

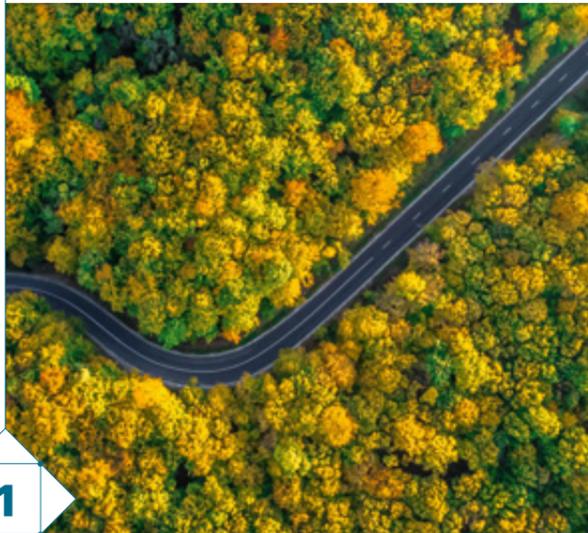
2018
ESG
REPORT
ON INVESTMENTS

STRIVING
FOR SUSTAINABLE
AND SOCIALLY
RESPONSIBLE
DEVELOPMENT

SCOR

The Art & Science of Risk

FOREWORD — 1
MESSAGE
FROM THE CHAIRMAN — 2



1

GOVERNANCE

Role of the Board of Directors — 6
Role of management — 7
Strategic management
at operating level — 8

2



STRATEGY

Investment
philosophy — 12
ESG approach — 13

TABLE OF CONTENTS

3



RISK MANAGEMENT

Protecting assets against
climate risk — 22
Including all ESG criteria to make
the portfolio more resilient — 28
Engaging to mitigate
portfolio risks — 31

4



FIGURES AND TARGETS

Carbon footprint — 34
Outlook, alignment
with international targets — 36

GLOSSARY — 40

ESG REPORT 2018 ON INVESTMENTS

This report has been prepared pursuant
to Article 173 of the French law on energy
transition for green growth

This report was produced in accordance with decree no. 2015-1850 of December 29, 2015, pursuant to law on energy transition for green growth no. 2015 – 992 of August 17, 2015. Its structure complies with the recommendations made by the Task Force for Climate-related Financial Disclosures (TCFD). The information in this report was prepared based on portfolio data at end-December 2018, except for the indicators linked to carbon intensity and alignment with the 2° scenario, for which the data provided was correct as at end-November 2018, to balance production times with regulatory constraints.



“ENVIRONMENTAL, SOCIAL AND GOVERNANCE CONSIDERATIONS ARE AN INTEGRAL PART OF THE IDENTITY AND CULTURE OF THE SCOR GROUP”

DENIS KESSLER
Chairman &
Chief Executive Officer

Climate variability, the increased frequency of certain extreme events, the growing vulnerability of modern societies to natural hazards... adapting to climate change and controlling the risks associated with it is a major societal challenge. Climate change is regarded in economics as a so-called “common good” problem. These kinds of problems give rise to moral hazard and free-rider issues - while all economic agents are likely to gain significant economic benefits over the long term from a reduction in greenhouse gas emissions, few want to take action individually and pay their fair share of the costs involved. Instead, they would rather let their neighbors shoulder the burden of the environmental transition. To find a comprehensive solution to the negative environmental externalities of the global economy, we need to combat this free-riding behavior. We can do this through better designed economic policies incorporating incentives that align the individual interests of the various economic agents involved with the collective interest, as emphasized by Jean Tirole in his recent book “Economics for the Common Good”¹. To overcome inaction, COP 21 set Nationally Determined Contributions (NDCs), which publicly quantify the efforts each country must make under the Paris Agreement.

Any initiative designed to incorporate the climate and environmental consequences of global business in what economists call the “social utility function” deserves our wholehearted support. Through such initiatives, the negative externalities of climate change would be “internalized” in the decisions made by all economic agents, and so would no longer just be the concern of national governments and international institutions. This would help to ensure that companies consider, in their production process, the social cost of the environmental externalities they cause, and would encourage them to implement sustainable development policies and strategies of their own. It is crucial to set out the role that the private sector should assume in combating climate change, as well as the issues that this raises in terms of technology, regulation and even competition.

The insurance and reinsurance sector has a pivotal role to play in facilitating comprehension, mitigation and protection with regard to climate change risks. As a global reinsurer, SCOR has been committed to fighting climate change for a very long time. The Group was one of the first to recognize the importance of managing climate risk and the risk of extreme events. SCOR signed the UN Global Compact in 2003 and subsequently supported the Kyoto Declaration on May 29, 2009, under the aegis of the Geneva Association. Ahead of several international declarations, the Geneva Association clearly stated that climate change poses a major long-term threat to the global economy. It also stressed that the

fight against the consequences of climate change must be a global commitment backed by the combined efforts of all reinsurer(s), as their fiduciary responsibility. Over the past few years, SCOR has stepped up its commitment to climate risk management, playing an active role in various sector-specific and multi-sector climate-related initiatives. These have included the French Business Climate Pledge signed in the wake of the Paris Climate Agreement, the Geneva Association’s Climate Risk Statement on Climate Resilience and Adaptation, and more recently the Decarbonize Europe Manifesto and the Letter from global investors urging governments of the G20 nations to fully support and implement the Paris Agreement. Following the Group’s announcement in 2015 of its full divestment from companies deriving more than 50% of their revenue from coal, SCOR made two further pledges. First, in 2017, it undertook to divest from the shares of companies deriving more than 30% of their revenue from coal. Then, in 2018, it extended its coal divestment strategy by adopting the Global Coal Exit List (GCEL). Accordingly, the Group now holds no investments in the top 120 developers of coal-fired power plants on this list, and has pledged to make no further investments in these companies in the future.

SCOR’s environmental and social commitment has also prompted it to implement broader initiatives designed to protect all populations from disease and addiction. The Group has contributed to the wide-ranging debate over whether climate change is likely to affect the well-being, health and mortality of populations, and whether it is likely to have an impact of the risk of pandemics. In May 2017, SCOR announced its full divestment from tobacco companies. In September 2018, the Group committed to an international initiative vis à vis the UNEP FI, as a founding member of the Tobacco-Free Finance Pledge. This initiative aims to raise awareness and encourage financial institutions to consider their business commitments with the tobacco industry, from the perspective of the global tobacco epidemic. With this commitment, which confirms SCOR’s position as a responsible Life & Health reinsurer, the Group has demonstrated that the investment community can play a role in support of the common good.

SCOR’s environmental and social commitment is reflected in its strong support for scientific research. The Group strives to deepen and share insights into the main climate and pandemic risks threatening the world. The SCOR Foundation for Science, established in 2011, bears witness to the Group’s long-term commitment to creating and disseminating risk awareness. In 2018, the Foundation supported an exhibition and seminar at the French natural history museum, called “Meteorites, From Sky to Earth”. It also co-organized an international conference on emerging infections and pandemic risk with the Institut Pasteur in June 2018. This event brought together some of the world’s leading specialists in infectious diseases to consider how epidemics spread. In an ever riskier and more uncertain world, the insurance and reinsurance industries have a leading role to play in working towards sustainable and responsible development. Environmental, social and governance considerations are an integral part of the identity and culture of the SCOR group.

¹. Jean Tirole, “Economics for the Common Good”, Princeton University Press, 2019

GOVERNANCE

1

ROLE OF THE BOARD OF DIRECTORS **6**
ROLE OF MANAGEMENT **7**
STRATEGIC MANAGEMENT AT OPERATING LEVEL **8**



GOVERNANCE

As a global and independent reinsurer, the SCOR group aims to embrace best governance practices. These will play a crucial role in helping it to achieve its strategic objectives and manage appropriately the risks arising in its various business lines. Climate risk in particular is studied and acted on at various levels of the Group. Led by its top governance bodies, SCOR has formulated an ambitious and holistic climate policy encompassing its activities and its operations.

SCOR is a signatory of the United Nations Principles for Sustainable Insurance (**PSI - see glossary**), which call for long-term responsible investment (**IR - see glossary**) to protect the environment and make society more respectful of individuals. Various initiatives supported by the Group strive to reduce climate risk. The SCOR group is committed to making companies more resilient by promoting the adoption of the Principles and the cooperation necessary to implement them, and by encouraging good governance, integrity and accountability.

ROLE OF THE BOARD OF DIRECTORS

SCOR's Board of Directors has various consultative committees responsible for laying the groundwork for its discussions and making recommendations on specific issues. The remit of the Corporate Social and Societal Responsibility and Environmental Sustainability Committee (CSSRESC) is to align the Group's ESG strategies with its long-term development and also to incorporate the direct and indirect effects of its activities on the environment into its strategy effectively. Accordingly, the CSSRESC oversees the ESG strategy and monitors implementation of its action plan. The role of the CSSRESC is to study the Group's key corporate social responsibility (**CSR - see glossary**) challenges, to provide scrutiny and control of the corresponding strategy, to draw up for the Board all

proposals aimed at incorporating CSR issues in the Group's strategic orientations and also to make sure that its executive officers implement an anti-discrimination and diversity policy to achieve a balanced representation of men and women on the executive bodies. The Committee must report on this to the Board of Directors.

In 2018, the Committee was kept regularly informed during its meetings of regulatory changes, requests from stakeholders and initiatives taken in connection with the action plan for the ESG strategy for investments. The SCOR Group Investment Office ("GIO") reports directly to the Committee on actions taken to apply ESG criteria to its investment strategy and on how the Group's asset management takes climate change risks into account.



IN 2018, THE GROUP SET UP A CORPORATE SOCIAL AND SOCIETAL RESPONSIBILITY AND ENVIRONMENTAL SUSTAINABILITY COMMITTEE AT EXECUTIVE COMMITTEE LEVEL

ROLE OF MANAGEMENT

• Executive Committee

In 2018, the Group set up a Corporate Social and Societal Responsibility and Environmental Sustainability Committee (CSSRESC) at Executive Committee level. This committee meets on a regular basis ahead of the Board of Directors' CSSRESC meetings and is tasked with approving the decisions concerning SCOR's ESG approach and initiatives. More specifically, it approves the ESG strategy for the Group's investments and makes sure the action plan is executed properly.

• Internal Corporate Social Responsibility Committee

The internal CSR Committee coordinates the Group's actions in terms of social and societal responsibility and sustainable development. It is made up of one representative from each Group division and from Human Resources, Investor Relations, Risk Management and Group Communications. Like the other committees referred to previously, it also meets on a regular basis. This internal committee is coordinated by the Group's

Head of CSR under the authority of the General Secretariat. Its operational role is to foster an overarching approach to CSR, in order to merge the initiatives taken by the Group, business lines and asset management. It is also tasked with making certain that the various action plans prepared by each division are consistent.

• Group Investment Committee

The Group Investment Committee, chaired by the Chairman & Chief Executive Officer of SCOR, meets every three months to define portfolio positioning within the limits set by the strategic plan. Normative and thematic exclusions, as well as major asset reallocations related to risk management – particularly climate risks - are approved during these meetings. At this committee meeting, the SCOR Global Investments division reports on the portfolio's exposure in relation to the risk limits laid down in the strategic plan and operational plans, including to risks arising from ESG criteria. 



STRATEGIC MANAGEMENT AT OPERATING LEVEL

• Mandate Investment Committee

The SCOR Global Investments division, in charge of Group investments, is composed of a Group Investment Office (GIO) and the asset management company SCOR Investment Partners (SCOR IP).

- The Group Investment Office is in charge of relations between SCOR and its asset managers. On the basis of the Group's risk appetite, the GIO defines investment constraints. It is also in charge of monitoring all the risks on the investment portfolio, reporting, data quality and the Group ESG investment policy.

- SCOR IP is the Group's principal asset manager. A wholly owned subsidiary of SCOR SE, SCOR IP manages the assets of the Group's companies, except for entities operating in the Americas and in certain Asian countries. SCOR IP may also, under certain conditions, act as investment advisor to entities that have delegated asset management to external asset managers. SCOR IP is a signatory of the UNPRI and applies, as part of its investment decisions, ESG principles defined by SCOR for its investment mandate.

The Mandate Investment Committee meets regularly with both GIO and SCOR IP representatives, in order to analyze SCOR IP's portfolio positions at a more operational and granular level. This committee discusses strategic choices in light of the Group's ESG criteria. The exclusion lists are updated at the initiative of SCOR or based on proposals submitted by SCOR IP. These lists feature specific issuers (e.g. the exclusion list of the Norwegian pension fund) and business sectors (e.g. exclusion of the tobacco and coal industries).

• Role of the Group Investment Office

The GIO is in charge, inter alia, of verifying that investment decisions comply with the various risk-related limits set by the Group (e.g. concentration, appetite, tolerance, target allocation, etc.). It is also in charge of drawing up the ESG strategy with regard to investments, which is then submitted to the Executive Committee. The GIO sends the updated list of exclusions, along with any changes to the strategy, to SCOR IP and to external asset managers for immediate enforcement.

The Group Investment Office also retrospectively controls the adequacy of the portfolio position and all its risk indicators with the objectives set by the various governance bodies that determine the Group's

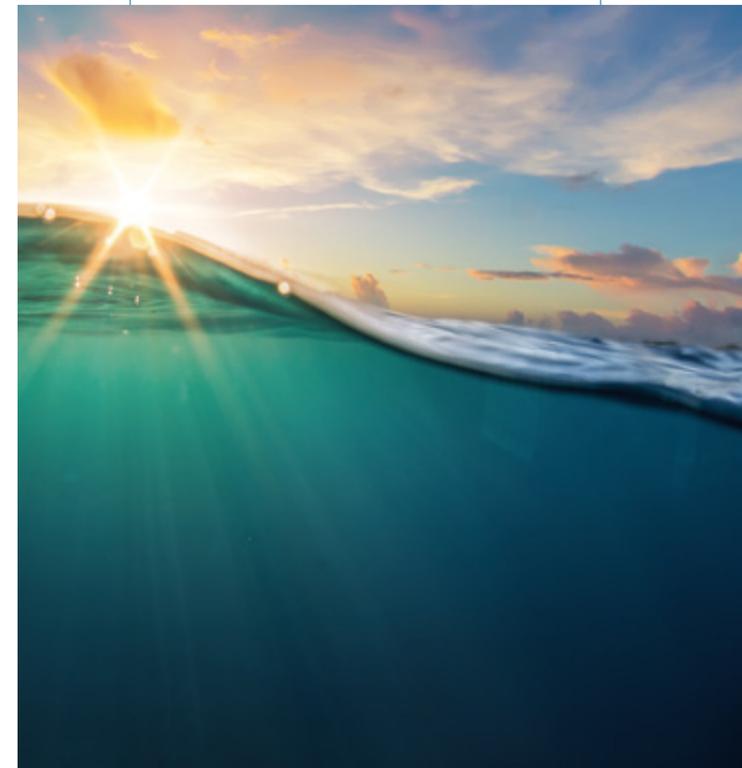
investment strategy. The GIO's risk management team includes ESG scoring, exclusion lists and operational monitoring of the ESG action plan in its weekly portfolio reporting. The head of the GIO risk management team is a member of the Mandate Investment Committee and in that capacity participates in discussions on ESG portfolio guidance. Both before and after an investment decision, ESG is fully integrated into risk management.

The Group predominantly uses information provided by data suppliers. Industry consolidation continues, and in 2018 SCOR retained the service providers it chose the previous year to ensure the comparability of the results, except for the analysis of the portfolio's alignment with the 2°C scenario, which was entrusted to Carbone 4 this year.

• Role of asset managers

Finally, SCOR relies on the skills of the asset managers to whom asset management is delegated. SCOR IP plays a dominant role in the integration of ESG criteria in investment decisions and the principal external asset managers are recognized for their ESG competency. They can be asked to provide analyses of issuers, thereby giving a basis for evaluating investments in light of the Group's ESG policy.

During the selection process for external asset managers, SCOR considers their ability to include ESG criteria in their investment decisions and their engagement with ESG aspects. The Group's guidance is also specified during the due diligences regularly conducted by the GIO. When SCOR IP acts as investment advisor, the management company also monitors the application of Group criteria prior to investment decisions. ◆



STRATEGY

INVESTMENT PHILOSOPHY 12
ESG APPROACH 13



STRATEGY

SCOR capitalizes on its expertise to analyze the exposure of its asset portfolio to climate change risks. The Group has undertaken to help finance the energy transition through targeted investments in renewable energy sources and energy-efficient buildings. SCOR is aware of the importance that access to knowledge plays in empowering people and thus continues its initiatives to spread and share knowledge. This is found as an investment theme in its 2016-2019 strategic plan. Lastly, in deference to best practices, the Group relies on its governance system to develop its ESG strategy.

The themes chosen demonstrate the Group's consistency and determination. They are based on SCOR's risk management know-how, especially with regard to adapting to the consequences of climate change. One example is the Group's capacity for natural catastrophe modeling, developed as part of its P&C reinsurance activity. Catastrophe modeling provides analysis of potential physical risks related to real estate and infrastructure investments. It is also useful for the precise management of asset portfolio exposure to Catastrophe Bonds (**see glossary**) and other protection against natural catastrophes, particularly in the Insurance-Linked Securities asset class (**ILS – see glossary**).

INVESTMENT PHILOSOPHY

Based on capital allocation in a Solvency II context, SCOR's approach to asset management is underpinned by an internal model developed by the Group. This approach was in place long before the advent of Solvency II. For years the Group has considered risk to be a major factor in its strategy. As in reinsurance underwriting, SCOR assesses its appetite for market risk, interest rate risk and credit risk. The investment strategy then adheres to risk-tolerance limits as defined by the Group's Executive Committee and approved by the SCOR SE Board of Directors.

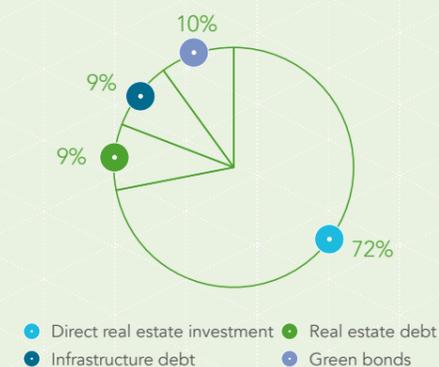
The objective of asset management is to optimize the recurrent financial contribution to Group results, while protecting asset values. Accordingly, SCOR is prudent in the management of its investment portfolio. Technical reserves for Life and P&C reinsurance comprise the bulk of liabilities. Liabilities are covered mainly by fairly liquid, high-quality fixed-income assets in order to ensure Group solvency in the event of large claims. ALM (**Asset and Liability Management – see glossary**) is a critical factor in the selection of assets used to cover SCOR's technical liabilities. In addition, the Group manages assets under the congruence principle, which ensures that investments are always made in the same currency as underwriting commitments.

The Group places great importance on asset allocation, not only in terms of the major asset classes but also in terms of concentration. Precise limits for asset classes and asset quality are stated in the Group's Investment Guidelines and are reviewed at least once a year and approved by the SCOR SE Board of Directors. In its latest 2016–2019 "Vision in Action" strategic plan, published in September 2016, SCOR reaffirmed its prudent approach, although the Group is normalizing its investment strategy in the plan.

DISTRIBUTION OF SCOR'S GREEN INVESTMENTS IN 2018 BY ASSET CLASS



DISTRIBUTION OF SCOR'S GREEN INVESTMENTS IN 2017 BY ASSET CLASS



ESG APPROACH

As part of its 2016–2019 strategic plan "Vision in Action", the SCOR group reaffirmed its commitment to applying ESG (**Environmental, Social and Governance – see glossary**) criteria in the management of its financial assets, with a view to investing responsibly. Risk management, which is the core of the Group's business, is designed to be

holistic and to cover various factors through a global approach. Over many years, SCOR has developed a transversal corporate culture of risk management under the ERM (**Enterprise Risk Management – see glossary**) concept. Environmental, social and governance risks fall naturally into this approach. They do not require a separate, specific framework.

In 2018, 87% of SCOR's portfolio was managed in accordance with ESG criteria, and the "green" portion of the investment portfolio now totals EUR 1.3 billion including operational real estate, representing a little over 7% of the overall assets (including operational real estate). This far exceeds the objective set by Christiana Figueres, former Executive Secretary of the United Nations Framework Convention on Climate Change, to allocate at least 1% of portfolios to green investments. Through selective investments, SCOR applies a consistent approach that combines risk analysis, impact investing and exclusions. SCOR's green assets include directly-held certified real estate, investments in certified real estate debt and in infrastructure debt linked to the energy transition, and green bonds.

The SCOR group's ESG approach is based on carefully selected themes. It is structured around four main areas, which ensure the consistency of the strategy, from preparation to operational implementation. In order to fully assume its fiduciary responsibilities, the Group has chosen an approach that is both proactive and adaptable. 

OUR COMMITMENTS SINCE 2015

- Environmental and climate commitment
- Health commitment
- General commitment



• Management of risks linked to ESG factors

The Group naturally harnesses its expertise in understanding the risks linked to climate change to gain a better understanding of the impact of these risks on its investment portfolio. SCOR also analyzes the consequences of how its portfolio performs on the environment. The Group pursues a dynamic and progressive approach, systematically adopting best practices and advances in knowledge and methodology. In addition to purely environmental aspects, ESG scores and controversial issues are also analyzed to detect potentially at-risk positions at an early stage.

• Exclusions

Given the urgent nature of the measures required to combat global warming, SCOR has introduced an ambitious climate policy. For investments, it excludes businesses generating more than 30% of their revenue from coal mining, and the 120-largest coal-fired power plant developers. These choices confirm the consistency of the Group's holistic strategy. Its business of providing cover for natural catastrophes and biometric risk is hard to square with the health and environmental toll that these activities take on society and the environment. Standard exclusions applicable to companies involved in the production of arms banned under certain international treaties, and to countries that do not adhere to anti-money-laundering and anti-terrorism-financing rules, are also applied to the investment portfolio.

• Engagement

Despite its slim appetite for equities and the very modest proportion of its portfolio accounted for by this asset class, SCOR exercised all the voting rights attached to directly-held shares in 2018. The Group plans to join bond engagement platforms, which provide a channel for discussing with issuers how to make their business more resilient. SCOR's engagement is also reflected in the various initiatives it has supported over many years. The Group regularly draws on its expertise in risk management and the effects of climate change to support market initiatives to produce

methodologies giving insurance and reinsurance operators a better understanding of the challenges posed by efforts to combat climate change. It supports the work of the European Commission through its participation in the **Technical Expert Group on Sustainable Finance**. It led a working group at the French Insurance Federation (FFA) whose work led to the drafting of a guide to analyzing climate risk on investment portfolios, published in autumn 2018.

• Theme-based investments

Energy transition to a low-carbon economy

For several years, SCOR has pursued an ambitious policy of financing the energy transition to a low-carbon economy. The Group began making direct investments in highly energy-efficient real estate a long time ago, and it recently stepped up its strategy by investing in infrastructure debt funds that finance "green" or social projects and in real estate debt for environmentally accredited buildings. This approach has been supplemented through selective investments in Green bonds.

For years, the Group has taken a proactive approach to the environmental certification of its real estate investment portfolio, and incorporates environmental labelling into the management of its real estate holdings.

In addition to office buildings acquired for SCOR's own use, the real estate portfolio also contains assets purchased solely for investment purposes. All these acquisitions are refurbished and then undergo certification based on one or more standards. Consequently, the bulk of SCOR's real estate portfolio has or is in the process of gaining the BREEAM (**BRE Environmental Assessment Method – see glossary**) and HQE (**High Quality Environmental Standard – see glossary**) certifications.

As part of its approach to financing the transition to a low-carbon economy, SCOR also invests in real-estate debt funds and infrastructure debt funds managed by its subsidiary SCOR Investment Partners. The investment strategy of these funds is in line with the Group's stated objectives.





AT THE END OF 2018, INVESTMENTS IN LIFE-SCIENCE EQUITIES AND BONDS TOTALED EUR 166 MILLION



Reconstruction after natural catastrophes

SCOR uses its expertise in the insurance coverage of natural catastrophes, both to optimize asset portfolio profitability through diversification, and to finance reconstruction after natural catastrophes. Thus, SCOR participates actively in strategies for adapting to climate change, by developing, distributing and investing in financial products that cover natural catastrophes (insurance-linked securities). At the end of 2018, SCOR held EUR 100 million in funds of this type managed by its SCOR IP subsidiary.

Life sciences

In the objectives set out in its strategic plan for 2016-2019, "Vision in Action", SCOR reaffirms its support of the life sciences through the investment of an additional EUR 50 million by 2019. At the end of 2018, investments in life-science equities and bonds totaled EUR 166 million, compared to EUR 100 million at the start of the plan. Most of the companies selected for investment are in the biotechnology field and are working to improve medical treatment or to broaden access to care.

Sustainable development goals

The 17 Sustainable Development Goals and their 169 targets introduced by the United Nations form the cornerstone of the Agenda 2030. This covers the full breadth of sustainable development issues and is also notable for recognizing how the various themes are interwoven, and the need to secure buy-in from the whole of society, including both institutions and civil society. SCOR progressively analyzes its portfolio's positioning vis-à-vis the UN Sustainable Development Goals. The primary goals to which its investments contribute are efforts to combat global warming and to provide funding for the transition to a low-carbon economy, as well as health and well-being.

SHARE OF CERTIFIED REAL ESTATE IN THE SCOR PORTFOLIO AT THE END OF 2018 (in EUR millions)



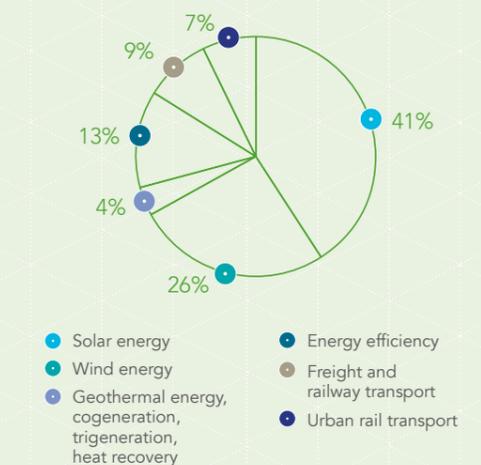
SHARE OF CERTIFIED REAL ESTATE IN THE SCOR PORTFOLIO AT THE END OF 2018 (in m²)



SHARE OF CERTIFIED REAL ESTATE IN ACQUISITIONS



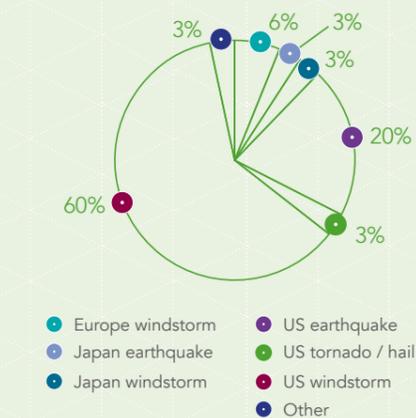
DISTRIBUTION OF INFRASTRUCTURE DEBT INVESTMENTS WITH AN ENVIRONMENTAL IMPACT (in %)



EXPOSURE TO ILS (in EUR millions)



DISTRIBUTION OF NATURAL CATASTROPHE INVESTMENTS BY ESTIMATED LOSS (IN %)





ODD 3

Ensure healthy lives and promote well-being for all at all ages.

3.A Strengthen the implementation of the World Health Organization Framework Convention on Tobacco Control in all countries, as appropriate.

Over the past few years, the Group has extended its ESG approach to aspects other than just the environment, notably with its decision in May 2017 to withdraw completely from the tobacco industry. It rapidly disposed of any securities it still held in its asset portfolios to ensure that its portfolio was fully aligned with its strategy, and undertook not to make any further financial investment in businesses operating in the sector.

On September 26, 2018, as a founding member of the Tobacco-Free Finance Pledge, SCOR committed to an international initiative vis-à-vis the United Nations Environment Programme Finance Initiative (UNEP FI), to:

- encourage the financial sector to play an active role by setting joint priorities, such as those laid down in Sustainable Development Goals 3 and 17, and by the WHO Framework Convention on Tobacco Control;
- encourage financial institutions to consider their business commitments with the tobacco industry in light of the global tobacco epidemic;
- consider tobacco separately from any other product and as being harmful irrespective of the level of use.



ODD 4

Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

4.6 By 2030, ensure that all youth and a substantial proportion of adults, both men and women, achieve literacy and numeracy.

4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development, including, among others, through education for sustainable development and sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship and appreciation of cultural diversity and of culture's contribution to sustainable development.

Wishing to invest in high-quality, medium-sized companies working in the production and publication of certified knowledge, SCOR acquired the French publishing houses Presses Universitaires de France (PUF) and Editions Belin. In a context of information available 24/7, which can be a source of confusion, the objective behind these acquisitions was to protect against a contemporary risk: cognitive risk, i.e. the risk of misunderstanding or of biased judgment, which is often the result of low-quality information or insufficient access to knowledge.

The initial approach was to strengthen and digitalize these two companies, notably by supplying them with the services of another SCOR investment in knowledge sciences, Gutenberg Technology, an expert in e-learning and the digital transformation of content. Today the idea is to create a hub for the production and dissemination of confirmed knowledge, including the creation of diploma programs.

This policy of "cognitive protection" is now embodied in a group, HUMENSIS, the result of the merger between PUF and Editions Belin. HUMENSIS aims to bring together robust, well-known brands in the production, dissemination and diploma-level teaching of confirmed knowledge. Its ambition is to participate actively in the expansion of the knowledge society.



ODD 11

Make cities and human settlements inclusive, safe, resilient and sustainable.

11.3 By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.

11.6 By 2030, reduce the adverse per capita environmental impact of cities, including by paying special attention to air quality and municipal and other waste management.

By investing in real estate debt funds managed by its subsidiary SCOR IP, SCOR is committed to financing sustainable offices. In 2018, the SCOR FCT REL III fund financed 50% of the debt related to the construction of the Spinner building in the Paris suburbs. This building meets the highest degree of environmental certification, HQE exceptional. It has also been awarded the energy positive and low carbon label (E+C-) with rating of E2C2, demonstrating both a particularly low energy consumption and a genuine effort in the choice of building materials and technical equipment.

PRACTICAL IMPLEMENTATION OF CLIMATE RISK MANAGEMENT: EFFECTS ON PORTFOLIO MANAGEMENT.

The type of portfolio management adopted by SCOR is based on rapid adaptability to market changes, which asset managers must be capable of handling. The average duration of assets is relatively short (4.5 years at the end of 2018) and the normal rotation of the portfolio ensures the flexibility crucial to the resilience of the portfolio.

In addition to the carbon footprint, sector allocation is monitored systematically, ensuring that portfolio positioning is in line with Group objectives for climate risk exposure. The Group takes a pragmatic approach and does not aim for zero risk. Rather, it seeks a controlled level of risk that is compatible with the specificities of its activity and its profitability targets., which enables it to adapt to new developments and progressively incorporate innovations ◆



RISK MANAGEMENT

PROTECTING ASSETS AGAINST CLIMATE RISK **22**
INCLUDING ALL ESG CRITERIA TO MAKE THE PORTFOLIO
MORE RESILIENT **28**
ENGAGING TO MITIGATE PORTFOLIO RISKS **31**



3

RISK MANAGEMENT

As outlined in the ESG principles section above, risk management is the primary pillar of the Group’s ESG approach. SCOR incorporates ESG criteria into its portfolio allocation and risk monitoring. It reports on risks relating to these criteria to the various governance bodies. The Group pays particular attention to the risks linked to climate change and capitalizes on the skills of its climate event modeling teams to reinforce the robustness of its approach.



PROTECTING ASSETS AGAINST CLIMATE RISK

Climate change and the transition to a low-carbon economy are two separate concepts leading to a distinction between two types of related risk: physical risks and transition risks.

Physical risks

Physical risks arise from damage and losses caused directly by changes to climate phenomena. Global warming could significantly increase the frequency and/or the intensity of extreme climate events like cyclones, hurricanes and floods, posing an acute risk to the physical assets held directly in portfolios or financed indirectly by investments in companies. This is called acute physical risk, as opposed to chronic physical risk, a longer-term consequence of an upward trend in physical risk.

SCOR analyzes “acute” physical risks which could affect its portfolio of real estate debt, infrastructure debt and direct real estate investments.

74% of the real estate and the real estate and infrastructure debt portfolio is located in France. The “acute” physical risks are analyzed using SCOR’s

ESTIMATED LOSSES DUE TO PHYSICAL RISKS (in EUR thousands)

| | DIRECT REAL ESTATE INVESTMENT | REAL ESTATE DEBT | INFRASTRUCTURE DEBT | TOTAL |
|--|-------------------------------|------------------|---------------------|-------|
| AVERAGE ANNUAL LOSS | 198 | 31 | 53 | 282 |
| AVERAGE ANNUAL LOSS FOR A 100-YEAR EVENT | 3,306 | 342 | 478 | 3,961 |

INTERNAL MODEL CALCULATIONS PROVIDE INFORMATION ON EXPOSURE TO PHYSICAL RISK

internal model for simulating natural catastrophes. Based on scenarios validated by the Group’s modeling teams, this model estimates potential losses from natural catastrophes. Depending on the geographical location of the investments, the internal model calculates damage rates, which provide estimates of the potential losses that these investments could suffer in the event of a natural catastrophe. Given the portfolio profile, SCOR has calculated the risk exposure of storms in Europe, the most significant climatic event. To date, the metric still remains highly approximate: the climate models underpinning SCOR’s internal model are predicated on historical data rather than a forward-looking view of the effects of climate change on extreme events, which will in turn be shaped by whether or not governments take bold action to comply with their Paris Agreement commitments. That being said, the investments analyzed are located in Europe and benefit from insurance cover that is not taken into account by the calculations.

The results calculated by the internal model for the selected investments are shown in the table above.





As in previous years, the physical asset portfolio benefits from its geographical location, mainly in Paris for direct real estate investment and in Europe for real estate and infrastructure debt investments. Its resilience to the risk of extreme climate events is reinforced by a highly selective investment process. Thus, the loss remains very modest by comparison with the size of the investments (EUR 1.9 billion). Loss / investment ratios are up very slightly compared to the end of 2017.

• **Transition risks**

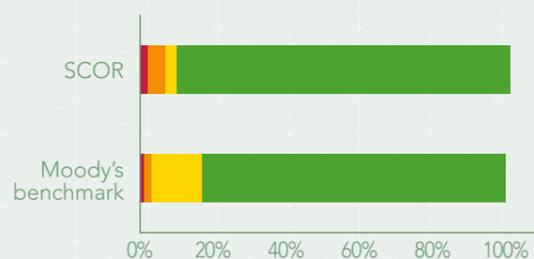
In an investment portfolio, the transition risk can be defined as all the risks incurred by businesses as a result of the transition to a low-carbon economy. These may be political and regulatory risks, arising from governments' determination to accelerate the energy transition (carbon price, product regulations, etc.), technological risks with the emergence of

disruptive technologies liable to affect the business model of certain operators, the risk of a shift in demand for products or reputational risk, directly reflecting the growing consideration economic players give to ESG criteria.

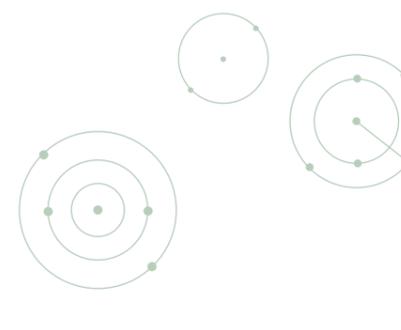
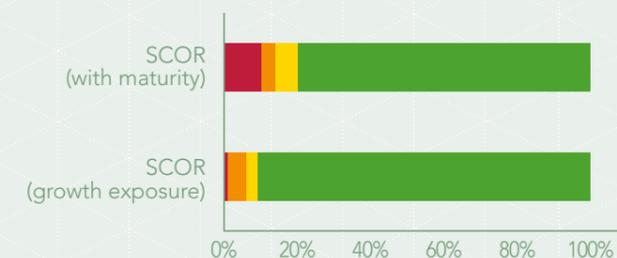
The protection of assets against global warming comprises two distinct dimensions: issuer risk and the holding period of the asset. SCOR's goal is to protect the value of its assets and therefore to minimize potential defaults or spread stress significant enough to have a material adverse impact on the value of the portfolio. The shorter the maturity of the securities, the smaller the impact of pressure on spreads, so in the short term only default risk is considered. In addition, a company's transition risk should be analyzed at a given moment, and in the context of its commitment to reduce its carbon intensity or its reliance on carbon-intensive activities. The issue of the length of the obligations linked to each Group investment is thus a critical element in the implementation of a resilient climate strategy.

Analyzing transition risk is thus a highly complex task for an institutional investor. To do so, it needs to be able to consult Nationally Determined Contributions (NDCs – see glossary) for the portion of the portfolio invested in government bonds, as well as data reflecting a forward-looking view of the impact of climate change on the business model pursued by the companies (also largely dependent on NDCs) in the corporate bond or equities segment of the portfolio. Transition risk also depends on the maturity band, as certain segments are already heavily exposed (coal, for example), while at this stage others are only expected to be affected by the negative effects of climate change over a time horizon that is hard to determine. It naturally depends to a very high degree on the global warming scenario envisaged and is inversely proportional to the physical risk. The greater governments' determination to observe the Paris Agreement, the more transition risk increases, because the efforts required of the various companies will be more substantial. In parallel, the physical risk decreases because the effects of global warming should be better contained.

EXPOSURE LEVEL TO ENVIRONMENTAL RISK



EXPOSURE LEVEL TO ENVIRONMENT RISK AFTER CONSIDERING ASSET MATURITY



In 2018, SCOR conducted a preliminary portfolio analysis along the same lines as the Moody's Investors Service industry mapping published in September 2018. This analysis establishes the risk level for the various carbon-intensive business sectors based on a projected timeline for the occurrence of transition risk. However, it does not factor in the degree of resilience of businesses in these sectors, or the maturity of the debt they have issued. Using this data, and fine tuning the analysis by incorporating the maturity of the securities held in the portfolio, SCOR has identified lines requiring close monitoring. The analysis covers 84% of the Group's portfolio, corresponding to the assets analyzed by Moody's (sovereign bond portfolio and private issuers, cf. graph p.24).

The maturity of the securities held in the portfolio is a key factor in the risk analysis. Shorter durations make the portfolio more resilient by reducing the risk of a decline in the value of the assets and allowing the positioning of the portfolio to adjust to the pace of the fall. The integration of this maturity criterion makes it possible to better anticipate the exposure of the portfolio.

The analysis confirms the resilience of the Group's portfolio, thanks to its global ESG strategy.



• Portfolio alignment with the 2°C scenario

SCOR has analyzed the alignment of its investment portfolio with the 2°C Scenario defined by the International Energy Agency. The 2° scenario was approved by the Paris Agreement signed during COP 21 in December 2015. This agreement aims to limit global warming to 2°C by the year 2100, compared with levels found in the pre-industrial era. Even though the IPCC's latest report presents the major challenges involved in staying on track, this scenario remains, for now, the baseline scenario underpinning the various reporting standards.

The results are used to gain a clearer picture of the investment portfolio's impact on the environment. The metrics are more relevant than an incomplete, static carbon footprint, and with time they should help to adjust portfolio positions more effectively. Nevertheless, at this point, the methodologies are still very disparate and the results too volatile to set quantified objectives. 



INCLUDING ALL ESG CRITERIA TO MAKE THE PORTFOLIO MORE RESILIENT

• ESG rating

The integration of ESG criteria is measured primarily by assessing the quality of the asset portfolio. Given the extremely high level of diversification of its investments, the Group works with the independent, non-financial ratings agency oekom research to assess its portfolio's standard instruments. The agency assesses mainly government bonds, corporate bonds and listed equities. For debt instruments, particularly infrastructure and real estate debt, the Group relies on the expertise of its subsidiary SCOR IP, a recognized leader in the European debt instrument management industry.

Using the data provided by oekom research, SCOR is able to rate 80% of its asset portfolio based on non-financial criteria. A line-by-line analysis is regularly performed ex-post. Issuers with the lowest ratings may be placed under review, and the asset managers in charge of managing such securities may be asked to provide additional information or to justify their investment decisions. At present, SCOR does not apply systematic exclusions, however it may make adjustments to portfolios after analysis. By taking a pragmatic approach, the Group aims to reconcile risk control with profitability and solvency targets. Like all reinsurers, SCOR is subject to numerous asset management constraints, especially since it operates in multiple jurisdictions. The main growth drivers are in Asia, where national law often requires that assets be owned and held locally. To optimize its capital allocation, the Group focuses on its core business rather than on risks affecting the asset portfolio, which are confined



USING THE DATA PROVIDED BY OEKOM RESEARCH, SCOR IS ABLE TO RATE 80% OF ITS ASSET PORTFOLIO BASED ON NON-FINANCIAL CRITERIA



GOVERNMENT BONDS AND ASSIMILATED (in EUR millions)



to ALM constraints. As a result, the vast majority of the portfolio comprises government bonds in countries deemed to carry the highest risks. This asset class has been growing steadily in tandem with the expansion of SCOR's Asian business. Nevertheless, the Group remains very alert for any local initiatives that could be taken to promote the energy transition, especially the outlook for sovereign Green bond issues.

The oekom research rating methodology is based on the analysis of environmental and social ("E" and "S") factors, including governance criteria. Based on an 80% coverage rate by oekom research (compared with 77% in 2017), SCOR's portfolio has an average rating of C, unchanged compared with the previous year. This average rating reflects a very diverse data set and, as previously mentioned, SCOR's influence varies widely, depending on the asset class involved. Government and corporate bonds are the portfolio's two largest asset classes and account for 91% of Group assets covered by oekom research's analysis.

For the country rating as applied to government securities, oekom research assigns equal weighting to the two groups of E and S factors.

The portfolio of government bonds (EUR 4.6 billion at December 31, 2018) is rated C on average and is broken down compared with 2017 as shown in the government bonds and assimilated chart, above.



These securities are employed mainly for ALM coverage of the Group's underwriting commitments. Investing in other asset classes creates other types of risks, a strategy that is not currently considered advantageous.

The methodology used to rate private-sector companies is also based on the two groups of E and S factors, but their weighting depends on the business sector involved. Analyses are based not only on financial and non-financial data provided by the companies but also on interviews with employees and external stakeholders. Corporate bonds rated by oekom research totaled EUR 8.9 billion at December 31, 2018, with an average ESG rating of C. A breakdown of the 2017 and 2018 ratings is shown in the Corporate bonds chart.



CORPORATE BONDS
(in EUR millions)



Investments in D-rated bonds total less than EUR 13 million, down significantly from 2017, due to the combined effect of the reduction in portfolio positions and the improvement in certain ratings.

ENGAGING TO MITIGATE PORTFOLIO RISKS

As explained previously in the transition risk section, ESG scores can also be used to fine-tune a sectorial analysis, providing an overview of how an issuer is performing within the context of its activities and its challenges, mainly for the environmental pillar.

Drawing on the Glass-Lewis proxy voting recommendations, SCOR exercised all the voting rights on the shares it held directly in its portfolio in accordance with the undertakings it made under its ESG action plan for investments. Except for one resolution, the recommendations were followed in respect of the shares it held. ♦

FIGURES AND TARGETS

CARBON FOOTPRINT **34**
OUTLOOK, ALIGNMENT
WITH INTERNATIONAL TARGETS **36**



4

FIGURES AND TARGETS

SCOR's commitment is based on the development of a robust frame of reference. The Group is developing a set of indicators and tools that enable it to measure the exposure of its assets to climate change and to set objectives for the incorporation of ESG criteria across its entire investment portfolio.



CARBON FOOTPRINT

SCOR uses ISS data to measure the carbon footprint of its portfolio. The measurement taken is only an indicator at a given time. It provides little information on the approach or commitment of issuers with regard to climate risk, or on how SCOR can efficiently manage its assets with regard to risks related to greenhouse gas emissions. The methodologies currently available are far from consistent. This is especially true for bond portfolios,

for which the allocation key used for greenhouse gas emissions remains very arbitrary. The likely emergence of a market benchmark in the years to come will undoubtedly allow the Group to refine its approach, which at present remains highly pragmatic.

Carbon footprint assessment is based on a number of assumptions and conventions, including the distribution of greenhouse gas emissions by scope:

- **scope 1:** direct production of greenhouse gas emissions through the consumption of fossil fuels;
- **scope 2:** indirect production of greenhouse gas emissions through the consumption of energy that in turn consumes fossil fuels;
- **scope 3:** other forms of greenhouse gas production related to the entity's activity.

For government bonds, ISS collects data with regard to all three emission scopes, but only with regard to the first two scopes for the other asset classes. Consequently, the results are not fully consistent.

Carbon intensity is defined as the ratio of total CO₂ emissions to GDP for states and to turnover for companies. It is calculated excluding real estate debt, infrastructure debt and direct real estate investment. This data reflects the impact of the issuing company's position on the environment. The carbon intensity per million euros invested amounts to 285 tons at the end

TABLE 1: CARBON INTENSITY TO GDP OR TURNOVER RATIO AND CHANGE COMPARED TO 2016

| | SCOPES 1,2,3 | SCOPES 1 AND 2 | | | |
|--|------------------|-----------------|-------------------------------------|---------------|-----------------|
| | GOVERNMENT BONDS | CORPORATE BONDS | EQUITIES AND CONVERTIBLE SECURITIES | COVERED BONDS | CORPORATE LOANS |
| TONS OF CO ₂ EQUIVALENT TO GDP (government bonds) OR TURNOVER RATIO | 514 | 162 | 216 | 4 | 205 |
| CHANGE COMPARED TO 2016 | + 8% | - 3% | + 70% | + 16% | + 102% |
| CHANGE COMPARED TO 2017 | + 6% | - 2% | + 50% | - 50% | + 8% |

The assets analyzed in this table exclude real estate debt, infrastructure debt and exposure to direct real estate investments.

TABLE 2: INVESTED CARBON INTENSITY AND CHANGE COMPARED TO 2016

| | TOTAL SCOR |
|---|------------|
| TONS OF CO ₂ EQUIVALENT PER EUR MILLION INVESTED | 285 |
| CHANGE COMPARED TO 2016 | + 14% |
| CHANGE COMPARED TO 2017 | - 19% |

of 2018, up 14% compared to the end of 2017. The calculation covers 89% of the Group's portfolio at the end of 2018.

Carbon footprint results calculated for positions at the end of 2018 on the basis of issuer data from 2017 and comparatives for 2017 are summarized in the tables above.

Another measure is the ratio of total greenhouse gas emissions to the amount of investments made by SCOR (tons of CO₂ equivalent per EUR million invested). The analysis can then be broadened to include real

estate debt and infrastructure debt, thereby covering EUR 17.2 billion of portfolio assets (cf. board 2). This measure provides information on the Group's investment choices.

The results vary widely from one year to the next, due to both the quality and coverage of the information provided by the companies and to adjustments to the calculation models. SCOR considers that it is still too early to set quantified "decarbonization" targets for its asset portfolio in the near future (cf. graphs p. 37).





OUTLOOK, ALIGNMENT WITH INTERNATIONAL TARGETS

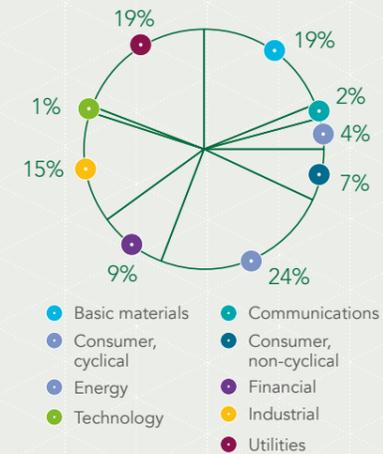
Carbone 4 has been entrusted with measuring the portfolio's alignment with the 2°C scenario advocated in the Paris Agreement. The analysis covers government bonds, corporate bonds and equities, representing 85% of SCOR's total portfolio.

The data is stable between 3.7 °C and 3.8 °C for 2016, 2017 and 2018. The main contributors are government bonds in emerging countries in which SCOR allocates capital to its core reinsurance business, at the expense

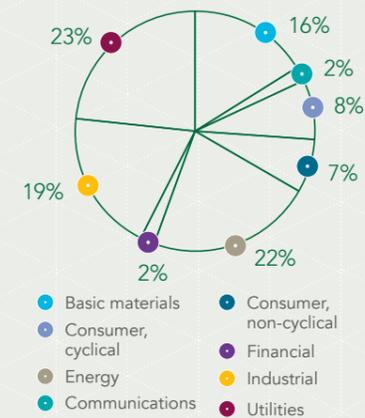
of market risks. It should be noted, however, that part of the Group's activity in Asia consists in protecting local populations against extreme weather events on the P&C side, and in making medical coverage more accessible on the Life side. Given the Group's growth ambitions in Asia, and the local regulatory constraints, the improvement of the trajectory will depend on the public initiatives adopted in these countries.

SCOR is actively pursuing its analysis of the drivers behind the portfolio temperature, to identify the best ways to set a realistic course within an appropriate time frame. ◆

BREAKDOWN OF CARBON INTENSITY TO TURNOVER RATIO, BY SECTOR (CORPORATE BONDS)



BREAKDOWN OF CARBON INTENSITY FINANCED, BY SECTOR (CORPORATE BONDS)



GLOSSARY

ALM (ASSET AND LIABILITY MANAGEMENT)

The practice of managing risks that arise due to mismatches between assets and liabilities, based on risk appetite and profitability targets.

BREEAM (BUILDING RESEARCH ESTABLISHMENT ENVIRONMENTAL ASSESSMENT METHOD) CERTIFICATION

British certification, a method for measuring the environmental performance of buildings. BREEAM was first developed by the BRE (Building Research Establishment), whose mission is to improve construction through research.

CATASTROPHE BONDS

Investors purchase catastrophe bonds to cover certain risks (or groups of risks) and to receive income, as with other types of bonds. If one or more of the risks covered should occur, the investor may lose part or all of the income and invested capital.

ERM (ENTERPRISE RISK MANAGEMENT)

Approach which includes risk as an integral part of a company's strategy. ERM combines all methodologies in order to identify, manage and account for risks which may have an impact on the definition of the company's strategy and the achievement of its objectives.

ESG (ENVIRONMENTAL, SOCIAL AND GOVERNANCE)

Criteria for measuring environmental risks, the management of human capital, and corporate organization. The development of these criteria aims to promote best practices for the respect of the planet and of people.

HQE (HIGH ENVIRONMENTAL QUALITY) CERTIFICATION

French certification awarded to buildings which meet 14 criteria for construction, water management, energy use, comfort, and the capacity to provide a healthful environment through high-quality water and air.

ILS (INSURANCE-LINKED SECURITIES)

Insurance products covering natural catastrophe risks.

LAGGARDS, UNDERPERFORMERS, PERFORMERS AND LEADERS

Non-financial ratings agencies divide issuers into several categories, according to their level of maturity and commitment to ESG criteria. The category may reflect all ESG criteria, or it may refer to a company's position with regard to a single criterion for climate change. Laggards and underperformers are below standard and do not meet objectives, while performers and leaders apply the highest standards.

LEED (LEADERSHIP IN ENERGY AND ENVIRONMENTAL DESIGN) CERTIFICATION

American certification awarded to buildings that meet high environmental quality standards. LEED is the American equivalent of HQE and BREEAM certifications.

NDCs (NATIONALLY DETERMINED CONTRIBUTIONS)

Launched by the United Nations, the Nationally Determined Contributions publicly define how each country plans under the Paris Agreement to contribute to the international effort to ensure a sustainable future for everyone, by limiting global warming since the pre-industrial era to well below 2°C, preferably at 1.5°C.

PSI (PRINCIPLES FOR SUSTAINABLE INSURANCE)

These principles for sustainable insurance were drawn up by UNEP FI, the United Nations Environment Programme Finance Initiative. They provide a framework for the insurance industry to integrate environmental, social and governance (ESG) criteria into its decision-making.

CSR (CORPORATE SOCIAL RESPONSIBILITY)

Recognition of the need for each company to include social and environmental criteria in its strategy, and to improve its practices with regard to these criteria. CSR covers both corporate responsibility and reporting obligations.

RI (RESPONSIBLE INVESTMENT)

Responsible investment or socially responsible investment (SRI) consists in incorporating Environmental, Social and Governance (ESG) criteria into asset management.

SBT (SCIENCE-BASED TARGETS)

Launched in 2015, the SBT initiative aims to encourage 500 companies to define targets for lowering greenhouse gas emissions in line with the 2°C target.

SDGs (SUSTAINABLE DEVELOPMENT GOALS)

The SDGs comprise the 17 goals that the United Nations have set for 2030, including eradicating poverty, protecting the planet and ensuring prosperity for all. These objectives supersede the Millennium Development Goals set for the 2000-2016 period.

TEEC (ENERGY AND ECOLOGICAL TRANSITION FOR THE CLIMATE)

Created in September 2015 by the French Ministry of the Environment, Ecology and Marine Affairs, this certification is awarded to funds which finance the green economy through investments having a positive environmental impact.

UNPRI (UNITED NATIONS PRINCIPLES FOR RESPONSIBLE INVESTMENT)

Initiative launched in 2006 by investors in partnership with the United Nations Environment Programme Finance Initiative and the United Nations Global Compact. The UNPRI promotes six principles for responsible investment.

CONTACT

GROUP COMMUNICATIONS
Email : media@scor.com

Marie-Laurence Bouchon
Group Head of Communications
Tel.: +33 (0) 1 58 44 75 43

www.scor.com

Photo credits:
©Shutterstock

Design and production:
côté corp.

Led by Michèle Lacroix
Contributors : Guillaume Levannier,
Matthieu Togoires, Yun Wai-Song.

An aerial photograph of Central Park in New York City during sunset. The park's trees are in various shades of green and yellow, and the water of the lake reflects the golden light of the setting sun. The dense city skyline is visible in the background under a hazy, orange sky.

SCOR

AND ITS 2,880+ EMPLOYEES
ARE VERY PROUD TO
CONTRIBUTE TO THE
PROTECTION AND WELFARE
OF MILLIONS OF PEOPLE
AROUND THE WORLD
FACING RISKS OF ALL KINDS.

To learn more about
SCOR's strategy, goals, commitments
and markets, please visit our website.
www.scor.com

Follow us on social networks



SCOR
The Art & Science of Risk