictions in which Swiss Re operates. In 2016, Swiss Re remained strongly engaged in the regulatory debate, striving to mitigate potentially negative impacts while supporting reforms that could enhance the overall health of the sector, facilitate convergence of regulatory standards or generate business opportunities.

While Solvency II took effect in 2016 and applies across the European Economic Area, national discretions and different supervisory interpretations (eg the recognition of reinsurance) distort a level playing field. The European Commission will review Solvency II in 2018, in part to address such inconsistencies. Additionally, the European Insurance and Occupational Pensions Authority intends to add a macro-prudential framework for insurance to Solvency II, to regulate systemic risks across the insurance industry.

Prudential regulation is developing towards more risk-sensitive and economic-based capital regimes, yet regulatory fragmentation remains high. Local capitalisation rules often fail to fully recognise the benefits of risk mitigation and diversification. In addition, there are moves to limit the use of internal models influenced by post-crisis banking regulation. Swiss Re strongly supports the use of internal models, full recognition of risk mitigation and diversification, appropriate consideration of counterparty default and concentration risk, and efficient application of eligible capital instruments.

National protectionism restricts the free flow of risk and capital. The outcome of the Brexit negotiations between the UK and the EU could potentially limit the ability to benefit from the free movement of services, including reinsurance. Swiss Re is advocating for removal or reduction of market access barriers, so that policyholders, governments, taxpayers, and national economies can fully benefit from international diversification and therefore reliable, quality, and affordable risk cover.

**Climate change**
In view of the strategic importance climate change has for our core business, we closely monitor related regulatory developments. Governments' and regulators' interest in climate change and natural catastrophes has continued to build, leading to an increase in climate-related reporting requirements.

In the US, for example, several state insurance regulators are evaluating the impacts of climate change on re/insurers, including through insurer surveys. The State of California even requires insurers to disclose investments in fossil fuels and is asking them to divest voluntarily from thermal coal concerns. In Europe, certain EU insurance supervisors, including the UK's Prudential Regulation Authority (www.bankofengland.co.uk/pra), are examining the impact of climate change on insurer underwriting and investment risks.

Such initiatives form part of a wider effort by public-sector bodies to integrate sustainable development criteria into the financial system. Recent examples include the G20's proposal to establish a Green Finance Study Group and the EU's announcement to develop a strategy on sustainable finance.

Reflecting governments' growing concern over the implications of climate change, the Financial Stability Board (FSB) has recently established a Task Force on Climate-related Financial Disclosures, TCFD (www.fsb-tcfd.org). The FSB is an international body that monitors and makes recommendations about the global financial system, coordinating national financial authorities and international standard-setting bodies.

Starting from the premise that climate change creates physical, liability and transition risks, the TCFD aims to develop consistent and effective financial disclosures that will allow stakeholders to properly assess the climate risks faced by companies and to take appropriate action. In 2016, the task force published its Phase 1 report for public consultation. After processing the inputs received from key stakeholders, it launched its "Recommended disclosures" in December 2016. Swiss Re supports the work of the task force and has been providing one of its members since its launch. We have started to integrate the recommended disclosures in our 2016 Financial Report, pages 123–130.

We were also present at the launch event of the Sustainable Insurance Forum for Supervisors, held by the California Department for Insurance and the UN Environment Programme. The Forum's goal is to promote cooperation on critical sustainable insurance challenges, such as climate change. Increasingly, insurance regulators and supervisors are exploring how these factors impact upon their goals of ensuring the safety, soundness and accountability of the sector. For the first time, the Forum provides them with an international platform to share experience and explore common approaches.

## Emerging risks

Re/insurers operate in an ever more complex and rapidly changing risk landscape. New demographic, economic, technological, socio-political, regulatory and environmental developments are all capable of changing risks or creating new ones. In addition, growing interdependencies between these developments can lead to accumulations of risk and create significant knock-on effects. The general business environment is undergoing significant changes, as well. People's risk perceptions are shifting, liability and regulatory regimes continue to evolve and stakeholder expectations are growing.

**Emerging risks**
We define emerging risks as newly developing or changing risks that are difficult to quantify and whose potential impact on our business is not yet sufficiently taken into account.

**Swiss Re SONAR: New emerging risk insights**
The Swiss Re SONAR report features emerging risk themes that have the potential to impact the insurance industry in the future. These topics were mainly derived from our SONAR process and were assessed by our emerging risk management experts.
media.swissre.com/documents/SwissRe_SONAR_2016.pdf


This complex landscape gives rise to "emerging risks" – newly developing or changing risks that are difficult to quantify and whose potential impact on our business is not yet sufficiently taken into account.

Detecting and investigating such risks early on forms an important part of our comprehensive approach to risk management. Our aim is to reduce uncertainty and prevent unforeseen losses, while raising awareness within the Group and across the industry. Therefore, we try to understand how risks are changing, assess their impact and seek to recognise potential links between them.

## 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 decisions.

The SONAR process involves several steps. An interactive intranet platform serves as a first level, enabling our employees to share and discuss so-called risk notions on all main areas of the emerging risk landscape quickly and easily and to stay up-to-date on new developments. While many of the early signals flagged through the SONAR platform will never actually turn into emerging risks, others may well do so. As it is impossible to anticipate which signals will fall into which category, all of them warrant equal attention. The SONAR platform allows for peer reviews and bottom-up discussions of early signals.

Our emerging risk specialists periodically cluster and further assess these risk notions for their potential impact on our business. Based on this, they subsequently carry out more in-depth investigations of selected topics. In 2016, one of the focus topics was human-induced earthquakes (see case study on page 37). To share some of our key insights on this and other emerging risks with external audiences, we published the fourth edition of our comprehensive Swiss Re SONAR report.

For more information see
**swissre.com/about_us/managing_risks/emerging_risks.html**

There is growing evidence that drilling activities associated with hydrofracking or geothermal exploration may contribute to earthquakes. As most established risk models do not account for this effect, we treat "human-induced earthquakes" as an emerging risk.

## Human-induced earthquakes: **a new protection gap?**

Earthquakes are the most natural of natural disasters, one would think, as they seem to occur entirely detached from human involvement or interference. While this may have held true in the past, recently a strong increase in drilling activity to extract natural gas ("hydrofracking") or to carry out large-scale geothermal exploration has changed the picture.

There is evidence that hydrofracking itself creates earthquakes of very small magnitude. These are generally not felt at the surface, but they have been linked to the stimulation of larger earthquakes. Moreover, the common practice of disposing of hazardous wastewater by injecting it at high pressure into deep ground changes the tectonic stress conditions within the rock. This adds to the likelihood of higher-magnitude earthquakes.

The increase in earthquake activity associated with human actions is an emerging risk, as most risk models used by the re/insurance industry do not incorporate the associated increase in seismic hazard. Losses arising from the rapidly rising number of human-induced seismic events are largely uninsured or fall into the deductible of traditional earthquake insurance products, which are designed to protect against single big loss events rather than damage arising from frequent small earthquakes.

In the US, in particular, there is an increasing likelihood of litigation/class actions against hydrofracking operators, with a significant accumulation risk for re/insurers when events trigger claims on the property and casualty side.

We have looked at hydrofracking in several of our recent publications. Our 2015 SONAR report highlighted the risks around fracking fluids with regard to chemical composition and groundwater contamination, whereas in the 2016 edition we address the increased earthquake risk associated with hydrofracking. In addition, we published a comprehensive report on "The link between hydrofracking, wastewater injection and earthquakes: key issues for re/insurers".

**Further activities on emerging risks identified in the past**
The emerging risks we previously examined in more detail and featured in our Corporate Responsibility Reports since 2007 were:

**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

Since we first identified these emerging risks, we have followed up on several of them together with our stakeholders. In 2016, we focused on the three risks below:

**References to further activities**

Critical infrastructure
Infrastructure private debt mandates, **page 40**
Supporting financial resilience, **page 47**

Cyber attacks
Partner reports on "Financing resilient energy infrastructure", **page 44**
Expert Forum on Cyber Risk, **page 49**

The Internet of Things
Risk Talk on Smart Homes, **page 49**

**Strategic risk initiatives**
Identifying and addressing emerging risks can be challenging. Their novelty and interconnectedness makes it difficult for anyone to determine when a particular risk notion must be considered an emerging risk. Timing is thus of crucial importance: If measures to exclude a particular risk are taken too early, we can offer our clients less 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. In 2016, we contributed to the following strategic initiatives:

**CRO Forum Emerging Risk Initiative (CRO ERI)**
The CRO ERI was launched in 2005 to raise awareness of major emerging risks relevant to society and the re/insurance industry.
www.thecroforum.org/emerging-risk-initiative-2/

In 2016, we contributed to the CRO Forum's Emerging Risk Initiative position paper "Water Risks".

**International Risk Governance Council (IRGC)**
The IRGC is an independent organisation whose purpose is to help understand and manage global risks that impact human health and safety, the environment, the economy and society at large. Since its foundation in 2003, Swiss Re has been a partner of the IRGC, and has participated in its initiatives and publications.
www.irgc.org

## Responsible investment

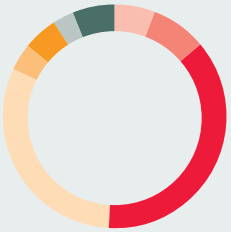
Asset-liability management (ALM) is the cornerstone of our investment philosophy. To meet future claims and benefits, we invest the premiums generated by our underwriting activities in assets whose cash flows match the durations and currencies of our re/insurance liabilities. Generally, we invest more in higher-quality fixed income securities with stable long-term returns. At the end of 2016, such investments accounted for 75% of our total assets under management[1].

We are committed to investing our assets responsibly via a controlled and structured investment process, integrating environmental, social and governance (ESG) criteria. Such criteria can have a positive impact on the long-term financial performance of our investment portfolio. Thus, we apply sustainability-related risk information consistently across our entire investment portfolio.

**Responsible investment framework**
Our asset management runs under a well-defined framework, which considers ESG criteria consistent with the Group's Code of Conduct and Swiss Re's commitment to sustainability. This pledge is further outlined in the Group Asset Management Responsible Investment Policy, which describes our approach and principles with regard to sustainable investing. This is complemented by the Swiss Re Asset Management Voting Framework, which provides guiding principles that apply to all our voting activities.

1 Asset classes considered are government bonds (incl. agency), corporate bonds, securitised products, and mortgages and other loans.

**Overall investment portfolio**
USD 130.5 bn, as of
31 December 2016



- 6 % Cash and cash equivalents
- 8 % Short-term investments
- 37% Government bonds
- 31% Corporate bonds
- 4% Securitised products
- 5% Equities*
- 3% Mortgages and other loans
- 6% Other investments incl. policy loans

* Includes equity securities, private equity and Principal Investments

The Responsible Investment Policy also describes the roles and accountabilities to ensure the integration of ESG considerations: The overall responsibility for sustainable investing lies with the Group Chief Investment Officer, who is advised by the Asset Management Executive Team and the Asset Management Investment Committee. Furthermore, an ESG Advisory Group, formed by representatives of all investment units, legal, compliance and risk management and steered by the Head Responsible Investing, conducts our responsible investment activities and monitors their progress. Through this governance structure, we ensure a comprehensive commitment to responsible investment in our day-to-day asset management activities.

In 2007, we signed the UN Principles for Responsible Investment (PRI) and in 2012, the Principles for Sustainable Insurance (PSI), thereby formally endorsing our commitment to corporate responsibility. The PRI and PSI are considered in Swiss Re's comprehensive responsible investment framework.

All PRI signatories are required to provide in-depth reporting on their responsible investment activities. The reports are available on the PRI website at www.unpri.org/signatory-directory/

## 2016 – ESG: An integral part of the investment process

We look at ESG integration primarily from the viewpoint of generating sustainable long-term returns, which aligns well with our focus on a high-quality investment portfolio. ESG integration makes economic sense because it improves risk/return profiles. As part of our active risk management, we are therefore adopting ESG-based benchmarks in our credit and equity portfolios.

As a long-term investor, we consider factors that may have an adverse impact on the sustainable value of our portfolio, such as climate risk. As a result, we measure our exposure to carbon emissions in listed equities and corporate bonds in a systematic manner. In order to mitigate the risk of stranded assets, we have also adopted a policy to avoid investments in companies where a substantial part of their revenues is stemming from thermal coal.

## Overarching approach

The Sustainability Risk Framework (see pages 28–33) enables us to identify and analyse potential ESG risks within an investment, and is aligned with our overall governance structure.

The framework consists of two umbrella policies on human rights and environmental protection, and seven guidelines on sensitive sectors or issues: the defence industry; oil and gas (including oil sands); mining; dams; animal testing; forestry, pulp & paper and oil palm; and nuclear weapons proliferation. Each of these policies and guidelines contain a number of predefined criteria and qualitative standards that may lead to the exclusion of a company or a country from our investment scope. Following our recent review, we extended our exclusion list to include companies potentially posing a significant reputational risk to investors due to controversial business activities from an ESG perspective.

Our Asset Management unit applies these criteria to our investment assets, and excludes companies and countries if they do not meet the pre-defined criteria and qualitative standards.

## Specific approaches per asset class

We have identified some key investment areas in which we apply further specific ESG criteria to cater for the different risk characteristics of responsible investing. Asset class specific approaches towards sustainability are outlined in the following sections.

### Rates products

Rates products[2] constitute the largest asset class in our investment portfolio, with a share of 51% at the end of 2016. At 37% of total assets under management, government bonds (incl. agency) are the largest holding within rates products.

In 2016, we revised our ESG screening approach at country level. We now include detailed information from a specialised research company on primary political risks, human rights, economic and environmental issues affecting the resilience of countries. Based on such factors, we assess our government bond assets to guide our responsible investment decisions and to guarantee the quality of our government bond portfolio. We screen our portfolio against ESG considerations twice a year. Furthermore, we use the rating measures to define investment mandates for our portfolio managers.

### Credit products, equities and hedge funds

At the end of 2016, approximately 44% of our investment portfolio was managed externally. This portfolio comprises mainly credit products, equities and hedge funds. PRI signatories manage more than 97% of these assets. Furthermore, all of our external asset managers have contractual provisions with Swiss Re that specifically relate to responsible investing.

We work closely with the external managers to ensure they consider ESG aspects in their investment processes. Before external managers are appointed, we perform thorough due diligence to confirm their compliance with our responsible investment principles. This includes ESG considerations in investment decisions and monitoring, as well as a review of the managers' commitment to responsible investing. After being mandated, the managers' individual performances are monitored in line with our Responsible Investment Policy and measured against ESG-related benchmarks. The managers are required to report regularly on their responsible investment activities.

For more systematic and regular monitoring of the actual integration of ESG factors into our externally managed portfolio, we have engaged the services of a leading ESG research company. Every year, we conduct an in-depth assessment based on ratings provided by them to analyse the quality of the portfolio and to gain further insight into ESG risk exposures.

As part of our commitment to sustainability, we also invest in related assets like renewables and social infrastructure in our infrastructure private debt mandates, and green bonds in our credit and rates products mandates. For the latter, we rely primarily on the "Green Bond Principles". For further information, please refer to www.swissre.com/about_us/about_our_business/asset_management/responsible_investing_in_practice.html

### Real estate

Our investment portfolio consists of direct investments in property in Switzerland, Germany and the US. It comprises buildings for residential, industrial and commercial use. The market value of the portfolio was USD 3.4 billion at the end of 2016.

2 Rates products consist of cash, short-term investments and government bonds (incl. agency).

We apply ambitious sustainability standards for these real estate investments. For projects in Switzerland, the applicable criteria are defined in the Energy Mission Statement of Swiss Re. This stipulates that all new buildings need to conform to the MINERGIE® standard (www.minergie.ch), a Swiss quality label specifying high levels of energy efficiency and superior user comfort. When an existing building in the portfolio is due for renovation, this standard is applied whenever it is feasible from an architectural, technical and financial point of view.

By the end of 2016, the combined value of our MINERGIE®-certified buildings reached USD 0.4 billion, or 22% of our Swiss portfolio of direct real estate investments. The total energy consumption surface in accordance with the MINERGIE® standard was 82 497 m² at the end of 2016. In addition, more than 59 000 m² had been sold on to third parties.

Since 2015, Swiss Re has also invested in the US real estate market, having now acquired a portfolio of 14 properties. The investment manager's approach to sustainability includes "GreenGuide: Sustainable Property Operations", a best practice guideline for sustainable and efficient real estate operations; "ULI GreenPrint Foundation", a global environmental management platform; and "LEED Certification" from the USGBC.

## Voting

We recognise our rights and responsibilities as an asset owner, and in particular as a shareholder, as an integral part of our commitment to responsible investment.

We believe that ESG considerations, especially good corporate governance and transparency towards shareholders, are key drivers for sustainable value creation. Therefore, we review our voting principles periodically to keep them aligned with best practice.

In the case of internally managed equities, we use our influence as a responsible shareholder by directly exercising our voting rights and, with externally managed portfolios, by facilitating the relevant portfolio managers to execute our proxy votes and related engagement activities.

In line with our voting framework, we review the voting policies of external managers during due diligence processes to confirm compliance with our own policy. In addition, external managers are required to report on voting activities conducted on Swiss Re's behalf.

In 2016, we exercised 99% of our voting rights of our listed equity portfolio[3]. We voted on 7 103 voting items through our external managers. We voted in favour of the respective management resolution in 6 305 cases (89%) and against it in 585 cases (8%). In 213 cases (3%), we abstained or withheld from voting.

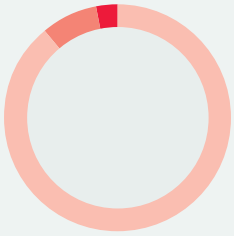
In addition to shares in listed companies, investments in our equity portfolio include equity exchange-traded-funds (ETFs). The fund managers cast votes on these ETFs for all investors in accordance with the fund managers' own voting policies and processes.

**Our voting activities in 2016**



- 99% Votes cast
- 1% No votes cast

**Our voting behaviour in 2016**



- 89% Voted with management
- 8% Voted against management
- 3% Abstained

3 We vote in all countries, with the exception of a few where voting process and regulatory obligations require a high level of administrative coordination.