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In our corporate reporting on climate change, we are applying the recommendations developed by the G20 Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). The TCFD's four-pillar framework provides guidance on how companies can disclose and address risks and opportunities from a changing climate. To drive best practice, we strive to continuously enhance our reporting and business practices.

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ALLIANZ'S CLIMATE-RELATED FINANCIAL DISCLOSURE

05.1 HIGHLIGHTS

In recent years, Allianz has laid strong foundations for the development of its climate change strategy. This includes committing to the Science Based Target initiative (SBTi), further strengthening our approach to exiting coal-based business models, implementing the TCFD recommendations and enhancing our systematic approach to investee engagement.

(1) 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 on our corporate response. Consequently, we increased our ambition from "well below 2°C" and are now committed to pursuing efforts to limit global warming to a maximum of 1.5°C by the end of the century, postulated as the high ambition level of the Paris Agreement. In 2019, we updated our carbon reduction target to align with 1.5°C-compatible pathways and adjusted our coal phase-out plan accordingly.

(2) At the Climate Action Summit in New York in September 2019, the United Nations (U.N.) launched the Net-Zero Asset Owner Alliance (AOA). The AOA consists of the world's largest pension funds and insurers. Members commit to reduce greenhouse gas (GHG) emissions of their investment portfolios to net-zero by 2050, taking responsibility of their share in limiting global warming to 1.5°C compared to pre-industrial times. Allianz helped to set up the group, collaborating with the Finance Initiative of United Nations Environment (UNEP FI), the Principles for Responsible Investment (PRI), WWF and the Mission 2020 campaign. In addition, Allianz chairs the AOA and leads several working groups within.

(3) In the run up to our portfolio decarbonization targets as part of the AOA, we are starting to report on climate-related indicators for our proprietary listed equity portfolio, including carbon footprint indicators.

(4) The Board of Management remuneration is tied to the attainment of sustainability- and climate-related targets, including the successful delivery of our climate change strategy and oversight of implementation of our different climate-related commitments, including the AOA.
A particular focus lies on the quantitative reductions targets for GHG emissions.

For 2020, we aim to set public long-term and intermediary climate targets for our proprietary investments and business operations in line with the Paris Agreement's goal to limit global warming to 1.5°C. Furthermore, we will continue to scale up our engagement of corporates and policy-makers on climate strategies in line with our ambition.

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ALLIANZ'S CLIMATE-RELATED FINANCIAL DISCLOSURE

05.2 GOVERNANCE

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 2019, they were overseen by five Board members. The following divisions focus on Group functions, along with business-related responsibilities: Chairman of the Board of Management; Finance, Controlling and Risk; Investment Management; Operations and Allianz Services; Human Resources, Legal, Compliance, and M&A; Business Transformation. For further information on Board of Management (BoM) members and their responsibilities, please refer to the Allianz Group Annual Report 2019, page 56.

The highest governing body for sustainability-related issues is the Group ESG Board. Meeting quarterly, it is comprised of three Allianz SE BoM members as voting members, one BoM member as standing guest voting on operations topics, and key departments being represented. On a case-by-case basis, further participants from Group Functions and operating entities participate. The ESG Board is responsible for sustainability and climate-related topics and oversees the Allianz Group Climate Change Strategy. It steers the whole corporate responsibility agenda, including for example positioning on Sustainable Finance as well as approving and steering external climate and ESG-related commitments and initiatives. Furthermore, it is responsible to ensure alignment of the ESG agenda with Allianz's business operations, especially by validating with Group functions such as Group Risk and Group Compliance. It also oversees the integration of climate and ESG aspects into all core lines of business and central Group processes.

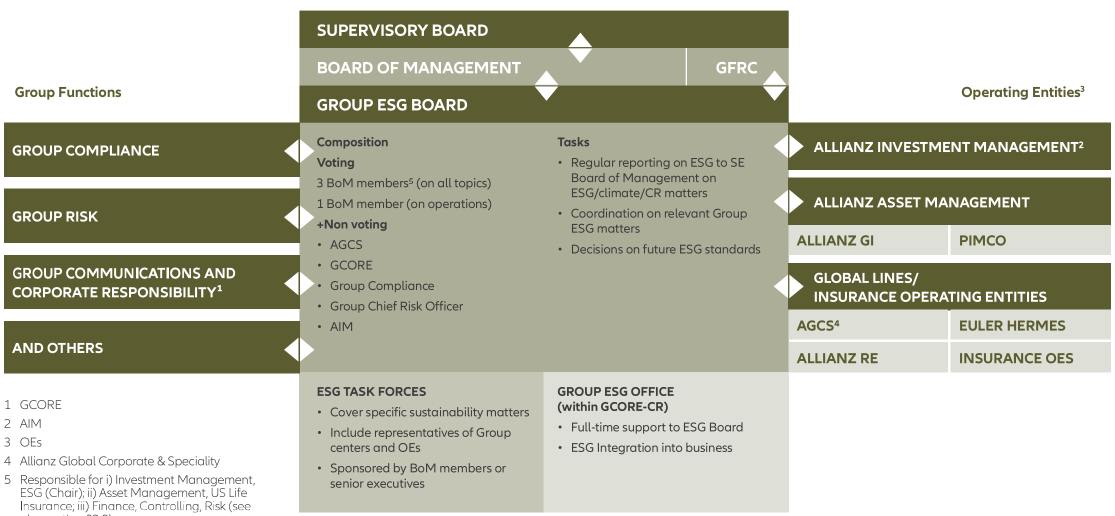
The ESG Board is constituted as an advisor to the BoM of Allianz SE, informing and involving the BoM on relevant topics and activities at least twice a year. Additionally, it reviews and recommends decisions to be taken by the BoM and relevant Board committees. Group Functions and operating entities directly update the ESG Board on material sustainability issues through their representation on the ESG Board or by invitation.

Within the Group and beyond the ESG Board, diverse functions and committees steer sustainability topics within their scope of influence, on business and management-level, supported by specific ESG Task Forces (see 05.2.2).

The Group Finance and Risk Committee (GFRC) consists of members of the BoM and oversees risk management and monitoring, including sustainability and climate risks. It also serves as an escalation point based on analysis and deliberations within the ESG Board. Risks identified as emerging and/or significant are addressed either in 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 as well as its risk management and strategy and develops an underwriting policy.

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 regular updates where relevant.

Climate & ESG Governance at Allianz



1 GCORE
2 AIM
3 OEs
4 Allianz Global Corporate & Speciality
5 Responsible for i) Investment Management, ESG (Chair); ii) Asset Management, US Life Insurance; iii) Finance, Controlling, Risk (see also section 02.8)

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05.2.2 BUSINESS AND MANAGEMENT-LEVEL GOVERNANCE

Group functions

The Allianz Group Corporate Responsibility department, and particularly the Group ESG Office, including a team dedicated to Climate Integration, is responsible for orchestrating 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 are reporting on non-financial matters and support operating entities in integrating the Group's strategic approach and policies.

To develop projects and proposals for ESG and climate integration into all our lines of business, Allianz set up cross-functional ESG Task Forces in late 2019; see also section 02.8. These consist of ESG specialists and representatives of relevant local operating entities, global lines, and Group functions. Each is sponsored by either a member of the BoM or a senior executive. Bi-monthly ESG Sponsor Meetings ensure alignment between the different task forces.

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

Further information can be found in the Allianz Group Annual Report 2019.

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 dedicated climate and ESG functions and practices, which eventually also report to BoM level.

At AIM, the Investment Management Board (IMB) oversees the implementation of the climate and ESG strategy for Allianz's proprietary investment portfolio of 795 billion Euro[1]. This includes regular discussions and decisions around operationalizing the portfolio decarbonization and science-based target setting, analyzes on asset stranding in climate scenarios, as well as dedicated engagement on climate aspects. Within AIM, climate and ESG is steered at IMB level with a Managing Director in charge of the implementation.

The implementation of science-based emission reduction targets for our proprietary investments and operations is run by a task force expanding across all relevant investment and operational departments and entities. It comprises more than 50 employees, including executive functions and reporting to the BoM members responsible for investments and operations as well as to the ESG Board.

Moreover, several units also have dedicated competence centers on promoting low-carbon technologies from an insurance and investment perspective: Allianz Capital Partners, Allianz Global Investors, Allianz Global Corporate & Specialty, Allianz Climate Solutions, and others.

For more details on our corporate responsibility governance see section 02.8 in our Sustainability Report 2019 and the Allianz ESG Integration Framework.

05.2.3 REMUNERATION AND CLIMATE COMPETENCE

The BoM's remuneration is tied to the attainment of sustainability- and climate-related targets, including the successful delivery of our climate change strategy and oversight of implementation of our different climate-related commitments. A particular focus lies on the quantitative reduction targets for GHG emissions. Our long-term climate ambition and targets are decided at ESG Board level and cascaded to all relevant functions tasked with delivering on these targets.

For more details on our Remuneration Report see here.

Allianz is also applying a variety of instruments to foster ESG and climate competency at Board, senior executive, and employee level aside of the governance described above:

- An annual Sustainability Forum conference, broadcasted globally and with Board member presentations
- Briefings for top management
- Biannual ESG Roundtable of investment functions
- Trainings for underwriters and investment-related functions like sales agents
- Trainings for employees.

1 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).
2 Task force established in early 2020.

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05.3 STRATEGY

05.3.1 OUR STRATEGIC RESPONSE TO CLIMATE CHANGE

The Allianz Group Climate Change Strategy has been first published in 2005 – since then it steers the uptake of climate-related risks and opportunities in our insurance and investment business. It has been regularly updated and is overseen by the ESG Board.

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 construction and/or operation of single coal-fired power plants and coal mines,
- fully phasing out coal-based business models across proprietary investment and P&C insurance portfolios by 2040, at the latest,
- engaging with policymakers to drive sustainable finance and achieve the Paris Agreement's goals, and
- ensuring active dialogue with investee companies on climate strategies.

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 climate goals for our proprietary investments and business operations, in line with '1.5°C-aligned net-zero emission by 2050' pathways, and
- 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.

05.3.2 CLIMATE-RELATED RISKS AND OPPORTUNITIES

We believe that climate change will materially affect economies and therefore our lines of business. Arising risks and opportunities can be seen already today and will increase over mid- and long-term. These can for instance be acute and chronic physical impacts on property or human health such as warming temperatures, extreme weather events, rising sea levels, intensifying heatwaves and droughts or a change 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 changes in climate policy, technology, or market sentiment, and impact thereof on the market value of financial assets, as well as impact resulting from climate change litigation.

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Impact on our business and impact of our business

Allianz Group is exposed to a variety of risks. The largest general risks in terms of their contribution to Allianz's risk profile are market risks, especially equity risk, credit and credit spread risks driven by assets backing long-term liabilities. Furthermore, Property-Casualty premium and reserve risks resulting from natural and man-made catastrophes as well as from claims uncertainty need to be considered. Climate change, as a multi-faceted phenomenon, is influencing these risks in varied ways.

Vice versa, choices made about how Allianz conducts its business can impact on the climate and global warming, e.g. by investing in or insuring low-carbon and emission-reducing activities.

Climate change impacts Allianz's business in two key ways: firstly through insurance policies, e.g. covering health impacts and other losses, property damage, and secondly through changes in the sectors and business models it underwrites. Furthermore, Allianz is affected as a large-scale institutional investor. It has significant stakes in various 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, which can directly influence the ability of assets to generate long-term value. Below is an illustration of how climate change risks translates into financial impact for investments, applicable to short-term as well as longer-term developments.

In early 2019, the Chief Risk Officer Forum has published a report on the implications of climate change on the insurance industry. From Allianz, several authors contributed to the report 'The Heat Is On', which can be accessed **here**.

Exemplary Illustration of Climate Risks Translation for Investors

CLIMATE-RELATED CHANGES				OPERATING ASSET IMPACTS				INVESTOR IMPACT
RISK CATEGORY				IMPACT ON	MITIGATING LAYER ON COMPANY/ PHYSICAL ASSET LEVEL	FIRST ORDER	SECOND ORDER	
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							
	Litigation for insufficient disclosure, adaptation, etc.							

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Financial impact of climate change

Building on our previous internal finding that our proprietary investment portfolio and especially the listed equity asset class is most sensitive to climate transition scenarios, Allianz further analyzed this risk exposure. Allianz Research calculated the macroeconomic negative impact of increasing regulatory intensity on the global industry at nearly 2.5 trillion USD 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 however 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 USD. The steel sector follows with a cost of 300 billion USD. Air and marine transport faces costs of 55 billion USD. 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 full report with all results can be accessed here.

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

In 2020, we will continue to expand our analyzes and assessments on physical, transition and litigation risks and opportunities for our business.

Asset and Business Value Impact under Transition Scenarios (Source: Allianz 2019, 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:	Risk mitigator:	Risk:
P = policy	(P) = policy	Low
T = substitution technology	(T) = little substitution technology	Medium
M = related market forces	(M) = countering market forces	High
		Very high

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05.3.3 OUR RESPONSE

The management of risks and opportunities resulting from climate change is part of our overall business strategy. Measures we take include: developing and adjusting financial products and services; improving decision-making, policies and processes; the setting of targets and limits; managing our operational climate footprint; as well as engaging with internal and external stakeholders.

Our Response – 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 ourselves long-term emissions reduction targets for our proprietary investment portfolio and for 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 on our corporate response. Consequently, we increased our ambition from "well below 2°C" and are now committed to pursue 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. As a result, 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 UN-convened Net-Zero Asset Owner Alliance (AOA), together with the Finance Initiative of United Nations Environment (UNEP FI), the Principles for Responsible Investment (PRI), WWF and the Mission 2020 campaign. In addition, Allianz chairs the AOA and leads several working groups within. At the end of 2019, it consisted of 16 asset owners with almost 4 trillion USD Assets under Management.

Members of the AOA commit to reduce GHG emissions of their proprietary investment portfolios to net-zero by 2050. Asset owners within the AOA are already engaging portfolio companies and are committed to setting 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 UN 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
- Impact on the real economy and emissions – to the extent to which methodologies can be developed
- Implementation via a holistic ESG approach for measuring and managing associated impacts
- Joint engagement and monitoring based on authoritative and credible scientific input, to ensure consistency of messaging and necessary ambition

Over the next three years, asset owners 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 practice 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, with individual member announcements of portfolio targets for 2025 being planned for 2020.

Our Response – Managing transition risks

We conduct detailed analysis in particularly energy-intensive sectors on emission profiles, possible proto-decarbonization pathways, and necessary technology shifts. The results are used for portfolio carbon analysis, the definition of decarbonization pathways, our corporate engagement process as well as management decisions.

In 2019, 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 as well as potential investment management actions. Building on these insights, we are developing ways to monitor and steer the portfolio transition as part of the AOA. Furthermore, Allianz Investment Management is now working to close data gaps by sourcing own data.

As an early step, Allianz has not financed coal-based business models since 2015. Equity stakes have been divested, fixed income investments made before that are in run-off, and no new investments have been allowed since then. Moreover, Allianz does not offer insurance for coal power plants or mines and requires all companies from both our Property & Casualty (P&C) insurance as well as 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 are excluding them from our business. To this end, we developed a specific methodology with a third-party provider to create a dataset applicable to both insurance and investment business.

Our criteria are being further tightened over time and explained in more detail in our public Statement on Coal-based business models.

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Our Response – Seizing 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, by providing insurance solutions to protect against physical climate impacts and to support low-carbon business models. For our 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.

Read more in our ESG Integration Framework.

We are strategically investing in low-carbon assets for more than a decade now. This includes renewable energy, certified green buildings, and green bonds (see also the chapter Metrics). Through our Sustainable Solutions program, Allianz provides products and services that create shared value by improving people's lives and/or delivering a positive environmental impact.

Allianz is a pioneer in insuring 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. Moreover, we are assessing how to use our expertise in investments in and insurance of renewable energy to achieve our RE100 target and tap potential business opportunities.

While working to combat global warming and climate change, we also aim to reduce the impacts of climate risks. Here, we 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 chapters 03.1 and 03.2 in our Sustainability Report 2019.

Our Response – Active company dialogue, joining forces and targeted engagement

Allianz Group is engaging investee companies as well as insurance clients in a variety of channels and formats. Besides the Group ESG Office also Allianz Investment Management has a dedicated engagement function for our proprietary investments. In addition, our internal asset managers Allianz Global Investors and PIMCO as well as our industrial insurer Allianz Global Corporate and Specialty are active stewards on climate-related matters.

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

Please see details on Allianz Global Investors voting policy and records here.

By leveraging the expertise of several units and departments, we want to create an impact in the real economy and encourage companies to define and implement climate strategies following scientific findings. By actively encouraging companies to set measurable climate targets that are transparently pursued, for example by joining the SBTi, we aim to not only reduce emissions in our proprietary investment portfolio but eventually in the real world.

For more details on our engagement approach please see chapter 03.2 in our Sustainability Report 2019. For proxy voting records of AllianzGI, please refer to their overview web page.

We are also 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+ as well as the Principles for Responsible Investment (PRI) connects us with like-minded investors and offers platforms for collaborative engagement. The AOA strives to be the hinge between these existing engagement platforms, asset owners, target verification initiatives and tools, as well as policy-makers.

Besides helping to drive decarbonization through our insurance and investment business, we continually work towards improving the environmental performance of our own operations through active dialogue and engagement. In operationalizing our commitment through the RE100 initiative to source 100% renewable power for our group-wide operations by 2023, we have started to engage deeply with our suppliers and landlords and collaborate with peers and the RE100 initiative to achieve this target. Our long-established carbon reduction strategy to manage the emissions from our own operations also builds on the exchange and engagement with service providers, suppliers, and employees and includes adjusting internal processes and policies. Additionally, 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 please see our ESG Integration Framework.

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05.4 STRATEGY RESILIENCE, STRESS TESTS AND CLIMATE SCENARIO ANALYSIS

Partnerships, memberships and financial industry engagement

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

Through our work with the G7 Investor Leadership Network (ILN) and Institutional Investors Group on Climate Change (IIGCC) as well as through our memberships in The B Team, the World Economic Forum Alliance of CEO Climate Leaders and others, we are encouraging other companies – both within our sector and beyond – to step up and improve their climate strategies and their climate disclosure as well as further develop our own.

Beyond previously-mentioned initiatives with a strong decarbonization focus (AOA, SBTi, TPI and Climate Action 100+), Allianz is partnering with international organizations to drive climate-smart investment and insurance. One example is the Sustainable Development Investment Partnership (SDIP) 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 also an active member of climate-related industry associations and initiatives like the Munich Climate Insurance Initiative, 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 Sustainability Report 2019 on our Memberships and Partnerships.

Developing approaches on climate-related financial disclosure for insurance portfolios

As part of the PSI, together with 21 other insurance companies, Allianz is developing new approaches on risk assessment tools designed to enable the insurance industry to better understand the impacts of climate change scenarios on their lines of insurance business. The pilot will make use of the latest climate science, including some of the most advanced, forward-looking climate scenarios available. This shall help the industry to pioneer climate risk disclosures for insurance business in line with the recommendations of the Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). Results are expected towards Q4 2020.

05.4 STRATEGY RESILIENCE, STRESS TESTS AND CLIMATE SCENARIO ANALYSIS

Climate change considerations are an integral part of our insurance and investment strategy which is informed by regular stress tests and additional climate-related scenario analyzes. We perform, for instance, sensitivity and scenario analyzes with time horizons up to 2050 and including scenarios ranging from 1.5°C to 4°C with internal models and with external tools. While material time horizons naturally differ depending on specific lines of business under consideration, the range of scenarios we apply allows to better assess the variety of risks and opportunities associated with climate change. We rely on both our own and on third-party scenarios provided by renown institutions such as the IPCC, IPR, EU, IEA or IRENA.

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

When we conduct scenario alignment analyzes, we are adjusting our scenario selection with the guidance being developed within the AOA which will focus 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.

We apply scenarios for instance in analyzing decarbonization challenges and pathways of sectors and assets, potential stranded assets and technology developments across different sectors. Furthermore, we are using scenario data and analysis to develop forward-looking criteria for our investment decisions with regard to carbon-intensive business models as well as low-carbon opportunities.

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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 on how it will adapt to a decarbonizing world.
- Allianz Real Estate conducted an energy and carbon performance overview of the direct real estate portfolio, including indicative decarbonization targets.
- Allianz co-led with the PSI the development of an ESG guide to non-life underwriting, 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 2020, we plan to increase these practices as part of our risk governance and will continue to conduct asset and portfolio scenario analysis for our direct infrastructure and real estate investments.

For more details see for instance the ESG guide for non-life underwriting here.

CASE STUDY

SCENARIO ANALYSIS IN ASSET MANAGER MANDATES:

In early 2019, Allianz engaged with an asset manager with whom we hold a separate managed account as well as commitments to energy funds. Together with the asset manager – a specialized energy credit investor – portfolio projections were developed along with an investment portfolio pathway that is in line with an energy transition to keep global temperature rise at levels aligned with the Paris Agreement goals. Scenarios used in this context were IEA SDS and B2DS, Greenpeace Energy Revolution as well as scenarios drawn from the EU 2050 Long-Term Climate Strategy.

Allianz will continue engaging with this and other asset managers, providing impetus to further develop their ESG efforts. This kind of approach can serve as a feasible and scalable model for institutional investor engagement to develop consistent decarbonization pathways and investment strategies accordingly. As a result, asset managers then engage with the companies they invest in as well as their peers to implement best practice criteria in their industry.

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05.5 RISK AND OPPORTUNITY MANAGEMENT

05.5.1 OVERARCHING RISK GOVERNANCE

As a general principle at Allianz, the responsibility for the 'First Line of Defense' rests with business managers in the related undertaking. They are responsible for both the risks taken and the returns from their decisions. Our 'Second Line of Defense' consists of independent global oversight functions. These are Risk, Actuarial, Compliance and Legal, which support the Board 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.

Climate-related risks are addressed as part of an overarching qualitative and quantitative risk reporting and controlling framework. Early-warning indicators are monitored and regularly reported to senior management through risk dashboards, risk capital allocation and limit consumption reports, where climate aspects become material. Supplemented by quarterly updates, senior management decides on a risk management strategy and related actions.

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

Another instrument is the yearly Top Risk Assessment with the goal to identify and remediate significant threats to financial results, operational viability, reputation and the delivery of key strategic objectives, regardless of whether they can be quantified or not. Not only does this include immediate risks for the company, but also emerging risks, which may arise from technological development, new or changing environmental risks or socio-demographic changes. Climate-related factors are included in Top Risk Assessments conducted both on the level of operating entities as well as the Group.

Additionally, relevant emerging risks are discussed by the GFRC or the GUC and following that, underwriting opportunities or mitigation measures might be implemented where necessary.

For more details on these risk management processes please see the Risk and Opportunity Report on page 76-92. of the Allianz Group Annual Report 2019.

05.5.2 NATURAL CATASTROPHE RISK GOVERNANCE

The Group uses a group-wide risk management framework which is also applicable for natural catastrophes. Each operating entity is responsible for controlling its exposure to individual catastrophes and defining its local reinsurance requirements, based on its local risk appetite and capital position. The respective cover is then provided by Allianz SE or one of its subsidiaries. At the Group level, the BoM reviews and approves the risk appetite. The reinsurance division is then 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 are using special modeling techniques for natural catastrophes which combine portfolio data (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 stochastic 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 as of 31 December 2017, 2018 and 2019 were: windstorms in Europe, floods in Germany, and earthquakes in Australia. Furthermore, we are conducting selected stress-scenario analysis on natural catastrophe risks like hail or windstorms to be used in risk steering. Our natural catastrophe models are regularly updated according to newest 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 described above, a variety of comprehensive policies and processes foster integration of climate-related risks and opportunities.

Our ESG approach integrates climate- and sustainability-related considerations by applying group-wide corporate rules and ESG instruments across all our underwriting, investment and asset management activities. These guidelines, such as the Allianz ESG Functional Rule for Investments, are regularly updated and also part of the Allianz Standard for Reputational Risk and Issues Management, which establishes a core set of principles and processes for the management of reputational risks and issues within the Group. The publicly available third edition of the Allianz ESG Integration Framework further increases transparency around our internal processes and guidelines related to our ESG approach. We also rely on external providers for data related to climate, ESG and reputational risks.

As an additional layer, building on the explanations in the Governance chapter, the Climate Integration team within the Corporate Responsibility department as well as the ESG Task Forces work on early identification, measurement and business integration of risks as well as of opportunities arising from physical climate change and the low-carbon transition. Examples include regulatory activity around climate change

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05.6 METRICS AND TARGETS

and sustainable finance, the integration of ESG and climate considerations in business processes as well as particular projects and others. 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 by Allianz Global Corporate & Specialty, 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 102 countries and 22 industry sectors. Climate change, as a cross-cutting risk driver, climbed again in the ranking reaching its highest-ever position (#7). It naturally links to natural catastrophes (#4) 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 cyber incidents.
- The Global Claims Review, which analyzes more than 470,000 claims in over 200 countries and territories. This Review found wind storms as the only natural catastrophe event to appear in the top 10 causes of loss. Natural catastrophes in total account for 5% of claims in number and 13% of total value of all claims and represent 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.
- In addition, Allianz is a member of the Emerging Risks Initiative in the CRO Forum. This group defines climate change as a trend which might result in emerging risks for non-physical climate risk.
- Our NGO Dialogue, which provides ad hoc and scheduled exchanges with NGOs on sustainability matters.
- A regular materiality assessment of emerging ESG and climate issues and opportunities.
- On-going dialogues with policy-makers, NGOs and academia on key economic, governmental, environmental and societal issues, including climate change to contribute to solutions for a sustainable tomorrow.

For our 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. Our portfolio-wide ESG assessment processes and data, including a variety of climate and carbon data (see chapter Metrics), enables 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 chapters 03.1 and 03.2 in our Sustainability Report 2019.

05.6 METRICS AND TARGETS

Our approach to the low-carbon transition will be steered by our commitment to set science-based emission reduction targets as well as to reaching net-zero emissions in our proprietary investment portfolio by 2050. To this end, we will set ourselves long-term and intermediary emissions reduction targets for our business operations as well as our proprietary investment portfolio in line with the Paris Agreement's target of limiting global warming to 1.5°C. We expect publication of carbon reduction targets for our investment portfolio as part of the AOA towards the end of 2020, since the target-setting methodology for financial institutions is yet to be defined by sectoral initiatives like SBT for Financial Institutions within the SBTi.

The carbon footprint of our proprietary listed equity portfolio is newly included in our disclosure this year. Going forward, we will be publishing metrics, targets and our performance related to our AOA membership. Currently, we are expecting this to cover the asset classes listed equity, corporate bonds and real estate and potentially also sovereign bonds. The AOA is also striving to have engagement-related targets.

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05.6.1 TARGETS AND TARGET PERFORMANCE

	TARGETS 2018	PROGRESS & ACHIEVEMENTS 2018	TARGETS 2019	PROGRESS & ACHIEVEMENTS 2019	TARGETS 2020 AND BEYOND
Investment strategy	• 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 (expected for Q4 2020) • 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
Coal phase-out	• 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 in investments in 2018 • Tightened restrictions on coal, introduced a long-term action plan for coal until 2040 • Divested additional 61.5 million Euro in equities and put an additional 906.7 million Euro 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 Euro in equities and put another 236 million Euro 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% to 25% as of 31 December 2022 • Engage with companies in proprietary investment as well as P&C portfolios to move away from coal
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

05.6.2 METRICS

To monitor, assess and steer climate-related aspects of the economy, Allianz uses a variety of indicators across the different lines of business. Our complete 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 FY 2019 annual report documents, for instance the financial supplement and the corresponding analyst presentation here.

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Listed equity carbon-related indicators incl. carbon footprint

As of this reporting year, we are introducing disclosure on our listed equity portfolio. Within our entire portfolio, listed equities are the asset class we found most exposed to transition risks in previous analyzes. We are therefore providing general listed equity portfolio indicators as well as emission-related indicators. We are expecting to enhance this disclosure in upcoming reporting cycles, also in light of our upcoming AOA targets and reporting.

Methodology and scope

The portfolio carbon footprint 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.

ABSOLUTE PORTFOLIO CARBON FOOTPRINT:

$$\sum_{i=1}^{n} \frac{\text{€}investment_i}{issuer\text{'s } enterprise\ value_i} * issuer\text{'s } emissions_i$$

RELATIVE PORTFOLIO CARBON FOOTPRINT (I.E. PORTFOLIO CARBON FOOTPRINT PER EUR INVESTED):

$$\frac{\sum_{i=1}^{n} \frac{\text{€}investment_i}{issuer\text{'s } enterprise\ value_i} * issuer\text{'s } emissions_i}{Portfolio\ market\ value}$$

WEIGHTED AVERAGE CARBON INTENSITY (I.E. PORTFOLIO WEIGHTED AVERAGE CARBON INTENSITY PER EUR INVESTED):

Portfolio weighted average carbon intensity per revenue

$$= \sum_{i=1}^{n} \text{Portfolio weight}_i \frac{\text{issuer's emissions}_i}{\text{issuer's sales}_i}$$

Enterprise value 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.

Mutual Equity Funds and similar products like ETFs are out of scope of FY2019 reporting, which represent 5.8 billion Euro in the global Allianz Equities Portfolio. We estimate the absolute emissions of these products at around 1.3 million tonnes CO_2e, based on the emissions of the MSCI ACWI index. We expect to include reporting on the carbon footprint of these products in FY2020 reporting.

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LISTED EQUITY PORTFOLIO INDICATORS

Indicator	Unit	2019	2018	Δ y-o-y
Equities Portfolio AuM	€ bn	**39.53**	32.93	+20.0%
Share of total AuM	%	**5.0%**	4.7%	+0.3%p
Absolute Emissions	mn t CO_2	**3.904**	4.012	-2.7%
Relative Emissions	t CO_2/€ mn invested	**98.76**	121.84	-18.9%
Weighted Average Carbon Intensity	t CO_2/€ mn invested	**155.42**	177.76	-12.6%
Emission data coverage of equities AuM	%	**99.8%**	99.5%	+0.3%p

all values as of December 31

While our equity portfolio increased in value by 20% from 2018 to 2019, mostly driven by price performance, absolute emissions fell by 2.7%. This is a good result when compared with the global growth in emissions in recent years. Our two relative indicators have improved quite significantly, but a notable contribution comes from the general growth in company valuations.

Because relative indicators are sensitive to changes in either direction in both company valuation and company sales, we believe absolute emissions are the most meaningful measure of the carbon performance of our portfolio.

In addition, our current emission scope is 1+2 and thereby does not consider emissions in the wider value chain, which can be significant for many sectors. While data quality for scope 3 emissions is still low, we believe there is merit in sector-specific scope 3 indicators and data to determine if companies and their products are on a pathway consistent with our 1.5°C ambition. We are working to develop these indicators also as part of the AOA.

SECTOR-SPECIFIC LISTED EQUITY PORTFOLIO INDICATORS

Indicator		Unit	2019	2018	Δ y-o-y
Total AuM in 5 sectors with highest owned absolute emissions in equities portfolio		€ bn	**6.01**	5.29	+13.7%
Absolute Emissions of 5 sectors with highest owned absolute emissions in equities portfolio		mn t CO_2	**2.584**	2.611	–1.0%
Number of issuers in 5 sectors with highest owned absolute emissions in equities portfolio			**381**	315	+21.0%
Of these:					
SBTi Signatories			**35**	28	+25.0%
SBTi Targets Set			**22**	17	+29.4%
Under engagement by Climate Action 100+			**58**	52	+11.5%
Split of sectors with highest owned absolute emissions in equities portfolio					
Oil & Gas Producers	Sector AuM	€ bn	**1.96**	1.98	–1.0%
	Share of equity AuM	%	**5.0%**	6.0%	–1.0%p
	Absolute Emissions	mn t CO_2	**0.780**	0.775	+0.7%
	Relative Emissions	t CO_2/€ mn invested	**398.10**	391.40	+1.7%
Chemicals	Sector AuM	€ bn	**1.96**	1,70	+15.7%
	Share of equity AuM	%	**5.0%**	5.2%	–0.2%p
	Absolute Emissions	mn t CO_2	**0.501**	0.542	–7.7%
	Relative Emissions	t CO_2/€ mn invested	**255.21**	319.70	-20.2%
Construction & Materials	Sector AuM	€ bn	**1.13**	0.74	+52.8%
	Share of equity AuM	%	**2.9%**	2.2%	+0.7%p
	Absolute Emissions	mn t CO_2	**0.517**	0.312	+65.5%
	Relative Emissions	t CO_2/€ mn invested	**458.52**	423.26	+8.3%
Industrial Metals & Mining	Sector AuM	€ bn	**0.17**	0.16	+4.7%
	Share of equity AuM	%	**0.4%**	0.5%	–0.1%p
	Absolute Emissions	mn t CO_2	**0.428**	0.577	–25.8%
	Relative Emissions	t CO_2/€ mn invested	**2,524.17**	3,560.70	–29.1%
Electricity	Sector AuM	€ bn	**0.79**	0.71	+11.2%
	Share of equity AuM	%	**2.0%**	2.2%	–0.2%p
	Absolute Emissions	mn t CO_2	**0.357**	0. 404	–11.5%
	Relative Emissions	t CO_2/€ mn invested	**451.71**	567.85	–20.5%

all values as of December 31

In addition to the above figures, it is noteworthy that only 10 of almost 3,000 issuers in our equity portfolio account for 40% of the absolute emissions of the portfolio, while only accounting for 7% of the AuM. This also explains why we believe that the engagement of investee companies to decarbonize portfolios is essential.

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Investment and insurance metrics (list not exhaustive)

- Revenue generated from our sustainable solutions, including the number of products offered: 1.33 billion Euro, 203 products
- Total sustainability-themed investments, including climate aspects: 29.4 billion Euro
- Amount of green assets in the portfolio, all with growth aspirations:
  - Debt and equity investments in renewable energy: 7.2 billion Euro, an increase by 0.4 billion Euro from 2018
  - Number of renewable energy parks in portfolio: 99
  - Capacity of renewable energy parks in portfolio: 1.95 GW
  - Debt and equity investments in green buildings: 14.6 billion Euro
  - Investments in green bonds: 5.6 billion Euro
- In 2015, we stopped financing coal-based business models. Amount of securities affected:
  - Fixed-income securities in run-off: 5.9 billion Euro
  - Fixed-income securities added to run-off in 2019: 236.0 million Euro
  - Total equity securities divested: 340.5 million Euro
  - Equity securities additionally divested in 2019: 14.0 million Euro
- Volume of Sustainable and Responsible Investments (SRI) for our third-party assets: 157.7 billion Euro

Furthermore, we analyze our investment portfolio with a broad range of climate- and carbon-related data and indicators from sources like MSCI ESG, TPI, Influence Map, Carbon Tracker and SBTi (list not exhaustive). The indicators are absolute and relative carbon footprint information, fossil fuel reserves including potential emissions, carbon performance, risk and risk management indicators, low-carbon opportunities scores and decarbonization targets.

For more details on our climate and sustainability-related metrics and targets see section 06 of our Sustainability Report 2019.

05.6.3 BUSINESS OPERATIONS

Allianz continually strives to improve the environmental and climate performance of its business operations. A group-wide Environmental Management System provides the framework, including 47 KPIs related to, amongst others, GHG emissions per employee, electricity consumption, share of renewable energy and number of carbon certificates used to offset remaining emissions to be carbon-neutral.

More information on our environmental management can be found in section 04.7.

As part of the Allianz Sustainability Report, an assurance review of our climate-related financial disclosure was conducted by our auditor.

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DATA AND PERFORMANCE:

06.1 OUR TARGETS AND ACHIEVEMENTS

CLIMATE INTEGRATION

Topic	Targets 2019	Progress and Achievements 2019	Targets 2020 and beyond	Reference Sections / Data Table
CLIMATE STRATEGY	• Set long-term climate targets for our proprietary investments and business operations in line with the Paris Climate Agreement's goal to limit global warming to well below 2°C. • In the first half of 2019, we will run pilot portfolios on climate- related target-setting and steering which will ideally allow us to identify data gaps, derive monitoring and steering approaches and metrics as well as potential investment management actions.	• Actively contributed to setting up the UN-convened Net-Zero Asset Owner Alliance, a group of asset owners committed to reduce the GHG emissions of their investment portfolios to net-zero by 2050, consistent with a maximum temperature rise of 1.5°C. • In the first half of 2019, 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 as well as potential investment management actions. The results of this will now be used in the operationalization of the Asset Owner Alliance commitment.	• Set long-term and intermediary climate targets for our proprietary investments and business operations in 2020 in line with the Paris Climate Agreement's goal to limit global warming to 1.5°C. • Reduce GHG emissions of proprietary investment portfolio to net-zero by 2050.	Sections 02.2; 05
PSI COLLABORATION ON CLIMATE RISKS	• Together with the UN Principles for Sustainable Insurance, we will furthermore develop new approaches on climate risk assessment tools for the insurance industry. This shall enable a better understanding of the impacts of climate change scenarios on the different lines of insurance business.	• Gathered 21 insurance companies under the roof of the UN Principles for Sustainable Insurance to jointly develop new approach on climate risk assessment tools for the industry and secured 3rd-party support.	• Publish final report of Principles for Sustainable Insurance project expected by Q4 2020.	Section 03.1.1
CLIMATE RISK INSURANCE	• Develop flood insurance product for public assets in Accra, Ghana.	• Insurance product to protect public assets against floods in Accra, Ghana, developed within the framework of our three-year strategic alliance with GIZ.	• Propose flood insurance for public assets in Accra, Ghana; propose integrated risk management including flood insurance to SMEs in industrial zones in Morocco.	Section 03.1.2
COAL-BASED BUSINESS MODELS	• Update coal exclusion lists with most recent market data. • Fully phase out coal-based business models across our proprietary investments and property-casualty (P&C) portfolios by 2040 at the latest.	• Worked on the implementation of our coal exclusion approach in proprietary investments and P&C underwriting. • On-boarded data provider specifically for identifying companies with coal-based business models. • Divested an additional 14.0 million Euro in equities and put another 230 million Euro 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. • Reduce the threshold for coal-based business models for P&C insurance as well as investment portfolios from current 30% to 25% as of 31 December 2022. • Engage with companies in proprietary investment as well as P&C portfolios to move away from coal.	Section 03.2.1 Table ESG-10
RENEWABLE ENERGY	• Increase debt and equity investments in renewable energy in the mid-term.	• Investments of 7.2 billion Euro (2018: 6.8 billion Euro) in renewable energy.		Section 03.2.2 Table ESG-8
	• Achieve 100% green electricity for our operations by 2023 within Allianz Group.	• Achieved a share of 49% green electricity of total electricity used (2018: 45%) within Allianz Group.	• Achieve 100% green electricity for our operations by 2023 within Allianz Group.	Section 04.7 Table ENV-5
ENERGY CONSUMPTION	• Reduce energy consumption by 30% per employee by 2020 compared to 2010 within Allianz Group.	• Achieved a reduction of 37% in 2019 (2018: 34%) compared to 2010 within Allianz Group.	• Reduce energy consumption by 30% per employee by 2020 compared to 2010 within Allianz Group. • In 2020, we will develop our next set of environmental targets up until 2025.	Section 04.7 Table ENV-3
GREENHOUSE GAS (GHG) EMISSIONS PER EMPLOYEE	• Reduce CO_2 emissions by 30% per employee by 2020 compared to 2010 within Allianz Group.	• Achieved a reduction of 35% in 2019 (2018: 27%) compared to 2010 within Allianz Group.	• Reduce CO_2 emissions by 30% per employee by 2020 compared to 2010 within Allianz Group. • In 2020, we will develop our next set of CO_2 emission targets up until 2025, in line with the latest climate science.	Section 04.7 Table ENV-2 NFR, Group Annual Report 2019, p. 44[1]
PAPER CONSUMPTION	• Reduce paper consumption by 40% per policy compared to 2014 by 2020 within Allianz Group.	• Achieved a reduction of 53% in 2019 (2018: 41%) compared to 2014 within Allianz Group.	• Reduce paper consumption by 40% per policy by 2020 compared to 2014 within Allianz Group. • In 2020, we will develop our next set of environmental targets up until 2025.	Section 04.7 Table ENV-9

1 Additional details can be found in the Group Annual Report 2019, Combined Separate Non-Financial Statement (NFR).

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DATA AND PERFORMANCE:

06.2 MEMBERSHIP AND PARTNERSHIPS

GRI
102-12, 102-13, 102-40

Below is an excerpt of some of our memberships and partnerships

Memberships
Founders Circle, The B Team
Investor Signatories, ClimateAction100+ (CA100+)
Founding Member, Climate Leadership Council (CLC)
Member, ClimateWise
Member, The Global Innovation Lab for Climate Finance
Member, Institutional Investors Group on Climate Change (IIGCC)
Member, Insurance Development Forum (IDF)
Member, InsuResilience Global Partnership
Member, Investment Leaders Group (ILG)
Member, Investor Leadership Network – A G7 initiative (ILN)
Member, Munich Climate Insurance Initiative (MCII)
Member, Portfolio Decarbonization Coalition (PDC)
Signatories, Principles for Responsible Investment (PRI)
Signatory, Principles for Sustainable Insurance (PSI)
Member, RE100
Member, Science Based Targets initiative (SBTi)
Member, Stifterverband der Deutschen Wissenschaft
Signatory, UN Global Compact (UNGC)
Founding Member, UNEP Finance Initiative (UNEP FI)
Member, World Economic Forum Alliance of CEO Climate Leaders
Founding Member, U.N.-convened Net-Zero Asset Owner Alliance (AOA)
Member & Co-chair, U.N.-convened Global Investors for Sustainable Development (GISD) Alliance
Supporter, Transition Pathway Initiative (TPI)
Supporter, Task Force on Climate-related Financial Disclosures (TCFD)
Partnerships
Partnership with the German Corporation for International Cooperation (GIZ)
Partnership with Impact Hub Munich (concluded as of March 2019)
Partnership with SOS Children's Villages International
Partnership with World CleanUp Day

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DATA AND PERFORMANCE:

06.4 ENVIRONMENTAL PERFORMANCE DATA

GRI
302-1, 302-3, 302-4, 305-1, 305-2, 305-3, 305-4, 305-5

Our reporting on environmental data generally follows the GRI Standards of the Global Reporting Initiative. The Group's carbon footprint is oriented towards the Greenhouse Gas (GHG) Protocol's Corporate Accounting and Reporting Standard. For data compilation, Allianz further applies the standards developed by the Association of Financial Institutions for Environmental Management and Sustainability (Verein fur Umweltmanagement und Nachhaltigkeit in Finanzinstitutionen 'VfU') as they are tailored to financial services institutions.

Detailed guidance for environmental data compilation is further defined in internal guidelines for environmental reporting and in the publicly available explanatory notes.

Data in this section is part of the Sustainability in operations (Environmental management) section.

Table ENV–1

EMS COVERAGE

As of December 31		2019	2018	2017
Share of employees in scope by our environmental management system (EMS)	%	95	94	91

Table ENV–2

GREENHOUSE GAS EMISSIONS

As of December 31		2019	2018	2017
Scope 1 – Direct GHG emissions	t CO_2	42,011	46,734	51,838
Scope 2 – Indirect GHG emissions (market-based)	t CO_2	142,563	159,181	167,888
Scope 2 – Indirect GHG emissions (location-based)	t CO_2	224,315	239,132	257,488
Scope 3 – Other indirect GHG emissions	t CO_2	149,459	167,533	159,719[1]
Scope 1-3, GHG emissions total	t CO_2	**334,033**	373,448	379,446[1]
Total GHG Emissions per employee	t/empl	2.4	2.7	2.7
Overall GHG reduction per employee since 2010 Target -30% by 2020	%	-35	-27	-27

Table ENV–3

ENERGY CONSUMPTION[1]

As of December 31		2019	2018	2017
Energy consumption from our office buildings	GJ	2,156,963	2,240,060	2,391,123
Energy consumption from our data centers	GJ	379,351	396,338	392,055
Total energy consumption	GJ	**2,536,314**	2,636,398	2,783,178
Energy consumption from office buildings per employee	GJ/empl	15.3	16.1	17.0
Energy reduction from office buildings per employee since 2010 Target -30% by 2020	%	-37	-34	-30

Table ENV–4

ENERGY SOURCES

As of December 31		2019	2018	2017
Electricity	%	70.7	72.2	70.9
Fossil fuels	%	14.0	14.1	16.4
Long-distance heating	%	14.9	13.5	12.4
Other sources (incl. energy from own sources including photovoltaic, internal waste heat)	%	0.3	0.2	0.3

Table ENV–5

RENEWABLE ELECTRICITY

As of December 31		2019	2018	2017
Renewable electricity	GJ	872,929	859,862	882,222
Renewable electricity as a share of all electricity sources Target 100% by 2023	%	49	45	45

1 We are in the process of consolidating our global data center real estate. The reported energy consumption relates to our strategic data centers in Europe, the U.S. and Singapore. Up to the end of this consolidation program, the energy consumption from some local data centers will be included in the energy consumption reported for office buildings.

DATA AND PERFORMANCE:
06.4 ENVIRONMENTAL PERFORMANCE

GRI
301-1, 301-2,
303-1, 303-5,
306-2

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Table ENV–6

BUSINESS TRAVEL

As of December 31		**2019**	2018	2017
Total travel	km	918,693,524	941,564,230	952,221,036
Road travel (incl. rental, fleet, and private cars)	%	34.8	38.3	40.7
Air travel	%	54.8	53.9	51.5
Rail travel	%	10.3	7.9	7.8
Travel per employee	km/empl	6,509	6,749	6,776

Table ENV–7

WATER CONSUMPTION

As of December 31		**2019**	2018	2017
Total water consumption	m^3	1,883,352	1,830,782	1,940,030
Drinking water	%	91.1	87.6	86.6
Rain water	%	0.4	0.4	0.3
Natural water	%	8.6	12.0	13.1
Water consumption per employee	m^3/empl	13.3	13.1	13.8

Table ENV–8

WASTE

As of December 31		**2019**	2018	2017
Total waste	t	19,396	19,575	21,474
Waste Incinerated	%	39.8	40.3	39.5
Waste Recycled	%	40.5	39.9	40.7
Waste to Landfills	%	19.6	19.8	19.4
Special Waste Treatment	%	0.1	0.1	0.3
Waste per employee	kg/empl	137	140	153

Table ENV–9

PAPER CONSUMPTION

As of December 31		**2019**	2018[1]	2017[2]
Total paper consumption	t	10,161	12,332	14,866
Recycled Paper	%	40	40	41
FSC-labeled paper	%	59	50	50
Paper consumption per policy	g/policy	76	96	117
Paper reduction since 2014[3] Target -40% by 2020	%	-53	-41	-28

1 Please note that number of policies in 2018 has been restated, please see our explanatory notes.
2 Please note that the data for paper use, related emissions and number of policies in 2017 have been restated, please see our explanatory notes.
3 Please note that the data for paper use and number of policies in 2014 have been restated, please see our explanatory notes.