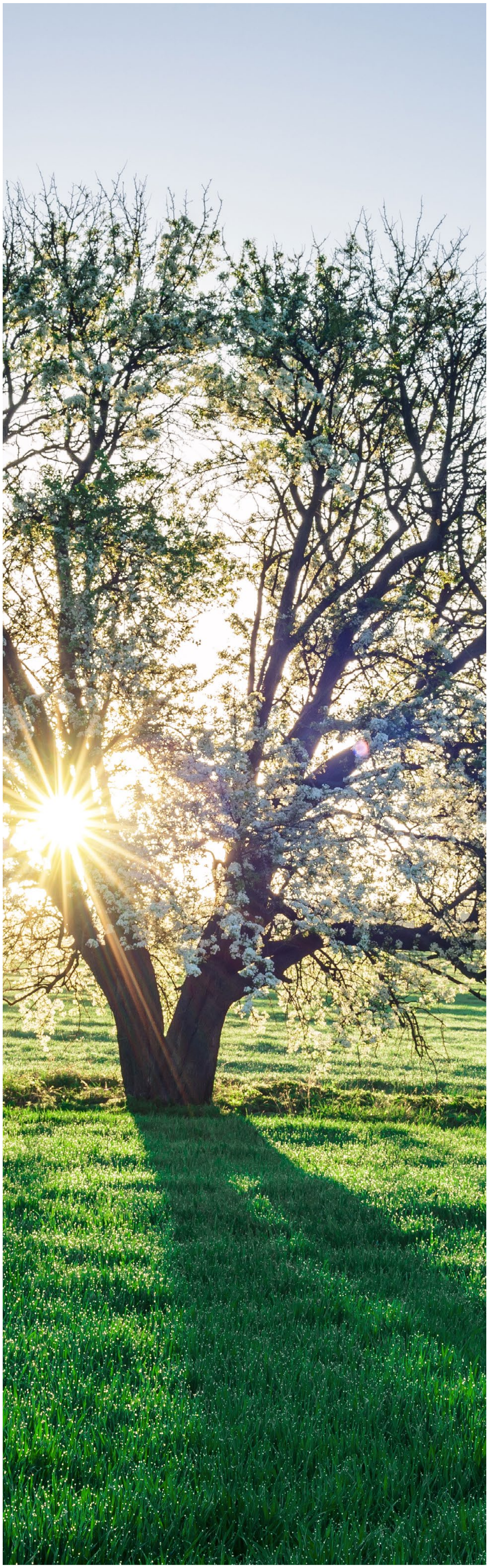
Task Force on Climate-Related Financial Disclosures Report

BARINGS LLC

2022

June 2023



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A Message from our Head of Sustainability & ESG

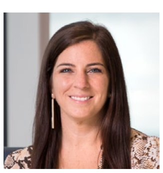
From drought to wildfires and floods, 2022 was another year of extreme weather events.

We know that these phenomena, along with the rise in temperatures analyzed and forecast by many scientists and agencies, could have widespread consequences on our clients and communities. Natural disasters, many driven by climate change, caused global economic losses of $313 billion in 2022[1]. These proliferating costs are borne by businesses, governments and individuals, and could create a significant strain on local and global economies.

Against this backdrop, Barings is building a sustainability and ESG framework for both our investments and operations to help us identify the potential risks and opportunities created by the changing climate. We integrate material environmental, social and governance (ESG) information, including climate change data, into our investment process, stewardship, corporate responsibility and partnerships with our clients, where applicable. We believe that doing so not only helps us deliver superior risk-adjusted returns for our clients, but also builds more resilient portfolios, and develops environments where both our teammates, and the communities in which we live and work, can thrive in the long term.

As part of this process, we have spent considerable time developing, documenting and testing our ESG and sustainability practices. With this inaugural Task Force on Climate-Related Financial Disclosure (TCFD) report, we continue that journey, providing transparency on how material ESG factors are integrated within our investment and engagement processes, as well as our plans and progress toward reducing our operational greenhouse gas (GHG) footprint.

We look forward to advancing the ESG, sustainability and climate-related initiatives we have outlined in the report over the coming months and years, and to partnering with clients and portfolio companies to help them achieve their sustainability and climate resiliency goals. We will continue to share our progress in future TCFD reports and other Barings' disclosures.



SARAH MUNDAY

Head of Sustainability & ESG

1. Source: Reuters, as of 2023.

Introduction

Barings is pleased to present our inaugural report aligned with the recommendations of the TCFD. It is intended to provide transparency on our approach to managing climate-related risks and opportunities across our business, as well as on behalf of our clients, communities and other stakeholders. It provides insight into Barings' approach to climate-related risks, including our strategy for identifying, managing and monitoring them.

This report covers both the potential impact of climate-related issues on our clients' investments, as well as on Barings as a corporate entity. We also discuss the opportunities created by climate change mitigation and how these are integrated into our business and investment strategy.

Seeking superior risk-adjusted returns for our clients over the long term is central to our climate approach. We understand that climate change could have a significant and enduring impact on many businesses that we invest in or interact with, as well as on many investors and other Barings stakeholders. As a result, our investment teams analyze a host of material ESG risks and opportunities, among several other material factors, in pursuit of maximizing returns and mitigating risk for our clients. This allows for a more complex understanding of risk and opportunity. With this in mind, we will continue to partner with our clients to evolve and advance Barings' climate-related mitigation and adaptation efforts.

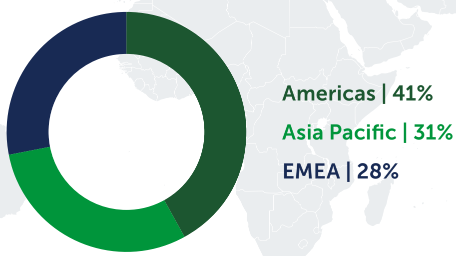
ABOUT BARINGS

$362+ B
Assets Under Management

1,200+
External Clients

1,800+
Professionals Globally

EXTERNAL AUM BY REGION



Barings is a $362+ billion[2] global investment manager with more than 1,800 teammates sourcing differentiated opportunities and building long-term portfolios across public and private fixed income, real estate and specialist equity markets. With investment professionals based in North America, Europe and Asia Pacific, the firm, a subsidiary of MassMutual, aims to serve clients, communities and teammates.

We integrate material ESG topics, alongside other factors, into our investment and operational processes. Barings is a signatory of the Principles for Responsible Investment (PRI), Climate Action 100+, Farm Animal Investment Risk and Return (FAIRR), and the United Nations Global Compact (UNGC). We strive for sustainable practices across our operations and hope to strengthen the communities in which we live, work and invest.

2. As of March 31, 2023.

Governance

a. Describe the board's oversight of climate-related risks and opportunities

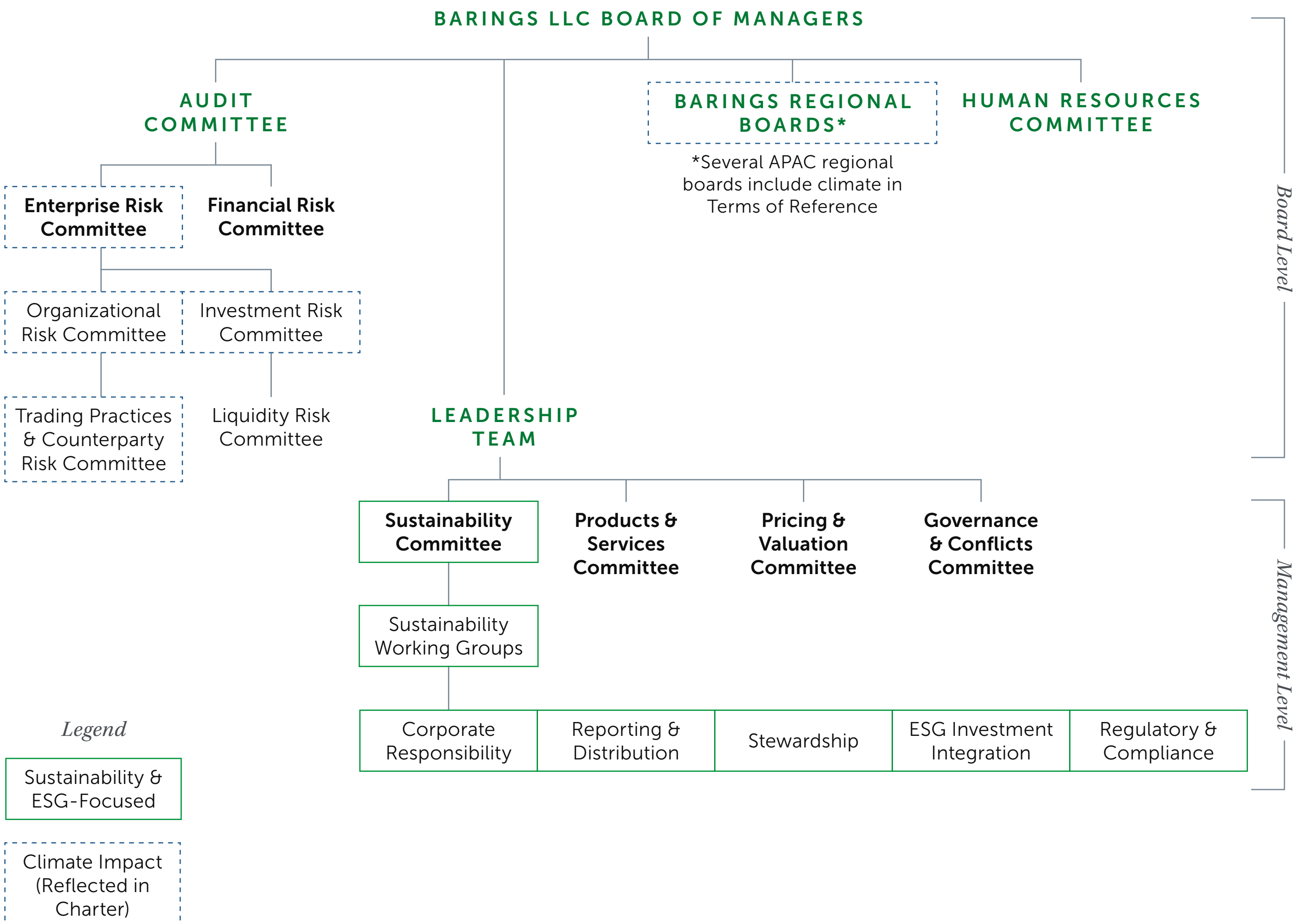
b. Describe management's role in assessing and managing climate-related risks and opportunities

CLIMATE GOVERNANCE OVERVIEW

Barings, as a wholly owned subsidiary of Massachusetts Mutual Life Insurance Company (MassMutual), has a separate Board of Directors (referred to as the "Barings LLC Board") that is responsible for managing company affairs, while also being subject to the oversight of MassMutual's Board of Directors. Board-level committees that report to the Barings LLC Board include the Audit Committee, Human Resources Committee, and regional boards, including those for our U.K., Ireland, Luxembourg, and Asia-Pacific entities.

Strategic business decisions, including those pertaining to climate-related risks and opportunities, are recommended by the Chairman & Chief Executive Officer (CEO) of Barings and endorsed, amended or declined by the Barings LLC Board. Day-to-day management decisions are approved by the Barings Leadership Team, who reports to the Barings LLC Board quarterly.

BARINGS ESG & CLIMATE-RELATED ORGANIZATIONAL STRUCTURE



The Sustainability & ESG team provides twice-yearly updates to the Barings LLC Board on sustainability initiatives, including progress toward our ESG and climate-related targets and goals. Additionally, certain regional boards may receive updates that include climate-related risk and opportunities where relevant.

Barings has made the commitment to incorporate climate change-specific analysis into our broader ESG and sustainability integration efforts. Our Sustainability Committee is foundational to this commitment and to our ESG, sustainability and climate-related governance. Chaired by Barings' Head of Sustainability & ESG, the Sustainability Committee oversees sustainability policies, strategies and programs and monitors compliance with our sustainability-related memberships and commitments. The Sustainability Committee meets to discuss climate-related and other ESG issues at least quarterly.

Our dedicated risk and investment research resources and committees view climate risk in the same way that we would any other material risk to our business, with input from Barings' Risk Management, (see Risk Management below). Our investment teams have discretion over methodologies for integrating ESG and climate-related issues into investment decisions, engagement and escalations procedures.

Our Portfolio Solutions & Analytics (PSA) team provides ESG, sustainability and climate-related metrics for our investment portfolios and works closely with investment teams to support integration of ESG data into the investment process. TCFD-aligned carbon emissions metrics are included in PSA analytics, as are measures of Implied Temperature Rise (ITR), and Climate Value at Risk (CVaR).

Oversight of climate-related risks and opportunities at the corporate and organizational level, including progress toward our operational net zero GHG emissions target, is provided by the committee structure shown above.

These management structures help senior management and the Barings LLC Board stay informed on the climate-related impacts and opportunities of our business, as well as key regulatory issues, industry trends and internal adherence to climate-related targets. This should, in turn, help inform Barings' strategy, budgets and planning processes and allow climate risk owners to be appropriately consulted on business decisions and that business units consider climate-related issues in the normal course of their business.

COMMITTEES & REGIONAL BOARDS

Several committees, at both the Board and management level, as well as some regional boards, may assess and address material climate-related risks and opportunities, including:

Barings LLC Board Level

- Audit Committee
- Leadership Team
- Regional Boards

Barings' Management Level

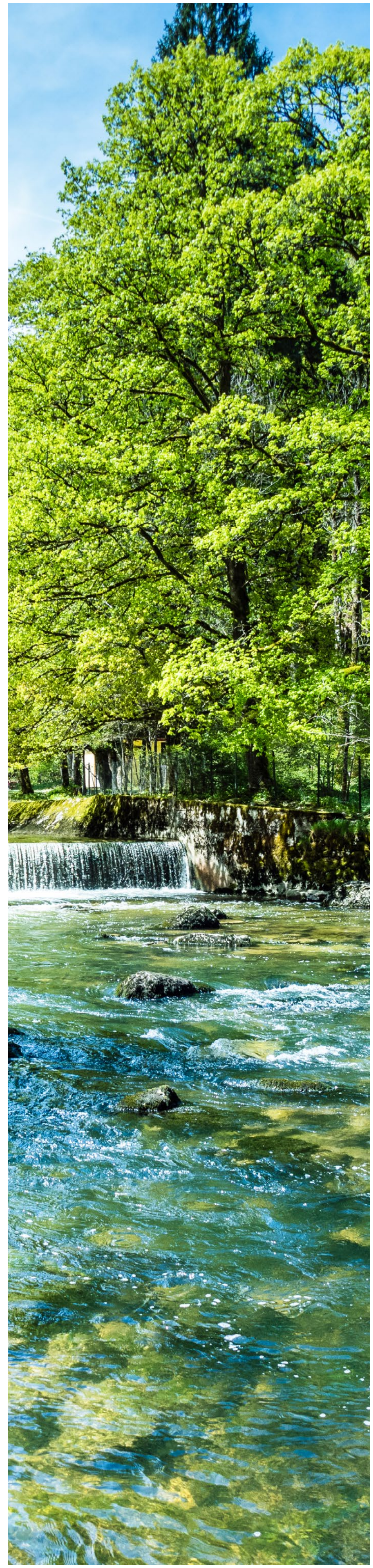
- Enterprise Risk Committee
- Organizational Risk Committee
- Investment Risk Committee
- Trading Practices Committee
- Sustainability Committee

The Sustainability Committee, Trading Practices Committee, Enterprise Risk Committee, Organizational Risk Committee and Investment Risk Committee charters specify that the committees will integrate the consideration of material environmental sustainability issues, including climate change, into analysis, monitoring processes and decision making.

SUSTAINABILITY WORKING GROUPS

Our sustainability-focused working groups support the delivery of long-term ESG initiatives, including climate, and report to the Sustainability Committee. These consist of representatives from across the business and are tailored to the purpose and goals of each working group. These working groups foster cross-functional collaboration to improve communication and consistency, enabling stakeholders from across the business to contribute to our ESG, sustainability and climate-related strategy.

- The ESG Investment Integration Working Group includes members from Barings investment teams and meets to discuss ways to enhance ESG integration practices, tools and data. Given Barings' integrated approach to



material ESG issues, climate change-specific data, including estimation methodologies and tools to enhance analysis, are included in discussions.
- The Stewardship Working Group coordinates ESG, sustainability and climate-related engagements across investment teams, including those done via collaborative engagement bodies like the PRI, FAIRR and Climate Action 100+.
- The Corporate Responsibility Working Group supports our corporate and operational efforts on sustainability and climate change, including reducing our environmental impact, developing our net zero operational targets and sharing best practice across the business.
- The Sustainability Regulatory & Compliance Working Group monitors and discusses ESG, sustainability and climate-related regulatory developments.
- The Reporting & Distribution Working Group coordinates with relevant teams on ESG, sustainability, client matters and climate-related disclosures.

Our dedicated ESG & sustainability resources also organize and lead training on climate change, including topics such as data sources, frameworks, and evolving best practices to enhance the skills and knowledge of our wider teams.

LOOKING FORWARD

Barings will continue our efforts to define climate-related roles and responsibilities throughout the business, including at the Barings LLC Board and C-Suite levels. Our goal is to have a governance structure that provides for broad-based input into our investment and corporate climate-related risks and opportunities, as well as sufficient oversight of these risks.

Strategy

a. Describe the climate-related risks and opportunities the organization has identified over the short, medium and long term
b. Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy and financial planning
c. Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario

We partner with clients on their unique preferences, including those on climate-related issues, and recognize this can be crucial to achieving their risk and return objectives. Therefore, we incorporate these issues into our investment strategies. We take a holistic approach that includes material ESG topics alongside more more traditional financially material metrics, aiming to capture risks and opportunities in whatever form they appear in our investment analysis and decisions.

As a result, it is in our clients' best interest to integrate these impacts into our fundamental investment analysis. In addition, we also recognize the ways in which our corporate operations contribute to addressing climate change. As a result, we are constantly evaluating the ways in which our organization can drive mitigation and adaptation efforts, including working toward our 2030 operational net zero commitment, detailed further below.

INVESTMENT RELATED ACTIVITIES

PRODUCTS & SERVICES

Barings partners with our clients on their unique goals and preferences for sustainability and climate-related investments. This presents opportunities for Barings to develop new products to serve a wide range of their investment needs. As such, Barings partners with clients to find solutions to specific ESG and climate-related objectives. We currently operate 34 funds[3] that are classified as Article 8 under the European Union's Sustainable Finance Disclosure Regulation (SFDR)[4]. Barings also offers separate accounts with ESG, client-determined exclusions, sustainability, and climate-related goals, based on each client's preferences.

3. As of December 31, 2022.
4. Article 8 funds are required to 'promote environmental and/or social characteristics'.

ESG INTEGRATION

Our primary objective is to seek superior risk-adjusted returns for our clients. Our investment professionals' fundamental analysis, including on financially material ESG topics, supports this goal by understanding the factors that influence the financial sustainability of the investments we make. As a result, Barings' investment professionals evaluate ESG information, along with various other potential risks and opportunities that may impact investments, portfolios and the economy to make informed decisions that align with investment objectives. Once invested, teams monitor their investments' performance and progress, including on ESG matters.

While evaluating material risks and/or opportunities, investment professionals assign proprietary ESG scores to investments, and record these in Barings' platforms. These scores provide an overall assessment of the current state and outlook of the investment on ESG topics. Typically, investments are assigned a one (excellent) to five (unfavorable) ESG Current State Score and an improving, stable or deteriorating ESG Outlook Score for each of the ESG categories. ESG scores may be presented to the relevant investment committees (where such committees are in place), in investment/underwriting memorandums, and/or in earnings notes. Investment professionals review ESG scores periodically and/or as material ESG developments occur. Investment teams have the option of overweighting environmental factors in the calculation of an aggregate ESG score for investments that may have significant transition challenges, such as in the energy, utilities, industrials and materials sectors, among others.

To formalize and document our ESG and sustainability strategy, processes and controls, Barings engaged a third-party consultant to examine how ESG is integrated into investment decision making. Barings is in the process of implementing the recommendations from this 2022 project into our ESG integration policies and processes for investment strategies. In general, our ESG and sustainability investment process is structured as follows[5]:

GLOBAL PUBLIC EQUITIES[6]

3%

of Assets Under Management

Given more widely available data on the public companies in our investment universe, the Barings Public Equities team is generally able to incorporate ESG and sustainability considerations, including transition and physical risks from climate change, into the valuation and qualitative evaluation process. The team uses a standardized ESG assessment framework which helps in understanding risks not already included in traditional financial models to capture ESG fundamentals of current and potential portfolio companies. The following categories constitute our ESG assessment framework:

- Sustainability of the business model (franchise) including employee satisfaction, resource intensity and supply chain.
- Corporate governance credibility (management) such as independence of the board and audit arrangements.
- Hidden risks including environmental and social factors (balance sheet) such as business ethics, carbon footprint and societal impact of products and services.

Evaluation of these risks results in a -1 to +2 percentage point adjustment to the cost of equity (CoE). In 2022, we further enhanced our ESG analysis to allow for an additional two percentage point adjustment to the CoE discount rate used in our investment analysis to account for the impact internalized carbon costs can have on company earnings in certain activities subject to cross border or local carbon adjustment mechanisms.

5. All AUM figures are as of December 31, 2022.
6. Process is different for mandates managed by Barings Asset Management Korea.

		Systematic		*Idiosyncratic*		
COST OF EQUITY (DISCOUNT RATE) =	**RISK FREE RATE** +	**EQUITY RISK PREMIUM** +	**STOCK SPECIFIC RISK** +	**ESG** +	**CARBON**
Impact to COE	**5Y IMF CPI Forecast** **+2.25%** Average Risk Free Rate of the five-year forecasting period	**4% Developed** **5% Emerging** **6% Frontiers** Economic Classification Political Risk Social Risk Credit Risk	**(0 to 2%)** Sector Risk Regulatory Risk Business Cyclicality Earnings Volatility Balance Sheet	**(-1% to 2%)** Barings Assessment of ESG	**(0 to 2%)** Emissions Mitigation Carbon Taxes

*Sectors that may be subject to additional carbon adjustments (described above) include: electricity and heat generation; oil refineries; steel works; production of iron; aluminum; metals; cement; lime; glass; ceramics; pulp; paper; cardboard; acids; bulk organic chemicals; commercial aviation; and maritime.

In addition, the team is aware that climate-related changes to the physical environment, as well as changes relating to the transition to a low-carbon economy, could present both short and long-term risks and opportunities to their businesses. To assess the impact of such risks, we utilize third-party climate scenario analyses that address both physical and transition risks and integrate these results into our overall understanding of investees climate value at risk (CVaR). When a company falls in the top quintile by CVaR in either an 'average' or 'aggressive' physical risks scenario, we identify what climate adaptation measures the company is taking by engaging with the company management or through other sources of information.

Proxy Voting

We undertake to exercise voting rights whenever possible and have retained a dedicated third-party proxy voting provider. In those cases where we disagree with the proxy research provider's recommendations, we can cast our votes differently. Our policy is to vote on behalf of our clients as systematically as is practicable, using inputs from proxy advisers that are reviewed by our portfolio managers. The Barings website outlines our voting records and our full proxy voting policy, including those votes that were made on climate-related proposals. Our records track monthly how we have voted in relation to both management and the recommendations of advisors.

PUBLIC CORPORATE & SECURITIZED FIXED INCOME

55%

of Assets Under Management

The Public Corporate & Securitized Fixed Income team undertakes an assessment of the ESG profile of issuers, alongside financial and market analysis. Research focuses on material ESG credit risks over the lifecycle of the loan or investment that could impact cash flow, valuation of the business, or the general ability of the issuer to meet its debt obligations. ESG scores providing an overall assessment of the current state and momentum of the issuer on ESG topics are produced by the analyst team.

Portfolio managers may have access to emissions data including aggregated carbon emissions and carbon intensity for core investment strategies. This includes officially available data, when coverage allows, and is supplemented by in-house estimations using peer comparisons. These data sets allow fund managers to consider emissions profiles across strategies in comparison to benchmarks, if applicable, for an investment fund or strategy. This information may also drive additional engagement activity by the Public Corporate & Securitized Fixed Income teams toward issuers in high emissions sectors where data is not disclosed.

SOVEREIGN & SUB-SOVEREIGN DEBT (PART OF PUBLIC FIXED INCOME)

Sovereign and sub-sovereign investment decisions are based on internal research, which encompasses both our proprietary financial underwriting methodology, as well as our ESG assessments. Our ESG assessments rely on an extensive database of ESG indicators sourced from third parties and has significant coverage of the sovereigns in our investment universe. We complement this systematic analysis with specific country evaluations which consider variations in each country's ESG policies and practices, including improvement on material ESG factors. Therefore, our sovereign ESG research methodology incorporates a mix of systematic and fundamental analysis of ESG factors, including the countries' efforts to preserve natural resources, participate in protecting the international environment, and efforts to improve the resilience of the population, including that which is related to natural disasters and climate change.

STRUCTURED CREDIT (PART OF PUBLIC FIXED INCOME)

As part of the initial due diligence process and ongoing investment analysis, our Structured Credit team's portfolio managers and analysts engage in dialogue with Collateralized Loan Obligation (CLO) management teams with whom we invest to better understand potential risks and opportunities, including those related to ESG. The team also aims to determine if a CLO manager has a formalized and adequate ESG policy in place, the extent to which the policy is incorporated into the credit underwriting process, and the commitment to a trajectory for ESG processes over time.

A standard questionnaire is sent to all approved managers that addresses ESG policy, governance, investment process and monitoring. The team utilizes the Loan Syndications and Trading Association (LSTA) ESG Diligence Questionnaire for Asset Managers, supplemented with additional Barings Structured Credit team-generated questions, such as how the manager assesses and manages risk related to climate change.

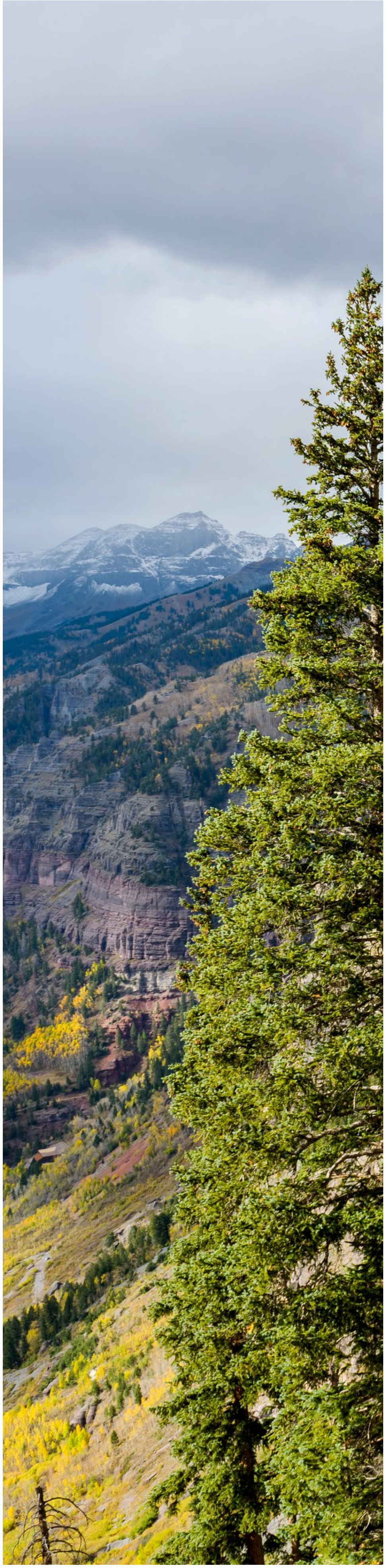
REAL ESTATE

16%

of Assets Under Management

The Barings Real Estate Debt and Equity strategies generally assess the material ESG factors facing their sectors. Using inputs from ESG and sustainability frameworks such as the Global Reporting Initiative Construction & Real Estate Sector (GRI CRESS), Global Real Estate Sustainability Benchmark (GRESB), Principles for Responsible Investment (PRI), Leadership in Energy and Environmental Design (LEED), as well as stakeholder input, we have identified ESG factors that may have significant economic, environmental and social impacts on real estate investments. These factors inform real estate diligence and acquisition approval as well as business plans, ongoing monitoring and reporting.

Physical risk is increasingly a priority, which may have a direct impact on real estate assets. Currently, some of the Barings real estate teams work with third-party vendors to help evaluate physical risk at acquisition and we continue to evaluate emerging tools in this space.



PRIVATE CREDIT

23%

of Assets Under Management

When underwriting and monitoring investments, Private Credit analysts and deal teams analyze the ESG profile of an investment. During the initial due diligence phase, deal teams may engage with the sponsor and/or management team on material ESG risks and considerations through an ESG diligence questionnaire. Responses to this questionnaire help generate ESG commentary in memos and help to determine our proprietary ESG scores, which in turn contribute to the team's investment decision making.

Following the completion of the ESG analysis and due diligence on each investment opportunity, analysts and deal teams document their findings within the screening and underwriting investment memos that are presented to the Investment Committee. Additionally, each borrower's ESG scores are documented in the investment memos. ESG scores are considered in conjunction with other investment risks when a deal is considered for approval at Investment Committee. Private Credit teams may also offer sustainability-linked loans or ESG-linked margin ratchet loans to private equity sponsors and borrowers which provide an economic incentive (a five to 15 basis point reduction in borrowing cost) in exchange for material improvements in ESG factors, generally identified in the underwriting process. Material improvements may include actions such as, but not limited to, improved board oversight, internal sustainability professional oversight, data improvements and measured positive change though ESG and sustainability Key Performance Indicators.

PRIVATE EQUITY

2%

of Assets Under Management

Our Private Equity teams identify material ESG risk factors based on a qualitative assessment undertaken during due diligence, including a qualitative ESG questionnaire. In line with other investment teams within Barings, the Private Equity teams utilize a proprietary, sector-based ESG scoring approach that is designed to determine baseline scores for environmental and social categories.

The Private Equity teams' portfolio management systems (PMS) display ESG and sustainability data from third-party systems (i.e., MSCI, Sustainalytics) and tracks Barings in-house ESG scores. Limited data on carbon emissions and intensity as well as controversial sector exposure and flags for breaches of sustainability guidelines (e.g., UN Global Compact) may also be available in the PMS. At this time, availability of third-party ESG data for investments is low but, where it is available, this information may inform ESG scores and discussions.

GLOBAL CAPITAL SOLUTIONS

1%

of Assets Under Management

The Global Capital Solutions (GCS) investment team invests in a wide range of transactions, encompassing debt-like and equity-like instruments in both private and public companies. The GCS team also integrates ESG analysis into the investment process. Investment professionals typically build relationships with both management teams and financial sponsors, and in many cases have worked with companies and in sectors for some time. The team's knowledge, contacts and ongoing research enable risk-focused ESG analysis and engagement with key stakeholders. In line with other investment teams within Barings, the GCS team utilizes Barings' proprietary ESG scoring to determine ESG current state and outlooks for investments.

STEWARDSHIP & ENGAGEMENT

Our stewardship approach is founded on the belief that minimizing ESG risks and unlocking ESG opportunities, including those relating to climate change, helps to protect long-term value for our clients.

We believe that partnership and engagement, over exclusion, remain central to good stewardship. Our preference is to engage with investee firms rather than divest from them so we can partner to address the material ESG risks and opportunities identified through our ESG integration approach. We believe this allows us to consider a fuller investment universe so potential investment opportunities have the chance to improve their ESG performance alongside their financial performance. We recognize the PRI's latest definition of engagement[7] which reflects interactions with investment entities as well as service providers or non-issuer stakeholders to improve disclosure, improve practice on an ESG factor, or make progress on sustainability outcomes.

Barings' investment professionals are responsible for undertaking engagement with entities in which we invest. Depending on the investment team, our investment professionals may also liaise with investment managers, consultants, sponsors, tenants and servicers as part of the engagement process.

Our engagement approach typically involves the following:

- ESG engagements are initiated at the discretion of investment analysts based on material ESG topics typically identified through the ESG integration process and ongoing monitoring.
- We often engage with C-suite level for corporates and senior governmental representatives for sovereign entities.
- Objectives, milestones, likelihood of success, and timelines are established at the outset of engagement and progress is recorded in our proprietary system.
- Insights gained through engagements feed back into our fundamental ESG analysis.
- As a signatory of the UN Global Compact, we are guided by its principles and incorporate them into our engagement activities related to fundamental responsibilities in the areas of human rights, labor, environment and anti-corruption.
- As part of our firm-level approach, our investment teams have access to join collaborative engagement groups.
- Any concerns identified through ongoing monitoring and engagement interactions may lead to escalation.

The engagements recorded in our proprietary system are based on objectives to encourage issuers to improve disclosures or change behavior across a broad range of ESG topics. We also publicly disclose Barings' engagement activity on our website. We have provided further information in the Metrics and Targets section of this report and two investment team case studies in this section below.

7. Interactions and dialogue conducted between an investor, or their service provider and a current or potential investee (e.g. company), or a non-issuer stakeholder (e.g. an external investment manager or policy maker) to improve practice on an ESG factor, make progress on sustainability outcomes, or improve public disclosure. In private markets, engagement also refers to investors' direct control over and dialogue with management teams and/or Board of portfolio companies and/or real assets.

CASE STUDY

Driving Climate-Related Disclosure in the Banking Sector

**INVESTMENT TEAM: EMERGING MARKETS CORPORATE DEBT
COLLABORATIVE ENGAGEMENT INITIATIVE:
EMERGING MARKETS INVESTORS ALLIANCE EMIA)**

Barings continues to engage with banking sector issuers in emerging markets to improve their disclosure around corporate governance, financial inclusion, social responsibility and climate risk management. Barings has developed a framework (in the form of a questionnaire) which it has rolled out to the issuers and used this as a basis for deeper issuer engagement and encouraging improved behavior. Alongside this, Barings is part of the EMIA Financial Sector Working Group, an industry initiative for asset managers to collaborate and engage with issuers in emerging markets. Barings is driving greater engagement with emerging markets banks focusing especially on climate change and financial inclusion. Barings has taken the lead in developing an industry tool (EMIA Banking Sector questionnaire) focusing specifically on climate risk which is being used by EMIA members as a basis of sector engagement.

We have engaged with senior management of emerging markets banks, including in Slovenia and South Africa, based on their response to the climate risk questionnaire in the following ways:

- Standard Bank: We sent the bank a questionnaire focused on climate risk and subsequently had a call with them in January 2023 where they shared their climate risk strategy. After this, we followed up with a letter where we asked them to consider joining the Science Based Targets initiative (SBTi) and set goals for a reduction in fossil fuels.[8]
- Nova: We held a call with the bank in November 2022 where they shared their climate risk strategy. After the call, we asked them for more clarity on setting and communicating Scope 3 emissions targets, (the bank has already articulated Scope 1 and 2 targets) which have been vetted by SBTI.

Outcome: As a recent engagement initiative, responses from banks in completing the questionnaire and participating in follow-up dialogue is a positive initial outcome. Going forward, Barings will work with the EMIA group to increase scope of banks engaged, to encourage improved data collection on carbon footprint, as well as evidence of building climate risk analysis into its new loan underwriting to pursue engagement objectives. Barings will also continue to engage with banks on an individual basis (outside of the EMIA platform).

8. SBTi defines and promotes best practices in emissions reductions and net-zero targets in line with climate science.

CASE STUDY

Reducing Transitional Risk Through Repositioning an Office Space

TIDE, Bankside, is a Grade A sustainable office space currently under development in a prime location on the Southbank submarket in Central London. Our aim is to support the creation of a building that focuses on its occupiers by providing amenities and outside spaces throughout, and that is net zero carbon in both construction and operations. Amongst the areas considered in the design are health and wellbeing, customer experience, and digital connectivity.

Emerson offered Barings the opportunity to put our emerging ESG strategy into practice, actively reducing embodied and operational carbon to minimize the transitional risk of the asset. This will be achieved through an anticipated annual carbon emission value of 191t CO_2/m_2, with current carbon emission savings of 36.2%. Emerson is also targeting EPC A and energy use intensity of 90 kWh/m2, with 18m3 of solar PV panels to be installed.

Additionally, the project is targeting NABERS UK and BREEAM Outstanding third-party certification, SMART and WIRED Platinum ratings—all of which represent best-in-class performance criteria for new office developments. The building will also be designed in line with WELL building standard requirements.

CLIMATE SCENARIO ANALYSIS

Barings performs scenario analysis at the portfolio and issuer level utilizing Morgan Stanley Capital International's (MSCI) CVaR model. This CVaR analysis considers physical and transition impacts under three temperature pathways: 1.5°C, below 2.0°C, and above 3.0°C. The CVaR Model adds policy risk, technological opportunities, and physical effect to find an aggregate Climate VaR, and also calculates an Implied Temperature Rise (ITR) metric.[9] The results of this climate scenario analysis are used by investment teams to highlight potential areas of climate-related risks, which inform our dialogue with investees, and where material, may influence investment decisions accordingly.

OPERATIONAL CONSIDERATIONS

NET ZERO OPERATIONAL GHG

Barings has committed to achieving net zero GHG in its operations by 2030. To this end, Barings set both short-term and long-term operational GHG emission reduction targets in July 2021. We utilized carbon offsets to achieve global operational neutrality from 2019–2021 and will use offsets for 2022, but we understand that offsetting our emissions is only a short-term solution. Achieving our long-term goal of net zero GHG operations requires emissions reductions and behavior changes within our organization.

Progress toward our GHG reduction targets is tracked and communicated through annual public reporting, informed by global reporting standards in coordination with our parent company MassMutual. MassMutual has its own 2030 and 2050 net zero commitments covering their operations and general investment account, respectively. Barings is actively supporting MassMutual as they work toward their climate commitments.

In 2021 and 2022, Barings collaborated with a third-party carbon services company to calculate our 2019–2022 operational GHG footprint. To achieve our short-term goal of operational GHG neutrality, we purchased voluntary carbon offsets for our total 2019, 2020 and 2021 operational GHG emissions, and will purchase carbon offsets for our 2022 operational GHG emissions.

Barings also reviews our office GHG footprint during normal financial planning, and assesses the efficiency of our office locations, including looking at waste reduction, including e-waste opportunities, in these locations. For example, since 2015 Barings has donated more than 2,000 refurbished laptops to local communities to help facilitate a more circular economy.

Barings has also taken steps to make our employees more aware of their carbon footprint. We promote environmentally compatible mobility for employees through several programs. For example, since 2012 we have provided Season Ticket Loans for use of public transport from home to work. In 2020, Barings also launched a cycle-to-work program, which incentivizes employees to buy a bicycle for commuting purposes through a tax-free loan. In 2021, Barings launched an e-vehicle leasing arrangement to all U.K. benefit-eligible employees. The e-vehicle arrangement incentivizes employees to lease new ultra-low emission vehicles (ULEVs) through Personal Contract Hire savings via corporate discounts, and further tax savings through gross salary reduction. The arrangement gives employees access to all electric and hybrid vehicles in the market. We are also exploring options to incentivize employees to utilize energy-efficient transportation options for their commutes.

9. For more information please visit MSCI Climate Value-at-Risk Scenario Analysis.

IWFM POSITIVE
CLIMATE ACTION AWARD

Barings' London Office

20 OLD BAILEY

Barings' London office was awarded the IWFM Positive Climate Action award in 2020 for their evidence-based application, showcasing 11 environmentally-impactful initiatives that had been implemented since moving into the 20 Old Bailey office space in 2018. The team has also twice been recognized at the Clean City Awards, which reward good practice by encouraging businesses to reduce, reuse and recycle, as well as decarbonize their operations as quickly as possible.

The office received a BREEAM Excellent rating for both the pre-design and fit-out stages of the construction process and was awarded ISO 14001 certification in 2021.

LOOKING FORWARD

Barings continuously seeks to reassess our business and investment strategies and expand our focus on climate-related issues. We will continue to assess our own product lineup, investment process and corporate strategy against these factors and update our strategy based on the risks and opportunities identified. Barings plans to develop additional Article 8 investment products, as well as funds that would be classified as having a sustainable investment objective (Article 9) in the future. We also plan to continue advocating for corporate transparency on material ESG risks and opportunities through engagements with our portfolio companies.

We believe that climate scenario analysis can be an important input to strategic decisions and we intend to further develop our capabilities to conduct climate scenario analysis on our investments and operations, from both a top-down and bottom-up perspective. Barings also plans to continue to review and update ESG investment policies for each investment strategy to maintain formal processes and procedures related to ESG-related investment management, including climate. Investment teams will continue to analyze portfolios for climate impacts through scenario analysis and emissions monitoring, where tool and data coverage allows. Our real estate teams are assessing tools to address various use cases, including property-level risk, neighborhood risk, market risk and portfolio risk. The U.S., Europe and APAC real estate ESG representatives are working together to determine the best suited tools. We expect that some tools will be hyperlocal and others will be global in scope.

We will continue to progress toward our operational net zero target by improving our operational footprint through our existing and developing initiatives.

Risk Management

a. Describe the organization's processes for identifying and assessing climate-related risks
b. Describe the organization's processes for managing climate-related risks
c. Describe how processes for identifying, assessing and managing climate-related risks are integrated into the organization's overall risk management

Barings' Enterprise Risk Management Framework has been established to support the effective identification and management of risks, potential events and trends that may significantly impact the firm's ability to achieve its strategic goals, manage client assets or maintain operations. Barings' key risks are reviewed and overseen at the quarterly risk committees and can be described as falling under three categories—strategic, business and operational.

Any climate-related risks that are identified through our risk identification and assessment processes would be escalated through Barings' enterprise-wide risk framework and committee structure. As described in the Looking Forward section below, Barings is in the process of identifying specific climate-related risks to integrate into our risk management process. In addition, as described in the section above, investment teams can identify bottom-up climate risks through a range of ESG data and analysis tools developed by and in conjunction with the PSA team.

RISK FRAMEWORK

Barings outlines roles and responsibilities, risk management processes and exposure guidelines in our Risk Management Policies and Procedures. We utilize the three lines of defense model for managing strategic, business and operational risks, including those risks related to sustainability.

BARINGS THREE LINES OF DEFENSE

SUSTAINABILITY ROLES & RESPONSIBILITIES

1ST LINE **Investment Teams, Product, Marketing, Enterprise Data, Client Reporting, Procurement & Vendor Management and PSA**	• Documented policies and standards to ensure consistent application of investment-related ESG assessments • Portfolio managers manage each Article 8 and 9 fund in line with pre-defined ESG limits and guidelines • PSA provides portfolio-level ESG analytics and metrics • New business and product approval processes incorporate ESG operational support requirements • Quality control procedures to ensure accuracy and reliability of disclosures within marketing and sales materials • Quality control processes in place to ensure the availability of suitable ESG data • ESG factors incorporated into vendor due diligence for new and existing third party suppliers • Quality control protocols defined for ESG related reporting to clients and regulators • Established and documented processes for identifying, recording, approving and managing each new client request (incl. side letter provisions, guideline restrictions)
2ND LINE **Risk and Compliance**	• Established procedures for identifying, recording and monitoring existing and new ESG-related client guidelines • Investment risk oversight and monitoring of each relevant fund ESG risk profile against pre-defined limits • Risk governance framework to explicitly incorporate ESG risk appetite measures and assessments • Establish and maintain firm-wide policies
3RD LINE **Internal Audit**	• Periodic independent review of processes and controls to ensure key protocols and procedures are being followed and operating as intended

RISK IDENTIFICATION

Barings' first line of defense is responsible for identifying risks. Generally, when risks are identified across the organization, the risk owners work in collaboration with the Risk team to define and document these risks. Barings is currently working to include climate-related risks specifically into this process, as discussed in the Looking Forward section below. Investment teams may consider ESG and sustainability criteria in relation to specific industry and sector trends and characteristics to identify the risks of an investment, and/or through bottom-up research. Investment teams identify and evaluate potential ESG risks for investment portfolios during their due diligence and investment research processes. Once identified and evaluated as financially material for an individual investment portfolio, sustainability risks and mitigations are directly integrated in the related investment and risk analysis. Investment teams will also utilize stress testing through RiskMetrics with an aim of identifying extreme events that could trigger very significant losses to portfolios.

RISK MANAGEMENT

Barings's risk management program includes a risk appetite framework covering the key risks faced by our organization. The Barings risk team, in collaboration with risk owners, identify qualitative and quantitative metrics and tolerance thresholds for defined risks to be used for monitoring on an ongoing basis. When metrics approach the predefined threshold levels, the risks are flagged for possible intervention from the business units and risk teams, and steps are taken to identify reasons for a metric approaching a threshold and the measures needed to address and mitigate the risks.

These risk appetite statements are refreshed periodically, and the metrics used for this ongoing monitoring are reviewed and assessed on a quarterly basis. Barings is in the process of identifying and integrating climate-related risks explicitly into these risk appetite statements to enable management and the risk management functions to better monitor and manage the impact of climate-related issues.

Investment teams identify and evaluate potential sustainability risks at the asset class/portfolio level. Then, sustainability risks and mitigation efforts, including but not limited to engagement/active ownership, are documented and integrated in the related asset allocation and risk analysis for an individual investment portfolio, where applicable or appropriate.

Additionally, Barings' Legal and Compliance teams monitor climate-related regulatory developments across the jurisdictions in which we operate. We track any new climate-related legislation that could be enacted, or new interpretations, rulings, or regulations that could be adopted, including those governing the types of investments we are permitted to make.

From an operational standpoint, Barings' Enterprise Risk team maintains a business resiliency plan to provide guidelines for maintaining business critical operations in the event of a disruptive incident or unforeseen event by enabling the firm to anticipate, prepare, respond and adapt to incremental change and sudden disruption. The Business Resiliency plan encompasses both business and operational resilience and is aligned to the Business Continuity Institute's 'Best Practice Guidelines.' The plan includes considerations for various disruptive events, including extreme weather events. The operational resilience program encompasses the identification of important business services, mapping of key processes and dependencies, setting impact tolerances, ongoing self-assessment and governance. A series of testing and validation exercises are undertaken globally on an annual basis to validate the effectiveness of the business resiliency program.

LOOKING FORWARD

Barings is continuously evolving our risk management practices and aspires to further integrate climate-related risks into our overall risk management framework in the future. We are exploring physical risk assessment tools for our real asset portfolios, which could also be utilized for assessing physical risks at Barings office locations, if this is determined to be necessary and feasible. We also plan to further integrate climate risks into our key risk appetite statements and documentation to continue to better understand and manage the impact of climate issues on our business.

Metrics & Targets

a. Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process
b. Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks
c. Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets

As discussed in the Strategy section of this report, Barings utilizes a variety of tactics to address climate-related risks and opportunities within the organization, spanning both operations and our investment strategies. At present, we track the following metrics[10] as key performance indicators of our execution of these strategies.

ESG INTEGRATION

We integrate ESG information (among several other material factors) into investment analysis across each asset class, investment strategy, fund and/or portfolio, addressing the ESG factors we have determined are most relevant for each. At present, we have proprietary ESG scores for over 88%[11] of our investable assets. Where material and feasible, Barings' investment teams also incorporate climate-related data into the environmental component of our ESG scores. Currently, climate-related data is quantitatively incorporated into public equities and public corporate fixed income strategies, where data coverage allows.

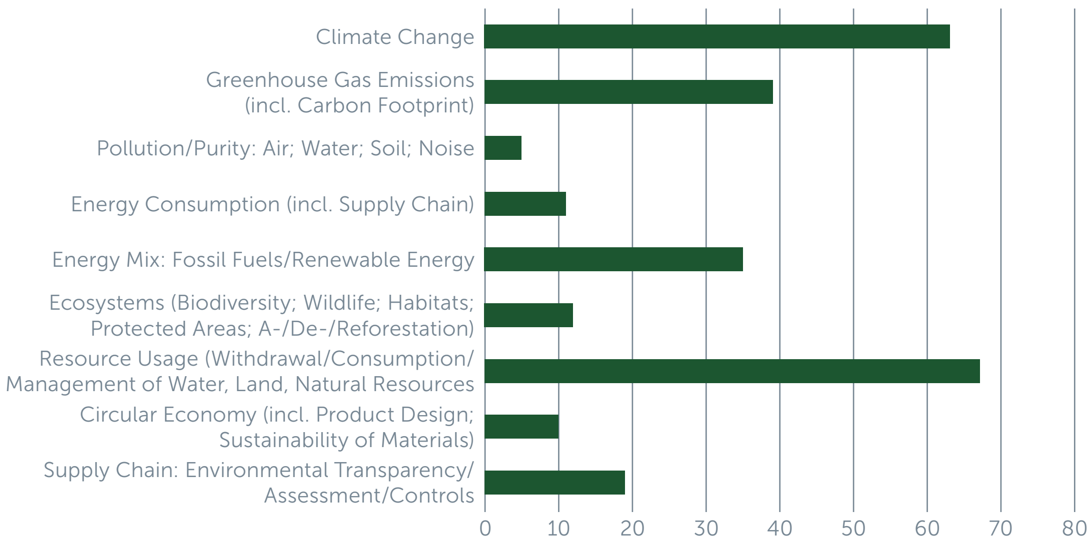
To facilitate climate related and broader ESG analysis, Barings' PSA team compiles metrics such as Scope 1, 2, and 3 emission data, Weighted Average Carbon Intensity (WACI), and Climate Value at Risk (CVaR) and makes it available within Barings' portfolio management systems, where data coverage allows. Barings utilizes a variety of third-party resources to generate this data, including MSCI and Sustainalytics. Summary metrics are currently produced for our public equities and public corporate fixed income.

10. All metrics are as of December 31, 2022, unless otherwise noted.
11. Includes scores held in Barings' ESG scoring database only. Look-through ESG scoring is unavailable for fund holdings. Cash and derivatives are excluded from this coverage percentage.

STEWARDSHIP

As mentioned in the Strategy section of this report, engagements are recorded by our investment teams in our Public Equities and Public Fixed income platforms. A number of engagement topics relate to climate-related dialogue to encourage improved disclosure or practice. In 2022, Barings recorded 261 engagements that were initiated or updated with 238 issuers related to the following categories: product lifecycle/supply chain (environmental), natural capital, energy, emissions/environmental impact. Further breakdown of subcategories has been provided in the chart below.

SUBCATEGORY OF ENGAGEMENT TOPIC



PROXY VOTING

In 2022, Barings voted on 488 environmental proposals[12], voting with management 54.5% of the time. For a full analysis of Barings proxy voting activity, please click here.

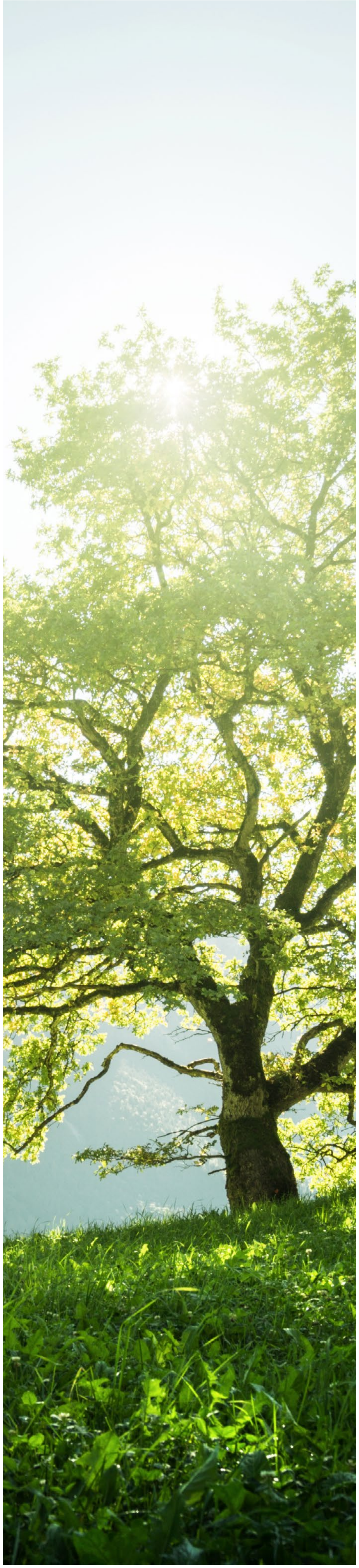
SCOPE 3, CATEGORY 15 GHG EMISSIONS DATA

As an asset manager, Barings' largest climate impact is that of our investments. We are currently tracking our financed emissions where reliable data is available. At present, we have metrics available on financed emissions as shown below[13]:

Asset Class	Scopes 1 & 2		Scope 3	
	Financed Emissions (Tons CO_2e)	% Coverage	Financed Emissions (tons CO_2e)[14]	% Coverage
Global Public Equities[15]	793,040	98.5%	6,047,649	97.9%
Public Corporate Fixed Income	4,685,763	77.1%	30,513,679	76.9%

12. 'Environmental proposals' comprise the following categories as provided by our third-party proxy voting service provider: environmental, SH—health/environ., blended E&S.
13. As of December 30, 2022.
14. Data based on estimates generated by MSCI's Scope 3 estimation model.
15. Public equities excludes Korean holdings.

In addition, our parent company, MassMutual, has instituted a net zero goal for its General Investment Account (GIA), of which Barings is the primary asset manager.



CLIMATE SCENARIO ANALYSIS

At present, Barings primarily utilizes MSCI CVaR for bottom-up climate scenario analysis. Coverage for each asset class is as follows[16]:

Asset Class	% of investments with climate scenario data
Global Public Equities	94.8%
Public Corporate Fixed Income	72.9%

PRODUCTS & SERVICES

Barings is committed to launching and managing investment products that allow us to partner with clients to progress their climate and sustainability goals. As of December 31, 2022, Barings had 34 Article 8 funds and is in the process of developing Article 9 funds. As we seek to support our clients in understanding and quantifying their exposure to climate-related risks, we can make this data available to clients upon request.

OPERATIONAL NET ZERO TARGET

Our commitment to sustainability and reducing our climate-related risks also extends to our own operations. In July 2021, Barings LLC set firm-level GHG emissions reduction targets covering our own operations. These targets include:

- Carbon neutrality by 2021
- Net zero GHG operations by 2030

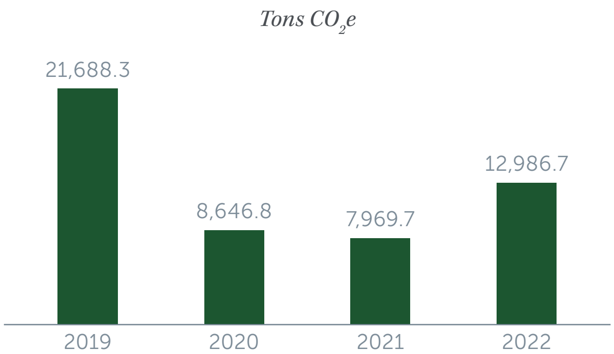
Both targets are on an absolute basis, with a base year of 2019 and covering our Scope 1, 2 and material operational Scope 3 categories. Barings used carbon offsets to achieve our carbon neutrality goal in 2019–2021 and will use offsets again in 2022. We recognize that offsetting our emissions is only a short-term solution, and to achieve our long-term goal of net zero GHG operations requires emissions reductions and behavior changes.

Barings tracks our progress toward these targets and communicates this through annual public reporting informed by global reporting standards in coordination with our parent company MassMutual.

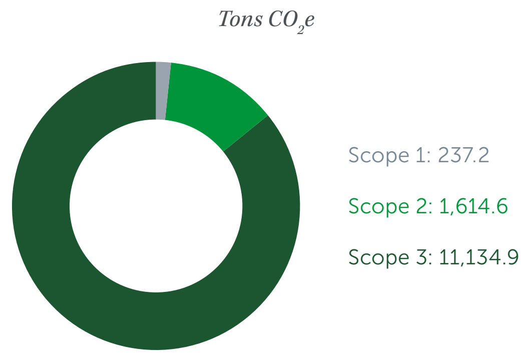
Barings has collaborated with a third-party consultancy firm to collect data and calculate our operational carbon footprint, in line with the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard. In 2022, Barings' business operations generated a total of 12,987 tons CO_2e. This includes Barings' Scope 1, 2 and material operational Scope 3 categories (1, 3, 5, 6 and 7).

16. As of December 30, 2022.

BARINGS' OPERATIONAL GHG EMISSIONS



2022 OPERATIONAL GHG EMISSIONS BREAKDOWN BY SCOPE



Our operational emissions saw an increase from 2021 to 2022, a rebound expected and experienced by many other organizations, driven largely by our return-to-office, increasing headcount and an increase in business travel to meet client needs and expectations. However, despite these changing circumstances, our overall operational emissions for 2022 are over 40% lower than our baseline year of 2019. We intend to keep executing on our sustainability initiatives around our own operations, as outlined in our Sustainability Report, to further reduce these emissions in line with our 2030 target.

LOOKING FORWARD

As we continue to focus on improving climate-related data coverage, especially around private assets, we expect to expand both our metrics and coverage in the future. For example, we have recently acquired Implied Temperature Rise data and expect that our investment teams will incorporate this into their analysis in the future. Additionally, our real estate investment teams are in the process of incorporating climate-related data, climate scenario analysis, and summary metrics into investment processes.

Barings is in the process of onboarding an investment management platform which will simplify access to ESG data and integration into portfolio construction.

We understand the importance of integrating climate-related metrics into the management of our business and our clients' assets, and of developing and reporting against clearly defined targets and goals. We intend to continue making progress in this area, working with external data providers and third-party experts to improve the suite of climate-related metrics available to our investment teams, and continuing to find better ways to support our clients' sustainability and climate goals.

Barings is a $362+ billion global investment manager sourcing differentiated opportunities and building long-term portfolios across public and private fixed income, real estate and specialist equity markets. With investment professionals based in North America, Europe and Asia Pacific, the firm, a subsidiary of MassMutual, aims to serve its clients, communities and employees, and is committed to sustainable practices and responsible investment.*

LEARN MORE AT BARINGS.COM

**As of March 31, 2023*

23-2961500