GRI 201-2

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

05

Allianz's climate-related financial disclosure

As part of our commitment to transparency on climate change, we apply the recommendations of the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

We strive to continuously enhance our reporting and business practices to drive best practice and collaborate with and support others to do the same.

05.1 Highlights

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Our climate change strategy is built on strong foundations. It includes a commitment to reach net-zero greenhouse gas (GHG) emissions in our proprietary investment portfolio by 2050, in line with the ambitions of the 2015 Paris Climate Agreement to limit global warming to a maximum of 1.5°C by the end of the century. Our priorities are exiting coal-based business models by 2040 at the latest, implementing the TCFD recommendations and enhancing our systematic approach to investee engagement and policy advocacy.

1. The United Nations (U.N.) launched the Net-Zero Asset Owner Alliance (AOA) at the Climate Action Summit in New York in September 2019. It consists of the world's largest pension funds and insurers who are committed to reduce GHG emissions of their investment portfolios to net-zero by 2050. Allianz helped to set up the group, collaborating with the United Nations Environment Finance Initiative (UNEP FI), the Principles for Responsible Investment (PRI), WWF and the Mission 2020 campaign. We currently chair the AOA and co-lead several working groups.

   Read more in section 02.2.

2. In 2020, we set targets for decarbonization of both our operations as well as our investment portfolio. These targets are derived from climate science, the investment-related ones are additionally in line with the approach of the AOA.

   Read more in sections 04.7 and 05.3.3.

3. For our listed equity portfolio, we have developed a first exploratory version of a dedicated inhouse carbon stress test. This is testimony to our commitment to drive disclosure to quantify climate risks and opportunities. It emphasizes portfolio decarbonization as an essential part of our climate strategies. Development of the approach is at an early stage and we will gradually expand scope and depth of the analysis.

   Read more in section 05.4.

4. We have made it a priority to advocate for a green recovery to build societies back better after the COVID-19 pandemic. Government spending and recovery packages play a vital role in underpinning economies, infrastructure, jobs and livelihoods. Policy and fiscal decisions taken now across wide-ranging policy areas have the potential either to delay action – or to pave the way for the necessary structural changes ahead.

   Read more in section 05.3.3.

5. The Board of Management (BoM) remuneration for 2020 is tied to the attainment of sustainability and climate targets. Performance metrics include delivery of the climate change strategy, oversight of implementation of climate-related commitments (including the AOA) and achievement of quantitative GHG reduction targets. For 2021, BoM remuneration is again tied to climate-related targets.

   Read more in sections 02.7.1 and 05.2.3.

6. In 2020, we changed the composition of the Group ESG Board, our board-level governance body for sustainability-related topics. It now fully reflects all business segments and operations, comprising five voting members – four Allianz SE Board members and the Chief Risk Officer, an increase from three voting Board members previously. The new composition means the Property & Casualty insurance business and own operations are represented by Board members in addition to investments, asset management and risk. In early 2021, further changes to the Group ESG Board composition have been implemented.

   Read more in section 05.2.1.

Looking ahead

In 2021, we will focus on action to achieve our 2025 targets for proprietary investments and business operations. We aim to develop comprehensive scenario analysis on the physical, transition and litigation aspects of climate change, covering both investments and underwriting. We will enhance the consideration of climate change as part of our Strategic and Planning Dialogues with our key operating entities. We will continue to ramp up engagement with companies and policymakers on climate strategies in line with our ambition.

05.2 Governance

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
— Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Given the materiality of climate change to our business, we govern it on highest levels and cascade responsibility through to management.

05.2.1 Overarching and board-level governance

Allianz SE has a divisional board structure based on functional and business responsibilities. Business-related divisions reflect our segments Property-Casualty, Life/Health, Asset Management, and Corporate and Other. In 2020, they were overseen by five Board members. The following divisions focus on Group functions and come with business-related responsibilities: Chairman of the BoM; Finance, Controlling and Risk; Investment Management; Operations and Allianz Services; Human Resources, Legal, Compliance, and M&A; Business Transformation. For further information on board members and their responsibilities, please refer to the Allianz Group Annual Report 2020, page 62.

The highest governing body for sustainability-related issues is the Group ESG Board (see section 02.7.1). Since September 2020, it is comprised of four Allianz SE BoM members and the Chief Risk Officer as voting members. It includes representatives of key departments and Group functions, and operating entities participate on a case-by-case basis.

The ESG Board meets quarterly and is responsible for sustainability and climate-related topics, including:

- overseeing the Climate Change Strategy;
- steering the corporate responsibility agenda, including positioning on sustainable finance and external climate- and ESG-related commitments and initiatives;
- ESG alignment across central functions, such as Compliance and Risk, and the Allianz Group Business Strategy;
- integration of climate and ESG aspects across core lines of business and central Group processes; and
- alignment of ESG topics in relevant corporate rules.

The ESG Board is constituted as an advisor to the BoM of Allianz SE. It informs the BoM on relevant topics and activities at least twice a year and on an ad hoc basis. It also reviews and recommends decisions to be taken by the BoM and relevant Board committees.

Group functions and operating entities directly update the ESG Board on material sustainability issues through their representation on the ESG Board and by invitation.

Beyond the ESG Board, different functions and committees steer sustainability topics within their scope of influence at a business and management level, supported by ESG Task Forces on specific issues (see 05.2.2).

The Group Finance and Risk Committee (GFRC) oversees risk management and monitoring, including sustainability and climate risks. Comprised of members of the BoM, it serves as an escalation point based on the analysis and deliberations within the ESG Board.

Risks identified as emerging and/or significant are addressed by either the GFRC or the Group Underwriting Committee (GUC). The GUC consists of Members of the BoM, the Group Chief Risk Officer, Chief Underwriting Officers and other executives of the Group. It monitors the underwriting business including its risk management and strategy and develops underwriting policy.

The Group Investment Committee (GIC) implements the Group investment strategy, including monitoring group-wide investment activities and approving investment-related frameworks, guidelines and investments within certain thresholds.

All three committees consider material climate issues in their decision-making, with the GFRC also serving as an escalation point for sustainability-related referrals of transactions.

The BoM reports regularly and comprehensively to the Supervisory Board on business development, the company's financial position and earnings, planning and achievement of objectives, business strategy and risk exposure. Climate-related issues are part of these updates.

05.2 Governance

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

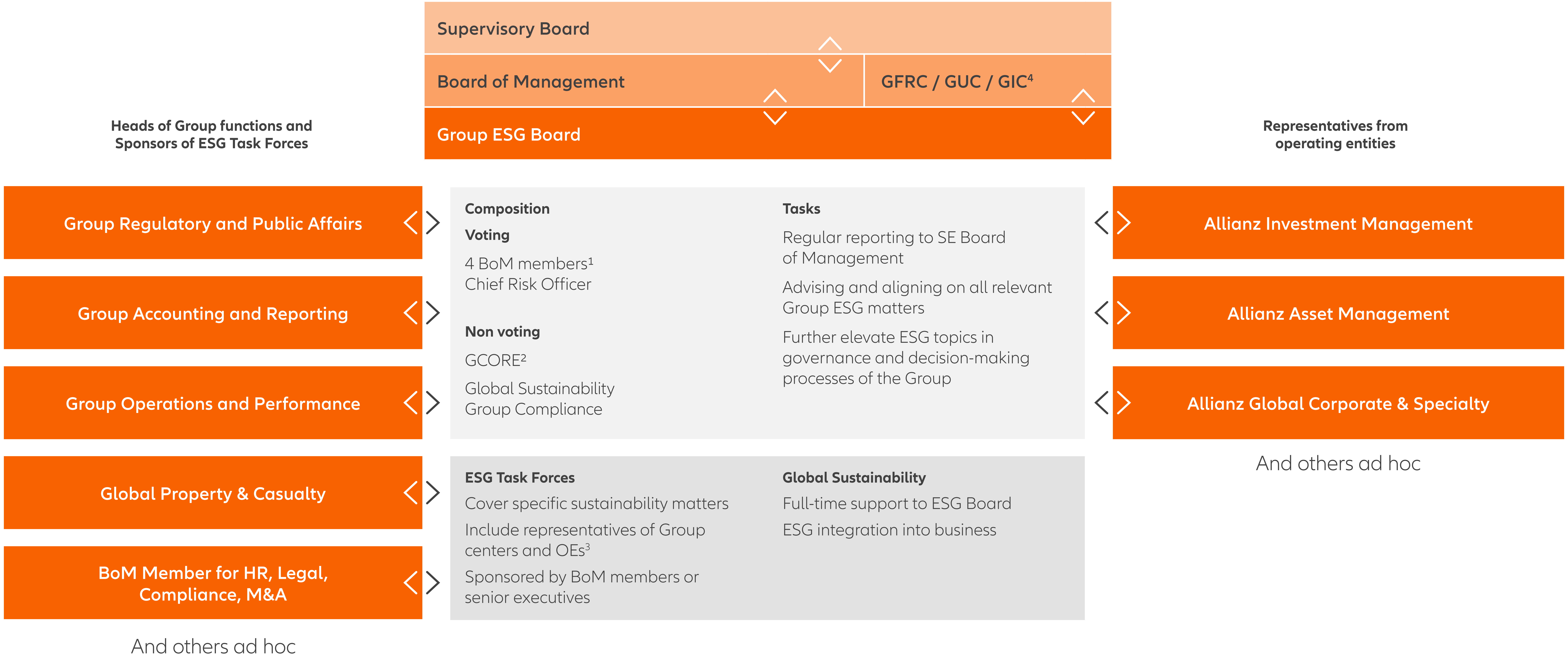
05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
— Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Climate & ESG governance at Allianz

as of December 31, 2020



1 Responsible for i) Investment Management, ESG (Chair); ii) Asset Management, US Life Insurance; iii) Operations, Allianz Services iv) Global Insurance Lines & Anglo Markets, Reinsurance, Middle East, Africa.
2 Group Communications and Reputation (GCORE).
3 Operating Entity (OE).
4 Group Finance and Risk Committee (GFRC), Group Underwriting Committee (GUC), Group Investment Committee (GIC).

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
— Business and management-level governance
— Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

05.2.2 Business and management-level governance

Group functions

The Global Sustainability[1] function includes a team dedicated to Climate Integration and is responsible for coordinating the integration of ESG and climate aspects into core investment and insurance activities. It also acts as the secretariat of the ESG Board and meets regularly with its chair. Further functions, such as Group Risk, Regulatory and Public Affairs, report on non-financial matters and support operating entities in integrating the Group's strategic approach and policies.

Addressing sustainability matters requires cross-functional collaboration and support across our global operations. To develop projects and proposals for ESG and climate integration and drive implementation, cross-functional ESG Task Forces were set up in 2019 (see also section 02.7.1). They consist of ESG specialists and representatives of relevant local operating entities, global lines and Group functions. Each taskforce is sponsored by senior executives from different functions and quarterly meetings between sponsors ensure alignment between the different task forces.

Additional bodies and functions within the Group monitor and analyze market, technological and regulatory trends and developments and share insights with key stakeholders.

Further information can be found in the Allianz Group Annual Report 2020.

Insurance and investment functions

Key insurance operating entities, our internal asset managers (Allianz Global Investors and PIMCO), and the investment management function, Allianz Investment Management (AIM), have well-established climate and ESG teams, which report to BoM level.

At AIM, the Investment Management Board (IMB) oversees implementation of climate and ESG strategy for our proprietary investment portfolio of € 835 billion[2]. This includes regular updates, discussions and decisions on implementation, target-setting and compliance related to portfolio decarbonization targets and measures. Analyses of asset stranding in climate scenarios and engagement on climate aspects are also regularly addressed. Within AIM, climate and ESG is steered at IMB level with a Managing Director in charge of the implementation.

Several business units have dedicated competence centers that promote low-carbon technologies from an insurance and investment perspective. They include Allianz Capital Partners, Allianz Global Investors, Allianz Global Corporate & Specialty, Allianz Climate Solutions, among others.

For more details, see section 02.7 Corporate Responsibility Governance.

For more details, also see the Allianz ESG Integration Framework.

05.2.3 Board remuneration and climate competence

In 2020, Allianz's Supervisory Board decided to link Allianz SE Board of Management remuneration to specific ESG-related targets. This will be effective in 2021. The remuneration of the Board of Management of Allianz SE will be tied to the attainment of sustainability and climate-related targets, including the successful delivery of the Group Climate Change Strategy and oversight of implementation of climate-related commitments. A key focus is on quantitative reduction targets for GHG emissions.

Allianz's long-term climate ambition and targets are decided at BoM level and cascaded to relevant functions tasked with delivering these targets.

For more details on our remuneration structure see here.

In addition to the governance mechanisms described above, we apply a variety of instruments to foster ESG and climate competency at Board, senior executive and employee level:

- Briefings for top management
- ESG roundtables of investment functions
- Trainings for employees, underwriters and investment-related functions like sales agents
- Conferences on sustainability topics which include with Board member presentations; in 2020 we held a conference on 'Understanding Climate Risks' as well as our annual Sustainability Forum

ESG Task Force	Sponsor
Corporate responsibility disclosures	Head of Group Accounting and Reporting, Allianz SE
Environmental management	Head of Group Operations and Performance, Allianz SE
ESG integration in communication and in branding/ marketing	Head of Group Communications and Corporate Responsibility, Allianz SE
ESG integration in investments	Managing Director, Allianz Investment Management SE
ESG integration in underwriting	ESG Working Group (including representatives Group ESG Office, Global P&C, Allianz Re, Allianz Global Corporate and Specialty, Euler Hermes, Allianz Germany and other P&C entities)
Operating entity collaboration	Head of Group Communications and Corporate Responsibility, Allianz SE
Sustainability ratings	Member of the Board of Management, Investment Management and ESG, Allianz SE
Societal impact	Member of the Board of Management, Human Resources, Legal, Compliance, Mergers & Acquisitions, Allianz SE
Sustainable finance regulation	Head of Group Regulatory and Public Affairs, Allianz SE
	Head of Asset Manager Management, Governance and Compliance, Allianz Investment Management SE

Quarterly meetings to ensure alignment between Task Forces.

1 See section 02.7 about the changes to the organization of the sustainability organization within Allianz SE as of 01 January 2021).

2 Based on economic view. Compared to accounting view it reflects a volume increase due to switch from book-to-market values and changed asset scope (e.g. including FVO, trading and real estate own-use).

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
— Our climate change strategy
— Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

05.3 Strategy

Since 2005, the Allianz Group Climate Change Strategy has encouraged solutions for tomorrow's climate. It steers the uptake of climate-related risks and opportunities in our insurance and investment business. It is regularly updated and overseen by the ESG Board.

05.3.1 Our climate change strategy

The Strategy focuses on three areas:

1. We anticipate the risks of a changing climate by:

- systematically considering climate criteria in insurance and investment business;
- no longer financing coal-based business models and no longer providing insurance for neither construction nor operation of single coal-fired power plants and coal mines;
- fully phasing out coal-based business models along science-derived pathways across proprietary investments and P&C insurance portfolios by 2040, at the latest;
- maintaining active dialogue with investee companies on climate strategies; and
- improving transparency through climate-related disclosures and aligning our strategy and reporting along the recommendations of the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD).

2. We care for the climate-vulnerable by:

- supporting our customers to reduce risks and minimize damage and compensating those who have suffered losses;
- working with peers, governments and the civil society to manage climate risks and 'close the protection gap'; and
- supporting scientific research and innovation that improves society's understanding of climate-related risks.

3. We enable the low-carbon transition by:

- pioneering insurance of low-carbon technologies and, for instance, insuring renewables in more than 60 countries;
- strategically investing in low-carbon assets, including renewable energy, green buildings, and green bonds;
- setting long-term and intermediate climate goals for our proprietary investments and business operations, in line with '1.5°C-aligned net-zero emission by 2050' pathways;
- joining forces with other asset owners through the U.N.-convened Net-Zero Asset Owner Alliance (AOA) to collaboratively support companies in their low-carbon transition; and
- engaging with policymakers to drive sustainable finance and achieve the Paris Agreement's goals.

See section 02.2 of our Group Sustainability Report 2020.

05.3.2 Climate-related risks and opportunities

There is no doubt that climate change will materially affect economies and Allianz's lines of business. The risks and opportunities emerging today will increase over mid- and long-term.

They include acute and chronic physical impacts on property and human health, such as warming temperatures, extreme weather events, rising sea levels, intensifying heatwaves, droughts and potential changes in vector-borne diseases. Risks and opportunities also result from the cross-sectoral structural change stemming from the transition towards a low-carbon economy. These include the impacts of changes in climate policy, technology and market sentiment on the market value of financial assets, as well as resulting from climate change litigation.

05.3 Strategy

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
— Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Impact on our business and impact of our business

Allianz Group is exposed to risks that are influenced by climate change in a multitude of ways. We are particularly impacted in two principle ways, both of which can influence the ability of assets to generate long-term value:

- As an insurer providing insurance policies, e.g. covering health impacts, property damage, or litigation claims and secondly through changes in the sectors and business models it underwrites.
- As a large-scale institutional investor with significant stakes in economies, companies, infrastructure and real estate that are, or will be, affected by the physical impact of climate change and by the transition to a low-carbon economy.

The largest risks in our risk profile are market risks, especially equity risk, credit and credit spread risks driven by assets backing long-term liabilities. Property & Casualty premium and reserve risks resulting from natural and man-made catastrophes as well as from claims uncertainty need to be considered.

As well as being impacted by climate change, the choices Allianz makes about how to conduct its business may impact climate change, e.g. by investing in or insuring low-carbon and emission-reducing activities. To manage potentially detrimental impacts, we have committed to align our proprietary investment portfolio to 1.5°C climate scenarios.

The following provides an illustration of how climate change risks translate into financial impact for investments, applicable to short-term as well as longer-term developments.

Exemplary Illustration of Climate Risks Translation for Investors

Climate-related changes				Operating asset impacts				
Risk category				Impact on	Mitigating layer on company/ physical asset level	First order	Second order	Impact on investor
Physical	Acute	First-order hazard/risk Like extreme weather, heat stress, etc.	Second-order risk Like soil moisture deficit, coastal erosion etc.	• **Operations** • **Value chain** • **Markets**	**Adaptive capacity of companies** (diversified value chain, substitutes, sufficient stock, insurance, capex, efficiencies, etc.)	**Impact on corporate performance**	**Impact on financial asset performance**	• **Direct** in case of real-asset investments • **Indirect** in case of listed equity, corporate bonds, government bonds, funds, etc. • **Indirect** in case of macro-economic/ sectoral implications
	Chronic	First-order hazard/risk Like changing temperature patterns or rising sea levels, etc.						
Transition	Policy and legal							
	Technology							
	Market							
	Reputation							
Litigation	Litigation for (enabling) GHG/emissions/ failure to mitigate, etc.							
	Litigation for insufficient disclosure, adaptation, etc.							

05.3 Strategy

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
— Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Financial impact of climate change on our investments

Internal analysis shows that our proprietary investment portfolio, and especially the listed equity asset class, is most sensitive to climate transition scenarios. This is mainly due to the fact that equity investments are directly affected by climate-related impacts and changing market expectations and resulting market valuation. In contrast, for a long-term investor like Allianz, impacts on debt investments would be felt first by a changing of spreads and to a lesser extent by impairment of debt service of assets.

Due to this finding, we have further analyzed our risk exposure through macroeconomic research and a dedicated first carbon stress test. With that we combine complementary top-down with bottom-up approaches. (see section 05.4 for carbon stress-test results).

Allianz Research calculated the macroeconomic negative impact of increasing regulatory intensity on the global industry at nearly 2.5 trillion U.S. dollars over the next ten years, while identifying opportunities for a variety of sectors. The analysis focused on the most important measures of climate policy currently enacted or under discussion.

These measures can be grouped into the following categories: carbon pricing, energy mix and efficiency mandates, mobility regulations, industry-specific taxes, fines and levies. Cost and business ramifications are considered in a contained manner. They depend on emissions' costs, regulation and policy dynamics. The ultimate risk is a complete loss of value of certain assets or entire businesses.

According to report findings, the energy sector will be hit the hardest with an estimated cost of 900 billion U.S. dollars. The steel sector follows with a cost of 300 billion U.S. dollars. Air and marine transport faces costs of 55 billion U.S. dollars. Other sectors at risk include automotive, chemicals, pulp and paper, retail and machinery/manufacturing.

The report also presents a heat map, showing transition risk severity for the next twenty years, as well as drivers and mitigating factors for the different sub-sectors. An extract of the results is shown below.

The findings of this macroeconomic analysis have also been used for internal analysis, for example on the proprietary investment portfolio.

Assets and business impact under transition scenarios (source: Allianz, excerpt)

Global		2°C					1.5°C				
		2020	2025	2030	2035	2040	2020	2025	2030	2035	2040
Energy	Integrated oil and gas	(M)	(M)				(M)				T
Energy	Oil and gas storage and transportation										
Energy	Coal and consumable fuels				T, P	T, P				T, P	T, P
Materials	Fertilizers and agricultural chemicals	(T)	(T)	(T)	(T)	(T)	(T)	(T)	(T)	P	
Materials	Aluminium										
Materials	Steel										
Industrials	Industrial conglomerates										
Industrials	Airlines	(T)	P				(T)	P			
Consumer discretionary	Auto components										
Consumer discretionary	Automobiles			P	P, T	T		P	P	P, T	P, T
Utilities	Electric utilities	P	(M)		P	P	P	(M)		P	P
Utilities	Renewable electricity				T	T				T	T

Risk enhancer:
P = policy
T = substitution technology
M = related market forces

Risk mitigator:
(P) = policy
(T) = little substitution technology
(M) = countering market forces

Risk:
Low
Medium
High
Very high

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
– Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

05.3.3 Our response

We embed the management of risks and opportunities resulting from climate change in our overall business strategy. Measures include: developing and adjusting financial products and services; updating policies and processes; setting targets and limits; managing our operational climate footprint; and engaging with internal and external stakeholders.

Long-term ambition and the Asset Owner Alliance

As a major outcome of incorporating the assessment of climate-related risks and opportunities into our business strategy, we committed to set long-term emissions reduction targets for our proprietary investment portfolio and our business operations. To this end, we joined the Science Based Targets initiative (SBTi) in May 2018.

After the release of the landmark Special Report on Global Warming of 1.5°C by the Intergovernmental Panel on Climate Change (IPCC) in October 2018, we thoroughly reviewed the implications for our corporate response. As a result, we increased our ambition from 'well below 2°C' and are committed to pursuing efforts to limit global warming to a maximum of 1.5°C by the end of the century, postulated as the upper ambition level of the Paris Agreement as well as the European Union's long-term climate strategy. We updated our target ambition to 1.5°C-compatible pathways for carbon reductions and adjusted the coal phase-out accordingly.

In 2019, Allianz helped to set up the U.N.-convened Net-Zero AOA, together with the UNEP FI, the PRI, WWF and the Mission 2020 campaign. Allianz chairs the AOA and leads several working groups. At the end of 2020, it consisted of 33 asset owners managing assets of more than five trillion U.S. dollars.

Members of the AOA commit to reduce GHG emissions of their proprietary investment portfolios to net-zero by 2050. Asset owners are already engaging portfolio companies and have committed to set intermediary targets for the years 2025, 2030 and beyond to ensure their portfolios decarbonize in a timely manner. The AOA will report publicly and to the U.N. Secretary General on progress against these targets.

The AOA intends to use state-of-the-art tools and aligns with other initiatives to emphasize:

- Investor ambition and target-setting at portfolio-level;
- Contribution to methodologies which can be applied across the sector. In 2020, the AOA has developed and publicly consulted its Inaugural Target-Setting Protocol. Furthermore, the AOA has developed principles for methods to measure temperature alignment;
- Impact on the real economy and emissions – to the extent to which methodologies for measurement can be developed;
- Implementation via a holistic ESG approach for measuring and managing associated impacts; and
- Joint engagement and monitoring based on authoritative and credible scientific input, to ensure consistency of messaging and necessary ambition.

Members have committed to carry out and disclose portfolio baseline assessments and develop climate strategies and action plans, including trajectories. Members are already collaborating to define best practices to reduce GHG emissions by engaging with portfolio companies and governments on public policies. The first quantitative joint AOA report will be published by December 2023.

As part of the long-term commitment to have net-zero greenhouse gas emissions by 2050, we have set our first intermediate target: We will reduce the GHG emissions from our listed equity and corporate bonds portfolios by -25 percent by 2024 (compared to 2019). More targets are explained in detail in section 05.6.1).

Managing transition risks

We have conducted detailed analysis of energy-intensive sectors' emission profiles, possible proto typical-decarbonization pathways and necessary technology shifts. The results are used for portfolio carbon analysis to define decarbonization pathways and to inform our corporate engagement process and management decisions.

In previous years, we ran pilot portfolios on climate-related target-setting and steering which allowed us to identify data gaps, derive monitoring and steering approaches and metrics, and identify potential investment management actions. Building on these insights, we have been developing ways to monitor and steer the portfolio transition as part of the AOA. Allianz Investment Management is also working to close data gaps by sourcing own data directly from investee companies.

Allianz has not financed coal-based business models since 2015. Equity stakes have been divested, fixed income investments made before that have been put in run-off, and no new investments have been allowed since 2015. We do not offer insurance for coal power plants or mines and we require all companies across our Property & Casualty (P&C) insurance and proprietary investment portfolio to fully phase out coal by 2040 at the latest. If companies do not present a credible strategy to transition away from coal at a pace which is compatible with the scientific pathways of limiting global warming to 1.5°C, we exclude them from our business.

Our criteria are being continuously tightened and explained in more detail in our public Statement on Coal-based Business Models.

05.3 Strategy

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
– Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Seizing on opportunities

Our business strategy includes systematically leveraging opportunities for financing a low-carbon and climate-resilient future, e.g. by investing in renewable energy, energy efficiency in real estate and electric vehicle infrastructure and by providing insurance solutions to protect against physical climate impacts and support low-carbon business models.

For proprietary investments, the Allianz ESG Functional Rule for Investments provides the foundation of integrating climate-related issues. It comprises asset manager selection and systematic integration of climate and ESG factors into our investment decisions.

Read more in our ESG Integration Framework.

We have strategically invested in low-carbon assets for over a decade. This includes renewable energy, certified green buildings and green bonds (see also the section 05.6 Metrics).

Our Sustainable Solutions program provides products and services that create shared value by improving people's lives and/or delivering a positive environmental impact.

Allianz is one of the leading insurers of low-carbon technologies. As part of our Sustainable Solutions approach, we provide standardized and tailor-made insurance products and are insuring renewables in more than 60 countries.

In 2019, we started analyzing technological and natural negative-emission solutions to accompany our net-zero commitment. In 2020, we developed the first respective investment strategies and are co-leading the Asset Owner Alliance working group which works on the financing of the transition.

We also aim to reduce the impacts of climate risks and incentivize preventive measures to increase customers' resilience and compensate for climate-related damages. Examples include Risk Consulting services offered by AGCS, our active support of the InsuResilience Global Partnership, or our work with the German Corporation for International Corporation (GIZ) to pilot innovative insurance solutions in emerging and developing countries.

For more details on these and other examples, please see sections 03.1 and 03.2 in our Group Sustainability Report 2020.

Active company dialogue, joining forces and targeted engagement

We actively engage investee companies and insurance clients using a variety of channels and formats. Besides the Group CR function, AIM also has a dedicated engagement function for proprietary investments. In addition, our internal asset managers – AllianzGI and PIMCO – and our industrial insurer Allianz Global Corporate & Specialty are active stewards on climate-related matters.

Allianz's shareholder voting rights are exercised by AllianzGI. AllianzGI conducts voting activities in line with Global Corporate Governance Guidelines and generally supports proposals that encourage company boards and management to increase transparency on and consideration of sustainability issues deemed material to the long-term performance of the company. AllianzGI votes and engages on behalf of Allianz SE and all other asset management clients, and thus considers all clients in their approach.

By leveraging the expertise of several units and departments, we aim to create an impact in the real economy and encourage companies to define and implement science-based climate strategies. By actively encouraging companies to set and pursue transparent and measurable climate targets, for example by joining the SBTi, we have the opportunity to reduce emissions in our proprietary investment portfolio and in the real world.

In 2020, we joined a call by 137 investors with 20 trillion U.S. dollars assets under management asking over 1,800 companies to commit to climate action in line with 1.5°C and a net-zero future by setting science-based targets.

Read here for more details.

For more details on our engagement approach please see section 03.2 in our Group Sustainability Report 2020.

For voting records of AllianzGI, please refer to their overview web page.

We are joining forces with other asset owners in encouraging companies to implement such pathways. Our participation in the Transition Pathway Initiative (TPI), the engagement platform Climate Action 100+ and the Principles for Responsible Investment (PRI) connects us with like-minded investors and offers platforms for collaborative engagement. On decarbonization matters, the AOA strives to be the hinge between these existing engagement platforms, asset owners, target verification initiatives and tools and policymakers.

05.3 Strategy

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
— Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Collaborating for a sustainable future...
...by actively engaging oil and gas sector companies

In the past year, we engaged oil and gas companies on the topic of climate disclosure, selecting a target group of investees from our portfolio that were not sufficiently reporting in line with TCFD and not an official TCFD supporter. By focusing our engagement on this target group, we were able to use our engagement to address three risks at once: 1) high-concern target group; 2) hard-to-abate sector where all participants need to be moving; and 3) supporting a reporting framework that we have high confidence in.

We had a strong response rate and companies engaged with the suggested TCFD disclosures that are considered relevant for this sector. Many companies were considering, or are now considering, reporting in line with TCFD requirements and our detailed suggestions helped guide them on what large institutional investors want to see in their disclosures. Several companies did not realize that they could become official TCFD supporters and have subsequently been added to the TCFD web page. We will be monitoring for improvements in their disclosures and following up with those that have not met our request.

In alignment with Climate Action 100+, we are leading one long-term engagement and participating in three more engagements with oil and gas companies. Participating in Climate Action 100+ is one of the most effective and well accepted forms of engagement by large industry actors because the quality of discussions increases with both sides being able to offer significantly more resources, than if all collaborators were to approach a company individually. Participation and involvement in engagements is high and correlates to some of the most well-known and public outcomes between large industry emitters and investor engagement. We have seen increased alignment with TCFD reporting, shareholder resolutions being prepared for 2020 proxy season, and development of net-zero commitments by oil and gas companies in scope of the engagement.

For further information please see section 03.2.

05.3 Strategy

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Aligning our own business operations to net-zero

Besides driving decarbonization through our insurance and investment business, we continually work to improve the environmental performance of our own operations through dialogue and engagement.

In 2020, we defined new emission-reduction targets for our business. Having over-achieved our previous targets by 12 percentage points (target: 50 percent reduction in emissions by 2020 vs. 2010) we have committed to reduce our GHG emissions a further 30 percent by 2025, against a baseline of 2019.

We met the 2020 target mainly through energy efficiency improvements from data center consolidation and the increase in the share of renewable power in our energy mix. The target was further exceeded as a result of reduced business travel and an increase in work-from-home measures due to the pandemic.

In operationalizing our commitment through the RE100 initiative to source 100 percent renewable power for our group-wide operations by 2023, we have started to engage deeply with our suppliers and landlords and to collaborate with peers and the RE100 initiative to achieve this target. In 2020, 57 percent of our electricity consumption was renewable electricity.

Our long-established carbon reduction strategy to manage emissions from our operations includes exchange and engagement with service providers, suppliers and employees and adjusting internal processes and policies. We require all vendors in our supply chain above a certain spend threshold to meet the standards of the Allianz Code of Conduct and include environmental and climate issues in a vendor screening.

For further information on our environmental management, including trends influencing our performance, please see section 04.7 in our Group Sustainability Report 2020.

Forest protection to protect carbon sinks and biodiversity

In 2019, we committed to pursue efforts to limit global warming to a maximum of 1.5°C by the end of the century and aim for net-zero emissions by 2050. To date, we have claimed our operations to be 'carbon-neutral' since 2012. We achieved this through our investments in the protection of existing rainforests (Wildlife Works Carbon and Rimba Raya), thereby maintaining significant carbon sinks. This created voluntary emission certificates which we used to offset our operational emissions. The protection of natural systems is essential to achieve climate goals and even more important than planting new trees. Those take much longer amounts of time to store similar amounts of carbon. In the specific case of Rimba Raya, for instance, the Indonesian government had designated large areas on which palm oil plantations were to be established before Allianz invested in the protection of the existing swamp forest in 2013.

For more information read here.

In addition to this benefit, those projects also empower the local population through job creation, provision of health care and education – whilst simultaneously preserving biodiversity. Looking ahead, we believe focus should be both on reducing emissions in line with science and protecting natural systems. Therefore, we now have set corresponding targets to reduce emissions in our investments and operations. Furthermore, the IPCC defines carbon neutrality as 'achieved when anthropogenic emissions of greenhouse gases to the atmosphere are balanced by anthropogenic removals over a specified period'[1]. We support this understanding of carbon neutrality. Science has made clear that the 1.5°C target will require an upscaled removal of emissions from the atmosphere into technical and natural carbon sinks. In this context, we will review our approach to retiring carbon offsets and we are looking to scale removals as well to achieve our net-zero emissions goals.

1 Source: IPCC, 2018: Annex I: Glossary. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways.

Our response – partnerships, memberships and financial industry engagement

As signatories of the U.N. Global Compact, the PRI and the U.N. PSI, as well as founding member of the Finance Initiative of the UNEP FI, we strive to further a systemic response to the U.N. Sustainable Development Goals (SDGs) and the Paris Agreement. Allianz is represented as a board member of the PSI and the PRI and a Thematic Advisor on Climate Change of the Investment Committee of UNEP FI.

We are also part of specialized initiatives that focus on decarbonization:

- AOA and SBTi are bound to a commitment to portfolio decarbonization, with the AOA striving to coordinate commitment, methodologies and actions.
- Climate Action 100+ coordinates the engagement of 162 of the largest global corporates on climate matters and Allianz leads engagements.
- The Transition Pathway Initiative (TPI) has achieved remarkable progress in assessing the climate performance of corporates.
- The G7 Investor Leadership Network (ILN) and Institutional Investors Group on Climate Change (IIGCC) serve as networks to share and develop best practice; in both Allianz is represented in the board.
- Open Source Climate is a group of corporates to jointly build a 'pre-competitive layer' of modeling and data that is globally shared and accessible (see box in 05.4),

Through our memberships in The B Team, the World Economic Forum Alliance of CEO Climate Leaders and others, we are encouraging companies – both within our sector and beyond – to step up and improve their climate strategies and climate disclosure, as well as develop our own.

05.3 Strategy

01 Introduction

02 Sustainability strategy and governance

03 Sustainability in our core business activities

04 Sustainability in our organization

05 Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
– Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06 Data and performance

Furthermore, the German Insurance Association GDV adopted a new sustainability positioning in early 2021. Allianz was an active part of the group which developed the positioning. Amongst other goals, the industry commits to invest clients' money in a climate-neutral way by 2050 at the latest.

For more details see the positioning here.

Allianz partners with international organizations to drive climate-smart investment and insurance. One example is the Sustainable Development Investment Partnership (SDIP) which aims to scale the use of blended finance in sustainable infrastructure investments in developing countries, an initiative coordinated by the World Economic Forum with support from the OECD. Another example is our three-year strategic alliance with the German Corporation for International Cooperation (GIZ) aiming at 'Closing the Protection Gap' around climate risks in developing countries.

We are an active member of climate-related industry associations and initiatives like the Munich Climate Insurance Initiative, the CRO Forum, the Climate Finance Lab, the Accelerating Sustainable Finance initiative, the Geneva Association, ClimateWise, RE100, and others.

For more details see section 06.2 of our Group Sustainability Report 2020 on our Memberships and Partnerships.

Developing approaches on climate-related financial disclosure for insurance portfolios

UN environment programme finance initiative

PSI Principles for Sustainable Insurance

As part of a PSI-convened group with 21 other insurance companies, we have been working on an insurance industry approach to implementing the TCFD requirements. Together, we published the first guidance on how to analyze the impact of climate scenarios for different types of insurance products (e.g. personal, Property-Casualty, Life-Health, reinsurance, etc.).

The new guidance is available here.

Advocating for strong climate policy

A supportive policy environment is crucial to ensure the viability of a transition to climate resilience and net-zero emissions. Without decisive action by governments, there will be insufficient market incentives to allocate capital in line with a 1.5°C-trajectory. The private sector, including insurers, can play an important part in raising government awareness and making the business case for getting back on track with the Paris Agreement.

Asset owners like Allianz are in a unique position in the financing value chain, especially those setting themselves portfolio targets and therefore being dependent on change in policy and the real economy to achieve them.

In 2020, we made it a priority to advocate for a green recovery to build back better after the COVID-19 pandemic. As part of the recovery, government spending and recovery packages are playing a pivotal role in underpinning economies, infrastructures, jobs and livelihoods. Policy and fiscal decisions taken now cut across numerous policy areas and will either pave the way for the necessary structural changes that are needed – or delay action.

Allianz has been vocal with engagement from Board-level to working-level interventions, joint calls to action and dedicated papers:

- U.N.-convened Net-Zero Asset Owner Alliance
  Position Paper on the Coronavirus Recovery.
- Paper by Allianz Research and WWF Germany
  Managing the curves: Shaping a sustainable COVID-19 recovery.
- Panel representation of ESG Board Chair G. Thallinger at Petersberg Climate Dialogue panel
  Financing Climate Ambition in the Context of COVID-19.
- Joint opinion editorial of Nick Robins (LSE) and ESG Board chairperson G. Thallinger in Responsible Investor
  Post-COVID-19 recovery packages must quicken the pace to net-zero carbon emissions.
- Signatory to the following cross-sectoral support statements on green recovery:
  Energy Transitions Commission;
  German Business Statement for crisis management coordinated by Stiftung 2 Grad;
  Statement by German Sustainable Finance Council;
  EU Green Recovery Alliance.

We are also advocating for:

- embedding of 'net-zero by 2050' in short- to long-term governmental NDCs, climate strategies and emission reduction plans;
- development of sector policies to promote a swift and just transition, including the development of more granular short, medium and long term zero-carbon infrastructure plans;
- stringent carbon pricing to internalize the external costs of pollution, including a phase-out of direct and indirect fossil fuel subsidies;
- protection of nature and support for regenerative forestry and agriculture;
- support for and potentially redirecting of subsidies for scale-up of new technologies that will provide solutions in hard to abate sectors, e.g. carbon capture and storage (CCS), green hydrogen;
- promotion of mandatory, assured climate reporting and transition plans like GHG emissions, associated reduction targets and alignment with 1.5°C trajectories;
- climate disclosure aligned with TCFD and the E.U. Sustainable Finance agenda, in particular the E.U. sustainability taxonomy;
- sustainable finance regulation that provides a defined and reliable framework via a common taxonomy of sustainability, clarification of asset managers' and investors' duties, inclusion of sustainability in prudential regulation and enhanced transparency of corporate reporting.

For more details on sustainable finance regulation see section 04.3.

05.4 Strategy resilience, stress-tests and climate scenario analysis[1]

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Climate change considerations are an integral part of our insurance and investment strategy. We use regular stress-tests and additional climate-related scenario analyses to inform our strategic decisions as well as individual transactions.

We perform sensitivity and scenario analyses with time horizons up to 2050 and including scenarios ranging from 1.5°C to 4°C of average warming by the end of the century. We make use of internal models as well as external tools. While material time horizons naturally differ depending on the lines of business under consideration, the range of scenarios we apply allows us to better assess the variety of risks and opportunities associated with climate change.

Typical time horizons

Short-term	Medium-term	Long-term
up to three years	three – ten years	ten+ years
As defined, for instance, in our standard Top Risk Assessment process.	Needed for establishing solvency considerations and capital adequacy.	As, for instance, required for strategic decisions and transactions with investment horizons of several decades like real estate and infrastructure.

We rely on our own and third-party scenarios provided by renown institutions and initiatives such as the IPCC[2], NGFS[3], IPR[4], the institutions behind the E.U. long-term scenarios, the IEA[5] or IRENA[6].

1 The scenario analysis and carbon stress test of section 05.4 is not yet part of the assurance scope, as this section pertains to various assumptions and forward looking information. Methods to provide assurance on such analyses are currently under development internationally.
Please also see the cautionary note on forward-looking statements on page 133.
2 Intergovernmental Panel on Climate Change.
3 Network for Greening the Financial System.
4 Inevitable Policy Response.
5 International Energy Agency.
6 International Renewable Energy Agency.

We have called on the International Energy Agency already twice to develop and make available a full scenario aligned with 1.5°C and net-zero emissions by 2050. While the IEA's most recent World Energy Outlook included a partial 1.5°C scenario, it stopped short of providing an outlook beyond 2030 and all underlying data tables as for the other scenarios.

We aim to use a number of different scenario providers and scenarios for our analyses to reflect the range of potential future developments and reduce the sensitivity to individual scenario narratives and assumptions. To this end, it has proved useful to have access to an increasing number of scenarios in general and especially those aligned with 1.5°C pathways.

When we conduct analyses which assess scenario alignment, we adjust our scenario selection using guidance developed by the AOA which is focused on 1.5°C scenarios with no or low emission overshoot. When conducting outside-in impact scenario analysis, we use a broader range of scenarios in terms of temperature outcomes. For physical risks we are applying RCP 4.5 and 8.5 for our analyses and aim to incorporate RCP 6.0 in the future as well. For transition risks we are using, amongst others, IPCC's SR15 and AR5 scenarios, IEA's SDS, NZE2050, 2DS and B2DS scenarios, and the NGFS scenarios released in 2020.

We apply scenarios, for instance, in analyzing decarbonization challenges and pathways of sectors and assets, potential stranded assets and technology developments across different sectors. On physical risks, we seek to identify potential impacts on physical assets we insure, own, or operate, as well as impacts on client or investee level and associated portfolios. This type of analysis is being used for both sides of the balance sheet as well as our operations including procurement. We also use scenario data and analysis to develop forward-looking criteria for our investment decisions with regard to carbon-intensive business models and low-carbon opportunities.

Carbon Stress Test

This year, we publish for the first time results of an approach to modelling carbon risks for our listed equity portfolio with a bottom-up approach. It shall complement top-down approaches such as those put forward by financial markets regulators. We see merit in a model which gives us full transparency on methods and parameters, is easy to implement and gives a first understanding of evolution of potential climate impact on portfolio. It further gives possibility to cross-check external methodologies and provides a basis for potential development of more elaborate models going forward.

Methods, assumptions and parameters

The approach uses effective carbon prices as a proxy for policy intensity, e.g. actual carbon pricing, energy-related subsidies and incentives, standards for energy efficiency and emissions.

The fundamental idea is that an increase in emissions price entails a decrease in earnings at the level of individual investee companies. The decrease in earnings can be translated into a stock market value loss based on price-to-earnings multiples. The model requires assumptions on e.g. cost pass-through, price elasticities, or regulatory easing (either explicitly or implicitly via effective carbon prices) which are kept simple for this first version and need to be refined further.

The starting point is the carbon footprint of the listed equity portfolio, as disclosed in section 05.6, using scope 1 and 2 emission figures. On this we apply carbon price shocks derived from the climate scenarios developed in the Network for Greening the Financial System.

Read more on the Network for Greening the Financial System here.

In the scenarios, these prices materialize over the coming ten years and are depending significantly on intensity of policy action and underlying scenario assumptions. Carbon prices projected for 2030 range from € 45 to 115 per tonne CO_2e in 2°C-aligned scenarios, and increase to € 95 to 374 per tonne CO_2e in 1.5°C-aligned scenarios. The model assumes instantaneous changes of effective carbon prices applied to the portfolio, with no mitigation actions.

05.4 Strategy resilience, stress-tests and climate scenario analysis

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Limitations

To re-emphasize, this is a first version, it focuses on listed equity impacts only and also does not yet account for factors like different physical asset bases and resulting lock-ins, cost pass-through abilities, price elasticities or regulatory relief. It also does not yet differentiate between scope 1 and 2 emissions and, importantly, it assumes companies do not respond to climate policy trends, e.g. governmental net-zero strategies, by lowering their carbon exposure. These are factors which can become part of more elaborated versions. In addition, we also aim to develop our approach further to cover additional large asset classes like corporate bonds or real estate.

Results and interpretation

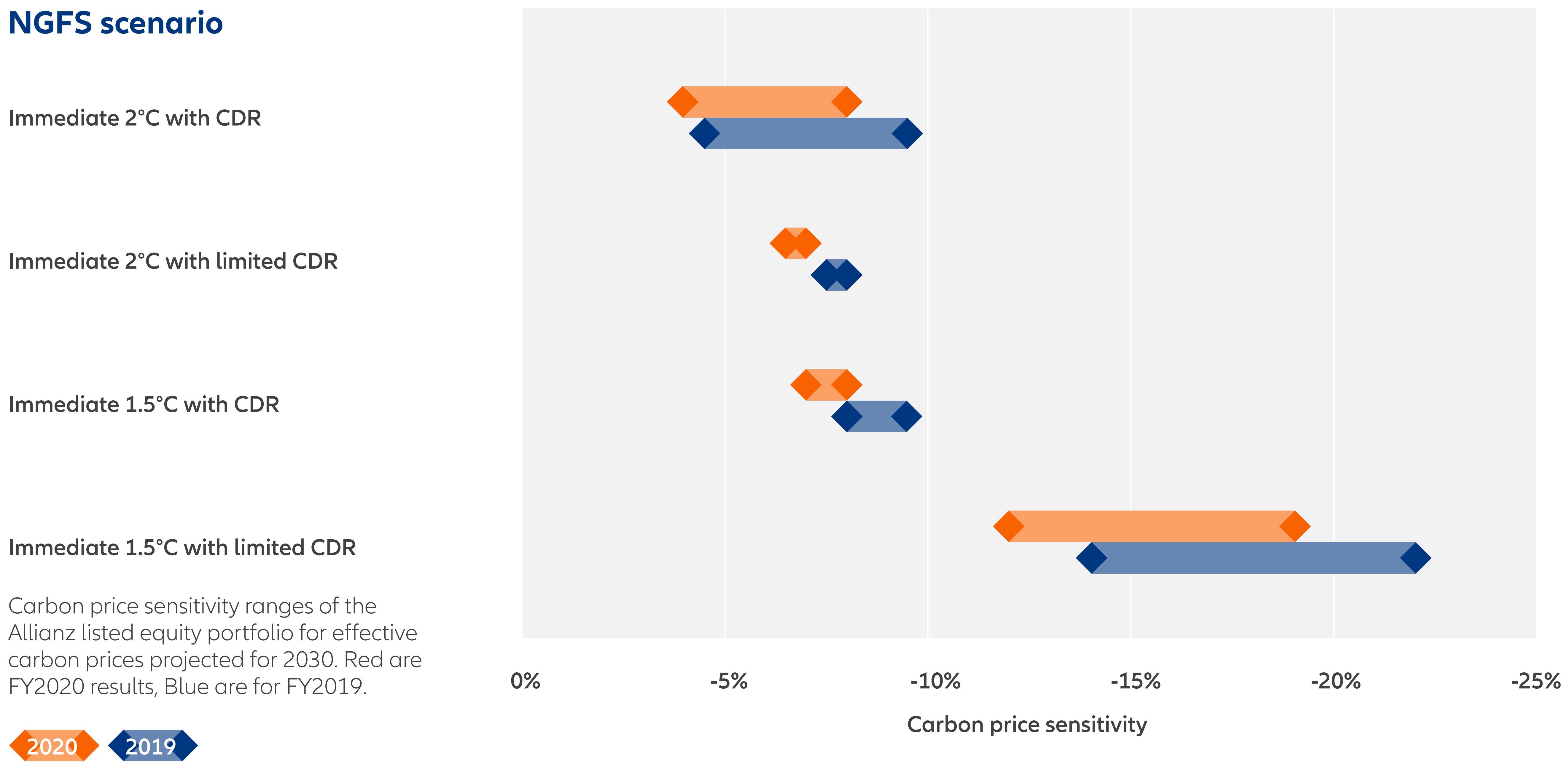
It is noteworthy that there is certain carbon concentration in our listed equity portfolio, with ten issuers accounting for about 40 percent of owned absolute emissions. Also on sector level, 94 percent of owned emissions are concentrated in five sectors[1], accounting for around 60 percent of AuM, as disclosed in section 05.6.

Consistent with analysis disclosed in previous years and with the scoping of this approach, our listed equity portfolio shows – within the current modeling framework and its limitations – sensitivities in those sectors and companies. The overall sensitivity stays contained in the Immediate 2°C scenario with CDR[2], with market value losses between -4 percent to -8 percent depending on climate-economic model. When more emission reductions are required and also atmospheric carbon removal is a limited option as in the Immediate 1.5°C scenario with limited CDR, the impact increases significantly: market value losses go up to -12 percent to -19 percent. From FY19 to FY20, the numbers have decreased as our equity portfolio carbon footprint was reduced, see section 05.6.

Being aware of the limitations of our approach, the results are still leading us to the right follow-up questions to understand how carbon price increases can affect different sectors and which parameters of individual investee companies will lead to a non-uniform development inside a given sector as not all will be affected equally. This holds especially true as major carbon emitters are often exempted from carbon pricing schemes due to carbon leakage risks.

1 NACE level 1
2 Carbon Dioxide Removal.

NGFS scenario



Carbon price sensitivity ranges of the Allianz listed equity portfolio for effective carbon prices projected for 2030. Red are FY2020 results, Blue are for FY2019.

Our strategic response to carbon risks is our long-term commitment to and our intermediary portfolio targets made as part of the UN-convened Net-Zero Asset Owner Alliance (AOA), the members of which are committed to 'transitioning investment portfolios to net-zero GHG emissions by 2050 consistent with a maximum temperature rise of 1.5C degrees above pre-industrial temperatures' (see chapters 05.3.3 on the AOA and 05.6.1 on AOA-related targets). The work of the Alliance is done in collaboration and with a collective ambition, bringing together global investors, leading civil society and academia organizations, and the leadership of the UN. The Alliance is the first group of private sector global players to set 2025 interim targets across four areas: sub-portfolio targets (at asset class level); sector targets; engagement targets and financing targets. The purpose of the targets is to drive decarbonization of real economy towards 1.5°C. We know today real economy is rather on a 3°C pathway, hence decisive and credible measures from all groups of actors are needed. This is why we complement our -25 percent by 2025 emission reduction targets for listed equity and corporate bonds portfolio with sector-level targets, the doubling of our engagements with companies, sectors, and full value chains, the engagement of asset managers as well as clear policy advocacy to effect the necessary change at scale.

05.4 Strategy resilience, stress-tests and climate scenario analysis

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

Further examples of the application of scenario analysis include:

- Prospect and existing infrastructure assets undergo a thorough diligence along evaluation criteria taking into account an asset's GHG emissions and potential impact on capital expenditures and performance. Assets are required to have a clear and time-lined strategy showing how they will adapt to a decarbonizing world.
- Allianz Real Estate has conducted an energy and carbon performance overview of the direct real estate portfolio, including indicative decarbonization targets. Furthermore, Allianz Real Estate was the pilot to apply inhouse climate scenario analysis for investment portfolios. This work builds on internal underwriting tools available and paves the way to use them for the asset side as well.
- In our operations, we are assessing potential impacts from climate-related physical and transitional risks, e.g. onto our facilities, premises, or IT services including data centers via extreme weather or regulatory developments. These could result in adaptation costs, business disruptions, financial and reputational loss and similar. Therefore, mitigation measures are regularly updated.
- Allianz co-led the development of an ESG guide to non-life underwriting with the PSI, including a risk heat map for economic sectors which also covers climate-change related risk assessments.

We will continue to scale up our efforts on stress-testing and scenario analysis. In 2021, we aim to develop comprehensive quantitative scenario analysis on physical, transition and litigation aspects of climate change, covering both investments and underwriting.

Towards open source climate data, models and analytics

OS-C

More and more financial institutions are now committing to align their portfolios with the Paris Agreement. One of the main barriers they face is trusted data as well as transparent analytic tools to quantify and act decisively on climate-related risk and opportunities. Methodologies remain not standardized enough and the market for data and tools is highly fragmented.

Therefore, Allianz is supporting and contributing to Open Source Climate (OS-C), an initiative hosted under the Linux Foundation, to build together with like-minded companies a 'pre-competitive laye' of modeling and data that is globally shared and accessible – and which will accelerate innovation. OS-C links company data, climate analytics (scenarios and stress-tests) and scientific climate models in one platform, allowing for global collaboration on this exceptional data challenge.

Allianz is heavily involved in the development of the prototype together with other large corporations like Amazon, Microsoft and Goldman Sachs.

Collaborating for a sustainable future.... ...by developing practical tools for investors to strength climate disclosure

INVESTOR LEADERSHIP NETWORK

As a member of the climate change initiative of the ILN, we have jointly developed a report on 'Climate change mitigation and your portfolio: Practical Tools for Investors'. The report includes insights and practical tools for investors on how to strengthen climate-related disclosures by companies, focused on decarbonization scenarios in line with the Paris Agreement. To help investors better understand how different industries can shift to a 1.5°C pathway, the report provides a credible 1.5°C trajectory for 10 key sectors and 10 emission reduction levers. It poses detailed questions investors might ask when reviewing companies' scenario analysis and disclosure, based on three core elements: scenario transparency and credibility; translation to sector impact; and financial and strategic implications.

Read more here.

05.5 Risk and opportunity management

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
— Overarching risk governance
— Natural catastrophe risk governance
— Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

The risks and opportunities posed by climate change requires the use and regular review of our comprehensive framework to be addressed properly.

05.5.1 Overarching risk governance

Climate-related risks are addressed as part of an overarching qualitative and quantitative risk reporting and controlling framework:

- As a general principle, responsibility for the 'First Line of Defense' at Allianz rests with business managers in the related undertaking. They are responsible for the risks taken and the returns from their decisions.
- The 'Second Line of Defense' consists of independent global oversight functions. These are Risk, Actuarial, Compliance and Legal, which support the Group Board of Management in defining the risk frameworks within which the business can operate.
- Group Audit forms the 'Third Line of Defense', independently and regularly reviewing risk governance implementation and compliance with risk principles, performing quality reviews of risk processes, and testing adherence to business standards, including the internal control framework.

Early warning indicators are monitored and regularly reported to senior management through risk dashboards, risk capital allocation and limit consumption reports to identify when climate aspects become material. Supplemented by quarterly updates, senior management decides the risk management strategy and related actions.

A key tool is the Allianz Risk Capital Model which assesses natural catastrophe events for the upcoming year on subsidiary and Group level.

Another important instrument is the yearly Top Risk Assessment which helps to identify and remediate significant threats to financial results, operational viability, reputation and delivery of strategic objectives, regardless of whether they can be quantified or not. This includes immediate risks for the company and emerging risks, which may arise from technological developments, new or changing environmental risks and socio-demographic changes. Climate-related factors are included in Top Risk Assessments conducted operating entity and Group level. Relevant emerging risks are discussed by the GFRC or the GUC. Following that, underwriting opportunities or mitigation measures are implemented where necessary.

For more details on these risk management processes please see the Risk and Opportunity Report on page pages 84–100 of the Allianz Group Annual Report 2020.

05.5.2 Natural catastrophe risk governance

The group-wide risk management framework is also applicable for natural catastrophes. Each operating entity is responsible for controlling its exposure to individual catastrophes and defining local reinsurance requirements, based on local risk appetite and capital position. The respective cover is provided by Allianz SE or one of its subsidiaries.

At Group level, the BoM reviews and approves the risk appetite. The reinsurance division is responsible for designing and implementing Group catastrophe protections within given exposure limits. These covers take various forms and aim to protect the Group against excessive losses from major natural catastrophes.

We use special modeling techniques for natural catastrophes which combine portfolio data (e.g. geographic location, characteristics of insured objects and their values) with simulated natural disaster scenarios to estimate the magnitude and frequency of potential losses. Where such models do not exist, we use deterministic, scenario-based approaches to estimate potential losses.

Experts at Allianz Reinsurance – including meteorologists, hydrologists, geophysicists, geographers and mathematicians – model around 50 natural catastrophe scenarios for Allianz Group, with data captured using best-in-class standards, mapping a range of perils and regions. The results provide the basis for group-wide risk monitoring, risk limits and subsequent business decisions. The top three perils contributing to natural catastrophe risk for Allianz Group in the past four years were: windstorms in Europe, floods in Germany, and earthquakes in Australia.

We also conduct selected stress-scenario analysis on natural catastrophe risks like hail or windstorms to be used in risk steering. Natural catastrophe models are regularly updated according to the latest scientific information. We are continuously improving the inclusion of global natural catastrophe hazard information, including climate, into underwriting decisions.

05.5.3 Climate and ESG-related risk governance

In addition to addressing climate-related risks as part of our overarching qualitative and quantitative reporting and controlling framework, a variety of comprehensive policies and processes foster integration of climate-related risks and opportunities.

The Allianz ESG approach integrates climate- and sustainability-related considerations by applying group-wide corporate rules and ESG instruments across all underwriting and investment activities. This includes the Allianz ESG Functional Rule for Investments and the Allianz Standard for Reputational Risk and Issues Management which establish a core set of principles and processes for the management of reputational risks and ESG issues within the Group.

All rules and standards are regularly updated to reflect newest insights and external developments. The publicly available third edition of the **Allianz ESG Integration Framework** increases transparency around internal processes and guidelines related to our ESG approach. We also rely on external providers for data related to climate, ESG and reputational risks.

05.5 Risk and opportunity management

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
Metrics

06
Data and performance

As an additional layer, the Climate Integration team within Global Sustainability and the ESG Task Forces ensure the early identification, measurement and business integration of risks and opportunities arising from physical climate change and the low-carbon transition. Examples include regulatory activity around climate change and sustainable finance, integration of ESG and climate considerations in business processes and dedicated projects. Substantial topics are channeled to the ESG Board to inform strategic decision-making.

Risk and opportunity considerations are supplemented by additional processes, including:

- The annual Allianz Risk Barometer produced by Allianz Global Corporate & Specialty. It is a survey amongst corporate clients, brokers, industry trade organizations, risk consultants, underwriters, senior managers and claims experts, in total collecting more than 2,700 responses from 92 countries and 22 industry sectors. Climate change is ranked ninth and is linked to natural catastrophe risks on sixth position as a key risk to property business, but also gains increasing importance in shaping emission-intensive industries in terms of transition risks. Business interruption as another overarching topic, with potential triggers also found in climate-related events, ranked highest together with the risks of pandemics.

  Risk Barometer here.
- The Global Claims Review analyzes more than 470,000 claims in over 200 countries and territories. The latest Review from 2019 found windstorms as the only natural catastrophe event to appear in the top 10 causes of loss. Natural catastrophes account for five percent of claims in number and 13 percent of total value of all claims. It represents some of the largest exposures to the energy as well as property and engineering segments. Environmental- and climate change-related liability issues are seen to potentially increase in future.
- Our partnership and memberships as described in section 05.3.3 also facilitate early risk detection as well as access to industry discussions and best practice.
- A regular materiality assessment ranks emerging ESG and climate issues and opportunities according to their importance for our business and our stakeholders. See section 02.5.
- Ongoing regular dialogue with internationally recognized non-governmental organizations (NGOs) provides ad hoc and scheduled exchanges on sustainability matters. The NGO dialogue is a forum for direct exchange of ideas and points of view designed to leverage NGO's expertise on climate and ESG matters to support the development and implementation of internal policies, programs and plans. Allianz listens to the concerns of NGO partners and discusses potential solutions to address these concerns. In 2020, our conversations with NGOs moved to digital formats due to the pandemic.
- Ongoing dialogues with policymakers, regulators and academia on key economic, governmental, environmental and societal issues, including climate change, to anticipate arising developments and share opinions, knowledge and best practice.

For proprietary investments, the ESG Functional Rule for Investments provides the foundation of integrating climate-related issues. It comprises asset manager selection and systematic integration of climate and ESG factors into our investment decisions. Across our portfolio, ESG assessment processes and data, including a variety of climate and carbon data (see section 05.6.2), enable continuous monitoring and steering of performance at security and portfolio level.

For listed assets, we use ESG scores and climate indicators to manage ESG risks and opportunities in our proprietary portfolio. If certain assets score below defined thresholds, further investigation is mandatory under central monitoring, leading to a variety of potential measures, including engagement with the respective companies.

For more details on our activities as a sustainable insurer and investors, see sections 03.1 and 03.2 in our Group Sustainability Report 2020.

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
— Targets and target performance
Metrics

06
Data and performance

05.6 Metrics and targets

Our support for the low-carbon transition is steered by our commitment to set science-based emission reduction targets and reach net-zero emissions by 2050 in our business operations and proprietary investment portfolio in line with the Paris Agreement's target of limiting global warming to 1.5°C.

Furthermore, we are proud of being ranked as leading in key sustainability rankings: **1st rank in Climate Strategy in Dow Jones Sustainability Index 2020 as well as A- in CDP climate change.**

05.6.1 Targets and target performance

	Targets 2018	Progress 2018	Targets 2019	Progress 2019	Targets 2020	Progress 2020	Targets 2021+
Decarbonizing our investments	Investigate further alignment of investment strategy with a 2°C target	Committed to Science Based Targets initiative in May 2018	Set long-term climate targets for proprietary investments and business operations in line with well below 2°C Run pilot portfolios on climate-related target-setting and steering	Actively contributed to setting up U.N.-convened Net-Zero Asset Owner Alliance (AOA), a group of asset owners committed to reduce the GHG emissions of their investment portfolios to net-zero by 2050 Ran pilot portfolios on climate-related target-setting and steering, results used in operationalization of AOA commitment Raised our carbon reduction target ambition to align with 1.5°C-compatible pathways	Set long-term and intermediary climate targets (2025) for proprietary investments in line with 1.5°C as soon as AOA has defined framework for target-setting Thereafter, regularly report on progress and review targets at least every five years in line with Paris Agreement Article 4.9 Reduce GHG emissions of proprietary investment portfolio to net-zero by 2050	Set first intermediate 2025 target as part of our 'net-zero by 2050' commitment for our proprietary investment portfolio as well as operations (see section 'environmental concept' for operational emission targets)	For our proprietary investment portfolio, we aim to reduce GHG emissions to net-zero by 2050. As intermediary target, we aim to reduce our emissions in listed equities and corporate bonds by 25 percent by 2025 compared to 2019 level. The fully owned real estate portfolio will be in line with scientifically based 1.5-degree pathways by 2025. See subsequent section for details. For our operational emission targets see subsequent section 'environmental concept'
Phase out of coal-based business models	Implement a group-wide divestment from coal-based business models	Decided to no longer insure single-site coal-fired power plants and coal mines that are being operated or planned as of 2018 Further strengthened the coal exclusion approach for investments in 2018 Tightened restrictions on coal, introduced a phase-out for coal until 2040 Divested additional € 61.5 million in equities and put an additional € 906.7 million in fixed income in run-off	Update coal exclusion lists with most recent market data Fully phase out coal-based business models across our proprietary investments and property-casualty portfolios by 2040 at the latest along well below 2°C pathway	Worked on the implementation of coal exclusion approach in proprietary investments and P&C underwriting On-boarded data provider specifically for identifying companies with coal-based business models Divested additional € 14 million in equities and put another € 236 million in fixed income investments in run-off Adjusted our coal phase-out plan to be aligned with our increased ambition of 1.5°C compliance	Fully phase out coal-based business models across our proprietary investments and P&C portfolios by 2040 at the latest along 1.5°C pathway Reduce threshold for coal-based business models for P&C insurance as well as investment portfolios from current 30 percent to 25 percent as of 31 December 2022 Engage with companies in proprietary investment as well as P&C portfolios to move away from coal	Engaged more than 30 insurance clients on transitioning away from coal Divested additional € 7.0 million in equities and put another € 40.3 million in fixed income investments in run-off	Fully phase out coal-based business models across our proprietary investments and P&C portfolios by 2040 at the latest along 1.5°C pathway Strengthen coal policy by increasing the scope and further tightening the criteria

05.6 Metrics and targets

01 Introduction
02 Sustainability strategy and governance
03 Sustainability in our core business activities
04 Sustainability in our organization
05 Allianz's climate-related financial disclosure
05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
— Targets and target performance
Metrics
06 Data and performance

	Targets 2018	Progress 2018	Targets 2019	Progress 2019	Targets 2020	Progress 2020	Targets 2021+
Scenario analysis for insurance			Initiate PSI project to develop new approaches on climate risk assessment tools for the insurance industry	Gathered with 21 other insurance companies under the roof of PSI to develop new approaches on climate risk assessment tools for the industry and secured third-party support	Final report of PSI project expected by Q4 2020	Final report of PSI project published in January 2021 Started development of qualitative analysis on transition and litigation risks for insurance Implemented climate scenarios in inhouse tools for insurance	Develop comprehensive quantitative inhouse scenario analysis on physical, transition and litigation aspects of climate change, covering both investments and underwriting.
Net-Zero Asset Owner Alliance					Further increase the number of members and assets under management Develop inaugural Target-Setting Protocol Engage with policy-makers, regulators, sectors and companies	Together with our partners at the AOA we achieved the following: Grown to 33 members across three continents with >5 tn USD AUM Inaugural Target-Setting Protocol developed Engagements with policy-makers, regulators, sectors and companies started Position papers on green recovery, coal as well as statements on mandatory disclosure and climate-related accounting published Call for Comment on Implied Temperature Methodology issued	Carry out and disclose portfolio baseline assessments. Develop climate strategies and actions plans,including trajectories. By 2023: Disclosure of quantitative joint Alliance report Continue to contribute to all workstreams of AOA, i.e. method development, engagement, policy, financing transition, recruitment

05.6 Metrics and targets

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
— Targets and target performance
Metrics

06
Data and performance

Allianz investment portfolio targets, as part of Asset Owner Alliance

Target layer	Measure	Target year	Base year
Sub-portfolio Listed equity	-25% absolute owned GHG emissions, Scope 1 and 2	By year-end 2024	Year-end 2019
Sub-portfolio Corporate Bonds	-25% absolute owned GHG emissions, Scope 1 and 2	By year-end 2024	Year-end 2019
Sub-portfolio Real Estate	Fully owned real estate portfolio aligned with 1.5°C pathways of CRREM[1]	By year-end 2024	Year-end 2019
Sector Utilities	• Coal phase out in line with 1.5 degree pathway • Increase direct & indirect exposure to renewable energy by 5.85 % per year (IRENA[2] global pathway)	Ongoing	
Sector Oil & Gas	• Scope 1&2 <20kg CO_2e / barrel • 50% of AuM to set net-zero 2050 targets for Scope 1+2 emissions	By year-end 2024	Year-end 2019
Engagement	• Engagement with Top 30 (non-aligned) emitters in portfolio • Full participation in all available AOA organized sector and asset manager engagements	By year-end 2024	Year-end 2019
Financing Transition	• Blended finance: 4-5 new vehicles • Climate-positive solutions: Start investing into e.g. Forestry, Hydrogen and other • Renewable investments: At a minimum, increase investments in line with IRENA[2] projection	By year-end 2024	Year-end 2019

1 CRREM: Carbon Risk Real Estate Monitor 2.5–year time lag for Joint Venture.
2 International Renewable Energy Agency.

01
Introduction

02
Sustainability strategy and governance

03
Sustainability in our core business activities

04
Sustainability in our organization

05
Allianz's climate-related financial disclosure

05.1 Highlights
05.2 Governance
Overarching and board-level governance
Business and management-level governance
Board remuneration and climate competence
05.3 Strategy
Our climate change strategy
Climate-related risks and opportunities
Our response
05.4 Strategy resilience, stress-tests and climate scenario analysis
05.5 Risk and opportunity management
Overarching risk governance
Natural catastrophe risk governance
Climate and ESG related risk governance
05.6 Metrics and targets
Targets and target performance
— Metrics

06
Data and performance

05.6.2 Metrics

We use a variety of indicators across different lines of business to monitor, assess and steer climate-related aspects of the economy. A detailed list of sustainability-related KPIs can be found in section 06.

Investment portfolio composition

On the investment side, it is helpful to contextualize, for instance, our commitment to the U.N. AOA with mainstream financial information like the spread across different asset classes, jurisdictions and sectors.

This information can be accessed via the 2020 Annual Report financial supplement and the corresponding analyst presentation here.

New asset classes covered by carbon footprint disclosure

As of this reporting year, we disclose carbon footprint information of our corporate bonds portfolio. We provide both general portfolio indicators and emission-related indicators. We expect to enhance this disclosure in upcoming reporting cycles in light of the expansion of asset classes covered by our AOA commitment, i.e. real estate, infrastructure, and sovereign bonds.

Methodology and Scope

The portfolio carbon footprint for listed equity and corporate bonds is calculated based on the following measures for Scope 1+2 emissions in line with the GHG Protocol. Emission-related data is provided by MSCI.

Variables

I_i Allianz's investment in issuer i in Euro

Q Allianz's total portfolio market value in Euro

V_i Enterprise value of issuer i in Euro

Y_i Sales/revenues of issuer i in Euro

m_i GHG emissions of issuer i in t CO_2e

F_a Absolute portfolio carbon footprint of Allianz's listed equity and corporate bond portfolio in t CO_2e

F_r Relative portfolio carbon footprint of Allianz's listed equity and corporate bond portfolio in t CO_2e per Euro invested

F_w Portfolio weighted average carbon intensity per revenue

w_i Weight of issuer i in Allianz portfolio (I_i/Q)

Enterprise value (V_i) is defined as the sum of the market capitalization of common stock at fiscal year-end, the market capitalization of preferred equity at fiscal year-end, and the book values of total debt and minorities' interests minus the cash and cash equivalents held by the enterprise. Enterprise value is sourced from Bloomberg.

2019 figures for listed equity have been restated. For this year, we changed the sector classification to NACE level 1 and 2.

Absolute portfolio carbon footprint:

$$F_a = \sum_{i=1}^{n} \frac{I_i}{V_i} \cdot m_i$$

Relative portfolio carbon footprint (i.e. portfolio carbon footprint per Euro invested):

$$F_r = \frac{F_a}{Q}$$

Weighted average carbon intensity (i.e. portfolio weighted average carbon intensity per revenue):

$$F_w = \sum_{i=1}^{n} w_i \cdot \frac{m_i}{Y_i}$$

The emission data represents the latest data we have as of March of this year. In case of this year's report, this means that emission data is largely comprised of data from FY 2019, as FY 2020 data will only be made available by investees in the first half of 2021.