

Climate  
Report  
2022

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# Introduction

Welcome to Troy Asset Management's (Troy) inaugural Climate Report. The aim of this report is twofold. Firstly, to lay out Troy's approach to integrating climate-related risks and opportunities into both our business and our investment process as described by the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). Secondly, it aims to outline Troy's ambitions for decarbonising, reflecting our commitment as a signatory to the Net Zero Asset Managers' initiative (NZAM).

Climate change is one of the most significant risks facing investors. Whilst inflation, soaring energy costs and the tragic war in Ukraine all rightly seized investor attention in 2022, climate change is not a risk we can afford to overlook. The United Nations Environment Programme (UNEP) has warned that there is currently "no credible pathway to 1.5°C in place". This heightens both the transition and physical risks faced by long-term investors.

2022 saw significant levels of climate-related disruption in the form of record-breaking extreme weather events. In June, Yellowstone, the world's second oldest national park and an important symbol of our efforts to preserve the natural world, was ravaged by flooding. Elsewhere, India, Bangladesh and Pakistan have faced the most prolonged and severe heatwave in over 100 years whilst Kenya and Somalia have suffered extreme drought. However, we need not look so far afield to appreciate the gravity of climate change. The UK has recently emerged from the hottest year on record with sustained heatwaves and peak temperatures of 40°C, bringing many parts of our economy to a complete standstill.

These extreme weather events serve as real-world reminders that our climate is changing, global mean temperatures are rising and, if unaddressed, the consequences will be felt by us all. Delaying mitigation efforts and investment in resilience will only heighten the impact and increase the costs at a later date.

It is for these reasons that Troy supports the recommendations of the TCFD and the aims of the Paris Agreement, specifically to strengthen the global response to the threat of climate change by pursuing efforts to limit temperature increases to 1.5°C above pre-industrial levels<sup>1</sup>.

<sup>1</sup>In December 2015, the Financial Stability Board (FSB) established the Task Force on Climate-related Financial Disclosures to develop climate-related disclosures that could promote more informed investment decisions and would enable stakeholders to better understand the financial system's exposures to climate-related risks and opportunities. The Task Force developed a framework with four widely adoptable recommendations applicable to organizations across sectors and industries, as described in the Task Force's 2017 recommendations report.





# About this report

This report outlines Troy's approach to managing climate-related risks and opportunities in accordance with the framework set out by the TCFD. This framework provides investors and other stakeholders with insight into the four areas of Troy's climate strategy as follows:

## 1. Governance

## 2. Strategy

## 3. Risk Management

## 4. Metrics and Targets

Troy's climate strategy has also been informed by the Net Zero Investment Framework, published by the Institutional Investors Group on Climate Change (IIGCC)<sup>2</sup>, and the Investor Agenda's Investor Climate Action Plan (ICAP). These two documents support the implementation of the recommendations of the TCFD within the asset management industry by providing additional sector specific guidance.

This initial report uses point in time data as at 31 December 2022, unless stated otherwise.

## Operational and investment portfolio climate-related exposure

Throughout this document we classify Troy's exposure to climate-related factors as either operational or pertaining to our investment portfolios. The exposure of Troy's investment portfolios to climate change refers to the positive or negative impact climate change may have on the value of the assets we manage on behalf of our clients. Troy's operational exposure to climate change refers to the impact climate change has on all aspects of our business beyond the portfolios we manage on behalf of our clients. This includes, but is not limited to, the direct impact that climate change may have on our physical office space as well as the many indirect implications of climate change on our product offering, operating systems, client reporting and regulatory obligations.

## Current scope of investment portfolio climate strategy

The climate strategy Troy has developed in relation to our equity investments is the focus of this report. Troy also invests in other asset classes including sovereign debt and gold, however the investment industry is yet to develop adequate tools to measure the emissions attributable to these asset classes or the channels for engagement and advocacy required to mitigate the associated climate risks. We strive to work with our industry peers to develop these methodologies and expand the scope of our climate strategy to include these uncovered asset classes.

## Limitations

Whilst this report outlines the steps Troy can take to mitigate both our operational and investment portfolio emissions in addition to our approach to reducing climate risk in our investment portfolios, it is important to recognise that the fulfilment of our decarbonisation targets is partially dependent on the pace at which the wider global economy decarbonises. This will depend on factors such as government policy and the availability of low-carbon technologies. In many instances, these factors are neither within our control nor the control of the underlying companies in which we invest.

However, these limitations have not deterred us from being ambitious in our climate strategy and leveraging our position as long-term and active owners to drive change. Troy firmly believes in the need to strive towards a net zero 2050 target aligned with the goals of the Paris Agreement. If unaddressed, climate change will have far reaching consequences for all people, all economies and the health and stability of all aspects of the financial system. A failure to decarbonise economies globally and address the systemic risks of climate change would make Troy's role as responsible, long-term stewards of its investors' capital that much harder.

<sup>2</sup>The Net Zero Investment Framework, published in March 2021, provides a common set of recommended actions, metrics and methodologies through which investors can maximise their contribution to achieving net zero global emissions by 2050 or sooner.



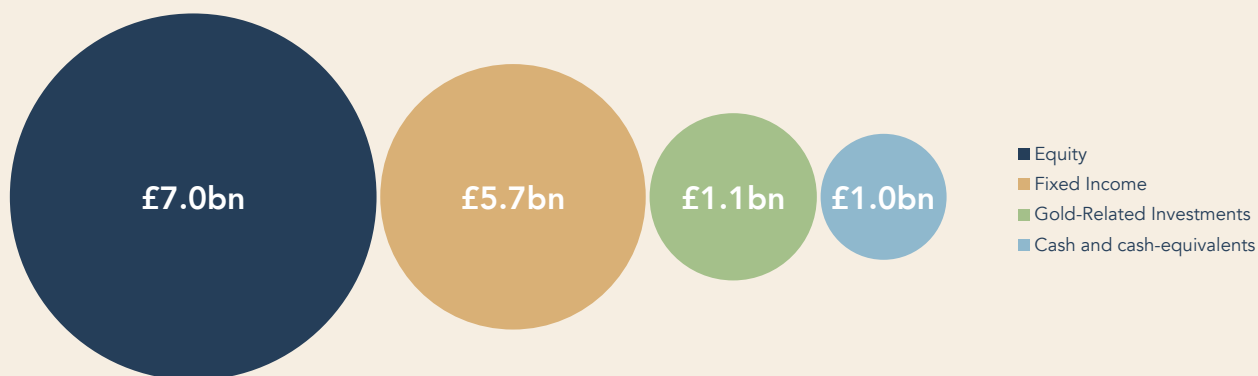
# About Troy

Troy was founded in 2000 by the late Lord Weinstock and Sebastian Lyon. Our purpose is to preserve, grow and be a responsible steward of our clients' irreplaceable capital over the long term. Troy's independent structure, robust governance model, and strong cultural values underpin our investment philosophy and long-term approach to managing risk. It is a combination of our purpose and approach to risk that informs Troy's climate strategy.

Troy believes that a portfolio which suffers fewer and less destructive drawdowns will be in a better position to compound returns over the long run. All Troy's strategies continue to emphasise absolute over relative returns and seek to protect and grow the real value of investors' capital over the long term. This protection has been achieved through investing only in what we consider to be high quality assets.

As at 31 December 2022, Troy managed £14.8 billion of assets, across a range of Multi-asset, UK Equity Income, Global Equity and Global Equity Income strategies. We offer an exclusions-based ethical capability in our Multi-asset, UK Equity Income and Global Equity Income strategies. We conduct thorough primary research, and manage concentrated, low-turnover portfolios of our best ideas. We avoid complexity and invest predominantly in high quality developed market equities, US and UK sovereign debt, gold-related investments and cash and cash-equivalents.

## AUM (£) by Asset Class



Source: Troy Asset Management as at 31 December 2022.

Troy has a strong and identifiable culture<sup>3</sup>. We strive to act responsibly at all times and expect the same of the companies in which we invest.

These guiding principles are core to both Troy's investment approach and how we work with our clients, employees, shareholders and wider stakeholders. How we respond to climate-related risks and opportunities is underpinned by our purpose, investment philosophy and culture.

<sup>3</sup>Further insights into Troy's purpose and culture can be found within our [2022 Sustainability & Social Responsibility Report](#).



# 1. Governance

Troy has an established governance framework which enables the identification and oversight of climate-related risks and opportunities. This framework is integrated into the firm's governance and management structures, with accountability at both the Board and management level.

## Oversight of climate-related risks and opportunities

Troy's independent structure, robust governance model, and strong cultural values form the foundation of our approach to effective stewardship of our clients' assets, including oversight of climate-related risks and opportunities. We remain a privately-owned company which has always sought to maintain a simple organisational structure. Since inception, we have been overseen by a Board of Directors (the Board), including strong representation by experienced Non-Executive Directors.

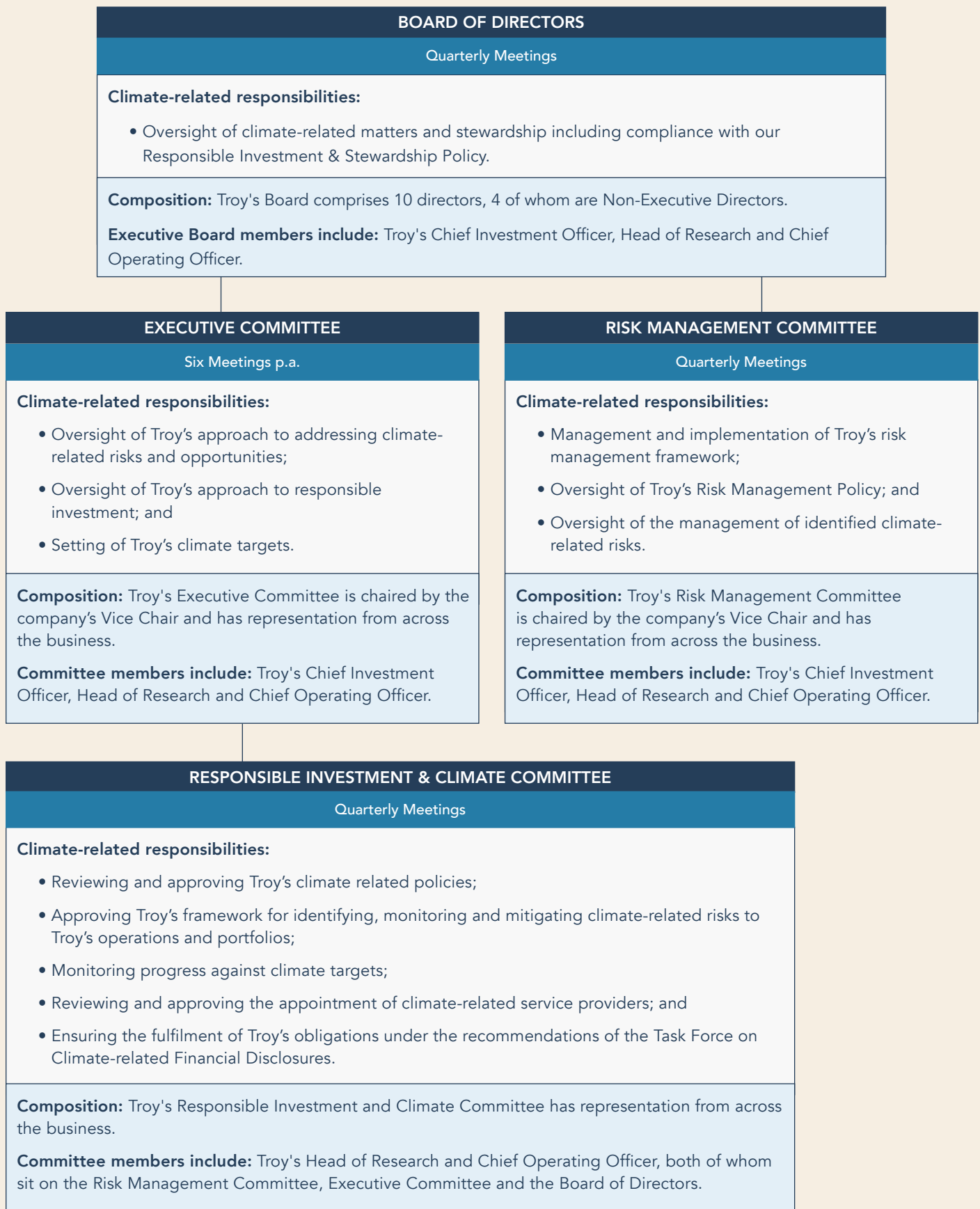
Our governance structure has evolved as the business has grown, with more recent notable changes in relation to oversight of climate-related issues including the creation of the Responsible Investment & Climate Committee. Troy's Board has established a number of committees to which it delegates responsibility. Each committee has its own terms of reference, meets on a periodic basis and can also be convened as necessary to deal with any matters arising. Committee members are selected from the relevant areas of the business to ensure that each committee has the appropriate level of knowledge and experience to execute its mandate effectively. Figure 1 shows the governance structure specific to the oversight of and accountability for climate-related matters.

Central to our climate-related governance structure is our Responsible Investment & Climate Committee which has, amongst others, the following responsibilities which relate to the assessment and management of climate-related risks and opportunities:

- Review and approval of Troy's climate-related policies;
- Approval of Troy's framework for identifying, monitoring and mitigating climate-related risks to Troy's operations and portfolios;
- Monitoring progress against climate targets;
- Reviewing and approving the appointment of climate-related service providers; and
- Ensuring the fulfilment of Troy's obligations under the recommendations of the Task Force on Climate-related Financial Disclosures.

The Responsible Investment & Climate Committee is a sub-committee of our Executive Committee to which it reports periodically. Other members of that Committee include our Head of Research and Chief Operating Officer, both of whom are also Directors of Troy and members of our Executive Committee. The Chair of the Responsible Investment & Climate Committee has primary responsibility for many aspects of climate change and reports to our Head of Research and Troy's Chief Investment Officer, both of whom are members of Troy's Board.



**FIGURE 1:** Troy's climate-related governance structure

The Executive Committee is responsible for overseeing Troy's approach to addressing climate-related risks and opportunities. With support from the Responsible Investment & Climate Committee and Board level oversight, it has driven forward the development of Troy's responsible investment and stewardship strategy as well as Troy's climate strategy. This includes the assessment of climate-related risks and opportunities, setting a firm level net zero target and enhancing our investment policies through the creation of a formalised Climate Change Mitigation Policy applicable to our funds which meet the criteria under Article 8 of SFDR<sup>4</sup>.

The assessment of climate-related risks and opportunities affecting our business is integrated into Troy's wider business strategy, which is set by the Board. Members of the Board receive information on climate-related risks and opportunities through several reporting structures. Formal reporting to the Board is by way of an annual Climate Report.

As noted above, Board members and members of the Executive Committee also sit on the Responsible Investment & Climate Committee thus ensuring an appropriate flow of information between the Board and relevant committees. The Executive Committee considers responsible investment matters as a standing agenda item at each meeting.

Across every function of the firm, there are people responsible for confirming the risks to which the relevant areas of the business may be exposed and reporting this to the Risk Management Committee by way of a risk register. Troy's Compliance Team is responsible for the day to day management of the risk register, as overseen by the Chief Operating Officer, who is responsible for Troy's risk register. Each risk within the register has a named person responsible for its management and implementation of the agreed controls, ensuring adequate training and resourcing. Various climate-related risks confronting both Troy's operations and investment portfolios have been identified and recorded in our risk register, which is reported to and reviewed by Troy's Risk Management Committee.

## Climate-related risks and opportunities in our investment process

The integration of environmental, social and governance (ESG) factors, including climate change mitigation, is the responsibility of the Chair of the Responsible Investment & Climate Committee with oversight from Troy's Head of Research and Chief Investment Officer. Our investment process has long sought to include the non-financial factors affecting an investment's long-term performance and durability, something we believe is an important contributor to our competitive advantage. The analysis of climate-related risks is no different. Our fiduciary duty requires us, as stewards of our investors' capital, to consider long-term value drivers in our investment process.

As the materiality of transition and physical climate risks facing our portfolios has increased over recent years, our integrated ESG analysis has evolved to ensure all holdings are assessed for their exposure to climate risks (and opportunities where appropriate). Troy's approach is outlined in our [Responsible Investment & Stewardship Policy](#).

All members of our Investment Team have responsibility for ensuring that we invest in line with Troy's established investment approach, which includes integrating analysis of ESG factors, including climate-related risks and opportunities, into our investment and stewardship process. In addition to their primary research, Troy's Investment Team is supported by third-party data providers including MSCI ESG Research, Bloomberg and the Carbon Disclosure Project to identify and manage the exposure of both individual holdings and portfolios to climate-related risks.

<sup>4</sup>Article 8 of Regulation (EU) 2019/2088 of the European Parliament and of the Council of 27 November 2019 on sustainability-related disclosures in the financial services sector.





## 2. Strategy

Troy recognises that the climate-related risks and opportunities to which the portfolios it manages are exposed far outweigh the risks and opportunities faced by its small operational footprint. We are aware of the material role our assets under management can have in supporting global efforts to transition towards net zero by 2050.

It is for this reason that Troy has made a commitment to align with the objectives of the Paris Agreement and why funds which meet the criteria under Article 8 of SFDR promote climate change mitigation<sup>5</sup>.

### The impact of climate-related risks and opportunities on our operations

Troy has thought carefully about how we can integrate climate-related risks into our business strategy. As a firm based in a single London office, we believe that our operational exposure to climate risks and opportunities relate primarily to transition risks rather than physical risks.

#### Physical risks

Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g. cyclones, droughts, floods and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g. sea level rise).

#### Transition risks

Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses, and reputational considerations.

Troy believes that climate-related matters will have a significant impact across the investment industry, particularly in areas such as changing investor demands, regulatory expectations and investor reporting. All of the risks identified have the potential to become opportunities if they are adequately managed. Details of our risk identification and risk management processes are included in the subsequent Risk Management section of this report.

<sup>5</sup>See Troy's [Climate Change Mitigation Policy](#).



### Short-Term Climate-Related Risks and Opportunities in Troy's Operations (0-3 years): Data Analytics and Metrics

The data and tools available to measure and report on climate change are rapidly evolving. An inability to keep up with the evolution of different methodologies and the supporting datapoints for assessing climate impact could negatively affect our client servicing efforts. Conversely, keeping abreast of the evolution of such metrics and reporting tools to measure climate impact allows Troy to better communicate the climate-related exposures of our investment portfolios to our underlying investors.

### Short to Medium-Term Climate-Related Risks and Opportunities in Troy's Operations (0-5 years): Compliance & Regulation

We consider there to be a significant short to medium-term compliance and regulatory risk arising from climate change. Over the past 18 months, the financial services industry has seen many new climate and ESG-related regulations come into effect<sup>6</sup>. We welcome the enhanced regulatory safeguards on ESG and sustainable investment, the enhanced disclosure they provide investors and the changes in investor behaviour they aim to encourage. With that said, we are not immune to the challenges that new regulations bring but we are well-positioned to respond to them. For this reason we believe that regulatory change also presents an opportunity.

### Medium to Long-Term Climate-Related Risks and Opportunities in Troy's Operations (5-7 years): Investor Preferences

Over the medium to long-term, we see changing investor appetite to be both a risk and opportunity arising from climate change. As investors become more aware of the impact of climate change and the role their capital can play in promoting sustainable and responsible investments, this may result in greater demand for investment products promoting environmental and social characteristics.

If investor preferences go beyond Troy's current approach, which is one that promotes climate change mitigation by way of stewardship, to exhibit greater preference for positive climate impact, e.g. investing in climate solutions, this risk may be amplified. Troy's investment process emphasises companies that exhibit lower volatility and demonstrate a well-established track record of profitability and cash flow. This means that some investments in emerging climate solutions may not align with our investment approach today, owing to their greater volatility and often higher valuation risk.

<sup>6</sup>New regulation relating to climate and broader ESG integration includes the European Union regulation 2019/2088 on sustainability-disclosures in the financial services sector (commonly referred to as "SFDR") and European Union regulation 2020/852 on the establishment of a framework to facilitate sustainable investment (commonly referred to as the "Taxonomy Regulation"). Both pieces of regulation are significant in setting a regulatory framework for the analysis of environmental, social and governance factors as part of investment processes and disclosures against that analysis. A similar regime, the Sustainable Disclosure Requirements, is also being implemented by the Financial Conduct Authority in the UK.



## The impact of climate-related risks and opportunities on our investment portfolios

Despite Troy's focus on the avoidance of unrewarded risk, its investment portfolios are not immune to transition and physical climate risks, as discussed in the subsequent Risk Management section. Troy's climate strategy currently focuses on the identification of climate risks (and opportunities where appropriate) within our equity investments as the investment industry is yet to develop adequate tools to measure the emissions attributable to the climate impact of sovereign debt, cash or gold-related investments. We will continue to work with industry initiatives and peers to develop these methodologies and hope to expand our climate strategy to cover these asset classes in due course.

Troy holds few carbon-intensive companies, or those that would be deemed 'high-impact'<sup>7</sup>. As a result, the transition risks, namely the disruption risk and stranded-asset risk our portfolio companies face is less severe than if we were more heavily exposed to certain sectors such as fossil fuels, heavy industrials and transportation. However, our portfolio companies remain exposed to climate-related risks in the ways discussed below.

### Short to Medium-Term Climate-Related Risk in Troy's Investment Portfolios (0-5 years)

The transition to a low-carbon economy affects all companies operationally, financially and strategically. We have identified transition risks; namely regulatory changes, technological disruption and reputational risks, as key short to medium-term risks for all of Troy's holdings. With that said, investments with a higher carbon footprint inevitably face higher transition risk owing to greater pressures to decarbonise, the possibility of carbon taxes and increased reputational risk.

Troy uses third party data to measure financial transition risks associated with Scope 1, 2 and 3 emissions for all holdings and identify transition-related opportunities where relevant. We monitor the carbon footprint of our portfolios and identify the holdings that contribute most to each portfolio's carbon footprint. In most instances, the five most carbon intensive holdings contribute to c.60% of the portfolio's carbon footprint. We have therefore carried out a supplementary assessment using the Climate Action 100+ benchmark to better scrutinise the transition plans of these holdings.

### Medium to Long-Term Climate-Related Risk in Troy's Investment Portfolios (5-7 years)

We deem the physical risks arising from climate change to be felt most in the medium to long-term. We have identified the impact many physical risks can have on our holdings – most notably, extreme weather hazards and water scarcity. The latter may have a significant detrimental consequence given the nature of Troy's portfolios and the reliance of many manufacturing processes on water usage. Troy uses third-party tools to analyse direct physical risk (including extreme heat, wind, wildfire, coastal and fluvial flood risks) and indirect physical risk (extreme heat and cold, precipitation risk and river flow). Troy is aware of the challenges involved in the quantitative analysis of physical climate risk and as such we seek to ensure that the input from any third-party tool is framed within our own qualitative understanding of the investments we hold.

Climate change, biodiversity, deforestation and water scarcity are topics we have explored in thematic research carried out by the Investment Team. Our research has allowed us to identify the holdings most vulnerable to these environmental risks. Physical risks will become more acute if policy responses to climate change are delayed, triggering a disorderly transition. Given this, we are aiming to develop our analysis of physical risk over the next 12 months.

<sup>7</sup>High Impact sectors are those defined by the Net Zero Investor Framework as companies on the Climate Action 100+ focus list; companies in high impact sectors consistent with Transition Pathway Initiative sectors, banks, and real estate are considered high impact for the purposes of this assessment.



### Climate-Related Risks Beyond our Investment Time Horizon (7 years +)

In determining whether climate risks sit outside our investment time horizons, which are typically 5-7 years, we have considered the climate commitments made by governments in the jurisdictions in which we invest and the rate of increase in global mean temperatures. The latter is informed by the status reports published by the Intergovernmental Panel on Climate Change and United Nations Environment Programme's emissions gap report.

The non-linear nature of climate change and the propensity for capital markets to be forward looking make any predictions of the timeframes over which climate-related risks and opportunities may manifest themselves difficult to analyse. We therefore cannot assert that any climate-related risks lie exclusively outside of our investment time horizon with any degree of certainty.

Troy's equity investments are almost exclusively listed on developed market exchanges including in the US, UK, Japan, Switzerland and Europe. All of these geographies have made climate commitments in the form of nationally determined contributions (NDCs) which are broadly Paris-aligned and include explicit 2030 emissions reduction targets and net zero by 2050 goals. As such, transition risks, including asset stranding and financial risks, are considered within our investment time horizon as the policy response to climate change may intensify in the nearer term. A delayed and more disorderly transition scenario may however mean that some of these risks occur beyond our stated time horizon.

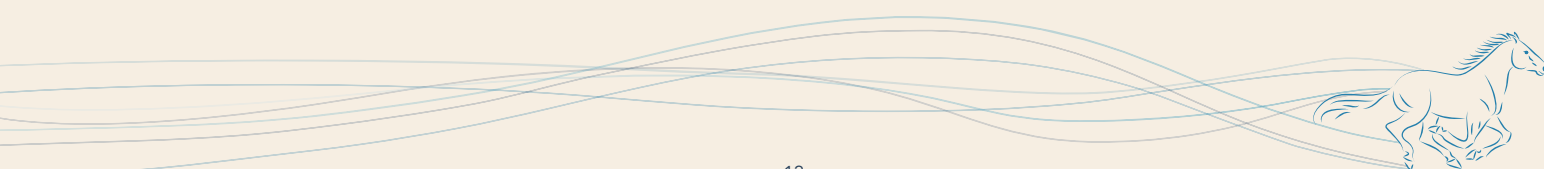
A number of physical climate risks are already having an impact in certain geographies today. However, it is clear that the severity of these risks is likely to increase over time periods beyond our stated investment time horizon. The risks associated with warming beyond 2°C above pre-industrial levels and the associated failure to prevent climate tipping points have the potential to cause physical climate impacts beyond our 7-year time horizon, for example the impact of a material rise in sea level.

### Climate-related investment opportunities

Troy considers both climate risks and opportunities within our investment process. However, our investment philosophy makes allocating to climate solutions more challenging. Troy typically seeks to invest in well-established and stable businesses that can compound steadily over time. We favour companies that return cash to shareholders and some of our mandates have a specific income objective. We typically do not invest in higher risk companies, especially those that have a less well-established track record of profitability. We are also valuation sensitive. This investment approach means that many companies that are focused on the development of emerging climate positive technologies currently fall outside of our investment universe.

That said, we consider the extent to which established companies may be able to take advantage of the opportunities associated with the low-carbon transition in the form of improvements in areas such as resource efficiency, investment in building resilience to climate change and responding to changing consumer preferences. These represent material opportunities for many investee companies.

Note that while for the purposes of this report we provide a separation between investment portfolio and operational climate-related risks and opportunities, we recognise that there is a material interdependency associated with these factors.





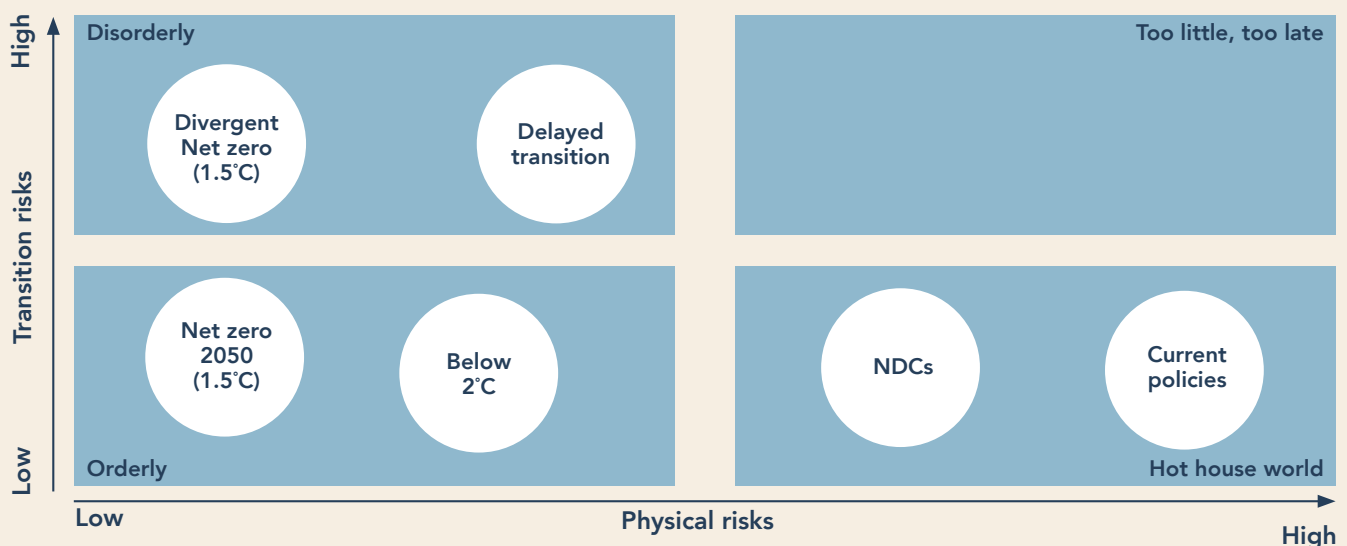
## Scenario analysis

Troy has assessed the current exposure of our portfolios to transition and physical risk under different scenarios using MSCI's Climate Value-at-Risk (CVaR) tool. MSCI's CVaR analysis seeks to combine future policy environments, profits from technological opportunities and physical risks and opportunities based on specific scenario pathways into a single metric which provides insight into the climate-stressed valuation of assets.

The scenarios available within MSCI's CVaR model have two key inputs: the transition risk scenario and physical risk scenario. For the transition risk scenarios, Troy has selected those based on the Network for Greening the Financial System (NGFS) scenarios.

The NGFS scenarios distinguish between orderly and disorderly transitions. In the former, climate policies are introduced early and become gradually more stringent. In the latter, scenarios explore higher transition risk due to policies being delayed or divergent across countries and sectors. The 'disorderly' scenarios used have similarities to the UN Principles for Responsible Investment's 'inevitable policy response'. The NGFS scenarios also provide a distinction based on the level of policy ambition, for instance those working towards 1.5 degrees, 2 degrees or 3 degrees rise in global mean temperatures. The 3 degrees scenario is referred to as a 'hot house' scenario and represents a failure to meaningfully transition to a lower-carbon economy. MSCI also models an average or aggressive physical risk environment for each scenario, which is based on the geo-location of assets, overlaid with climate hazard models such as extreme weather events. Figure 2 shows the relationship between transition and physical risks associated with various scenarios.

**FIGURE 2:** NGFS Scenario Framework



Source: MSCI Climate Value-at-Risk and Network for Greening the Financial System, as at 31 December 2022.

Positioning of scenarios is approximate based on an assessment of physical and transition risks out to 2100. NGFS scenarios currently do not model a 4+ degrees scenario which would occupy the top right quadrant of the above chart.

The scenarios selected meet the requirements of the Bank of England's 2021 Biennial Exploratory Scenario and are therefore associated with regulatory specified pathways. The scenarios provide a science-based and impartial insight into a variety of different climate outcomes.

Troy notes that scenario analysis is subject to significant limitations and assumptions and therefore the output should be considered within a wider portfolio level risk framework and alongside in-depth stock level analysis. It should be noted that for all portfolios only the equity component is considered in the scenario analysis. This means that any cash held in Troy's portfolios is not considered and for our Multi-asset mandates shown below (Trojan Fund and Trojan Ethical Fund), gold-related investments and sovereign debt are also excluded from the analysis. We also note that the aggregated CVaR figures produced below are significantly influenced by a small number of holdings within each portfolio.



**TABLE 1:** Climate VaR % of Troy representative portfolios

			Troy Multi-asset Strategy*	Troy Ethical Multi-asset Strategy*	Troy UK Equity Income Strategy	Troy Ethical UK Equity Income Strategy	FTSE All-Share Index	Troy Global Equity Income Strategy	Troy Ethical Global Equity Income Strategy	Troy Global Equity Strategy	MSCI World Index
Temperature Alignment	Policy Response	Physical Risk	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %	Climate VaR %
1.5°C	Orderly	Average	-6%	-5%	-8%	-8%	-26%	-7%	-7%	-5%	-13%
1.5°C	Disorderly	Average	-21%	-15%	-24%	-26%	-78%	-22%	-22%	-20%	-40%
2°C	Orderly	Average	-5%	-4%	-6%	-7%	-16%	-6%	-6%	-3%	-9%
2°C	Disorderly	Average	-11%	-8%	-14%	-15%	-57%	-13%	-12%	-12%	-25%
2°C	Disorderly	Aggressive	-12%	-9%	-19%	-21%	-62%	-17%	-17%	-13%	-30%
3°C	Hot House	Average	-5%	-4%	-6%	-7%	-15%	-6%	-5%	-3%	-8%
3°C	Hot House	Aggressive	-6%	-5%	-11%	-13%	-21%	-10%	-10%	-5%	-13%

\*For Multi-asset funds the Climate VaR analysis applies only to the equity allocation of the portfolio.

Source: MSCI ESG Manager, Troy Asset Management as at 31 December 2022.



## Interpretation of scenario analysis

Table 1 shows the Climate Value at Risk for each portfolio in a number of different climate scenarios against the portfolio's performance comparator index. The CVaR figure is expressed as a percentage of portfolio value at risk to the nearest full percentage point and represents the percentage drawdown that the portfolio could be expected to experience if the associated theoretical scenario played out. While we publish the data to aid transparency, we believe the limitations of the modelling diminish the value of individual data points and that it is the relative analysis between scenarios versus the benchmark that is most useful.

From the data, we highlight a few simple observations:

1. The aggregated impact of physical and transition risk is negative in all scenarios for both Troy's portfolios and the benchmarks.
2. For all portfolios, disorderly transitions, regardless of policy temperature alignment, represent the most significant CVaR.
3. Troy's portfolios are more sensitive to high transition risk scenarios (policies that target 1.5 degrees) than higher physical risk scenarios (aggressive, rather than average physical scenarios). This is likely to be the result of two factors:
  - a. Developed market focused portfolios
  - b. The current limitations of physical climate risk modelling
4. All Troy's portfolios have significantly lower exposures to climate risk than their respective performance comparator indexes.

Whilst we expect the sophistication and value of scenario analysis to improve over time, we believe that at this early stage the data shows a portfolio positioning that is consistent with Troy's philosophy of constructing portfolios which expose investors to lower levels of unrewarded risk than their respective benchmarks.

Troy's portfolios are shown to be little impacted by the 3 degrees 'hot house' scenarios. We believe there are considerable limitations in modelling the outcomes of 3 degrees or above scenarios given the possibility of harder to model climate tipping points, supply chain risks and potential systemic failures. We therefore caution against drawing any conclusions from the lower relative CVaR shown in the 3 degrees 'hot house' scenarios.

### Investor Climate Action Plans (ICAPs)

As part of its commitment under the Net Zero Investment Managers initiative, Troy expects to make public the details of its Investor Climate Action Plan (ICAP) later in 2023. The ICAP, as laid out by the Investor Agenda in its 2021 publication and subsequent 2022 guidance, provides an assessment of the progression of an investor's climate strategy and its plans for further development. Troy has conducted an initial benchmarking exercise against the Investor Agenda's expectations ladder and is currently developing timelines for progression through the tiers. We look forward to reporting on our ICAP in due course.



# 3. Risk Management

Effective risk management has long been central to Troy's investment philosophy and process; we believe in the importance of capital preservation which lends itself to a more risk-averse approach to investing. Climate change poses transition and physical risks to both Troy's business and our investment portfolios. Our processes have evolved to allow for the identification and mitigation of climate-related risks and ensure we are well positioned for the future.

A discussion of the physical and transition risks faced by both Troy's portfolios and its operations are included in the previous Strategy section of this report. Troy is cognisant that if the transition to low-carbon is not effectively managed and there is a continued delay in the policy response, both the physical and transition risks from climate change are likely to increase over the medium to long-term.

## Troy's risk identification process

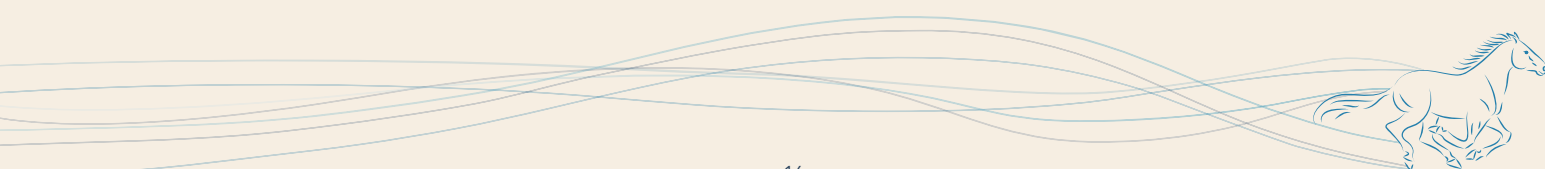
Effective risk management begins with a robust process for identifying risks, assessing their likelihood and potential impact. At a firm level, Troy has a standardised approach to the identification and assessment of risks, which is also followed for climate-related risks affecting the Firm. The identification of risks is a live process, which is managed and overseen by Troy's Compliance Team with each department and reviewed formally on an annual basis.

Troy's risk register assigns a risk rating to every identified risk which comprises the inherent risk and, post mitigation, the residual risk once the systems and controls have been implemented. The residual risk is considered against the Firm's risk appetite. Troy's risk register has identified a number of climate-related risks, highlighted under the Strategy section of this report.

## Identifying climate-related risks in our investment process

Troy's investment approach was informed at inception by a clear understanding that a portfolio which suffers fewer and less destructive drawdowns will be in a better position to compound returns over the long run. This protection has been achieved through investing only in assets deemed to meet Troy's quality criteria. These comprise a select universe of equities that have passed through Troy's research process, developed market government securities, gold-related investments and cash.

Troy's climate strategy currently relates to our equity investments. However, as the industry develops further tools to assess and mitigate the climate impact of sovereign debt, gold-related investments and cash, our strategy will evolve to include these asset classes.





## Equities

Troy's single unified investment process means climate-related risks and opportunities are assessed in the same way across all equity holdings. Both the physical effects of climate change and the transition to a greener future pose challenges to many businesses; a failure to adapt and build resilience can result in the erosion of profitability, loss of competitive positioning or a decline in asset values. This in turn poses an investment risk to the shareholders of those businesses and heightens the likelihood of capital loss. Our integrated responsible investment approach seeks to mitigate investment risks by assessing the exposure of the underlying companies in which we invest to both transition risks and physical climate risk.

As the materiality of climate change has evolved, so too has Troy's integrated analysis of climate-related risks and opportunities into the fundamental analysis of all existing and prospective equity investments.

### Transition Risk

Our exposure to high-impact sectors<sup>8</sup>, i.e., those with a higher carbon footprint, remains limited given our bias towards capital-light and non-cyclical businesses. This goes some way in managing our portfolios' exposures to transitional climate risk.

Troy seeks to avoid investments in assets that are likely to experience asset stranding and currently has no direct exposure to the oil & gas sector. We also avoid sectors where we believe there to be significant risk to asset lives or asset values as a result of transition and physical climate risk. We tend not to invest in sectors such as transport, mining, airlines or oil and gas. Where we do have exposure to transition risk it is to less material property, plant and equipment assets and some utility companies.

### Physical Risk

While our investment philosophy means that our portfolios are less exposed to transition risk, it less obviously helps mitigate exposure to physical risk. This is perhaps best illustrated by Troy's exposure to consumer goods companies which have long been an important part of our sector allocation. These companies typically have long, global supply chains, often including agricultural or horticultural producers, which create greater exposure to physical climate risk.

We recognise that climate change poses a systemic risk to the global economy, markets and society and therefore all equity investments will be subject to climate-related disruption, albeit to varying degrees.

<sup>8</sup>Defined as companies on the Climate Action 100+ focus list and companies in high impact sectors consistent with Transition Pathway Initiative sectors.



## Identifying climate-related risks at initiation

When carrying out fundamental analysis for prospective investments we consider the vulnerability of a company to climate change and establish how well positioned it is to take advantage of opportunities arising from the transition to a low-carbon future. Initiation notes have a dedicated section on environmental risks and opportunities with specific prompts relating to the company's exposure to both physical and transition risks.

Climate-related factors considered in Troy's proprietary research may include but are not limited to:

- Carbon pricing and increased regulation
- Global energy supply and demand mix
- Disruptive technologies
- Net zero alignment and transition plans issued by companies
- Direct and indirect physical risk

As part of our research, we may draw on various sources including company public filings, output from ESG research providers, CDP disclosures and the Climate Action 100+ benchmark.

## Identifying climate-related risks on an ongoing basis

As long-term investors we expend a considerable portion of our research effort on monitoring existing holdings. We monitor financial releases and meet with management regularly to build our knowledge of the company and ensure our investment thesis remains unchanged; this process includes monitoring the development of material non-financial factors such as the progress of a company's decarbonisation efforts. We conduct an annual governance and climate review of all holdings as part of our AGM and voting process. A number of questions in this assessment relate specifically to climate change.

To monitor the extent of risk exposure, we also support our own initial analysis with MSCI's climate data which takes into consideration a company's sector (carbon intensity, proneness to stranded asset risk or disruption risk) and geographical location (regulatory changes, carbon price introduction and physical risk exposure). This enables a better understanding derived from combining the quantitative carbon performance, transition and physical risk exposure data from MSCI with the qualitative analysis undertaken by Troy's Investment Team.

Climate issues identified in our research process are further explored during meetings with the management or sustainability teams of the companies concerned.

## Thematic research

In addition to company-specific equity research, Troy conducts ad hoc thematic research. A number of these thematic pieces have covered climate-related issues allowing the Investment Team to better identify holdings most exposed to various climate-related risks. Recent examples include a piece identifying our holdings most exposed to Europe's energy shortage.

## Climate maturity scale

Troy's Investment Team has conducted a number of iterative assessments of each equity holding's alignment with a net zero pathway. In accordance with the requirements of our Climate Change Mitigation Policy and our commitment under NZAM, each company has been plotted along an alignment maturity scale informed by the Net Zero Investment Framework<sup>9</sup> methodology.

<sup>9</sup>Details of the Paris Aligned Investment Initiative's Net Zero Investment Framework can be found [here](#).



**TABLE 2:** Climate Alignment Maturity Scale

Alignment Categories	Description	Criteria
<b>Not Aligning</b>	Any company that has not set a long-term 2050 goal consistent with achieving global net zero.	
<b>Committed to Aligning</b>	A company that has complied with criterion 1 by setting a clear goal to achieve net zero emissions by 2050.	<b>Criterion 1 - Ambition:</b> A long term 2050 goal consistent with achieving global net zero.
<b>Aligning towards a net zero pathway</b>	Companies that: <ul style="list-style-type: none"> <li>• Have set a short or medium-term target (criterion 2);</li> <li>• Disclose scope 1, 2 and material scope 3 emissions data (criterion 4); and</li> <li>• Have a plan relating to how the company will achieve these targets (partial criterion 5) but has yet to show sustained performance against those targets.</li> </ul>	<b>Criterion 2 - Targets:</b> Short- and medium-term emissions reduction target (scope 1, 2 and material scope 3).  <b>Criterion 4 - Disclosure:</b> Disclosure of scope 1, 2 and material scope 3 emissions.  <b>Criterion 5 - Decarbonisation Strategy:</b> A quantified plan setting out the measures that will be deployed to deliver GHG targets, proportions of revenues that are green and where relevant increases in green revenues.
<b>Aligned to a net zero pathway</b>	Companies that: <ul style="list-style-type: none"> <li>• Meet criteria 1-6 for high impact companies or criteria 2, 3 or 4 for lower impact companies; or</li> <li>• Have adequate performance over time in relation to criterion 3, in line with targets set.</li> </ul>	<b>Criterion 3 - Emissions Performance:</b> Current emissions intensity performance (scope 1, 2 and material scope 3) relative to targets.  For High Impact Sectors Only:  <b>Criterion 6 - Capital Allocation Alignment:</b> A clear demonstration that the capital expenditures of the company are consistent with achieving net zero emissions by 2050.
<b>Achieving net zero</b>	Companies that have current emissions intensity performance at, or close to, net zero emissions with an investment plan or business model expected to continue to achieve that goal over time.	

Source: Paris Aligned Investor Initiative's Net Zero Investment Framework (NZIF).



We also monitor the CVaR, carbon footprint and implied temperature rise of our portfolios on an ongoing basis. This allows fund managers to understand the physical and transition risk as well as the carbon footprint of their portfolios. This also enables the identification of the biggest contributors to portfolio emissions, in turn informing their exposure to transition risk at an aggregate level.

## Non-Equity Investments: Sovereign Bonds and Gold-Related Investments

Troy's Multi-asset portfolios and some segregated mandates include investments in sovereign bonds and gold-related investments. Assessing the climate-related risks and opportunities these assets are exposed to is more challenging owing to a lack of well-established methodologies and frameworks for Paris-aligned investing.

An assessment of climate risk comprises part of our annual ESG assessment of sovereign debt. The assessment includes a review of the international climate conventions that the sovereign is party to, an assessment of climate policies, nationally determined contributions under the Paris accord and longer-term net zero ambitions.

We continue to monitor the development of available methodologies to evolve our assessment of climate risk for sovereign debt and gold-related investments and will provide updates on our progress in future climate reports.

## Troy's risk management approach for investment-related climate risks

Troy takes an active ownership approach to mitigating climate risk. This means we use engagement and voting to encourage real-world emissions reductions. We outline below the measures employed to mitigate climate risk in our investment process.

### Climate Change Mitigation

In May 2022, Troy adopted a [Climate Change Mitigation Policy](#) which outlines the consideration of climate risk in our investment decision-making process for mandates which meet the criteria under Article 8 of the European Union's Sustainable Finance Disclosure Regulation. Portfolios included within our Net Zero Asset Managers initiative commitment are also managed in a way that is aligned with the policy. We believe that the promotion of climate change mitigation can be effectively conducted by:

- I) Investing in companies that have Paris-aligned or net zero goals, or a commitment to such alignment or goals; and/or
- II) Pursuing an active ownership strategy that targets alignment with the Paris Agreement or net zero goals.

We assess climate change mitigation by reference to whether a company has a stated net zero ambition and set Paris-aligned targets (these include short and medium-term decarbonisation targets) and discloses its emissions and performance against targets set.

For companies in high-impact sectors, we have used the Climate Action 100+ benchmark to assess whether they have developed a decarbonisation and capital allocation strategy that is compatible with the Paris-aligned targets set<sup>10</sup>. All equity holdings have been assessed against Troy's net zero criteria and plotted along a climate alignment maturity scale shown in Table 2.

The implementation of Troy's Climate Change Mitigation Policy is overseen by the Responsible Investment & Climate Committee, which is a formal sub-committee of Troy's Executive Committee.

<sup>10</sup>See [Climate Action 100+ Benchmark](#).





All holdings identified as 'not aligning' with a net zero pathway in this assessment represent a source of un-mitigated risk. To remedy this, Troy has undertaken an engagement-led approach which entails encouraging these companies to set a Paris-aligned goal/net zero commitment, supported by science-based target-setting and a robust decarbonisation strategy. Further details of our risk mitigation efforts are outlined below.

## Engagement - Promoting Adequate Disclosures

Poor disclosure by companies is often an impediment to carrying out effective research and quantifying the degree of climate-related risk exposure. This in turn limits Troy's ability to mitigate climate risks in our investment portfolios. We firmly believe that the transparent disclosure of climate-related risks and opportunities is a critical first step in promoting well-functioning markets.

As a signatory to the Carbon Disclosure Project (CDP), Troy has participated in a number of engagements during both 2021 and 2022. In particular, we played an active role in the CDP's annual non-disclosure campaign to encourage investee companies to respond to the CDP's annual questionnaires on climate, forests and water security. In 2022, Troy engaged with 15 companies on 19 disclosure requests. Troy was the lead investor in 5 engagements with Alcon, Domino's Pizza, Imperial Brands, PZ Cussons and Victrex where we engaged with the companies on behalf of all co-signatories.



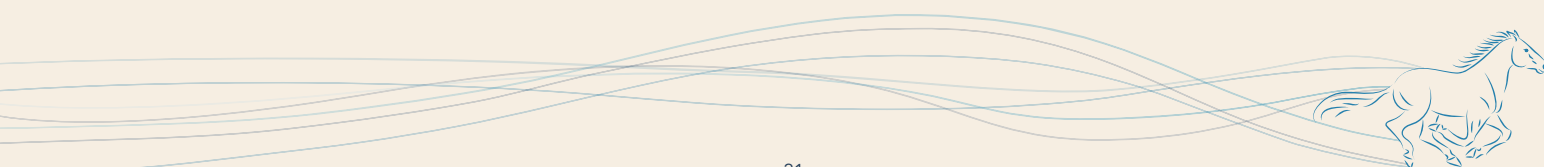
The aim of these collaborative engagements was to prompt the companies to respond to the relevant CDP questionnaires and to disclose in line with the recommendations of the TCFD. We had subsequent dialogues with a number of the companies, leveraging our long-standing relationships with them. Troy reinforced the importance of environmental disclosures to minimise informational asymmetries between companies and investors allowing for more effective risk management by the investment industry.

## Engagement – encouraging decarbonisation and net zero alignment

We consider engagement a fundamental part of exercising our stewardship responsibilities. Engagement has the ability to enhance returns to shareholders by aligning companies' behaviour with shareholders' interests, thereby mitigating both financial and non-financial risks and unlocking value from underexplored opportunities. Engagement is also one of the few ways in which public equity investors can deliver real-world emissions reductions and as such we prefer this approach over a divestment-led alternative which does not necessarily drive change in corporate behaviour. Troy seeks to influence management through engagement when we believe it is in the best interests of shareholders to do so. Any engagement is expected to meet the following criteria:

- There is a clear objective in engaging with a company;
- The matter for engagement must be material; and
- Engagement with the company has the potential to be constructive.

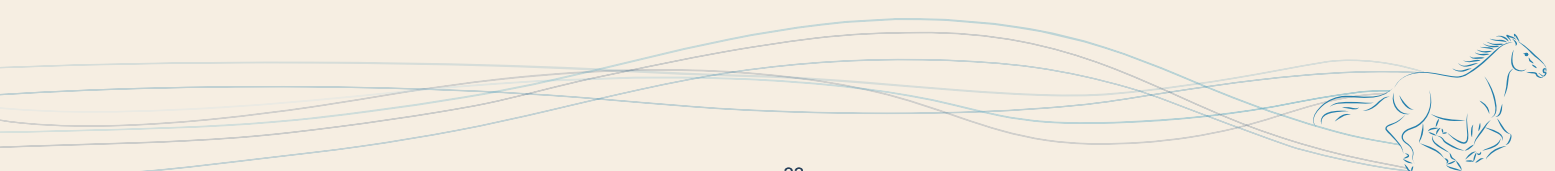
To effectively mitigate against climate-related risks, we currently prioritise engagement with all investee companies



classified as 'not aligning' to a net zero pathway and frequently engage with companies further along the alignment maturity scale, including those classified as 'high impact' sectors. Companies that are 'not aligning' to a net zero pathway have been identified as laggards in the transition to net zero and as such we engage to encourage greater alignment with the goals of the Paris Agreement. When engaging with companies on climate-related matters, we may set objectives including the following:

- i. Align climate-related reporting with the recommendations of the TCFD;
- ii. Commit to a Paris-aligned pathway by setting a long-term goal of net zero by 2050 or sooner and setting short and medium-term science-based emissions reduction targets for scope 1 and scope 2 emissions;
- iii. Develop a climate mitigation / decarbonisation strategy, extending to material scope 3 emissions;
- iv. Obtain independent validation for targets such as from the Science Based Targets initiative (SBTi).

Note, as time elapses it is anticipated that alignment with net zero will increase and our approach to engagement will evolve to reflect this. We will continue to steer investee companies towards the achievement of net zero and will increasingly focus on addressing any shortfalls in the climate strategies of investee companies. To date, we have had a number of successful engagements with companies that were identified as not aligning, as evidenced by the example of Agilent Technologies overleaf.



# Case study: Agilent Technologies



We first bought shares in Agilent Technologies in 2019. The company is a leading manufacturer and seller of life science tools that identify, quantify and analyse the physical and biological properties of substances. Troy remains a significant shareholder in Agilent today. In 2021, we undertook a project to pinpoint which of the companies we owned had not set greenhouse gas emissions (GHG) reduction targets that aligned with the Paris Agreement. Agilent was one of a small group of companies identified in this process and in May 2021 Troy emailed the Head of Investor Relations to outline several engagement objectives, including the setting of Paris-aligned net zero targets. We followed up on this engagement with a meeting in July 2021 with the company's Head of Sustainability and the Head of Investor Relations, to better understand Agilent's climate strategy and to re-state our desire to see the company set science-based emission reduction targets. We also stipulated our wish to see the development of a comprehensive climate strategy that included the use of scenario analysis and outlined the actions to be taken to achieve the company's decarbonisation targets. Additionally, we requested that Agilent implement the recommendations of the TCFD.

Following a constructive dialogue, Agilent assured us they would take our proposal to the Board. They also mentioned that we were the first shareholder to engage with them on this issue. Agilent subsequently announced during Q4 2021 its commitment to achieving net zero GHG emissions by no later than 2050. Agilent committed to interim GHG reduction targets of 50% (scope 1&2) by 2030 and scope 3 emissions by at least 30% (with a stretch goal of 40%) from the base year of 2019. In addition to setting the interim targets for achieving net zero GHG emissions, Agilent committed to the Science Based Targets initiative's 'The Business Ambition for 1.5 degrees Celsius' campaign and is adopting the TCFD recommendations. Troy has closed this engagement as successful but will continue to closely monitor Agilent's implementation of its climate strategy.



During 2022, Troy has seen a further ten portfolio companies with which we have engaged publish emissions targets. These include Alcon, Booking.com, Diploma, Domino's Pizza, Franco Nevada, Paychex, Primary Health Properties, PZ Cussons, Safestore and Visa which have all moved from 'not aligning' on the climate maturity scale to either 'committed to aligning' or 'aligning'. This leaves only eight companies owned by Troy still without a public commitment to align with the goals of the Paris Agreement.



# Climate Action 100+



Troy also uses Climate Action 100+ as a collaborative engagement platform. The platform is an investor-led initiative that aims to use engagement to improve the alignment of the world's largest corporate greenhouse gas emitters. The organisation has developed a benchmark that assesses corporate alignment with the Paris Agreement against ten headline indicators. Troy is currently an active participant in the initiative's climate engagement with Unilever.

## Escalation and Divestment

Engagements are monitored on an ongoing basis but must be raised with the company at least annually to update on progress. Where we feel inadequate progress has been made and sufficient time has elapsed, we will seek to escalate our engagement. Options include but are not limited to:

- Escalation of the engagement from management to board level;
- Collaborative engagement when either Troy's engagement has proved insufficient to gain traction or we believe other investors' insights would be beneficial;
- When we do not have conviction that management are acting in the best interests of shareholders, we may seek to vote against management on a particular resolution that would adequately reflect our concern; or
- We may consider a partial or complete sale of the holding where other avenues of engagement have been unsuccessful and the issue is of sufficient materiality.

The progress of climate engagements with those portfolio companies classified as 'not aligning' under the NZIF climate alignment scale outlined above are reviewed on a regular basis by the Responsible Investment & Climate Committee as per Troy's Climate Change Mitigation Policy. This committee will aid fund managers in identifying failed climate engagements and in taking decisions on escalation or divestment. As previously outlined, Troy's preference is to deliver both portfolio and real-world decarbonisation through engagement rather than to focus on portfolio decarbonisation alone by pursuing a divestment led strategy. We also engage with any holding identified as having an elevated exposure to climate risk (such as holdings in high-impact sectors) and where our analysis reveals the company has insufficient oversight or control of the risk. Priority for these engagements is based on our assessment of the perceived impact on the relevant portfolios.

## Portfolio Construction

Fund managers will also manage their exposures to climate-related risks and seek to mitigate it insofar as they can. This process is informed by the use of scenario analysis which shows the physical and transition risk sensitivity of individual stocks to different possible climate scenarios (as described in Table 1 of this report). If a company is identified as having a high and unmitigated exposure to climate risk this may influence portfolio construction. Where a risk is deemed to be intolerably high, this may constitute grounds for divestment. Such decisions are at the discretion of individual fund managers and are made within the broader context of our fundamental analysis. The case study below provides an example of such an instance.





# Case study: Hiscox and Lancashire Holdings



Hiscox and Lancashire Holdings were sold from the UK Equity Income Strategy in 2021/22. These non-life insurance companies are indirectly exposed to concentrated physical climate risk through the insurance of property and casualty risk. This creates significant exposure to climate change related increases in flood, wind and wildfire events in particular. Troy felt that the companies were unable to appropriately price for the increase in claims resulting from the physical risks of climate change and the increased frequency and severity of adverse weather events. This has been evident from the increase in “abnormal” storm and wildfire costs that have impaired profits over the past few years. Having had multiple conversations with the management team, we concluded that despite their best intentions, the structure of the market meant that they were unable to sufficiently increase premiums to account for these heightened risks without materially reducing insurance volumes. This significantly contributed to our decision to exit our holding in these companies.

## Engagement with Governments (Sovereign Debt)

Engaging bi-laterally with sovereign debt issuers on climate policy is a challenge for smaller investment managers like Troy who do not exert influence over government policymaking. However, given the important role policymakers play in facilitating the transition to a low-carbon economy, Troy has sought to participate in policy advocacy by engaging with governments via investor networks. In 2022, Troy signed the Global Investor Statement to Governments on the Climate Crisis facilitated by the Investor Agenda ahead of COP 27<sup>11</sup>. The aim of this statement is to ensure governments globally align their 2030 Nationally Defined Contributions with the goals of the Paris Agreement and encourage the development of policies to facilitate the attainment of a zero-emission and climate-resilient future.

Troy would like to explore other avenues for policy advocacy that can form part of our climate mitigation strategy in relation to sovereign debt assets in particular.

## Voting

Troy considers voting to be a vital part of our active ownership activity, investment process and an important aspect of our escalation approach. Our aim is to use our voting rights to encourage companies towards best practice and alignment with long-term shareholder interests. We seek to instruct votes on all resolutions on behalf of clients and investors for whom we have voting authority.

We aim to support well-formulated resolutions that require a vote on the climate report, in line with the “say on climate” or request companies to publish targets and disclose climate data in line with the TCFD. Where we have engaged with a company on their commitment to net zero and observe that a climate transition plan is either entirely lacking or inadequate, we may seek to vote against the chair of the sub-committee with which responsibility for the company’s climate change strategy lies. Where there is no such individual, we may vote against the chair of the audit committee.

<sup>11</sup>The demands of the 2022 Global Investor Statement to Governments on the Climate Crisis and a list of signatories can be found [here](#).



## Case study: Alcon



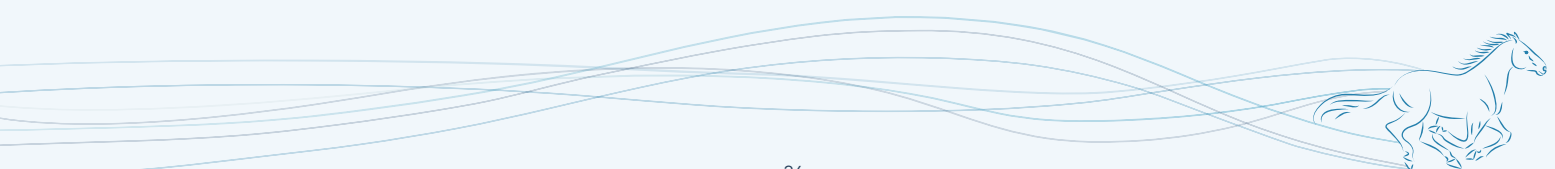
Alcon is the largest eye care company in the world, operating in both the ophthalmic surgical and vision care markets. The company was founded in 1945 but was spun out of Novartis (a longstanding investee company) as a separately listed and independent company in 2019. We allowed time for Alcon to establish independent processes and procedures, including those related to ESG, but sensed a lack of urgency on climate targets. This prompted us to engage with Alcon in May 2021 to encourage the company to develop an emissions reduction strategy aligned with a net zero pathway. A year later in May 2022, Alcon still had not disclosed any emissions reduction targets nor made a public commitment to net zero.

As a form of escalation, in the recent AGM season, Troy voted against both the ratification of their auditor and the re-election of the Chair of the Governance and Nominations Committee at Alcon owing to a lack of progress on committing to net zero and setting supporting decarbonisation targets. Following this vote, we wrote to the company to explain our decision and reiterated our desire to see progress on a climate change strategy. This resulted in a constructive meeting with the Head of ESG in July 2022 and in September 2022 Alcon announced a target of achieving carbon neutrality across their global operations (scope 1 and scope 2 emissions) by 2030. This ambition is supported by a focus on GHG reduction, with Alcon also seeking ways to reduce emissions across their value chain. This example illustrates the gravity with which we view a lack of progress towards a credible net zero pathway. As climate change mitigation becomes increasingly material and strategically important for businesses, we view emissions reduction targets as table-stakes. Where they are lacking, we will escalate our engagement in the form of a vote against the Director with whom responsibility lies and through meetings with management in order to accelerate progress. We are pleased to have reached a successful outcome in our engagement with Alcon and hope to make similar progress with our investee companies still lagging in their climate mitigation efforts.

## Case study: National Grid



Over the recent AGM season, Troy has supported a number of 'Say on Climate' resolutions. Notably, we were pleased to support National Grid's 'Say on Climate' resolution. The company put its climate strategy to voters and received 98% support from shareholders. For carbon-intensive companies such as National Grid a 'Say on Climate' resolution is an important step in ensuring the interests of both shareholders and environmental stakeholders are aligned. Troy was supportive of this resolution and we encourage other investee companies to follow suit in putting their climate strategies to shareholder votes.



## Troy's risk management approach for operational climate risk

The Strategy section of this report identified three important areas of transitional climate risk relating to Troy's operations, rather than its portfolios. Our approach to the mitigation of each of these risks is outlined in the following paragraphs.

### Short-Term: Data Analytics and Metrics

The risk that Troy does not adequately respond to the rapidly evolving climate data environment has been mitigated by adding resource and additional capabilities to support the analysis of climate-related risks and opportunities. During 2021, we conducted a tender process of third-party climate data providers. We considered several market leading providers, trialled their services and selected MSCI's Climate Change Metrics.

By selecting MSCI as our data provider, we consider that Troy has partnered with a provider which has the expertise and resources to ensure they are able to provide metrics, tools and reporting which reflects industry best practice, both now and in the future as this evolves. Further, Troy has periodic meetings, including a formal annual meeting, with our data providers to ensure they continue to deliver on our needs and meet our requirements.

Troy have also added resource in this area by hiring an investment analyst with specific expertise in ESG and climate analysis who is, along with the wider Investment Team, expected to keep abreast of emergent standards and the corresponding analytical tools and metrics used by the investment industry to assess climate-related impact.

### Short to medium-term: Compliance & Regulation

Although Troy has always adopted an integrated approach to the analysis of ESG factors within our investment process, increased regulatory requirements have required Troy to formalise some aspects of these processes. In recognition of the growing compliance and regulatory risks arising from climate change and other ESG-related regulation, Troy created a Responsible Investment & Climate Committee in 2021, a formal sub-committee of the Executive Committee, responsible for overseeing the implementation of responsible investment (and climate change mitigation) at Troy.

The Committee has representation from across the business, which ensures that all areas of the business understand our regulatory requirements and the framework Troy has implemented. Troy has also strengthened its policies, including the Responsible Investment & Stewardship Policy, and the monitoring of it to ensure the robustness of its processes and adherence to requirements of these regulations.

To enhance knowledge across the business, Troy has sponsored a number of employees to complete professional qualifications, such as the CFA in ESG investing, to deepen understanding and aid Troy in meeting its disclosure obligations under the relevant regulatory provisions.

### Medium to long-term: Investor Preferences

We have successfully responded to the increase in investor preferences for Paris-aligned investment solutions by joining the Net Zero Asset Managers initiative and committing our open-ended funds to be managed in line with the attainment of net zero. Additionally, in May 2022 Troy's Article 8 funds, which includes all Troy's actively marketed open-ended funds<sup>12</sup>, adopted a Climate Change Mitigation Policy. By making this change, we are able to evidence to investors the depth of our climate-related analysis and engagement with investee companies where we seek to drive changes in corporate behaviours.

<sup>12</sup>This includes the following vehicles: Trojan Fund, Trojan Fund (Ireland), Trojan Ethical Fund, Trojan Ethical Fund (Ireland), Trojan Income Fund, Trojan Income Fund (Ireland), Trojan Ethical Income Fund, Trojan Global Income Fund, Trojan Global Ethical Income Fund and Trojan Global Equity Fund.



# 4. Metrics and Targets

We firmly believe that measuring our environmental footprint is the first step to managing it. We have devoted considerable resources to measuring the carbon footprint of our business and our investment portfolios over recent years. Such efforts have allowed Troy to take proactive steps to reduce both climate risk and our operational and portfolio emissions. Troy has formally committed to net zero emissions by no later than 2050.

## Troy's operational carbon footprint

In recent years we have given consideration to our own modest operational footprint. In our view, all initiatives work best if they are underpinned at the grassroots level and our commitment to sustainability is no different; it starts in the office and with each employee.

**TABLE 3:** Troy's Operational Footprint, Financial Year 2021–2022

Scope	Activity	Location-based <sup>13</sup> t CO <sub>2</sub> e	Market-based <sup>13</sup> t CO <sub>2</sub> e
Scope 2	Electric generation	43.3	0.0
Scope 2 Sub Total		43.3	0.0
Scope 3	Flights	49.2	49.2
	Taxi travel	4.3	4.3
	Electricity transmission & distribution	3.8	0.0
	Rail travel	0.6	0.6
	Home-workers	0.6	0.6
Scope 3 Sub Total		58.5	54.7
Total t CO <sub>2</sub> e		101.8	54.7
t CO <sub>2</sub> e per employee		2.3	1.2

Source: Carbon Footprint Ltd, Troy Asset Management as at 30 April 2022.

Notes to Table 3:

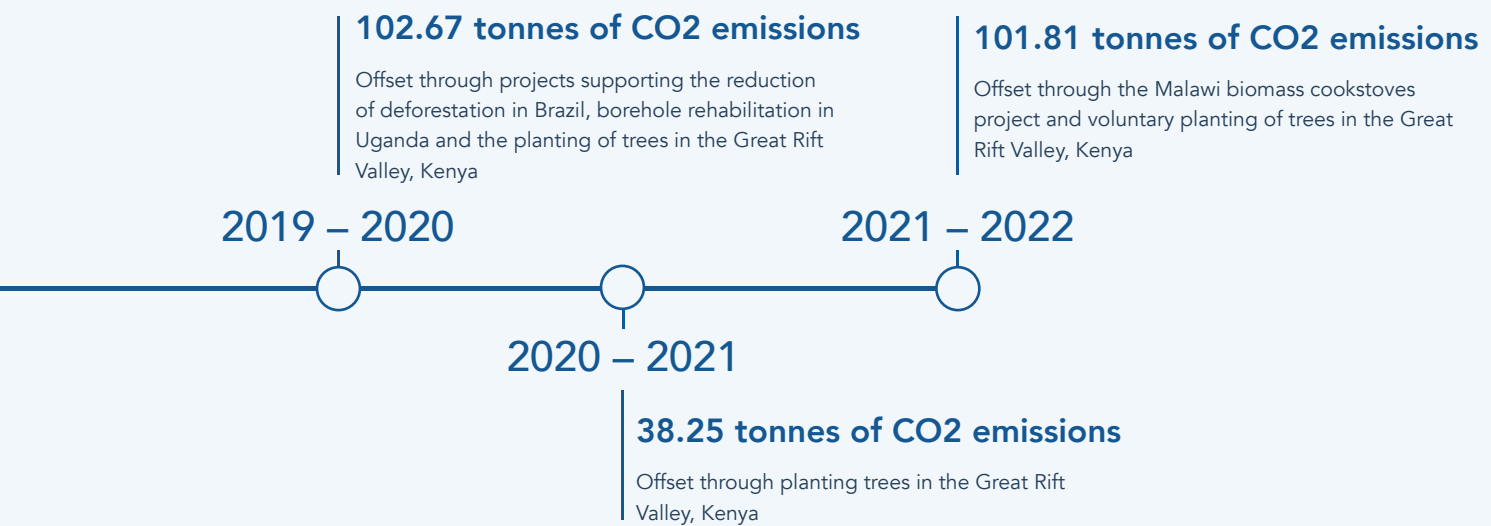
- Troy has no material scope 1 emissions as does not own fleet vehicles or have any on site generation.
- Table 3 addresses Troy's operational emissions only. It does not address the material scope 3 emissions associated with Troy's investment portfolios.
- Operational emissions calculated to 30 April 2022.

In September 2021, we switched to a green energy tariff which eliminated our Scope 2 emissions. The switch to a green business energy account has meant that 100% of on-site electricity is renewable. This move to a green energy tariff is accounted for in the Market-based emissions calculation but is not considered in the methodology used to calculate Location-based emissions<sup>13</sup>.

Over recent years, we have offset all greenhouse gas emissions by investing in several accredited carbon reduction initiatives. For the third year running, we have been recognised as carbon neutral by Carbon Footprint Limited, a leading independent carbon consultancy business. Whilst the measurement of our carbon footprint and offsetting our emissions is an important step, we acknowledge that the reduction of gross emissions is the real aim.

<sup>13</sup>Definitions of Location-based and Market-based Emissions calculations can be found in Appendix 3 – Glossary of Climate Terms.





Source: Troy Asset Management, 31 December 2022.

<sup>1</sup>Operational carbon neutrality as defined by Carbon Footprint Limited, which excludes portfolio emissions.

<sup>2</sup>Annual emissions calculated to 30 April (Troy's financial year end).

As with many capital light businesses we are aware that our biggest operational impact on the climate and our environment comes from employee travel and other sources of Scope 3 emissions. We will continue to use technology to bring groups of individuals together in virtual meetings but, where we are unable to avoid emissions, we have committed to offsetting the carbon produced by our travel.

To further minimise our operational emissions, we are working closely with our landlords to implement a green lease, which will encompass a wide range of sustainable initiatives such as:

- Monitoring and data sharing of environmental performance data;
- Switch to smart meters for electricity;
- Consolidation of deliveries to and from the premises where is reasonably practical using a centralised delivery scheme;
- The efficient procurement of waste collection services; and
- Agreement to not make any alterations to our premises that will adversely impact on the energy performance certificate and environmental performance of the premises.

## Troy portfolio carbon footprint and climate metrics

The Fund level disclosures in Appendix 1 cover the following funds in each of the four strategies that Troy manages:

Multi-asset Strategy	UK Income Strategy	Global Income Strategy	Global Equity Strategy
Trojan Fund	Trojan Income Fund	Trojan Global Income Fund	Trojan Global Equity Fund
Trojan Ethical Fund	Trojan Ethical Income Fund	Trojan Ethical Global Income Fund	

The metrics disclosed in relation to the funds outlined above are those recommended by the TCFD for asset managers. Calculation methodologies for Total Carbon Emissions, Carbon Footprint and Weighted Average Carbon Intensity are included in Appendix 2. Note, Troy has used an equity ownership approach based on market capitalisation to calculate its Total Carbon Emissions and Carbon Footprint.

While we are not currently publicly disclosing data for all portfolios, it is our intention to increase the number of public funds and Investment Trusts for which we disclose climate metrics in subsequent reports.

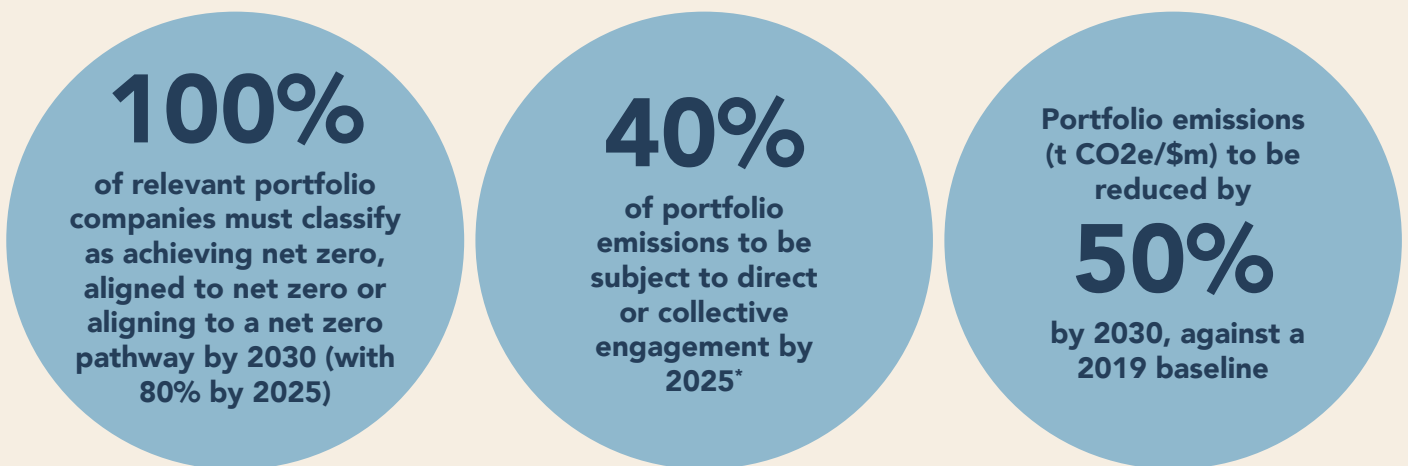


## Our targets

Achieving net zero emissions by mid-century is our best chance at staying on track to meet the goals of the Paris Agreement and avoiding the worst effects of climate change. To this end, Troy became a signatory of NZAMI in 2021 and published our first formal climate-related targets in July 2022.

While our long-term commitment is to invest all assets under management in alignment with the objectives of the Paris Agreement, we have made an interim commitment to manage Troy's publicly marketed open-ended investment funds in line with a net zero by 2050 target<sup>14</sup>. As we receive consent from asset owners, we expect to expand this alignment to cover Troy's other portfolios. For relevant portfolios within the Multi-asset strategy, this commitment applies only to equity investments at this stage, owing to a lack of established methodology for Paris-aligned investing in sovereign bonds and gold-related investments.

For these net zero aligned funds, we have also set the following interim targets<sup>15</sup>:



Our approach is supported by an active ownership strategy that prioritises engagement over divestment. The above targets, supported by our engagement activity, represent only some of the steps along our journey towards alignment with the goals of the Paris Agreement. We look forward to updating on our progress against these targets in future climate reports.

<sup>14</sup>This includes the following vehicles: Trojan Fund, Trojan Fund (Ireland), Trojan Ethical Fund, Trojan Ethical Fund (Ireland), Trojan Income Fund, Trojan Income Fund (Ireland), Trojan Ethical Income Fund, Trojan Global Income Fund, Trojan Global Ethical Income Fund and Trojan Global Equity Fund.

<sup>15</sup>Full details of the climate targets set by Troy under the Net Zero Asset Managers initiative can be found [here](#).

\*Unless already aligned to net zero.





# Appendix 1

## Trojan Fund

Note that as at 31 December 2022 the Trojan Fund's allocation to equities was 24%. The data below does not capture emissions for other asset classes such as sovereign debt, cash or gold-related investments.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Fund	FTSE All Share Index	Trojan Fund	FTSE All Share Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	39,520	-	42,850	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	720,464	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	109,198	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	5.1	129.3	5.5	157.5
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	22.2	121.2	23.8	133.1

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

### Portfolio Implied Temperature Rise



Trojan Fund

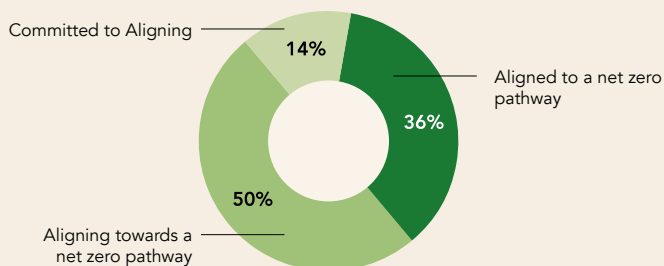
**1.6°C**

FTSE All Share Index

**2.4°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

### Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio equity holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Trojan Ethical Fund

Note that as at 31 December 2022 the Trojan Ethical Fund's allocation to equities was 23%. The data below does not capture emissions for other asset classes such as sovereign debt, cash or gold-related investments.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Ethical Fund	FTSE All Share Index	Trojan Ethical Fund	FTSE All Share Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	3,480	-	3,801	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	64,140	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	8,972	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	3.8	129.3	4.1	157.5
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	16.9	121.2	18.7	133.1

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Ethical Fund

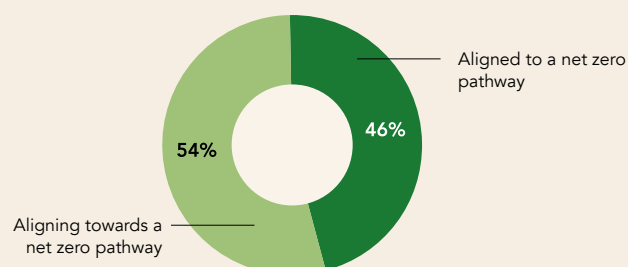
**1.5°C**

FTSE All Share Index

**2.4°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Trojan Income Fund

Note that as at 31 December 2022 the Trojan Income Fund's allocation to equities was 98%.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Income Fund	FTSE All Share Index	Trojan Income Fund	FTSE All Share Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	27,740	-	30,295	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	173,727	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	87,701	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	15.0	129.3	15.7	157.5
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	33.2	121.2	35.5	133.1

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Income Fund

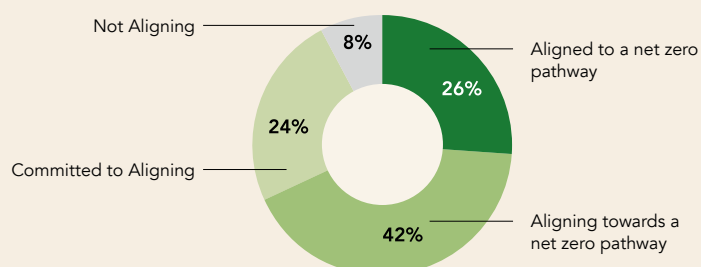
**1.6°C**

FTSE All Share Index

**2.4°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Trojan Ethical Income Fund

Note that as at 31 December 2022 the Trojan Ethical Income Fund's allocation to equities was 97%.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Ethical Income Fund	FTSE All Share Index	Trojan Ethical Income Fund	FTSE All Share Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	6,042	-	6,577	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	34,185	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	20,590	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	17.6	129.3	18.3	157.5
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	35.9	121.2	39.3	133.1

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Ethical Income Fund

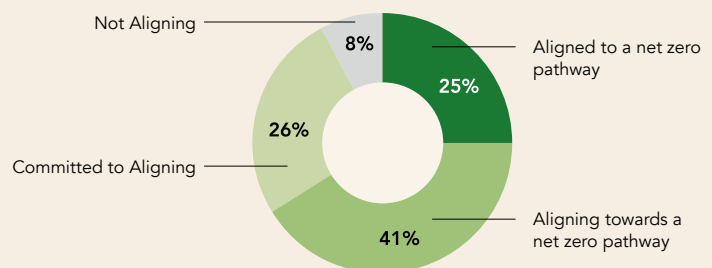
**1.8°C**

FTSE All Share Index

**2.4°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Trojan Global Income Fund

Note that as at 31 December 2022 the Trojan Global Income Fund's allocation to equities was 97%.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Global Income Fund	MSCI World Index	Trojan Global Income Fund	MSCI World Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	12,750	-	13,728	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	86,503	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	25,439	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	11.1	77.4	11.7	83.4
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	32.2	140.7	35.3	158.4

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Global Income Fund

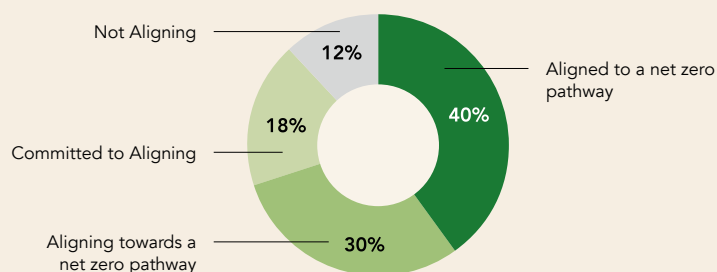
**1.7°C**

MSCI World Index

**2.7°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Trojan Ethical Global Income Fund

Note that as at 31 December 2022 the Trojan Ethical Global Income Fund's allocation to equities was 99%.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Ethical Global Income Fund	MSCI World Index	Trojan Global Equity Fund	MSCI World Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	390	-	412	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	27,597	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	883	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	10.4	77.4	11.0	83.4
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	32.0	140.7	35.1	158.4

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Ethical Global Income Fund

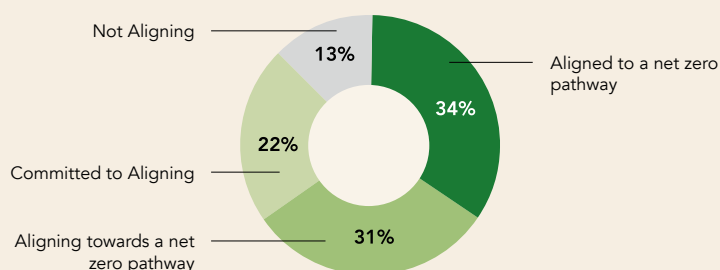
**1.8°C**

MSCI World Index

**2.7°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.





# Trojan Global Equity Fund

Note that as at 31 December 2022 the Trojan Global Equity Fund's allocation to equities was 97%.

Fund Carbon Metrics	Most Recent		2019	
	Trojan Global Equity Fund	MSCI World Index	Trojan Global Equity Fund	MSCI World Index
Total Scope 1 & 2 Carbon Emissions (t CO <sub>2</sub> e)	2,238	-	2,939	-
Total Scope 3 Upstream Carbon Emissions (t CO <sub>2</sub> e)	30,545	-	N/A	-
Total Scope 3 Downstream Carbon Emissions (t CO <sub>2</sub> e)	9,299	-	N/A	-
Carbon Footprint (t CO <sub>2</sub> e / US\$M Invested) Scope 1 & 2	4.9	77.4	6.3	83.4
Weighted Average Carbon Intensity (t CO <sub>2</sub> e / US\$M Sales) Scope 1 & 2	11.8	140.7	13.4	158.4

Note: Incomplete data for 2019 scope 3 emissions.

Most recent data show the latest emissions figures applied to the end December 2022 portfolio.

Emissions data in the fund specific disclosures is based on a Market Capitalisation based methodology.

## Portfolio Implied Temperature Rise



Trojan Global Equity Fund

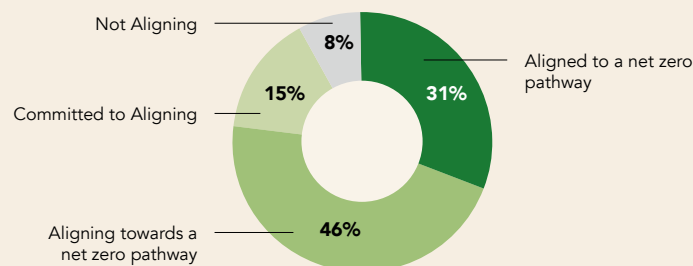
**1.7°C**

MSCI World Index

**2.7°C**

Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

## Portfolio Net Zero Alignment



The chart above shows the percentage of portfolio holdings that meet the requirements of each level of the Net Zero Investment Framework's Climate Alignment Maturity Scale as defined in [Table 2](#).

Source: MSCI ESG Research, Troy Asset Management, 31 December 2022.

Disclaimer: Asset Allocation subject to change. The information provided is based on calculations relating to corporate securities only. Where the fund holds other asset classes, such as cash, gold or government bonds, these are excluded from the portfolio calculations.



# Appendix 2

**TABLE 4:** Recommended metrics for the financial sector by the Task Force on Climate-related Financial Disclosures.

Metrix	Supporting Information	
Total Carbon Emissions	Description	The absolute greenhouse gas emissions associated with a portfolio, expressed in t CO <sub>2</sub> e
	Formula	$\sum_n^i \left( \frac{\text{Current value of investment}}{\text{issuer's market capitalization}} \times \text{issuer's Scope 1 and Scope 2 GHG emissions} \right)$
	Methodology	Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach. Under this approach, if an investor owns 5 percent of a company's total market capitalization, then the investor owns 5 percent of the company as well as 5 percent of the company's GHG (or carbon) emissions. While this metric is generally used for public equities, it can be used for other asset classes by allocating GHG emissions across the total capital structure of the investee (debt and equity).
Carbon Footprint	Description	Total carbon emissions for a portfolio normalized by the market value of the portfolio, expressed in t CO <sub>2</sub> e/\$M invested.
	Formula	$\frac{\sum_n^i \left( \frac{\text{Current value of investment}}{\text{issuer's market capitalization}} \times \text{issuer's Scope 1 and Scope 2 GHG emissions} \right)}{\text{current portfolio value (\$M)}}$
	Methodology	<p>Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach as described under methodology for Total Carbon Emissions.</p> <p>The current portfolio value is used to normalize the data.</p>
Weighted Average Carbon Intensity:	Description	Portfolio's exposure to carbon-intensive companies, expressed in t CO <sub>2</sub> e/\$M revenue.
	Formula	$\sum_n^i \left( \frac{\text{Current value of investment}}{\text{current portfolio value}} \times \frac{\text{issuer's Scope 1 and Scope 2 GHG emissions}}{\text{issuer's \$M revenue}} \right)$
	Methodology	Scope 1 and Scope 2 GHG emissions are allocated based on portfolio weights (the current value of the investment relative to the current portfolio value), rather than the equity ownership approach (as described under methodology for Total Carbon Emissions). Gross values should be used.



# Appendix 3

## Glossary of Climate Terminology

**Carbon Footprint:** Total carbon emissions for a portfolio normalised by the market value of the portfolio, expressed in t CO<sub>2</sub>e / \$M invested.

**Implied Temperature Rise:** Implied Temperature Rise is a forward-looking climate-focused metric that can be used to assess the net zero alignment of a company or portfolio. It translates the projected greenhouse gas emissions of the companies a portfolio comprises into an estimated rise in average global temperatures over the coming decades.

**Owned Emissions:** Scope 1 and Scope 2 GHG emissions are allocated to investors based on an equity ownership approach. Under this approach, if an investor owns 5% of a company (calculated as either enterprise value or market cap), then the investor owns 5% of the company's GHG emissions.

**Physical risks:** Physical risks emanating from climate change can be event-driven (acute) such as increased severity of extreme weather events (e.g. cyclones, droughts, floods and fires). They can also relate to longer-term shifts (chronic) in precipitation and temperature and increased variability in weather patterns (e.g. sea level rise).

**Scope 1 Emissions:** Scope 1 covers emissions from sources that an organisation owns or controls directly – for example burning fuel in a fleet of vehicles.

**Scope 2 Emissions:** Scope 2 are emissions that a company causes indirectly when the energy it purchases, and uses, is produced. For example, the generation of the electricity that powers a company's operations.

**Location-based:** This scope 2 emissions calculation methodology reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data).

**Market-based:** This scope 2 emissions calculation methodology reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.

**Scope 3 Emissions:** Scope 3 encompasses emissions that are not produced by the company itself, and not the result of activities from assets owned or controlled by them, but by those that it's indirectly responsible for, up (upstream) and down (downstream) its value chain. An example of this is products that are bought from suppliers.

**Transition risk:** Climate-related risks can also be associated with the transition to a lower-carbon global economy, the most common of which relate to policy and legal actions, technology changes, market responses and reputational considerations.

**Weighted Average Carbon Intensity:** Scope 1 and Scope 2 GHG emissions are allocated based on portfolio weights (the current value of the investment relative to the current portfolio value), rather than equity ownership approach as the 'owned emissions' approach.



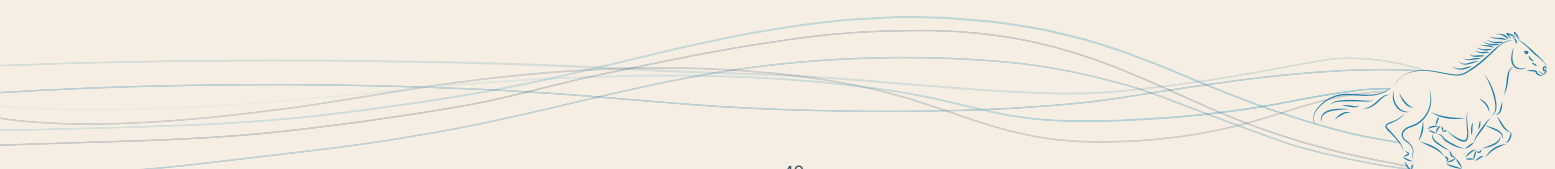
# Regulatory Information

All data as at 31 December 2022 unless stated otherwise.

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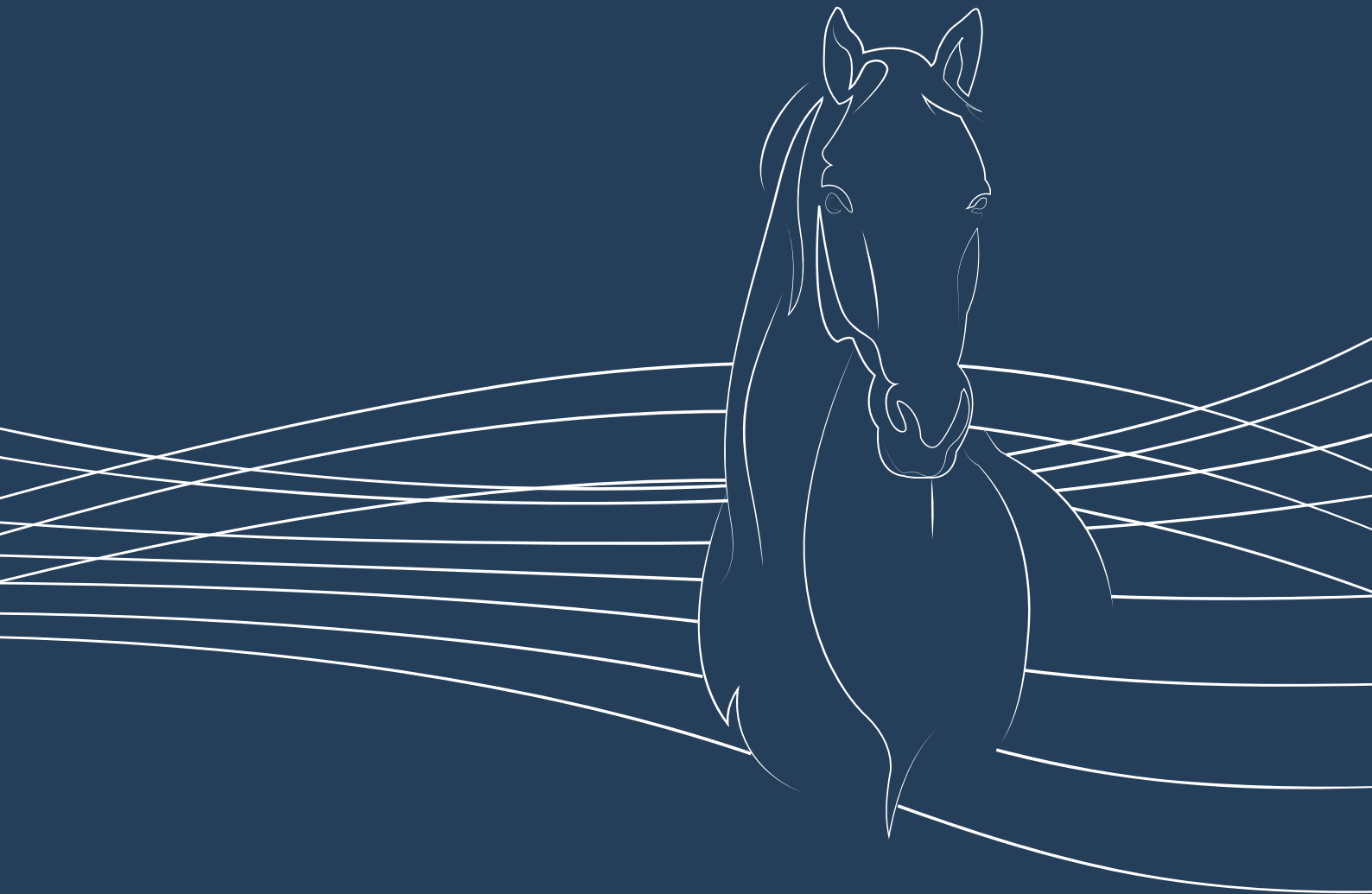
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# TROY

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