Shaping our net-zero pathway

Allianz Global Investors

TCFD Report 2021

Allianz Global Investors

Value. Shared.

Contents

Executive summary

Governance

Allianz Global Investors (AllianzGI) Management and Supervisory Board members receive regular strategy updates of AllianzGI business and this includes a section on the latest strategic updates regarding sustainability, and climate change.

Strategy

We help our clients to reflect climate risks and opportunities in their holdings. In 2021 we adopted a firm-wide thermal coal exclusion policy for all mutual funds we manage. This section shows our innovative investment solutions, progress in sustainability research, policy advocacy, and our active industry and policy engagement.

Risk management

We have put in place further processes such as a tool for analysing sustainability risks and principal adverse impacts, including climate metrics. This section also includes information on climate scenario analysis and stress-testing.

Metrics and targets

After becoming a Net Zero Asset Managers (NZAM) initiative signatory in 2021, we submitted first interim targets at the beginning of 2022, reflecting the targets set in 2021 by Allianz for its proprietary assets. In addition, we have also committed to reducing our greenhouse gas footprint as a business, covering energy-related emissions, business travel and paper use.

01 Introduction

Approach derived from TCFD principles

Allianz Global Investors is an active investment management firm and part of Allianz Group. Sustainable investing is a core part of our strategy to shape pathways that secure the future – for our clients, for our business and for society as a whole.

At AllianzGI, we manage EUR 673 billion (USD 765 billion) in assets for individuals, families, and institutions worldwide as at December 2021, of which EUR 303 billion[1] encompass our ESG and sustainable investment offering.

We began our sustainable investing journey over 20 years ago and published our first Responsible Investing Report in 2018. Our reporting incorporates our investment and stewardship activities as well as our business operations. As part of our commitment to transparency and accessibility, we produced our first Task Force on Climate-Related Financial Disclosures (TCFD) report last year to set out our climate-related risks and opportunities and how we integrate them into the business. We are pleased to issue our second TCFD report in response to the recommendations from TCFD.

Respondents to the 2022 World Economic Forum Global Risks Perception Survey ranked "failure of climate change mitigation and adaptation" as the number one risk with potentially the most severe impact over the next decade.[2] Climate risks are a major consideration in our assessment of the value of any potential holding. Unlike traditional financial risk factors, such as market price risks, assessing and quantifying climate change risks in investments is more difficult and complex. As an active investor, we can help to find innovative ways to reallocate capital towards a climate transition that supports the Paris Agreement goals. We are a signatory of the NZAM initiative to act on climate issues, present and future, jointly with other investment industry signatories. Our aim is to decarbonise investment portfolios and accelerate our contribution to achieving net zero emissions and limiting global warming to 1.5 °C by 2050 or sooner.

This is alongside our parent company, who committed to decarbonise its asset owner portfolio as a founding member of the UN Convened Net-Zero Asset Owner Alliance (AOA). In recent years, we have laid strong foundations for our climate change strategy by supporting the TCFD recommendations and implementing them and developing an enhanced systematic approach to investee engagement on climate noticeably with regard to disclosure. AllianzGI supports the climate approach of Allianz SE, which has been further strengthened to fully phase out coal-based business models across the proprietary investments and property and casualty (P&C) insurance portfolios by 2040 due to climate risk. Allianz SE has also set climate targets for specific asset classes in the insured portfolios and committed as an investor to the Science Based Targets initiative (SBTi) among many other efforts.

As an active asset manager, we not only embrace global objectives of carbon neutrality, but also take actions to contribute to climate transition. Below are the key milestones in AllianzGI's commitment to climate leadership during the reporting period (January – December 2021):

1. This figure includes EUR 156 billion of integrated ESG assets that are not considered sustainable according to EU Sustainable Finance Disclosure Regulation
2. The Global Risks Report 2022 17th Edition Workd Economic Forum (Link)

For more information see AllianzGI Climate Policy Statement and Exclusion Policy on our website

Introduction

- Launched three strategic sustainability themes: climate change, planetary boundaries and inclusive capitalism.
- Thermal coal (and controversial weapons) exclusion policy adopted firm-wide for all mutual funds that we manage.
- Joined the Net Zero Asset Managers initiative and submitted first interim targets at the beginning of 2022 to help meet our net-zero 2050 commitment.
- Launched a "Climate Engagement with Outcome (CEWO)" investment strategy, where we engage with the top emitters to reduce emissions without constraining the investment universe.
- Joined the One Planet Asset Managers (OPAM) initiative, which supports the One Planet Sovereign Wealth Funds (OPSWF) to tackle the challenges of climate change.
- Published three thematic papers on the climate change topic
  - Are all net-zero goals created equal?, September 2021 (Link)
  - Oil and gas majors: active stewardship rather than divestment, October 2021 (Link)
  - Carbon offsets: debate to define role in net zero, December 2021 (Link)
- Added new policy on "Say on Climate" under our Global Corporate Governance Guideline (Link)
- Hosted major events such as AllianzGI Global Sustainability Days (24-25 November 2021) to provide clients with information and insights on climate

AllianzGI became an official supporter of the TCFD recommendations in 2019 following its parent company Allianz SE. This report follows the structure of the TCFD recommendations along four pillars: governance, strategy, risk management and metrics and targets.

The TCFD's four-pillar framework provides guidance for companies on how to consistently disclose risks and opportunities from a changing climate as well as to integrate them into their business. We strongly believe that, for investors to be able to make informed decisions, companies must report comprehensively on how they tackle dominant global long-term trends, such as climate change. AllianzGI advocates for greater transparency and reporting on climate change risks by companies.

Core elements of recommended climate-related financial disclosures*

Governance

Climate-related issues in **board oversight**

Management's role in assessment and management

Strategy

Risk identification
Over the short, medium and long term

Impact of climate issues
On business, strategy and financial planning resilience considering different climate scenarios

Risk management

Processes for identifying, assessing and managing climate-related risks

How it is integrated into the organisation's overall risk management

Metrics and targets

Metrics used in climate change strategy and risk management

Disclosure of **climate-related targets** (including both investment-related and operation-related climate targets)

*Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures

02 Governance

1. Board-level oversight

AllianzGI is an investment management subsidiary of Allianz SE. As AllianzGI consists of various operational entities, lines of responsibility exist at the Allianz Global Investors GmbH level. AllianzGI management board is responsible for the overall business strategy including sustainability strategy. It reports to the Supervisory Board of AllianzGI.

Management and Supervisory Board members receive regular strategy updates of AllianzGI business and this includes a section on the latest strategic updates regarding sustainability, including climate change – one of our strategic topics.

2. Our sustainability governance structure

AllianzGI has clearly established lines of responsibility for sustainability.

Sustainability governance structure

The Executive Committee is the central governance and decision-making body for AllianzGI and other relevant committees on sustainability issues including climate change.

The Investment Executive Committee has responsibility for all sustainability-related topics including climate change within investments.

The Head of Sustainable and Impact Investing reports to the Global Head of Investment, who is a member of the Executive Committee, thus anchoring sustainable and impact investing at the top of the organisation.

The **Sustainable Investing Working Group** ensures that high-quality and, sustainable investing standards are being applied across the firm and allows especially for cross-asset class topics to be considered. It is a forum to share best practices and discuss, agree and execute on sustainable investing activities including climate change at AllianzGI. It also advises the Investment Executive Committee and other relevant committees on sustainability issues including climate change.

The **Global Proxy Voting Committee** ensures that our global proxy voting practices reflect the industry best practice and that we fulfil our fiduciary and stewardship duties on behalf of our clients.

The **Reputational Risk Working Group** comprises global representatives from across functions who meet semi-annually to proactively discuss topics that may pose a reputational risk and determine whether further action is necessary, including escalation to senior management. Additionally, the group may convene or communicate on an ad hoc basis topics that require a collaborative sounding board for establishing a need for action.

The **International Management Group** acts as a sounding board and communication platform for strategy and decisions firm-wide.

03 Strategy

AllianzGI has been at the forefront of responsible investing since the launch of our first sustainable investing portfolio in 1999. Climate change is arguably the greatest challenge of our time for all our stakeholders and, given the volume of assets we manage, we can be of some influence in driving positive change. As an asset manager, sustainability considerations in general, and climate change considerations in particular, are an integral part of our investment strategy, investment processes and investment product development as well as business operations. Acknowledging that there is an urgent action required to accelerate the transition towards global net zero emissions, AllianzGI was proud to join and become a committed member of the Net Zero Asset Managers initiative in 2021. We are supporting the goal of net-zero GHG emissions by 2050 in line with efforts to limit global warming to 1.5°C. We also encourage investee companies to integrate climate change considerations in their strategic decision-making process.

03.1 Strategy

1. Climate-related risks and opportunities the organisation has identified over the short, medium, and long term

We see a diverse set of both transition and physical climate risks and opportunities that may pose a significant risk or opportunity to us in the short, medium, and long term.

Climate-related risks

Climate-related risks are developments that may pose a significant risk to the value of assets we manage, the standing of investment products we sell, and our corporate activity.

In the short-term we see the policies and reputational risks of our investee companies as the leading climate-related risks that may affect investments. In the mid term, market and technology risks of climate transition may develop more substantially, and acute physical risk might emerge more frequently. With a long-term perspective, we are of the view that chronic physical climate risks can become more substantial.

Term	Investments	Products	Corporate
Short	**Transition risk: policy and reputational risks** In the next two years, increased policy ambition can be expected to reach the Paris Agreement goals[1], which is likely to translate into stricter regulatory and policy action and thus potentially increase company compliance costs or exert reputational pressure on company and sector climate profiles. A rise in EU Emissions Certificate prices is an example of such risk. With more public attention on climate change, some business models will not meet the objectives of a Paris-Aligned[2] world, which may transmit by losing a "social licence to operate"[3] or reputational risk eg, via movements like "Extinction Rebellion". Both risks can affect the value of investments due to decreased growth expectations or increased cost expectations.	**Transition risk: shift in market demand** With increased attention on climate-related matters from both retail and institutional clients, addressing climate topics insufficiently in our investment process and products might put them at risk of falling out of demand.	**Reputational risk** If the public and relevant stakeholders see that insufficient action is being taken to address material climate-related issues, it might affect the intangible brand value and capital availability on our operating entity, as well as having a knock-on group-wide effect as AllianzGI is part of Allianz SE.
Medium	**Transition risk: market, technology and physical climate risk (acute)** Larger economic trends like energy transition and further policy action are likely to exacerbate pressure in the next two to 10 years on fossil fuel producers. Higher costs may occur in areas increasingly exposed to physical climate risks. Additionally, policy and customer preference changes are likely to amplify the shift in market demand towards companies with more sustainable services and/or products. Some of the costliest losses from extreme weather events and natural disasters have occurred in recent years. Such acute physical climate risks are likely to increase insurance premiums to entities in the areas affected. Thus, investments exposed to areas prone to increasing acute physical risks may either experience higher insurance costs or increased expenditure to adapt to such events.		**Transition risk: policy** If there is an increase in regulatory pressure on fossil fuel energy, this may transmit itself through additional operational costs on using such energy sources versus non-fossil based fuels. In addition, more required disclosure on climate change by regulators would increase the compliance costs.
Long	**Physical climate risk (chronic)** In areas exposed to high physical risks, due to more frequent extreme weather events anticipated in the next 10 years, there may be an increase in disruption to business services leading to a higher risk of economic distress and future losses. The locked-in emissions in the atmosphere are predicted to lead to more frequent and severe extreme weather events,[4] which could destroy assets or disrupt business services leading to a potential loss of investment. The same causes can lead to economic distress in countries exposed to physical climate risks, which may result in re-pricing of investments linked to sovereigns.		**Physical climate risk (chronic)** The locked-in emissions in the atmosphere are predicted to lead to more frequent and severe extreme weather events,[5] which can put our business operations in affected areas at risk of disruption.

1. "Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change".
Source: Paris Agreement
2. Paris-Aligned refers to a world meeting the objectives set out by the Paris Agreement (UNFCCC, 2015)
3. Warhurst, A. 2001 Corporate citizenship and corporate social investment: Drivers of tri-sector partnerships. J. Corporate Citizenship 1, 57–73
4. Source: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf
5. Source: https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Full_Report_High_Res.pdf

03.1 Strategy

Climate-related opportunities

Climate-related opportunities are developments that may pose an upside potential to the value of assets we manage, enhance the market positioning of our investment products, and optimise our corporate activity.

In the short term we see opportunities that enable and benefit from the climate transition as the leading climate-related opportunities that may affect investments. In the mid and long term, the climate-related investment opportunities are arising from competitive positioning and climate innovation.

In summary, our key assumptions across the three climate risk factors are as follows. We consider the transition risk of corporates moving into a low-carbon emitting economy to be broad and to go beyond energy supply transition only. Transition will concern energy-using processes and products, agriculture and forestry, waste management etc. We are in this transition already and it is far from over; business disruption looms. According to the third volume of assessment report published by the Intergovernmental Panel on Climate Change (IPCC),[1] the window to prevent global temperatures from rising by more than 1.5°C above pre-industrial averages is rapidly closing. In our view it is also not clear whether, despite large scale efforts following COP 21, we will avoid the 2°C warming which is the level that must be avoided according to scientists. It is likely that both mitigation and adaptation will have major ramifications for investors.

Term	Investments	Products	Corporate
Short	**Resource efficiency** Opportunities for businesses and economies that enable and benefit from the climate transition towards cleaner energy generation, efficient energy storage and sustainable energy consumption. This not only would decrease costs per unit produced but the freed-up capacity can be leveraged for sustainable business growth, thus benefitting the investment value. **Energy transition** With an increasing policy risk on energy transition, renewable energy is likely to benefit if additional costs are imposed on emissions-heavy energy and fuel sources. Thus, a climate opportunity emerges within businesses that either produce renewable energy, as the demand for it will increase, or businesses using renewable energy will increase, because peers using energy affected by policy impacts would experience relatively higher costs.	**Climate transition: shift in market demand** With increased attention on climate-related matters from both retail and institutional clients, amending existing investment processes and products to strengthen how they address climate topics and innovating new investment products targeting climate change can lead to an increase in market share and business growth.	**Climate transition** Reducing emissions from our business operations by improving energy efficiency can also lead to increased savings on operational expenses.
Medium	The climate transition and emergence of more prevalent physical climate risks is likely to bring a transformation unlocking new sources of revenue, change in competitive positioning of businesses and economies, emerging leaders in climate innovation, and significant reputation advantages, all of which may result in opportunities in investments. Companies already aligned with Paris Agreement targets may benefit from a "first-mover" advantage in reputation and attracting new financing at potentially lower rates. Likewise, companies showing credible transition efforts will likely benefit from cheaper financing e.g., bonds linked to climate key performance indices (KPIs). To achieve that new technological solutions will be required, and thus companies at the innovative edge may receive positive tailwinds, too. An example of a policy framework that will amplify these opportunities is the EU Taxonomy.		**Brand reputation** Improving reputation as a company actively tackling climate change and responsibly participating in climate transition can stand to benefit the intangible value of our brand globally and across communities.
Long	Furthermore, the change in consumer preferences globally, and the increased attention on climate change mitigation and adaptation, sustainable use of water, circular economy and waste management, and biodiversity are all themes likely to play a role in shaping the investment landscape.		

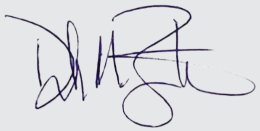
1. https://www.ipcc.ch/report/ar6/wg2/

03.2 Strategy

After joining the Net Zero Asset Managers initiative in 2021, we embarked on our net-zero journey. One of our priorities was to partner with Allianz, our largest client, to support its net-zero ambitions across both public and private markets investments. This is just a first step. I'm excited about the next steps, which will involve bringing third-party client assets into scope. We will continue to engage actively with our institutional clients and distributors on integrating net-zero objectives in their investments and into our mutual funds.

Deborah Zurkow

Global Head of Investments



2. Impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning

A net-zero asset manager

AllianzGI commits to supporting the goal of net-zero GHG emissions by 2050, in line with global efforts to limit warming to 1.5°C ("net zero emissions by 2050 or sooner"). This is in line with the Paris Agreement which sets out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C. It also aims to strengthen countries' ability to deal with the impacts of climate change and support them in their efforts.

The NZAM initiative is a step change. It requires those actions, such as engagement, to be in line with the net-zero goal and anticipates increasing the scope of assets being managed in line with the net-zero goal until 100% is reached. AllianzGI was proud to join and become a committed member of the NZAM initiative in 2021. After becoming a NZAM signatory in 2021, we submitted first interim targets at the beginning of 2022. As the first step, these targets cover listed equity, corporate debt, infrastructure equity, and infrastructure debt and reflect the targets set in 2021 by Allianz Group for its proprietary assets based on its commitment as a member of the UN-convened Net-Zero Asset Owner Alliance.

The assets in-scope for these targets represent 12% of AllianzGI's overall assets under management. The submitted targets include:

Listed equity and corporate bonds – a 25% GHG reduction, scopes 1 and 2, by the end of 2024 (baseline year: 2019).

Infrastructure equity – a 28% GHG reduction, scopes 1 and 2, by the end of 2025 (baseline year: 2020).

Infrastructure debt – our target is to grow the share of low-emitting and EU taxonomy-eligible assets.

As part of our commitment to a sustainable future, we manage the environmental impacts of our operations and aim to be a role model in delivering our own targets on climate change and the environment. Our efforts contribute to Allianz Group goals, including working towards sourcing 100% renewable electricity for our operations by 2023 and reducing CO_2 emissions by 38% per employee by 2025 against a 2019 baseline. For more information, see **section 5 Metrics and targets**.

A targeted exclusion policy

We acknowledge that thermal coal is the biggest contributor to climate change. AllianzGI has a firm-wide exclusion policy[1] that includes a dedicated thermal coal policy. For more information, see **section 4.2**.

Steps taken to address the impact of climate-related risks and opportunities

A key pillar in our philosophy surrounding climate investments today is that the public corporate disclosures on climate are not yet highly developed nor in-depth enough to be sufficient for simple rules-based strategies. For this reason, we believe that there exists market inefficiencies on climate risks and opportunities, for which active research and corporate engagement are necessary.

Our dedicated and experienced Sustainability Research team analyzes the material implications of climate change to the economy, sectors' drivers and business models of individual companies. We research the following:

1.This Policy is applicable to mutual funds for which Allianz Global Investors is acting as management company. For institutional funds and mandates, application of the Policy including its implementation date is subject to the consent of the respective clients.

For more information on the Net-Zero Asset Owner Alliance commitment of Allianz Group, please see the Allianz Group Sustainability Report

03.2 Strategy

- How and where global warming as well as increasing extreme weather events stress the food system and the potential economic and social repercussions across the value chain.
- What are the key measures and challenges of the automotive sector to address its scope 3 emissions (use of products).
- By reviewing an energy production or distribution player, how its methane performance and related emissions reduction targets aligned with the latest methane emissions pathway set by the IEA and whether investment plans in methane leakage prevention systems are credible.

AllianzGI Sustainability Research team conducts its proprietary research from 3 angles – themes, sectors and companies. These three angles are closely linked, and an iterative process ensures that analysis in one area informs the others, evolving the breadth and depth of our understanding of companies' sustainability profiles – and how to measure and engage them.

The derived impactful investment insights are articulated in views, which are shared with the investment platform via a collaboration platform, as well as through discussions and presentations, empowering the investment professionals to integrate these in the respective investment decisions. AllianzGI Sustainability Research findings are also shared externally over thematic papers, either about specific climate issues within our sustainability thematic pillar dedicated to Climate or about topics with strong interplay across one or more of the other AllianzGI thematic pillars: Planetary Boundaries and Inclusive Capitalism.

Research examples

Thematic research: One example is our introductory paper on climate change, published in 2021, in which we discuss the different elements of the notion of net zero that are complex and, in some cases, misunderstood. Its purpose was to explore in detail the various terms and definitions used by stakeholders in relation to climate strategies, how best to assess alignment with the Paris Agreement and how to identify areas on which to develop analysis and engagement. In 2021, we started to produce research papers on specific issues to stimulate discussion, form our view and articulate it to our portfolio entities, clients and other stakeholders. A full selection of our thematic research is available on our website.

Sector research: When assessing the impact of carbon emissions at a global level, we identified oil and gas as one of the most exposed sectors. As a result, we analysed and defined criteria which can be used at company level to assess energy transition strategy (e.g., whether the company has a decarbonisation policy).

Company research: For a company in the tyre industry, our analysis of climate related factors scrutinizes whether scope 3 emissions, representing more than 95% of total emissions for this activity are disclosed and integrated in the emissions reduction targets. In terms of the concrete measures to deliver on climate targets, we verify the investment budget allocated to energy efficiency in the operations including the value chain especially the transport of the tyres. Another strong action lever on emissions within scope 3 is the life cycle management of the tyres up to the end of life with recyclability improvement. The risk/opportunity assessment looks at the strategy to adapt the product features to electric vehicles. Finally the actual GHG performance is compared to peers for the emission intensity reduction pace. This assessment flows into the final sustainability rating of the company and can trigger our decision to initiate an engagement.

AllianzGI offers climate-thematic and impact-focused funds such as climate transition equity, smart energy equity, green bonds, as well as private market investments in renewable energy and blended finance solutions that tackle climate issues in emerging markets. As these examples show, we integrate climate risk and opportunities into public and private markets offerings.

03.2 Strategy

Climate Transition
Our Climate Transition capabilities are managed under a dynamic low-carbon investment strategy which aims over time to be in line with the objective of limiting global warming to 1.5°C and 2°C. This approach involves sustainable development, likely to impact the business model and the growth and risk profile of companies across various business sectors, which also create potential medium and long-term investment opportunities. Our approach aims to limit exposure to carbon risk by ensuring the reduction of its impact on climate over the recommended investment horizon, without applying any sector exclusions targeting industries generating high GHG emissions.

The stock-picking strategy targets two types of companies:

1. Companies demonstrating dynamic progress in terms of climate impact performance by aligning their strategies with energy transition objectives and therefore reducing risks incurred by implementing this type of transition.
2. Companies involved in businesses, products or services which reduce GHG emissions in the real economy and which, therefore, benefit from opportunities provided by energy transition.

Smart Energy
Smart Energy looks for companies around the globe that are enablers and beneficiaries of the energy transition process.

Energy transition is already in motion, and it aims to address our energy challenges by transforming the global energy sector from fossil-based to carbon-neutral by 2050.[1]

To do this, new infrastructure, and disruptive new solutions across a multitude of industries and sectors are required. This market opportunity is expected to reach USD 15 trillion by 2050,[2] translating into a wide range of robust investment opportunities with the potential to provide investors with sustainable long-term earnings and a cleaner and greener portfolio. Allianz Smart Energy invests in those key enablers contributing to the energy transition process. We invest across three distinct topics and an array of underlying areas:

1. Cleaner energy generation – e.g. renewables and back-up power
2. Efficient energy storage – e.g., lithium-ion chemistry, hydrogen technology and energy storage systems
3. Sustainable energy consumption – e.g., electric transportation, efficient buildings, smart grid

Green Bond
Our commitment is to contribute positively to the climate transition. Our investments in green bonds aims to mobilise capital to finance the energy and climate transition. By using the Green Bond market segment, the strategy favours the reallocation of investments through a lower carbon-intensive economy which is an important challenge in the fight against climate change.

The management team is conscious that the investments needed to cope with the objectives of a maximum 1.5°C and 2°C increase compared to pre-industrial times are huge. They aim to actively contribute to this capital market mobilisation with this strategy.

This capability being an impact strategy, the investment team does not exclude from the investment universe the issuers with the highest potential of improvement, the highest potential impact. This strong positioning is in line with the ambitious transition objectives of the Paris Agreement for climate.

The most important step of climate change integration in portfolio construction begins with the analysis of the bond structure to determine whether it is in line with the Green Bond Principles or not.

Eligibility criteria under which bonds are considered as "green bonds" include:

- A formal statement in the use of proceeds section of the bond prospectus stating that the proceeds will be used to finance "green"/climate projects.
- Internal process by the issuer to identify qualifying projects based on sound methodology and clear criteria.
- Management of the proceeds to make sure that they will be allocated to the identified projects and not to other general expenses/investments.
- Reporting, at least annually, of the status of the use of proceeds, the status of projects and the actual environmental impact.

The evaluation is followed by the analysis of the projects financed with the green bond issuance proceeds. AllianzGI has been a partner of the Climate Bond Initiative since 2015.

This allows the fund to keep in its investment universe issuers with an ESG profile which may not be best-in-class but which have a strong improvement potential and are willing to leverage on it.

1. https://www.irena.org/-/media/Files/IRENA/Agency/ Publication/2019/Apr/IRENA_Global_Energy_Transformation_2019.pdf
2. https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2019/Apr/IRENA_Global_ Energy_Transformation_2019.pdf

03.2 Strategy

Renewable energy
Allianz Capital Partners, our private equity business, has a dedicated renewable energy strategy which it manages for both Allianz and third party clients. The team invests in the energy infrastructure sector with a focus on renewable energy assets like wind and photovoltaic plants, and as a result contributes to the generation of renewable energy and avoidance of carbon emissions, both of which are actively measured and monitored. The impact on carbon emissions reduction of the acquired assets is compared to the regular country specific energy mixes, including traditional energy sectors. In the calculation the annual production per asset is used to calculate the actual asset specific carbon emissions and to compare these emissions to the theoretical emissions assuming the amount of energy would have been produced in the country specific energy mix.

For the European geographically focused capabilities, the information on emissions per MWh for each country is based on the "total supplier mix", which is taken from the study European Residual Mixes. Results of the calculation of Residual Mixes for the calendar year 2020 were published by the Association of Issuing Bodies on 31 May 2021 (Version 1.0).

For the US geographically focused capabilities, equivalent numbers were taken from the report "U.S. Energy-Related Carbon Dioxide Emissions, 2020" posted by the U.S Energy Information Administration in December 2021. As of today, our carbon and ESG reporting fulfil all regulatory requirements stemming from the latest EU Taxonomy regulations and are aligned with the French Energy Transition Law in its article 173, as well as the regulations arising from our compliance with minimum social safeguards. The list of these regulations includes, but is not limited to, OECD guidelines for multinational enterprises, UN guiding Principles on Business and Human Rights and the ILO declaration on fundamental principles and rights at work.

Emerging Markets Climate Action Fund (EMCAF)
In November 2021, the European Investment Bank (EIB) and AllianzGI launched the Emerging Market Climate Action investment approach in a public-private partnership, with the governments of Germany and Luxembourg, the Nordic Development Fund, Allianz, Folksam and EIB as anchor investors. EMCAF will invest in climate-focused investment funds and projects active in emerging markets and developing countries. Its focus will be on climate mitigation, climate adaptation, and access to electricity. This approach aspires to become a European flagship impact investing initiative, mobilising substantial amounts of private capital to get climate action projects off the ground in Africa, Asia, Latin America and the Middle East. EMCAF are expected to support a significant amount of new clean energy capacity globally.

EMCAF targets specialised investments to support projects like onshore windfarms and solar photovoltaic plants, or small- and medium-sized hydropower plants. It could also support energy efficiency projects in housing or industry, or projects bringing environmental or resource efficiency benefits. To help emerging and developing countries to adapt to the impacts of climate change, the approach could also finance projects that support cities and their public transport.

Managed Co-Lending Portfolio Program (MCPP) One Planet
At the UN Climate Conference in Glasgow in November 2021, AllianzGI, Allianz SE and International Finance Corporation (IFC), a member of the World Bank Group, announced they will provide USD 3 billion to private enterprises in developing economies through a Managed Co-Lending Portfolio Program (MCPP). The investors' contributions will be combined with IFC's own funds, to scale up climate-responsible financing in emerging markets which is aligned with the Paris agreement. MCPP One Planet, is the world's first cross-sectoral portfolio of emerging-market loans aligned with the Paris Agreement, and will enable large institutional investors to increase the share of their portfolios aimed at climate-resilient development.

03.2 Strategy

Our response – active industry and policy engagement

As a part of our support for TCFD, we recognise the necessity for a broader change and alignment in the investment industry around climate risks and opportunities. We believe that this can bring several long-term benefits to our investors: more attention and efforts from investees due to more aligned climate expectations, more precise measurement through clear requirements on climate scenarios that meet investor needs, and more refined climate investment frameworks.

Industry consultations

We responded to consultations from local and regional authorities including the European Commission, the US Securities and Exchange Commission (SEC), the Financial Conduct Authority in the UK, the Monetary Authority of Singapore and the Securities and Futures Commission of Hong Kong (SFC) on various sustainability topics including climate. Our responses set out our views and recommendations on these topics.

Sponsoring industry dialogue

AllianzGI continues to sponsor major events demonstrating our commitment to tackling climate change in the hope of working towards a greener future, and accelerating our sustainable investment drive. In 2021, we sponsored, among others, the following events:

The PRI Digital Conference (18-21 October 2021): AllianzGI has a long association with United Nations Principles for Responsible Investment (UN PRI). We were one of the first 50 asset managers globally to become a signatory to the PRI in 2007. The PRI Digital Conference brought investors, policymakers and other sustainable finance stakeholders together from around the world for an online exchange of views and ideas. The theme was building a sustainable future, and this covered ESG issues such as climate change, as well as the latest updates in responsible investment practices. More information including agenda and recorded sessions can be found here.

The World Climate Summit – the investment equivalent of COP 2021 (7-8 November 2021): the summit was a critical platform for responding to the growing climate challenge, promoting relevant solutions, innovations and best practice networks. It functioned as a cross-sectoral collaboration and solutions-focused platform for government and project development stakeholders to mobilise and present potential climate investments and financing. During this two-day in-person and digital hybrid Summit, Matt Christensen, our Global Head of Sustainable and Impact Investing, gave a keynote speech and joined a panel as part of the closing session on 7 November discussing: The Climate Decade – Collaborating to Overcome Challenges and Maximise Opportunities for Transformational Action by 2030.

Case study 1

SFC consultation on climate risk

In October 2020, the Hong Kong SFC published a consultation paper on the Management and Disclosure of Climate-related Risks by Fund Managers. In the consultation paper, the SFC has proposed to amend the Fund Manager Code of Conduct (FMCC) to introduce requirements for fund managers to take climate-related risks into consideration in their investment and risk management processes as well as to make appropriate disclosures to meet investors' growing demand for climate risk information and to combat "greenwashing". In our consultation feedback we provided our views and recommendations on multiple topics, for instance referencing the TCFD's recommendations for the SFC's proposed requirements, scope of requirements for climate related risks, and baseline requirements and standards.

Read more about the AllianzGI response to Hong Kong SFC

Case study 2

SEC consultation on climate change disclosures

In June 2021, AllianzGI provided feedback to the US Securities and Exchange Commission's consultation on climate change disclosures. Our main messages were:

- A need for global alignment on ESG and climate disclosure.
- Both financial materiality and environmental and social materiality should be taken into consideration. We also emphasised that the results of broadly established pioneering work, experience and accumulated expertise of organisations already dedicated to climate disclosure, especially the TCFD framework, become cornerstones of the global standards and national requirements for climate and potentially also other ESG-related disclosures.

Read more about the AllianzGI response to the SEC

Additionally, we welcome the SEC's proposal for climate disclosures, announced in March 2021. In our view it will enable more robust, reliable and comparable information on climate-related risks facing public companies. We will provide our feedback and we encourage companies, investors and other stakeholders to take the opportunity to provide their feedback through this consultation and help shape the disclosure requirements.

03.2 Strategy

Climate-related initiatives

AllianzGI actively participates in various international initiatives focusing on climate change from investor's perspective.

Initiative	Allianz Global Investors' position	Description	Joined the initiative
Asian Investor Group on Climate Change	Member	AIGCC is an initiative to create awareness among Asia's asset owners and financial institutions about the risks and opportunities associated with climate change and low carbon investing.	2018
	Member Engagement and Policy Working Group	The work this group undertakes on engagement is complementary and in parallel with company engagement as part of Climate Action 100+. Given the interconnected nature of company engagement and government policy in the region, combining the focus of this working group will initially enable investors to understand how their increasingly important role in policy advocacy can also help drive more ambitious corporate climate action.	2021
	Member Paris Aligned Investment Working Group	The group focuses on developing investor solutions for facilitating the transition to a net-zero emissions economy in Asia, and to track global progress. It identifies and collates what institutional-grade low carbon opportunities are available in the region and how they can be scaled up based on research.	2021
Carbon Disclosure Project	Investor Member	International non-profit organization that promotes carbon reporting by requesting information from leading companies about their GHG emissions and other environmental impacts.	2015
Climate Action 100+	Participant	The Climate Action 100+ is an investor-led initiative to ensure the world's largest corporate greenhouse gas emitters take necessary action on climate change.	2017
Climate Bonds Initiative	Partner	International, investor-focused not-for-profit. It's the only organisation in the world working solely on mobilizing the $100 trillion bond market for climate change solutions.	2015
Climate Finance Leadership Initiative	Founding Member	CFLI aims to unlock climate finance in emerging markets, thereby mobilizing private capital in order to help finance the transition towards a more sustainable tomorrow.	2019
Green Bond Principles	Member	The GBP are intended for broad use by the market: they provide issuers guidance on the key components involved in launching a credible Green Bond; they aid investors by ensuring availability of information necessary to evaluate the environmental impact of their Green Bond investments; and they assist underwriters by moving the market towards standard disclosures which will facilitate transactions.	2015
	Member Advisory Council Green Bonds and Social Bonds	The role of the Advisory Council is to advise the Executive Committee, to increase its market awareness and outreach, and to enable further engagement with specific membership categories and observers.	2019
Initiative Climat International	Member	The iCI represents a collective commitment to understand and reduce carbon emissions of private-equity based companies and secure sustainable investment performance.	2021
Institutional Investors Group on Climate Change	Member	IIGCC provides investors with a collaborative platform to encourage public policies, investment practices, and corporate behaviour that address long-term risks and opportunities associated with climate change.	2016
	Member Climate Solutions Working Group	A dedicated working group to develop best practice and support members to increase investment in climate solutions. This group oversees analytical work on defining pathways and setting targets for investment in climate solutions, support members to set targets and make commitments in relation to investment in climate solutions, and more broadly share best practice and build capability for investing in climate solutions.	2021

03.2 Strategy

Initiative	Allianz Global Investors' position	Description	Joined the initiative
Institutional Investors Group on Climate Change	Member Net Zero Technical Working Group	The group contributes to the Paris Aligned Investor initiative (PAII) by addressing analytical gaps where further development of methodologies and approaches is required to support implementation of the Framework. Topics include development of target setting methodologies, use of offsetting, Scope 3 emissions inclusion and measurement. The Net Zero technical working group takes forward development and oversight of this work.	2021
	Member Net Zero Stewardship Working Group	This working group aims to provide a forum to help investors view how best to operationalize "net zero stewardship", and develop key tools to enable progress and work with proxy advisors to ensure they are ready to support investors.	2021
Net Zero Asset Managers initiative	Signatory	The Net Zero Asset Managers initiative is an international group of asset managers committed to supporting the goal of net zero greenhouse gas emissions by 2050 or sooner, in line with global efforts to limit warming to 1.5 degrees Celsius.	2021
One Planet Asset Manager	Member	OPAM was launched to support the members of the Ones Planet Sovereign Wealth Fund (OPSWF) in their implementation of the OPSWF Framework. The goal is to acclerate the understanding and integration of the implications of climate-related risks and opportunities within long-term investment portfolios through sharing of investment practices and expertise.	2021
	Member Steering Committee	The steering committee brings together technical leadership and commitment by its participants aiming to further support the implementation of the OPSWF framework. Thereby this group contributes to actively shaping the future of the initiative.	2021
Task Force on Climate-Related Financial Disclosures	Supporter	The TCFD seeks to develop recommendations for voluntary climate-related financial disclosures that are consistent, comparable, reliable, clear, and efficient, and provide decision-useful information to lenders, insurers, and investors.	2019

Complete overview of our sustainability initiative and memberships can be found here

Case study 3

Climate Action 100+

We are a member of Climate Action 100+. In line with our thematic focus on climate, we supported a collaborative engagement letter that asked a US company to add a discussion item to its Annual General Meeting (AGM) agenda about its climate change commitments, as well as adopting a routine advisory vote on its climate strategy. Given our limited direct exposure, adding our support to a collective engagement was likely to have a greater impact. With the addition of discussion items to the agenda – as well as a formal response from the company – it was clear that climate had become a board-level issue and that continued engagement would be beneficial.

Case study 4

One Planet Asset Manager (OPAM) initiative

OPAM initiative was first launched to support the members of One Planet Sovereign Wealth Funds in their implementation of the One Planet Sovereign Wealth (OPSWF) framework. The goal is to accelerate the understanding and integration of the implications of climate-related risks and opportunities within long-term investment portfolios through sharing of investment practices and expertise. The OPSWF network comprises 43 of the world's largest institutional investors with more than USD 36 trillion in AuM and ownership. AllianzGI was the first German asset manager to join the initiative. We are committed to actively collaborating within the OPSWF members and to engaging with other key actors – including standard setters, regulators and the broader industry – to further the framework's objectives.

04
Risk management

1. Organisation's processes for identifying and assessing climate related risks

AllianzGI believes that it is crucial to be able to identify and assess sustainability risks as they can impact the investment performance of portfolios negatively. More specifically, the risks that can arise from climate change (physical and transition risks) may result in significant economic and financial losses and even impact financial stability.

Currently, a growing number of methodologies aiming at estimating climate-related risks are being developed and can sometimes lead to similar outputs despite having differing inputs and methodologies, such as the global warming potential metrics. To obtain more relevant and comparable results, we believe that a common set of standards on climate scenario assumptions is needed for a globally aligned climate risk assessment, such as:

- Be associated with limiting warming to 1.5°C above pre-industrial levels with at least 50% probability (or at least well below 2°C with >66% probability)
- Reach global net zero emissions by 2050, or soon after
- Provide differentiated pathway information for regions and sectors which may require net zero emissions earlier or later, consistent with the global goal
- Have a global peak emissions year of the current year or later
- Ideally be (or linked to) a multi-sector model, taking account of all emissions sources
- Rely on limited volume of negative emissions technologies (NETs) to 2050

At AllianzGI, we are developing a tool to measure physical and transition risks at both company and portfolio level.

In the listed strategies, we assess physical risks using a third party data provider. For each company, seven climate hazards are considered: water stress, heatwave, cold wave, hurricane, flood, sea level rise and wildfire. These risks are assessed across three scenarios based on IPCC Representative Concentration Pathway (low, moderate and high climate change scenario) and three time horizons (2020, 2030 and 2050), which causes the score attributed to each of these risks to vary.

Depending on the company's activity, these risks are considered more or less material, and this is reflected in a sensitivity adjusted composite physical risk score. This dataset provides us some valuable information at company level that we then aggregate at portfolio level thanks to an internal tool we developed. Portfolio managers can thus evaluate whether their portfolios have high exposures to physical risks and understand which companies are most at risk.

We are also assessing transition risks thanks to scenarios provided by an external data provider. For each company, a trajectory is built and combines historical data and projected emissions on Scopes 1 and 2 that go up to 2025. Along with this trajectory, 2°C and well-below 2°C pathways are given, allowing us to see if a company's expected future emissions are in line with a low carbon economy.

04.1 Risk management

Our tool aggregates these data at portfolio level, so that portfolio managers can assess the alignment of their portfolio with a 2°C or well below 2°C pathway, and flag the most misaligned companies they are invested in.

In private markets, these risks are considered during the origination and due diligence process. Depending on the individual investment strategy, the investment teams review specialist reports commissioned by independent advisors, conduct in-depth discussions with the management and/or existing equity owners, and seek advice from specialist Sustainability research colleagues within AllianzGI or Allianz SE. The due diligence process is used to identify relevant climate risks for each investment. A bespoke analysis is subsequently performed if necessary. This can include both qualitative analysis (eg, Q&A with the management or independent advisers) or quantitative analysis (eg, building a cash-flow operating model for a single company and sensitising the inputs). The teams will review the investment's carbon footprint and trends; GHG emission reduction targets with validation by science-based sources; the company's net zero carbon timeline plans; use of carbon offsets to reduce net footprint; and the company's approach to climate transition risk and physical climate risk. The private markets teams, in both direct and indirect strategies, have a strong program of engagement to encourage existing investments to move towards net-zero pathways, and in many case new investments must have a transition plan in place.

Climate scenario analysis and stress-testing
Assessing the risk and opportunities related to climate change through scenario analysis is a crucial priority across the financial services industry. AllianzGI closely monitors regulatory developments and participates in various industry working groups related to this topics.

In 2021, we have been developing tools aiming at integrating climate change in our analysis. We are now performing and monitoring a quarterly test on most all of the funds managed by AllianzGI, with an annual review of the methodology.

Name	Key assumptions	Temperature rise	Year of impact
Scenario A	Sudden disorderly transition (Minsky moment) that follows from rapid global action and policies	Below 2° C by 2100	2022
Scenario B	Long-term orderly transition that is broadly in line with the Paris Agreement	Well below 2°C by 2100	2050
Scenario C	No transition and a continuation of current policy trends	Exceeding 4°C by 2100	2100

The stress test is based on the three Bank of England climate scenarios published in 2019 (Bank of England General Insurance Stress Test 2019). Two of the scenarios assume that the Paris Agreement's targets are achieved on different trajectories, while the last scenario assumes that the targets are not met, resulting in a major impact on global climate.

The results obtained provided some valuable insights as they allowed us to see the potential negative financial impacts of both physical and transition risks on assets from at-risk sectors, such as fuel extraction, power generation, and agriculture, but also the opportunities (eg, electric vehicles, renewables).

As mentioned above, we are also now providing a climate scenario assessment at portfolio and company level to some of our portfolio managers through an internal tool, enabling them to compare the projected trajectory of GHG emissions with a 2°C and well below 2°C aligned trajectory of their portfolios and to view the detail by company.

These newly created tools allow us to assess the potential climate risks of our investees and portfolio profiles surrounding climate change mitigation and adaptation, but we are always working at developing and creating new ways to further integrate an assessment of climate risks to our management.

04.2 Risk management

2. Organisation's processes for managing climate-related risks

When it comes to climate data, we rely significantly on the disclosure provided by companies. Therefore, it is one of the key topics for us when engaging with companies. Over time, we expect the quality of the disclosure to improve, allowing us to report in a more meaningful way.

As part of our engagement with companies on climate issues, we are encouraging them to report on TCFD and commit to Science Based Targets (SBT) to lead to better quality of disclosures provided to our investors, helping them to monitor their progress and meet their climate goals with more accuracy. We also support and participate in the Climate 100+ initiative.

Beyond engagement, climate-related risks are considered through AllianzGI's sustainability risk management strategy, which was launched in 2021 and addresses two dimensions:

Analysis and management of sustainability risks

A sustainability risk is defined by the EU regulation on sustainability-related disclosures[1] in the financial services sector (SFDR) as "environmental, social or governance event or condition that, if it occurs, could cause an actual or a potential material negative impact on the value of the investment".

For publicly listed asset classes, external sustainability research data and/or internal research and analysis are used. These risks are then considered by the investment manager in the investment process.

For private market assets classes, sustainability risks are considered throughout both the investment process and ongoing asset management activities. They are also often flagged through sustainability risks guidelines (based on international best-practice standards) or using minimum exclusion lists. When a sustainability risk is detected during the origination process, the investment team can use several methods to mitigate and manage these identified risks, whether through commercial terms or documenting specific conditions, or by rejecting the transaction if the sustainability risk are deemed to be insufficiently mitigated. Investments are actively monitored through the asset management process, responding to materialising sustainability risks quickly and decisively through engagement with the management or sponsors of the companies in which AllianzGI invests on behalf of our clients.

Analysis and consideration in the investment process of principal adverse impacts

Principal Adverse Impacts (PAI), which have also been introduced by the SFDR are defined as negative impacts on environmental, social and employee matters or human rights, and/or impacts which may be linked to governance issues.

For listed equities and corporate fixed income assets, a regular portfolio screening of principal adverse impact is performed along selected key performance indicators, including climate change-relevant indicators, such as carbon emissions (absolute and relative), whether the company has committed to any decarbonisation targets, and exposure to sectors that are affecting climate change more than other sectors.

For private markets investments, principal adverse impacts are considered during the origination and structuring phases, often through project- and fund-specific due diligence questionnaires. Additionally, many of AllianzGI's private market assets are subject to the Allianz ESG Integration Framework, which sets out criteria to be considered and met when investing in particular sensitive business areas.

Sustainability risks and principal adverse impacts are monitored and assessed using our internal sustainability risk assessment tool called ESG Hub. It is accessible to all of our portfolio managers, and enables them to find reports on the sustainability risk profile of each of their portfolios. These reports include ESG measures as well as principal adverse impact indicators, giving the portfolio managers transparency by:

- Providing a view of the overall portfolio's sustainability risk profile
- Highlighting potential E, S, G pillar or sector concentration risks
- Outlining the individual holdings from which tail risks derive

The data in the ESG Hub is updated on a monthly basis and past reports remain accessible, allowing the portfolio managers to track the evolution of the sustainability risk profile of their portfolios and single indicators within them.

The following sample images depict dashboards which are available for portfolio managers in the ESG Hub.

1.Sustainable Finance Disclosure Regulation (SFDR) (Regulation (EU) 2019/2088)

04.2 Risk management

The below sample images depict dashboards which are available for portfolio managers in the ESG Hub.

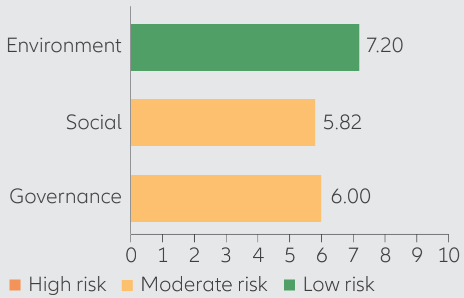
- The diagrams and statements below reflect the example inputs for shaping the portfolios. At any given time, other criteria may affect the investment strategy.
- The diagrams and statements below are provided for illustrative purposes only.

ESG dashboard overview

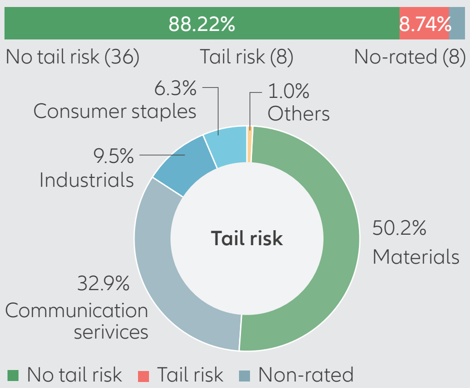
Portfolio snapshot

Total financed emissions (Scope 1+2)

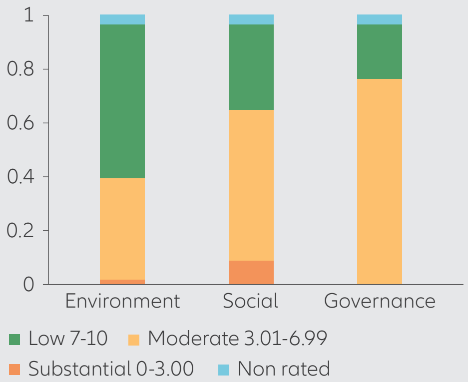
Overall portfolio ESG score



Overall portfolio tail risk



Portfolio E, S & G pillar risk distribution

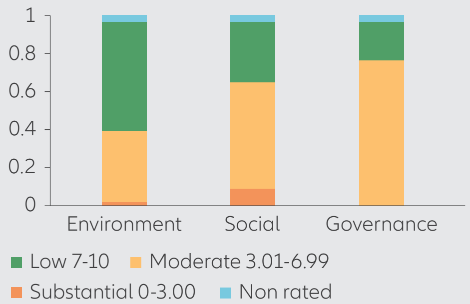


ESG risk dashboard

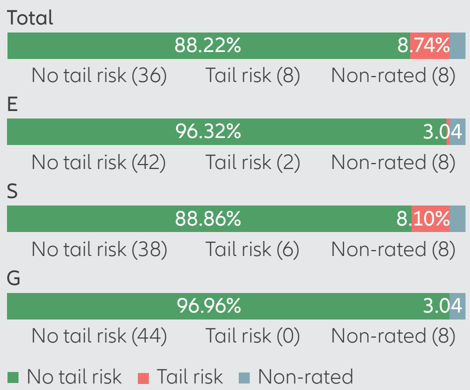
ESG tail risk overview (Score <=3)

	Absolute	in % of PF value
Environment	2	0.64
Social	6	8.1
Governance	0	0.00
Overall	8	8.74

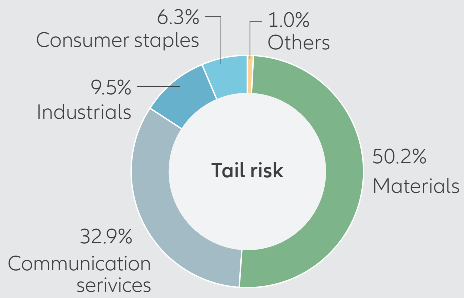
Portfolio E,S &G pillar distribution



ESG tail risk profile



Sector distribution of tail risky holdings (based on PF weight)



04.2 Risk management

PAI dashboard

Portfolio carbon footprint

91,762.77
tCO_2e

Total financed emissions (Scope 1+2)

Total financed emissions

91,762.77 tCO_2e
Sum of financed emissions Scope 1+2

Portfolio carbon intensity

45.63 tCO_2e per EUR m invested
Total financed emissions over total EQ and FI [corporate and agency] value

Weighted Average Carbon Intensity

143.85 tCO_2e per EUR m revenue
Emission over revenues weighted by share of total EQ and FI [corporate and agency] value

Coverage

96.7% of total Portfolio Value
Weighted from total NAV

99.24% of Weight of total issue assessed
Weight from total equity and fixed income [corporate and agency] value

Portfolio Principal Adverse Impact (PAIs) – Totals

	Fossil fuels any Tie	Thermal coal any Tie	Biodiv land use MGMT SCO	Labor compliance broad	Labor compliance core	Female directors	UNGC compliance	HR compliance	Carbon emissions reduction	Combined CEO chair	PAI Totals overall
Total # of PF holdings	2	1	0	0	0	3	0	0	14	1	16
Total % of PF value	1.69%	0.88%	0.00%	0.00%	0.00%	3.41%	0.00%	0.00%	18.18%	0.59%	19.65%

04.2 Risk management

Coal exclusions

Our new firm-wide exclusion policy is one of our key transition risk mitigation policies, and it is an example of our commitment to tackling climate change by divesting from the single largest source of carbon emissions. We have a firm-wide exclusion policy[1] that includes a dedicated thermal coal policy.

According to the International Energy Agency, thermal coal[2]-fired electricity generation is the single largest contributor to human-induced global temperature increase, accounting for about 30% of >1°C increase in global average annual surface temperatures above the pre-industrial levels already observed.[3] According to this policy, AllianzGI refrains from investing in companies that derive more than 30% of their annual revenue from thermal coal extraction, and companies where more than 30% of their electricity production is based on coal. This policy has become effective starting in December 2021 for all existing funds for which AllianzGI acts as management company and has been the default policy for all new funds and mandates after this date, subject to authorisation of the relevant jurisdictions and completion of relevant documentation. This new exclusion policy is a further example of AllianzGI's commitment to tackling climate change by divesting from the single largest source of carbon emissions.

AllianzGI started restricting investment in coal in its sustainable strategies in 2019. We apply even stricter criteria for our sustainable minimum exclusion (see link).

1. This Policy is applicable to mutual funds for which Allianz Global Investors is acting as management company. For institutional funds and mandates, application of the Policy including its implementation date is subject to the consent of the respective clients.
2. Thermal coal refers to the use of coal in power generation as well as the mining of thermal coal. It does not apply to metallurgical coal - coal utilized in industrial production process, e.g. making of steel, cement, iron ore or other heavy metals - as there are no commercially viable alternatives available at scale yet.
3. https://www.iea.org/reports/global-energy-co2-status-report-2019/emissions

For more information see our Firm-wide Exclusion Policy on our website.
For more information see AllianzGI Climate Policy Statement

04.3 Risk management

3. Processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management

Risk management along the value chain

We consider risk management to be an integral part of our business processes throughout the value chain, from client onboarding and portfolio risk management to monitoring operational risks. Risks are addressed as part of an overarching reporting and controlling framework covering both qualitative and quantitative risks for each of our functions along three lines of defence: the first line of defence is where each function is responsible for designing and implementing adequate controls related to its processes. The second line of defence provides independent oversight and challenge of the day-to-day risk controls and risk-taking by the first line. This second line of defence is performed by the Legal and Compliance function and the Risk Management function. The third line of defence provides independent assurance across the first and second lines of defence. The third line of defence is performed by the Internal Audit function.

In addition to the main risk categories of portfolio risk, operational risk, business risk and reputational risk, AllianzGI considers sustainability risk as transversal risk that may be realised in one or more of the main risk categories. Sustainability risk refers to ESG events or conditions which, if they occur, may potentially have significant negative impacts on products, profitability or reputation of AllianzGI. Sustainability risk includes climate change risks for instance and also includes risks associated with not meeting company sustainability targets, such as corporate emission targets. Sustainability risk factors that relate to the investment process are included in portfolio-related risks. The general strategy for management of sustainability risk factors is to follow the management approach for the primary underlying risk.

Active stewardship

As an active investment manager, we are committed to driving positive change and believe that constructive engagement dialogue with investee companies is essential. In 2021, we refined our engagement approach to rest on two approaches:

Risk-based approach: our risk-based approach focuses on the material ESG risks that we identify. The focus of engagements is determined by considerations such as significant votes against company management at past general meetings and sustainability issues that we identify as below market practice. Engagement activities typically relate to an investee company's strategy, operational or financial performance, capital management, corporate governance and ESG risks and impacts.

Thematic approach: we also lead themed engagement projects. These are either linked to our three strategic sustainability themes – climate change, planetary boundaries and inclusive capitalism – or related to governance themes within specific markets or more broadly. We identify thematic engagement projects based on topics that we deem to be important for our portfolio investments, for example energy transition or climate change. We prioritise them based on the size of our holdings per market or portfolio, and also factor in priorities of our clients. We observe an increasing number of requests from clients for engagement, in particular on topics such as climate and energy transition. This has prompted us to make these topics a priority of our engagement programme in 2021 and beyond.

We believe this two-pronged approach will allow us to achieve better balance between ESG risk reductions in our portfolios and leading clients and companies on an inclusive transition pathway to a sustainable future. The approach also improves our ability to set out engagement objectives clearly at the outset. In 2021, we developed a new engagement template to support us with this change of approach and improve the efficiency of recording engagements. The template was rolled out via a series of workshops within sustainability and investment teams.

Additionally, our TCFD journey plays an important role in our proxy voting activities by establishing clearer strategy and expectations. Our voting records on climate-related shareholder resolutions, demonstrate strong support for such resolutions encouraging companies to pursue the transition to decarbonisation.

In 2021, a notable change to our guidelines included voting rules on "Say on Climate" resolutions. As this type of proposal gains traction in some markets, we decided to update our guidelines to be more transparent and detailed about our approach.

04.3 Risk management

Case study 5

Engaging oil and gas companies on the energy transition

Our increasingly thematic and focused approach to engagement targets organisations where the implications can be most significant, such as oil companies. We continued our engagement programme with oil and gas majors and spoke with energy companies on 27 occasions. We also published a position paper as part of our new "Stewardship Principles" series to explain our role as an active owner in the sector and our stance on divestment.

Read the paper here: Link

As an example, in the context of this programme, we engaged one oil major on its climate strategy, targets and progress to inform our votes at its AGM and ensure its climate targets were ambitious enough. The firm's climate approach is supported by a net-zero ambition by 2050, including all emissions (Scopes 1, 2 and 3) as well as short- and medium-term targets. The latter is important given that the current decade is critical to decarbonising the firm's primary energy mix. Through this engagement, we gained a good sense of the level of accountability, transparency on lobbying, the executive incentive structure and its alignment with the firm's decarbonisation journey. As a consequence of the dialogue and evidence, AllianzGI supported the firm's resolution on its climate strategy at its general meeting.

Ongoing monitoring of progress is key to successful engagement outcomes. We will continue to track the company's climate action and net zero alignment.

Case study 6

Scrutinising progress on climate change strategies

In 2021, we adopted Climate Engagement with Outcome (CEWO) approach. This approach was first established to engage with high emitting companies with regard to GHG emissions (Scope 1 and 2). It enables us to understand the climate pathway of these companies and to identify credible yet ambitious climate goals that the company aims to achieve over a specified timeframe. This investment approach allows us to systematically screen and evaluate companies' climate profiles, including related social and governance indicators. The feedback we collected, along with our discussions in related engagement meetings, provided us with in-depth insights into where companies stand when it comes to implementing climate strategies, the specificity of pathways, how embedded climate is in strategy planning, alignment of management interests, dedicated capital expenditures to sustainable products and solutions, and just transition. This allows us to assess the ambition and credibility of the pathway and where best to engage in future to ensure its execution. While most of our engagements covered equity and fixed-income holdings, in 2021 16 engagements were dedicated to fixed-income funds only. At the time of engagement, our holding in one US petrochemical firm was mainly via fixed-income asset classes, with much smaller investment through equity holdings. The fixed-income team consequently became actively involved in the engagement, including company calls. We wanted to understand whether the company sought to actively shape the transition to a lower carbon business model and if it was using any offsetting mechanisms. We also addressed its stance on lobbying.

Case study 7

Linking engagement and AGM vote for a high emitter

We held numerous discussions (bilaterally and collectively) with a large international mining company. The company is a large emitter and is held by a number of our funds. Our discussions covered wider governance and environmental topics and specifically addressed climate change issues ahead of the AGM vote on the company's climate strategy. We engaged the company to get a deeper understanding of the challenges faced, its framework and future ambitions related to Scope 3 emissions. Following our discussion, the board chairman reached out to address some of our key concerns on science-based targets and their roadmap for reduction targets, including Scope 3. We fed back considerations directly and via an Investor Forum co-ordinated group meeting to ensure our questions were clarified ahead of the vote. Ultimately, we were comfortable that the company was on the right track and making positive steps. We supported the company at the AGM but reserved the right to withhold future support should we feel insufficient progress was being made.

05
Metrics and targets

We aim to be as transparent as possible in our climate-related profile. This includes disclosure of our investment-related and business operations climate metrics.

1. Metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process

At AllianzGI, we aim to avoid climate-related risks and to be aware of opportunities and have thus created tools that allow us to monitor various relevant metrics. Policies have also been implemented in order to limit our exposure to companies which might face transition risks in the future.

Our ESG Hub, mentioned in **section 4.2.**, integrates several Sustainability Risks and Principal Adverse Impact climate-related metrics which include portfolio absolute and relative emissions, an assessment of companies involved in the most harmful business activities, namely coal and fossil fuels, as well as which companies do not have formal targets in place to reduce their carbon emissions.

We have also developed a tool detailed in **section 4.1.** which gathers various physical and transition risks metrics at both company and portfolio level. It includes forward-looking GHG emissions trajectories, carbon emissions data and a physical risk assessment.

In order to further complete our climate-related risk and opportunities assessment, we are also currently in the process of reviewing temperature alignment solutions. In order to limit transition risks, we have implemented a firm wide coal exclusion policy.

05.2 Metrics and targets

2. Disclosures: Scope 1, Scope 2, (and, where appropriate) Scope 3 GHG emissions and related risks.

Our measured investment-related carbon footprints are based on the issuers' carbon emission data from data providers. Listed equity and corporate bond assets are used in calculating the carbon footprint.

For this year's TCFD report, we have made a change in the methodology as we have decided to replace the use of enterprise value (EV) by enterprise value including cash (EVIC), following its adoption by the EU Technical Expert Group on Sustainable Finance and the EU benchmark regulation. We have also implemented a new waterfall process, which allows us to get a better data coverage of emissions, combining data from data providers. The data from 2019 and 2020 have been recomputed following this new methodology to provide comparable results.

Investment-related climate metrics

Listed equity assets				
Indicator	Unit	2021	2020	2019
Total financed emissions	mn tCO_2e	15.22	12.10	15.27
Total carbon intensity	tCO_2e/€ mn invested	47.80	50.50	76.20
Weighted average carbon intensity	tCO_2e/€ mn revenues	119.90	130.80	142.30
Emissions data coverage of listed equities AuM	%	98%	99%	97%
Corporate bonds assets				
Indicator	Unit	2021	2020	2019
Total financed emissions	mn tCO_2e	13.72	17.94	16.87
Total carbon intensity	tCO_2e/€ mn invested	77.90	119.80	118.70
Weighted average carbon intensity	tCO_2e/€ mn revenues	192.20	201.70	206.90
Emissions data coverage of corporate bonds AuM	%	94%	89%	86%
Green assets				
Indicator	Unit	2021	2020	2019
Investments in renewable energy	€ mn	5,185.95	4,756.27	5,307.00
Investments in green bonds	€ mn	10,017.69	6,468.07	4,557.00

05.2 Metrics and targets

Carbon footprint

	Unit
1. Absolute Carbon Emissions (Scope 1+2) = $issuer's\ emissions_i$	tCO_2e
2. Total Financed Emissions (scopes 1 + 2) = $\sum_{i=1}^{n} \frac{€\ investment_i}{issuer's\ EVIC_i} \times issuer's\ emissions_i$	tCO_2e
3. Total carbon intensity = $\frac{\sum_{i=1}^{n} \frac{€\ investment_i}{issuer's\ EVIC_i} \times issuer's\ emissions_i}{Total\ market\ value}$	tCO_2e/mn invested
4. Weighted average carbon intensity = $\sum_{i=1}^{n} Portfolio\ weight_i \times \frac{issuer's\ emissions_i}{issuer's\ sales_i}$	tCO_2e/mn revenues
5. Emissions data coverage	%

Where:

Issuer's emissions *i* = scope 1+2 emissions from issuer *i*. Data come from MSCI and Refinitiv when MSCI data are not available.

Issuer's enterprise value including cash (EVIC) *i* = the sum of the company's market capitalization, non-redeemable preferred stock, total debt and minority interest at year end.

Issuer's sales *i* = Company's sales data as given by Refinitiv. For equity and fixed income, it refers to the identified company.

Portfolio weight *i* = $\frac{€\ investment_i}{Portfolio\ market\ value}$

Investment *i* = Exposure in EUR for the issuer *i* in the investment portfolio. For equity and corporate bond investments (ex-derivatives) this corresponds to the market value in EUR.

Total market value = Sum of Equity and Fixed Income (Corporates and Agencies) holdings value that are in scope for carbon footprinting.

Exchange rates used to convert the enterprise value and market capitalisation as well as sales into EUR refer to the WM/Reuters exchange rates (London 4pm closing spot rates).

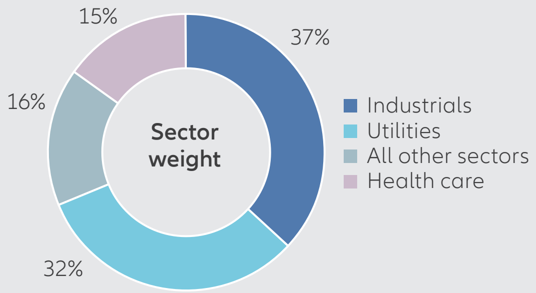
Data source: MSCI/Refinitiv

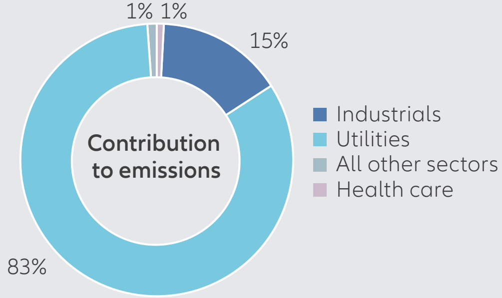
05.2 Metrics and targets

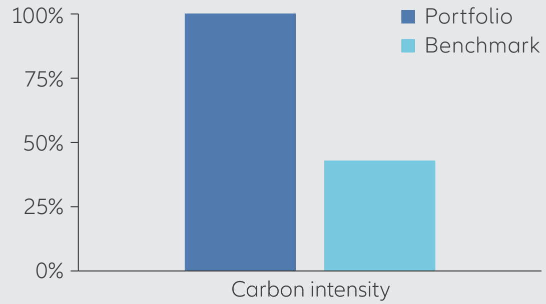
Example client reporting carbon portfolio overview metrics

	Coverage	Total carbon emissions	Carbon intensity	
	by weight	Emissions scope 1+2	Relative carbon footprint	Weighted average carbon intensity
Portfolio	94.1%	3'094.8	104.9	288.9
Benchmark	98.7%	2'504.9	84.9	195.9
	Market value	tCO_2e	t CO_2e/EUR m invested	t CO_2e/EUR m revenue

This report analyses a portfolio of securities in terms of carbon dioxide emissions invested. It provides a relative comparison to a market benchmark where available. The metrics provided in the table above include absolute and relative figures for portfolio carbon emissions as well as carbon intensity measures. The total carbon emissions aims to answer "What is my portfolio's absolute level of carbon footprint?" The relative carbon footprint is a normalised measure of a portfolio's carbon dioxide emissions investment contribution. It is defined as the total carbon emissions of the portfolio per million EUR invested. This metric enables comparisons with a benchmark, between multiple portfolios, over time and regardless of portfolio size. The weighted average carbon intensity is disconnected from ownership and thus does not capture the investor's contribution to climate change, but rather measures the portfolio's exposure to carbon-intensive companies. Therefore, it is applicable for comparison across different asset classes. All carbon emissions are computed based on Scope 1 and Scope 2 emissions data. Scope 1 aims to measure all direct emissions from the activities of a corporate or under their control. Scope 2 aims to measure all indirect emissions from electricity purchased and used by the corporate.





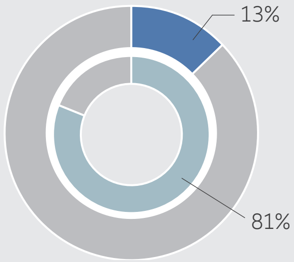


The portfolio's intensity is 56.5% higher than the benchmark. The sectors Industrials, Utilities, All other sectors (per GICS classification) in the portfolio make up 84.8% of the weight vs. 99.2% of the contribution to emissions. Calculations: Each holding's contribution to the carbon footprint is calculated on an enterprise value ownership basis. Analysis is based on Scope 1+2.

05.2 Metrics and targets

Top five absolute contributors

The list below shows the five individual companies contributing most to the greenhouse gas emissions of a fund. The chart on the right contrasts this with the value of those five companies within the portfolio. As not all companies disclose their greenhouse gas emissions, we show in the "Data Source" section if the emissions data used has been disclosed by the respective company or was approximated through our proprietary methodology.

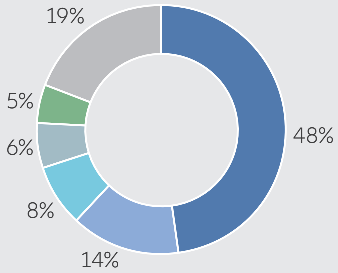


Top five absolute contributors

	Company	Financed emissions (tCO_2e)	% of total portfolio emissions	Portfolio weight
1	Company 1	1,480.0	47.82%	3.42%
2	Company 2	437.9	14.15%	2.90%
3	Company 3	247.8	8.01%	2.88%
4	Company 4	196.6	6.35%	1.90%
5	Company 5	151.3	4.89%	2.32%

Top five carbon intensive firms per m EUR invested

	Company	Financed emissions (tCO_2e)	% of total portfolio emissions	Portfolio weight
1	Company 1	1,480.0	47.82%	3.42%
2	Company 2	437.9	14.15%	2.90%
3	Company 4	196.6	6.35%	1.90%
4	Company 3	247.8	8.01%	2.88%
5	Company 5	151.3	4.89%	2.32%



ESG report statistics

Number of portfolio holdings	39
Number of issuers with an ESG rating	39
Percentage of portfolio NAV covered	94.13%
Portfolio NAV covered (in m EUR)	27.78

ESG benchmark statistics

Number of benchmark holdings	1,480.0
Number of issuers with an ESG rating	437.9
Percentage of portfolio NAV covered	247.8
Benchmark NAV covered (in m EUR)	196.6

Carbon report statistics

Number of portfolio holdings	39
Number of issuers with an ESG rating	39
Percentage of portfolio NAV covered	94.13%
Portfolio NAV covered (in m EUR)	27.78

Carbon benchmark statistics

Number of benchmark holdings	1,480.0
Number of issuers with an ESG rating	437.9
Percentage of portfolio NAV covered	247.8
Benchmark NAV covered (in m EUR)	196.6

Information value of reports may be limited when ESG research data coverage is below a certain threshold

The tables provide descriptive statistics on portfolio and benchmarks used in the report including data coverage for ESG and carbon reporting. Percentage of portfolio NAV covered mentioned above considers corporate positions either equity, credit fixed income or sovereign fixed income where ESG data including carbon data is available. Cash, derivatives and mutual funds holdings are not considered in the ESG report.

05.3 Metrics and targets

3. Targets used by the organisation to manage climate related risks and opportunities and performance against targets

Managing climate impact of our investments

We aim to be as transparent as possible in our climate-related profile, including the disclosure of our investment-related climate metrics. As a committed signatory of the NZAM initiative,[1] we support the goal of net-zero greenhouse gas emissions by 2050.

As the first step, these targets cover listed equity, corporate debt, infrastructure equity, and infrastructure debt, and reflect the targets set in 2021 by Allianz for its proprietary assets[2] based on its commitment as a member of the UN-convened Net-Zero Asset Owner Alliance.

The assets in-scope for these targets represent 12% of AllianzGI's overall assets under management. The submitted targets include:

- Listed equity and corporate bonds – a 25% GHG reduction, scopes 1 and 2, by the end of 2024 (baseline year: 2019).
- Infrastructure equity – a 28% GHG reduction, scopes 1 and 2, by the end of 2025 (baseline year: 2020).
- Infrastructure debt – our target is to grow the share of low-emitting and EU taxonomy-eligible assets.[3]

At AllianzGI, we will focus continuously on our net-zero commitment as a signatory of NZAM initiative. In the near future, we will increase the scope of our assets and set intermediate targets for our third-party client assets.

We will continue to actively engage with our institutional clients and distributors on integrating net-zero objectives in their investments and into our mutual funds. We plan to review our targets and progress annually.[4]

Managing the environmental impact of our operations

As part of our commitment to a sustainable future, we manage the environmental impacts of our operations and aim to be a role model in delivering our own targets on climate change and the environment. Our efforts contribute to Allianz goals, including working towards sourcing 100% renewable electricity for our operations by 2023 and reducing greenhouse gas (GHG) emissions by 38% per employee by 2025 against a 2019 baseline.

Our carbon reduction strategy is designed to reduce GHG emissions from material sources, namely energy use for office buildings and IT, business travel and paper use. The strategy focuses on energy-efficient planning, construction and operation of buildings, sourcing green electricity and using carbon-efficient vehicles. Allianz has committed to set long-term climate targets for its business operations in line with the science underpinning the Paris Agreement climate goal. In 2020, it set GHG emission targets to 2025 in line with the latest climate science. AllianzGI has committed to reduce GHG emissions by 38% per employee by 2025 (against a 2019 baseline) across Scope 1, 2 and selected Scope 3 emissions (covering energy-related emissions, business travel and paper use).

We actively measure and manage our environmental footprint. The tables below provide detailed overviews of environmental impact of our operations and sustainability related targets and achievements.

Corporate-level related climate metrics

Indicator	Unit	2021	2020	2019
GHG emissions	tCO_2e/employee	0.9	2.1	3.9[5]
Energy consumption	GJ/employee	16.1	18.7	20.6
Business travel	tCO_2e/employee	0.4	0.5	2.1[6]
Paper consumption	kg/employee	9.4	19.4	27.4
Water consumption	m^3/employee	24.9	35.4[7]	26.0
Waste	kg/employee	75.3	89.7	149.0

1. Net Zero Asset Managers initiative
2. Allianz Sustainability Report, page 85, Allianz Grouo Sustainability Report 2021
3. For more information on the Net-Zero Asset Owner Alliance commitment of Allianz Group, please see the Allianz Group Sustainability Report: https://www.allianz.com/en/sustainability.html
4. For more information, please read our Sustainability and Stewardship Report
   Further information – including our firm-wide exclusion policy, Global Corporate Governance Guidelines and Climate Policy Statement – is available here: https://www.allianzgi.com/en/our-firm/esg/documents#keypolicydocumentsandreports
5. GHG emissions data (old absolute: 3.5 tonnes) has been restated for 2019.
6. This business travel data (old absolute : 1.9 tonnes) has been restated for 2019.
7. Water consumption (old absolute : 20.9 m3) has been restated for 2020.

05.3 Metrics and targets

In addition to our net-zero goals on the investment side, we have also committed to reducing our greenhouse gas footprint as a business, covering energy-related emissions, business travel and paper use. I'm proud of the progress we have made so far and especially proud of how engaged our colleagues are on this topic. Many are taking their own conscious steps to reduce their carbon footprint as they want to contribute to a cleaner planet for all of us today and for generations to come.

Markus Kobler

Chief Financial Officer

Topic	Targets	Progress and achievements 2021
GHG emissions	Reduce GHG emissions by 38% per employee by 2025 compared with 2019.	Achieved a 77% reduction in 2021 (2020: 46%) compared to 2019.
Energy consumption	Reduce energy consumption in our office buildings by 10% per employee by 2025 compared with 2019.	Achieved a 22% reduction in 2021 (2020: 9%) compared to 2019.
Renewable electricity	As a signatory of the RE100 initiative, Allianz has committed to source 100% renewable electricity (RE) for its group-wide operations by 2023.	Achieved 100% renewable, low-carbon electricity for our operations in 2021.
Business travel	Reduce GHG emissions from business travel by 20% per employee by 2025 compared with 2019.	Achieved a 81% reduction in 2021 (2020: 76%) compared to 2019.
Paper consumption	Reduce paper consumption by 20% per employee by 2025 compared with 2019.	Achieved a 66% reduction in 2021 (2020: 29%) compared to 2019.
Water consumption	Reduce water consumption by 15% per employee by 2025 compared with 2019.	Achieved a 4% reduction in 2021 (2020: a 36% increase) compared to 2019.
Waste	Reduce waste by 14% per employee by 2025 compared with 2019.	Achieved a 49% reduction in 2021 (2020: 40%) compared to 2019.

For GHG emissions, achievements in 2021 were mainly due to increased use of renewable power, improved energy management, and reduced business travel. We expect to include GHG emissions from flexible and hybrid working within scope of our future reporting to reflect infrastructure changes as the way we work continues to evolve.

For energy consumption, the reduction was mainly due to energy-saving initiatives such as installation of occupancy sensors and refurbishment activities as well as increased remote working.

While business travel accounted for 40% of GHG emissions from operations in 2021 (2020: 25%), overall emissions associated with travel are decreasing. Covid-19 measures played a material role in reducing business travel emissions along with our new Global Travel Policy that prioritises client-facing business travel over travel for internal reasons.

Allianz Global Investors

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