BENTHAM INVESTMENT FUNDS

Climate-Related Statements

31st March 2024

Prepared by FundRock NZ Limited in
Compliance with the Aotearoa New Zealand Climate Standards

fundrock.com

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1. INTRODUCTION

FundRock NZ Limited ("**FundRock**") has prepared these climate-related statements (the "**Statements**") for Bentham Investment Funds (the "**Scheme**") in collaboration with Bentham Asset Management Pty Ltd ("**Bentham**") and in compliance with the requirements of the Aotearoa New Zealand Climate Standards (the "**Standards**"). These Statements cover the reporting period between 1st April 2023 and 31st March 2024 (inclusive) and for the Bentham Global Income PIE Fund (the "**Fund**").

FundRock is a fund hosting business; we issue and manage funds on behalf of investment managers who want to provide Aotearoa New Zealand investors with access to their investment solutions via Portfolio Investment Entities (PIE funds) under our MIS (managed investment scheme manager) licence. FundRock's goal is to provide Aotearoa New Zealand investors with access to leading global and boutique domestic investment managers. Our funds cover all asset classes and a broad variety of strategies.

While FundRock retains sole authority over all aspects of fund management, all decisions about investments are made by Bentham, in accordance with the Investment Management Agreement. These statements reflect this arrangement: certain sections are focused on how FundRock manages Climate-Related Risks and Opportunities ("**CRR&O**"); certain others, on how Bentham does it; and still others – in fact, most –present both. It is important when reading these statements to consider these arrangements, and the respective responsibilities, to understand the Funds' strategy in relation to CRR&O.

FundRock is part of the Apex Group, which has published a Sustainability Report where more details on the group's approach to sustainability can be found. At the level of schemes and funds (that at which these Statements were prepared), our approach to climate-change varies and is strongly influenced by the investment manager associated with them.

The investment manager for the Scheme is Bentham, as detailed in the Scheme's governing documents and the Product Disclosure Statement for the Fund.

Bentham is a specialist global credit investment manager. Their investment management philosophy is based on a strong credit culture and a systematic investment process, focused on preservation of principal and protection against downside risk.

Bentham believes environmental, social, and governance ("**ESG**") issues (including climate) are an important consideration in the credit research process. ESG analysis can assist in the identification of risks which can significantly impact creditworthiness. Consideration of ESG issues alongside financial measures therefore provides a more complete view of the risk / return characteristics of potential investments.

ESG analysis is incorporated into their credit research process and is consistent with their active approach to investing. In this regard, they believe disciplined application of ESG contributes to management of investment risks and long-term value preservation.

1.1. Adoption Provisions

In preparing these Statements, FundRock made use of the following adoption provisions found in the Aotearoa New Zealand Climate Standard 2 (the "**CS2**"):

- **(A)** Adoption provision 1 (Current financial impacts);
- **(B)** Adoption provision 2 (Anticipated financial impacts);
- **(C)** Adoption provision 3 (Transition planning);
- **(D)** Adoption provision 6 (Comparatives for metrics);
- **(E)** Adoption provision 7 (Analysis of trends).

1.2. Cautionary Note and Limitations

This report is a summary of FundRock's assessment of future CRR&O and its resulting strategy. It contains FundRock's current assessment of the future CRR&O which could affect its business and customers, as well as its current planning to address these risks. This process necessarily involves estimates, projections, and assumptions about the future, which are inherently uncertain and are not forecasts of future performance.

This report contains statements that are, or may be deemed to be, forward looking statements, including climate-related goals, targets, pathways, ambitions, and related risks and opportunities, as well as FundRock's current planning to address related risks. By their very nature, forward-looking statements require us to make assumptions and are subject to inherent risks and uncertainties, many of which are beyond our control and give rise to the possibility that our predictions, forecasts, projections, expectations or conclusions will not prove to be accurate, that our assumptions may not be correct, and that our objectives, vision, commitments, goals, targets, and strategies to mitigate and adapt to CRR&O will not be achieved. FundRock has set out the basis and limitations of its analysis in these Statements and reserves the right to revisit its assumptions and assessments as it develops its understanding of CRR&O and its response to climate change. This section should be read together with the limitations identified elsewhere in these Statements. Many of the assumptions, standards, metrics, and measurements used in preparing these Statements continue to evolve and are based on assumptions believed to be reasonable at the time of preparation, but should not be considered guarantees.

In light of the above, while FundRock has taken all due care in preparing these Statements, including its scenarios and assumptions, FundRock makes no representation as to their accuracy, completeness, or reliability, in particular in relation to FundRock's assumptions regarding future events. FundRock expressly disclaims responsibility for, and makes no representation, and gives no warranty, assurance, or guarantee, as to the accuracy, completeness, or reliability of any contents of these Statements. To the greatest extent possible under New Zealand law, FundRock also expressly disclaims all liability for any loss (direct, indirect, consequential, or otherwise) or damage arising from the use of these Statements. We recommend you seek independent advice before acting or relying on any information in this report. FundRock reserves the right to revise statements made and its strategy or business activities described in these Statements without notice.

1.3. Directors' Approval

Signed on 18 July 2024 by the Directors identified below on behalf of FundRock, approving compliance with the Standards:

Hugh Stevens

Jeremy Valentine

2. GOVERNANCE

2.1. Governance Body

FundRock's Board of Directors (the "**Board**") is the governance body for the Scheme (as well as all the schemes and funds managed by FundRock). It is accountable for the long-term stewardship and resilience vis-à-vis potential impacts of climate change.

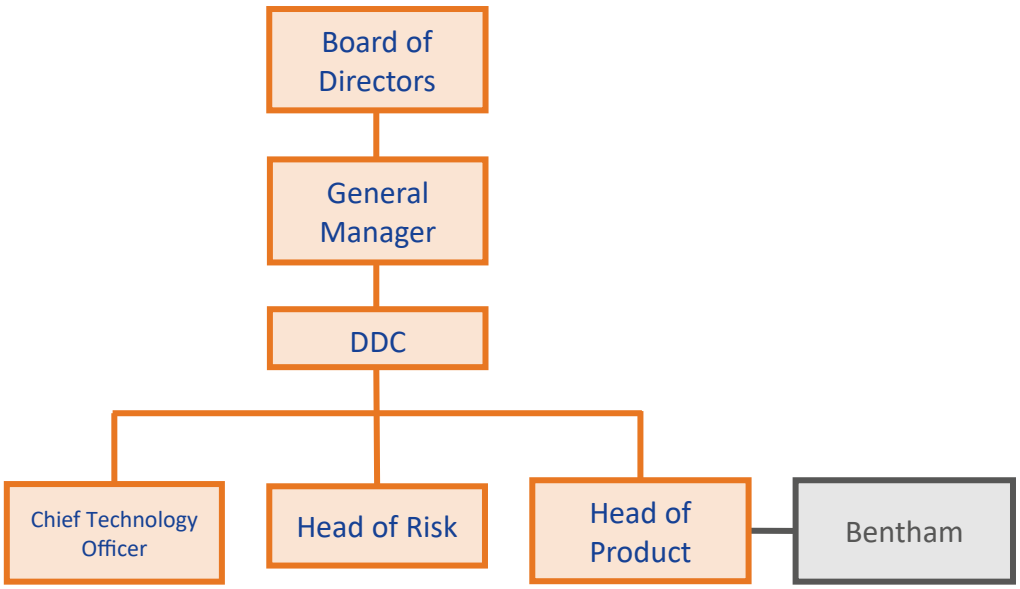
The Board takes CRR&O into account when developing and overseeing the implementation of FundRock's strategy – particularly transition compliance and regulatory risks arising from possible changes to the regulatory framework of Aotearoa New Zealand's investment industry. CRR&O that are specific to a Scheme or Fund (such as those associated with the assets held by a fund) are addressed at the management level.

2.1.1. CRR&O Governance Structure

The Board engages quarterly with FundRock's General Manager, who reports on the most material CRR&O. These reports are reviewed by the Due Diligence Committee (the "**DDC**") prior to being made available to the General Manager. The DDC also reviews key deliverables of the Climate-Related Disclosures ("**CRD**") regime (including these Statements) and either approves them or attests their orderliness for submission to the Board

For CRD purposes, the interactions with Bentham are managed by the Product team (lead by the Head of Product). As part of its role, the Product team continuously monitor Bentham's compliance with their climate-related objectives.

The chart below illustrates the structure described above:



- **Board**: performs the role of governance body, as described in this Statement.
- **General Manager**: ensures project is adequately resourced, defines success, and acts as liaison between the Board and FundRock.
- **DDC**: manages CRD-related activities, as described in this Statement.
- **Head of Product**: leads the execution of CRD-related activities.
- **Head of Risk**: leads the management of CRD-related compliance risks and provision of risk management expertise.
- **Chief Technology Officer**: leads the provision of IT support and data expertise.

2.1.2. Skills & Competencies

The Board continues to develop the skills and competencies of its members in respect to CRD and CRR&O. The Board has committed to receiving training on CRD and CRR&O at its quarterly meetings, prefacing the presentations on CRD and CRR&O by the General Manager (see p 6 above) who reports on the most material CRR&O

Bentham (and its sub-advisors) have developed internal Environmental, Social and Governance policies and procedures. The policies and procedures are specifically designed for credit funds, and Bentham analysts and portfolio managers have received training regarding them. Finally, Bentham's credit team is provided with regular training to ensure they are across ESG developments and emerging ESG themes. Bentham engages external experts to provide training on ESG.

2.1.3. Metrics & Targets

Reports from the General Manager to the Board (see p 6 above) are planned to include a review of the Fund's performance against their metrics and targets (if any) on a semi-annual basis.

The Board has not set CRD- or CRR&O-related targets, key performance indicators, or remuneration incentives for any of FundRock's staff, the Scheme, or the Funds at this stage. Nonetheless, the investment manager may choose to set such targets or indicators for the Schemes or Fund; for more about this, see Section 5 below.

2.2. Management

The DDC reviews key deliverables of the CRD regime as they are prepared, and CRR&O for the Scheme and Fund quarterly (see p 6 above). It also engages with the Product team regarding the work on CRD in the relevant reporting period and CRR&O on a regular basis. The Product team, in turn, is in close contact with Bentham throughout the reporting period and receives regular updates on their CRD-related processes and their status – including those directly related to CRR&O.

ESG is integrated into the standard investment processes at Bentham and hence each analyst is well positioned to assess the ESG risks for the issuer and industry and form a judgement as to whether or not those risks are reflected in valuations. Bentham (and its sub-advisors) have developed internal Environmental, Social, and Governance policies and procedures, which are integrated into Bentham's investment process. The Bentham investment process includes the presentation of investments by analysts to the Bentham investment committee. Bentham believes these processes deliver tangible portfolio outcomes and ensure that risks (including climate related) are adequately reflected in the portfolio construction.

Section 4 below provides more details on the risk management process.

3. STRATEGY

3.1. Current Impacts

At the entity level, the costs of compliance with CRD regulations were the most significant impact of CRR&O. FundRock and Bentham have dedicated material resources to ensure compliance with it, and the cost of data for the metrics in Chapter 5 was not insignificant. While these costs may not be passed on to the investors directly, mounting regulation may lead to fee increases.

The Bentham fund is diversified by geography, issuer, industry, and credit type. In addition to this, the Fund's assets are marked to market daily. Analysts consider asset specific risks, including climate, when material. Based on current information, and the Fund's features notes above, they believe the Fund does not face material climate related risks. From time to time the Fund may hold positions with climate risk; the Bentham investment process ensures the Bentham investment committee is aware of these asset-specific risks.

3.2. Scenario Analysis

FundRock has used the sector scenario analysis produced on behalf of the Financial Services Council to conduct the scenario analysis (the *Climate Scenario Narratives for the Financial Services Sector* and the *Climate Risk Database*, hereinafter jointly called the "**Sector Scenario Analysis**"). The reasons for making this choice were:

(A) adoption of the Sector Scenario Analysis across the industry makes it easier for investors to compare the climate-related strategies adopted by fund managers;

(B) the Sector Scenario Analysis benefits from the knowledge of experts; and

(C) adopting the Sector Scenario Analysis firmly grounds FundRock in a framework that is compliant with applicable regulations.

The Sector Scenario Analysis was not adopted without judgement, however. In an iterative process, FundRock identified the key risk drivers which directed the Sector Scenario Analysis, analysed their interactions, and prioritized them. The risks identified in the Sector Scenario Analysis were also analysed, with a view to systematizing them. Finally, the risks and impacts were analysed according to the distinctions of the Scheme and Fund.

The FSC's Sector Scenario Analysis works within Bentham's existing ESG approach; nonetheless, Bentham considers it too generic in nature, and believes that it should not be used to consider risks (including climate) relating to the Fund. Bentham has developed its own proprietary ESG analysis process, which is specifically designed for credit investment. The Bentham credit team (and its sub-advisors) reviews information on ESG factors relevant to issuers through the fundamental credit analysis process. Potentially material ESG issues are identified initially through application of the Bentham ESG risk framework, which sets out ESG risk factors on an industry basis. Sections 3.3.2 and 4 below provide more information on risk management at Bentham.

3.2.1. Methods & Assumptions

FundRock have analysed the three scenarios from the Sector Scenario Analysis: Orderly (1.5°C), Too Little, Too Late (2°C), and Hothouse (3°C). These scenarios are informed (respectively) by the Intergovernmental Panel on Climate Change ("**IPCC**") SSP 1-1.9, SSP 2-4.5, and SSP 5-8.5 scenarios[1], and are relevant and appropriate for the following reasons:

[1] *Climate Scenario Narratives for the Financial Services Sector*, p 12.

(A) They comply with the regulatory requirements, which stipulate that climate reporting entities must analyse a 1.5°C, a 3°C scenario, and a third scenario of their choice.

(B) The Orderly and Hothouse scenarios:

(i) represent extremes, and therefore allow FundRock to analyse how the Scheme and Funds would fare under the most challenging circumstances; and

(ii) are widely used by businesses, both in the financial services and other industries – their widespread adoption will make it easier for investors to compare offers and products.

(C) The *Too Little, Too Late* and the *Disorderly* scenarios were considered as the third option[2], and the former was selected as per the Sector Scenario Analysis Report[3] this was deemed the most likely path for Aotearoa New Zealand. It is also more challenging than the *Disorderly* scenario, which assumes lower physical and transition risks and a lower long-term temperature increase[4].

In considering this scenario analysis, it is important to recognize the currently limited availability of data (especially for credit), the variety of methodologies available, and the effects different security types have on scenario analysis. Given these shortfalls, Bentham currently believes that portfolio-level scenario analysis is of limited analytical value.

3.2.1.1. Time Horizons

FundRock adopted the time horizons set in the Sector Scenario Analysis:

Term	Time Horizon	End Year
Short	1-3 Years	2025
Medium	5-10 Years	2030
Long	30+ Years	2050

This decision was made to maintain consistency with the Sector Scenario Analysis and for the reasons below;

(A) Short-term horizon is aligned with short-term investment horizons.

(B) Medium-term horizon is aligned with strategic planning and medium-term investment horizons (e.g., first home acquisition).

(C) Long-term horizon is aligned with aspirational planning (e.g., mission and purpose), long-term investment horizons (e.g., retirement) and international decarbonisation targets.

3.2.1.2. Scenario 1: Orderly Transition

In the *Orderly* scenario there are steady and constant changes to technology, policy, and behaviour to support the transition to a low carbon global economy – including increasing carbon prices. The long-term chronic impacts from historic GHG Emissions occur nonetheless, but the coordinated and timely action succeeds in preventing the worst.

Increasing carbon prices (NZD 250 and USD 400 by 2050, in Aotearoa New Zealand and globally respectively) and regulatory requirements (such as mandatory climate reporting) result in increasing costs for emissions-intensive entities. Societal changes, supported by legally mandated reporting, lead investors and lenders to withdraw financing and funding from emission-intensive sectors and entities in favour of those supportive of decarbonisation.

The development of low-emissions technology, coupled with customers' preference for low-emissions products and business, impacts the viability of entities who offer neither, especially in the energy and transport sectors. Emissions-intensive sectors and entities are driven to last ditch decarbonisation attempts to maintain the viability of their businesses as they struggle with increasing costs and disinterest from investors and lenders.

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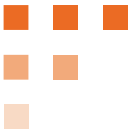
[2] See Sector Scenario Analysis Report, p 12.

[3] See Sector Scenario Analysis Report, p 12.

[4] See *Network for Greening the Financial System, NGFS Scenarios for central banks and supervisors*, November 2023, pp 11 and 20.



While the reduction in global GHG Emissions helps minimise the most significant physical impacts of climate change, minor impacts on sectors and entities reliant on the natural environment for their outputs or service delivery are nonetheless felt.

At a geography level, entities in economies that historically relied on emissions-intensive sectors and that have been slow to transition face economic impacts in the short-term – as do governments, who feel the economic impacts as worsening conditions reduce their revenue and expenditure is required to keep pace with transition being made by the rest of the world (e.g., electrification of transport infrastructure).

3.2.1.2.A. Emissions Pathways

Global emissions fall at accelerating rates, averaging a 3.4% reduction per year. Net global emissions reach 25.9 $BtCO_2e$ (billion tonnes of CO_2-equivalent) by 2030 and −294.82 $MtCO_2e$ by 2050[5]. This is cause and effect of the following[6]:

- Consumer preferences shift towards low-emissions products and services. Climate activism (including through litigation) and negative media attention impact entities perceived as not taking action. Population growth slows down in the medium term, reaching 8.5 billion in 2050.
- Policies [e.g., national and international emissions reduction requirements, carbon taxes (including border adjustments), and the ban of emission-intensive activities] are adopted globally. Global carbon prices reach USD 124 per tonne in 2030 and USD 400 by 2050.
- Development of low emissions and emissions abatement technology accelerates, and technologies are rapidly adopted. Electric vehicles see widespread adoption but heavy trucks and aviation struggle to reduce emissions. 55% of global energy production (and 61% of electricity) comes from renewable sources by 2030, and 67% by 2050 (88% of electricity). Emissions from processes such as cement and steel making remain hard to abate, however.
- Farmers implement ambitious changes to become more emission-efficient, reducing biogenic methane through widespread adoption of new technology and low emissions stock variants, and conversion of land from livestock to horticulture is substantial. The waste sector also reduces methane emissions, with nearly three quarters of organic waste recovery rate by 2050 and major expansion of landfill gas capture.
- Successful limitation of GHG Emissions curbs the most significant physical impacts of climate change. Global average temperature increases by 1.4°C by 2100.
- The global economy benefits from a stable transition to a low carbon economy, with global GDP reaching USD 289 trillion by 2050 (recovering from USD 176 trillion in 2030). The Aotearoa New Zealand economy is also positively impacted. The challenges of transformational change (such as job losses and skill shortages) are managed effectively with the help of stable climate, economy, and international relations.

3.2.1.3. Scenario 2: Too Little, Too Late

In the *Too Little, Too Late* scenario, transition to a low carbon economy is misaligned and delayed across different parts of the world. Certain geographies (as designated in the *Climate Scenario Narratives for the Financial Services Sector*: the European Union, Japan, China, the United Kingdom, the United States, Canada, and Aotearoa New Zealand —the "**Early Movers**") introduce policies that bring about net-zero emissions by 2050. But in other parts of the world there is very little action, with fossil-fuelled development continuing throughout much of the remaining first half of the century. Global efforts to address climate change begin to align and exceed those by Early Movers from mid-century, but changes come too late to prevent wide ranging acute and chronic physical climate impacts.

Emissions-intensive entities located in Early Mover economies face the following pressures:

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5 *Climate Scenario Narratives for the Financial Services Sector*, p 31.

6 The emissions pathways described in Subsections 3.2.1.2.A, 3.2.1.3.A, and 3.2.1.4.A below were adapted from *Climate Scenario Narratives for the Financial Services Sector*.

- increased costs, resulting from increased carbon emissions prices and regulatory requirements; and
- those without emissions reduction or climate-risk management plans, reduced sales and revenue, increased difficulty and cost for raising funds, decreased employee attraction and retention, and supply chain impacts, resulting from changes to stakeholder preferences.

Impacts are lesser outside these regions – except for exporters, who experience the same impacts as entities in Early Movers' regions, including through carbon taxes.

Significant physical climate risks impact sectors and geographies at varying degrees:

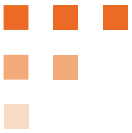
- Agricultural output and renewable energy generation are impacted by extreme weather events and gradual weather changes, which decrease revenue and increase costs. More fertiliser is needed to grow crops, and coal or gas is needed to generate energy, increasing emissions and physical impacts.
- Extreme weather events impair the ability of entities in the communication, utilities, information technology, and transport sectors to provide services. Customer satisfaction and revenue decline, and operational costs (repair costs and higher insurance premiums) increase.
- Significant financial impacts reduce demand for discretionary products and services.
- The health sector deals with increased demand as physical climate impacts and reduced economic stability affect individuals' health.
- At a geography level, Asia (*ex* China and Japan) and the Middle East are the most impacted, both because of the magnitude of impacts and inadequate adaptation. In Asia, this manifests as floods; in the Middle East, as water stress and drought. Food security, water availability, and housing challenges increase, leading to political unrest and migration. There are wide-ranging effects on governments and economies in these regions: the costs of disruptions and remediation are high both for public and private entities, and the latter face increased costs and reduced revenue.

3.2.1.3.A. Emissions Pathways

Emissions fall steadily and at accelerating rates (particularly after 2030), but slower than in the *Orderly* scenario, averaging about 1% per year. Global emissions reach 35.1 $BtCO_2e$ by 2030 and 26.7 $BtCO_2e$ by 2050 – 31% less than 2020[7], but substantially more than zero. This is cause and effect of the following:

- High transition risks and medium physical risks lead to significant financial impacts and a decline in economic growth by the medium term: global GDP reaches US 274 trillion by 2050. Coupled with a global population of 9.2 billion people, standards of living decline for many across the globe.
- Behavioural changes and social pressure drive decarbonisation in Europe, the United States, Canada, Australia, and Aotearoa New Zealand in the short term, but the same does not occur elsewhere until the medium term. Developed nations prioritise their own transition costs; regions with limited resources experience higher negative physical impacts. Marginalised nations are further exposed to poverty and instability (political and economic). Migration and geopolitical tensions increase. Challenges in agriculture, food security, and water availability exacerbate these trends.
- The Early Movers adopt climate policies in the short term, but elsewhere there is very little action until the mid-century, when climate policies begin to align and accelerate. Global carbon prices reach USD 34 per tonne in 2030 and USD 50 in 2050.
- Development of low emissions and emissions abatement technology is delayed; even early movers make limited progress until closer to the medium term. 19% of global energy production (and 46% of electricity) comes from renewable sources by 2030, and 37% by 2050 (71% of electricity). Much of Aotearoa New Zealand's progress is driven by the rise in renewable electricity and the conversion of low-process heat boilers to biomass and electricity.
- Delay in abatement efforts results in the materialisation of various physical climate risks. Average temperature increases by 2.7°C by 2100. The increased energy contained in the atmosphere drives greater extreme weather events, especially in the latter half of the century. Impacts are distributed unevenly: temperatures increase more at higher latitudes and in the Northern hemisphere; precipitation decreases in parts of northern and central Europe, eastern Africa, and southern

[7] *Climate Scenario Narratives for the Financial Services Sector*, p 40.



Australia, but increases in parts of South and East Asia; and Sub-Saharan Africa experiences both increases and decreases in precipitation. Sea levels rise by 0.20m in 2050 (0.56m by 2100), affecting coastal areas and island countries. These changes impact food security (especially in marginalised regions); cause loss of land, damage to infrastructure, and displacement of populations; and impact coastal ecosystems and trade routes.

3.2.1.4. Scenario 3: Hothouse

In the *Hothouse* scenario there is little change towards a low emissions future despite increasing social, economic, and environmental degradation. Emissions continue to grow higher throughout the remaining 21st century and lead to the increasing severity of extreme weather in its first half, with the addition of rising sea levels in the later half.

Entities in most sectors have increased costs (such as repair and remediation costs) and reduced productivity, and therefore reduced profitability.

In the agricultural sector, the increased frequency of extreme weather events and gradual weather changes (such as temperature and precipitation) have significant impacts on:

- stock and crop quality and yield;
- property, plant, and the equipment required to run facilities, provide access to water and food access, and prevent pest proliferation; and
- the infrastructure required for both downstream and upstream supply chain access.

There are also material impacts to the utilities sector, with a risk to potable water supplies, production of energy (particularly hydropower), and delivery of services (such as wastewater treatment). Transport infrastructure and services are affected too.

There is increased demand in the health sector, as in high-emitting sectors – increased cooling requirements because of higher mean temperatures, increased need for coal and gas energy because of impacts upon renewable energy generation, and increased need for fertilisers. With growth in high-emitting sectors limited by climate policies, entities enjoy increased profit margins.

All geographies are affected by physical climate impacts, which are exacerbated by the lack of investment in adaptation infrastructure by governments in the short- and medium-term.

Financial impacts follow. Demand for sectors such as consumer discretionary falls, and sectors providing necessities deal with impacts on margin and difficult questions as costs increase but consumers' ability to pay for goods and services is reduced. Food and water shortages and declining health and financial outcomes drive political unrest and further destabilise economies. Governments come under increasing pressure to support individuals, businesses (especially those providing essential services), and public health services while facing significant repair and remediation costs. Financial flow on effects reduce tax income, putting them under further strain.

3.2.1.4.A. Emissions Pathways

Emissions increase slightly until 2025, and then decrease at discrete rates, averaging about 0.4% per year. Global emissions reach 38.6 BtCO2e by 2030, and 34.3 BtCO2e by 2050[8] (28% more than in the *Too Little, Too Late* scenario). This is cause and effect of the following:

- Behavioural change and social pressure for decarbonisation are limited. The focus on growth by any means necessary drives higher rates of economic inequality, increasing political instability and geopolitical tensions. There is an increase in displaced people seeking to migrate to safer living conditions while physical impacts increase logistics and construction costs.

[8] *Climate Scenario Narratives for the Financial Services Sector*, p 49.

- The European Union, the United Kingdom, the United States, Canada, and Aotearoa New Zealand are early adopters of progressive climate policy, but eventually roll them back. Japan, China, and Australia pause the development and implementation of climate policies currently under development. Global carbon prices reach USD 6 per tonne in 2030 and remain stable util 2050. Investment in adaptation is minimal.
- There is little technological change to support emissions reduction, and fossil fuels continue to be the dominant source of primary energy: 16% of global energy production (and 42% of electricity) comes from renewable sources by 2030, and 26% by 2050 (60% of electricity).
- Unabated productivity by emission-intensive industries pushes for high economic growth, but the physical impacts of climate change eclipse that: global GDP reaches USD 175 trillion in 2030, and USD 273 trillion in 2050. With a global population of 8.6 billion people by 2050, means average living standards are lower than that in the *Orderly* scenario, but better than that in the *Too Little, Too Late* scenario (though "surplus" is not evenly distributed). Logistics are affected by events such as storms and flooding, disrupting trade.
- Fossil fuel-based fertilisers and machinery underpin agricultural growth, but in the long term the impacts of extreme weather makes it increasingly difficult to sustain said growth.
- Global average temperature rises by 4.4°C by 2100, leading to severe physical impacts. They are similar to those in the *Too Little, Too Late* scenario, but worse across the board.

3.2.1.5. Sources of Data

The scenarios described in this Statement were produced using data from the Sector Scenario Analysis. FundRock has also consulted the Network for Greening the Financial System's scenarios portal[9] to enhance its understanding of climate change in general and the Sector Scenario Analysis in particular.

3.2.2. Scenario Analysis Process

The scenario analysis followed the six-step process detailed in the guidance published by the External Reporting Board ("**XRB**"), particularly the *Staff Guidance Entity Scenario Development*[10]. An overview of the process is provided below:

(A) *Engage with Stakeholders*: see Subsections 3.2.2.1 and 3.2.2.2 below for details.

(B) *Define the Problem*: the focal question was adopted from recommendations by the Task Force on Climate-Related Financial Disclosures ("**TCFD**")[11] and the Fund was in scope. For information on time horizons, see Subsection 3.2.1.1 above).

(C) *Identify driving forces and critical uncertainties*: the Sector Scenario Analysis was reviewed and analysed to produce a conceptual model[12].

(D) *Select temperature outcomes and pathways*: temperature outcomes and pathways were adopted from the Sector Scenario Analysis (see Section 3.2 above for more details).

(E) *Draft narratives and quantify*: narratives were adapted from the Sector Scenario Analysis, taking into consideration the distinctions of the Scheme and Fund. No quantification was attempted.

(F) *Assess strategic resilience*: completed in close collaboration with Bentham.

3.2.2.1. Integration & Governance

The Board set the governance for scenario analysis, ensuring appropriate processes were in place; and FundRock's management has reviewed and approved the scenario analysis framework (which was based on the Sector Scenario Analysis, as described above) and its results (as reflected in this statement).

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9 See https://www.ngfs.net/ngfs-scenarios-portal/. This includes the *Guide to climate scenario analysis for central banks and supervisors* mentioned above, the Phase 4 Scenario Explorer, *NGFS Scenarios for central banks and supervisors*, and *Climate impact explorer*.

10 Which is itself an adaptation of *Task Force on Climate-Related Financial Disclosures*, *Guidance on Scenario Analysis for Non-Financial Companies*, October 2020 – also consulted.

11 Task Force on Climate-related Financial Disclosures, *Guidance on Scenario Analysis for Non-Financial Companies*, 2020 p 72.

12 A conceptual model is a "*simple representation of a system focused on the relationship expected to be seen between variables*" (XRB, Staff Guidance Entity Scenario Development, 2023, pp 11 and 27).

Scenario analysis was conducted by FundRock as a standalone process, but its results (particularly the risks and impacts which identification and assessment it enabled) were integrated into its risk management processes.

The scenario analysis was presented to the Bentham Investment Committee. The Committee acknowledged the analysis, but on consideration did not see the need to change anything in the fund structure or any processes.

3.2.2.2. External Stakeholders

FundRock provided Bentham with a scenario analysis framework (derived from the Sector Scenario Analysis, as described above), a structured plan, and output requirements.

3.3. Climate-Related Risks and Opportunities (CRR&O)

The Sector Scenario Analysis included a *Climate Risk Database*, on which FundRock and Bentham relied to identify and assess the risks for the Scheme and Fund. As indicated in Section 3.1 above, the risks found in the Sector Scenario Analysis were systematized by FundRock to allow for their application across the variety of schemes and funds we manage.

The table in Schedule A below lists the climate-related risks identified by FundRock and Bentham. Diversified investment funds will be exposed to most, if not all, climate-related risks. For example, it is likely that at least one of their investees will be exposed to the impacts associated with rising sea levels or stranded assets.

Bentham has structured the fund with diversification across geography, issuers, industry, and security type, and in addition the Bentham investment process includes the consideration of material ESG risks (including climate) in its investment process. These factors will assist the fund in adapting to investment risks arising from climate change.

3.3.1. Definitions of Short-, Medium-, & Long-Term

The time horizons used for the scenario analysis (see Section 3.2.1.1 above) were used for the purpose of analysing the timeframe of climate-related risks.

3.3.2. CRR&O & Decision Making

Management of entity-level CRR&O has been integrated into FundRock's overall risk management framework. They are discussed in a monthly risk controls meeting attended by the General Manager, where resourcing is addressed. If the relevant CRR&O cannot be properly addressed at this level, they may be highlighted in the quarterly Board reports (see Section 2.1.1 above) and addressed with the Board.

At FundRock, entity-level CRR&O receive the same treatment as all other risks and opportunities in all risk-related process and procedures and at all levels of the organization. As a rule, risks are prioritized based on their likelihood and expected impact.

The Bentham credit team reviews information on ESG factors (including climate) relevant to issuers through the fundamental credit analysis process. Potentially material ESG issues are identified initially through application of the Bentham ESG risk framework, which sets out ESG risk factors on an industry basis. Where deemed material to credit pricing/default risk, ESG factors are assessed in greater detail as part of the bottom-up credit risk analysis process. This comprises the assessment of ESG factors in conjunction with qualitative risk information, top-down sector views, and financial risk metrics. Our approach anchors ESG analysis within fundamental investment decision processes.

The Bentham ESG risk framework is reviewed and updated periodically to ensure it reflects evolving ESG issues relevant to fixed income investing.

3.4. Anticipated Impacts

FundRock anticipates that the cost of compliance with climate-related policies and regulations will continue to increase. Starting from the 2024/2025 reporting period, the data on GHG Emissions (see Section 5.1 below) will be subject to assurance, increasing compliance costs. The Financial Markets Authority (FMA) has also indicated that it expects reporting entities to continually develop their climate-related processes and procedures, which means that FundRock will continue to dedicate substantial resources to compliance with CRD regulations (at least in the short-term). As mentioned in Section 3.1 above, mounting regulation may lead to fee increases.

Bentham currently does not anticipate material impacts from climate risk. The Fund currently has a high level of diversification and is priced daily (meaning risks, include climate should be accounted for in the price). In addition, the fund integrated ESG analysis process is designed to highlight material ESG risks that are current or may arise in the future.

3.5. Transition Plan

FundRock is a fund hosting business. We provide services to domestic and international investment managers who want to operate in Aotearoa New Zealand but would prefer to outsource fund management to us, normally because they believe this to be the most cost-effective way of offering their services in the country.

Our business model is very resilient to investment risks (climate-related or otherwise) thanks to the broad variety of schemes and funds we can accommodate. As long as there is continued demand for managed investment schemes in Aotearoa New Zealand, we can evolve and adapt to political, economic, and societal changes: we can work with existing investment managers to make strategic adjustment to their products, and whenever this proves impractical, new products (more aligned with prevailing market winds) may be developed in collaboration with current or new investment managers, replacing those retired.

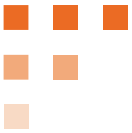
FundRock's knowledge of and experience in Aotearoa New Zealand's investment funds market will be invaluable in the process of identifying the adaptations required and assessing the viability of both existing and prospective products. Understanding the CRR&O specifically associated with this market must be part of this. Per adoption provision 3 in NZ CS2, which requires developing the transition plan aspects of its strategy, the work developed in the 2023/2024 reporting period – particular the setup of a framework for management of CRR&O – was the first step in this journey. FundRock's short-term goal is to further develop the structures that were put in place in this period and fully integrate them into its processes and procedures, particularly strategic decision-making. The knowledge and experience that has been and will be acquired as part of this will inform future strategic directions.

Bentham has structured the fund with diversification across geography, issuers, industry, and security type, and in addition the Bentham investment process includes the consideration of material ESG risks (including climate) in its investment process. These factors will assist the fund in adapting to investment risks arising from climate change.

3.5.1. Current Business Model & Strategy

The Fund invests in global credit and fixed interest markets. Its investments include, but are not limited to, Australian and global hybrid securities, global high yield bonds, global syndicated loans, investment grade securities, global capital securities, asset backed securities, repurchase agreements, reverse repurchase agreements, equities and derivatives.

Bentham aims to provide investors with access to the global credit asset classes through well-constructed, highly diversified, institutional-quality portfolios/funds, at competitive fees.



Bentham is an active credit manager that seeks to add value through economic cycles by identifying the most attractive relative value investment ideas and potential risks. Bentham actively reviews and adjusts portfolios based on potential returns and changing investment risks.

4. RISK

FundRock manages entity-level CRR&O directly. We have identified them by referencing applicable regulations, and assessed them by appraising their expected impact, the processes and controls we have in place, and the resources of which we dispose. The processes for monitoring and managing said CRR&O are summarised in Section 3.3.2 above.

Bentham's goal is to fully integrate ESG into the credit research process. ESG includes the consideration of climate related risks. Its credit team reviews information on ESG factors relevant to issuers through the fundamental credit analysis process. Potentially material ESG issues are identified initially through application of the Bentham ESG risk framework, which sets out ESG risk factors on an industry basis. Where deemed material to credit pricing/default risk, ESG factors are assessed in greater detail as part of the bottom-up credit risk analysis process. This comprises the assessment of ESG factors in conjunction with qualitative risk information, top-down sector views and financial risk metrics. Our approach anchors ESG analysis within fundamental investment decision processes.

The Bentham ESG risk framework is reviewed and updated periodically to ensure it reflects evolving ESG issues relevant to fixed income investing.

4.1. Prioritisation Process

FundRock prioritizes entity-level risks based on their likelihood and expected impact. Risks are classified across both axis and assigned a risk rating. Both inherent and residual ratings are considered.

These ratings, as well as **(i)** risk trend & velocity and **(ii)** management response, are regularly reassessed according to the processes summarised in Section 3.3.2 above.

Bentham integrates ESG risks (including climate) into its investment process. Bentham prioritizes risk based on materiality.

4.2. Short-, Medium-, and Long-Terms

For CRR&O, FundRock uses the time horizons adopted for scenario analysis (see Section 3.2.1.1 above) for risk assessment whenever necessary.

Bentham timeframes are based on those adopted in the scenario, with specific consideration for individual investments as required (e.g., asset maturity date).

4.3. Parts of Value Chain Not Included

The risk assessment process considered fund management, investment management, and the Fund's investments. Distribution risks were not considered.

4.4. Assessment Frequency

FundRock assesses entity-level risks regularly, following the processes summarised in Section 3.3.2 above.

Bentham reviews investments on an ongoing basis. This can be based on information releases, market changes, or events and changes in security prices.

5. METRICS & TARGETS

In determining which metrics to publish in the Statements, FundRock has considered guidance published by the TCFD[13], and XRB[14] and the sustainability standards published by the International Accounting Standards Board (IFRS[15]). We have also engaged with data providers and the investment managers with whom we work to learn about their views on appropriate metrics.

The set of metrics published below reflects the conclusions from this process. In selecting it, FundRock has considered the following criteria:

- **Conceptual Integrity**: certain metrics rely on concepts on which agreement is either limited or non-existing. This makes for metrics with low comparability or prone to manipulation.
- **Cost**: acquiring the metrics is costly, and the Fund's investors may (directly or indirectly) pay for this cost.
- **Expected Impacts**: diversified and dynamic investment vehicles such as managed funds are expected to be more heavily impacted by risks affecting a broad range of investees, as opposed to risks that are specific to a certain sector of the economy or geography.

Bentham considers the point of conceptual integrity as of particular importance for the Fund. The quality of carbon data reduces significantly for funds that have holdings beyond major listed companies. Bentham does not market the Fund as sustainable, and the Fund does not have any climate-related targets.

All metrics below are as of 31 March 2024.

5.1. GHG Emissions

The table below contains data on gross GHG Emissions (in metrics tons of CO_2e) for the Fund's investees. These figures are strongly influenced by fund size; to compare funds of different sizes, investors should use the data on emissions intensity (see Subsection 5.1.1 below).

The Scheme has no material Scope 1 or 2 emissions. In accordance with the Greenhouse Gas Protocol (GHG Protocol)[16], all the emissions of the investee companies are included in its Scope 3 emissions (and are reported below as the Total Gross Emissions). However, FundRock has further broken down the investee companies' emissions into those companies' Scope 1, 2, and 3 emissions.

FundRock and Bentham advise caution when considering the emission statistics below. The statistics should not be used for making investment decisions. While all data on GHG Emissions relies on some degree of estimation, this is significantly more pronounced for credit issuers and structured securities, to the point that their reliability becomes fraught. These estimations are reflected in *Partnership for Carbon Accounting Financials*' ("**PCAF"**) scores, which summarise data quality. These can be observed in Section 5.1.2.5 below. Additional caution should be applied to Scope 3 emissions. The statistics below rely on simplifying, industry-based assumptions and/or assumptions based on fund averages. Given these assumptions may change over time, these statistics may not be useful for a year-to-year comparison.

For a diversified fund, they may also contain some degree of duplication: if a fund is invested in Companies ABC and XYZ, and ABC is a supplier of XYZ, ABC's emissions would be included in the fund's Scope 1 *and* Scope 3 emissions. Given how supply chains are intertwined, this situation is not unlikely to be present.

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13 *TCFD, Guidance on Metrics, Targets, and Transition Plans, October 2021*; and *TCFD, Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures, October 2021*.

14 *XRB, Climate-Related Disclosures Staff Guidance – MIS Managers, August 2023*.

15 *IFRS S2 Climate-Related Disclosures—June 2023*.

16 See the GHG Protocol website.

Carbon emissions data is an evolving field; methodology and data are constantly being reviewed, updated, and improved. Corporate disclosure is also improving over time, which may change underlying disclosure as carbon data moves from a modelled to a reported category. This may complicate comparisons in future statements and/or require restatements.

Fund	Investees' Scope 1	Investees' Scope 2	Investees' Scope 3	Total Gross Emissions
Bentham Global Income PIE Fund	1,250.47	37.73	4,626.87	5,915.06

5.1.1. Emissions Intensity

Carbon Footprint is a measure of GHG Emissions (in metrics tons of CO_2e) by millions of New Zealand dollars invested, while WACI (*Weighted Average Carbon Intensity*) is a measure of GHG Emissions by revenue (*investees* revenue, in US dollars). Emissions intensity metrics allow for comparison between funds of different sizes. It is based on the total gross emissions figures above. It is important to note the comments relating to emission statistics in Section5.1 above.

Fund	Carbon Footprint[17]	WACI
Bentham Global Income PIE Fund	52.69	1,174.43

5.1.2. Methodology

5.1.2.1. GHG Emissions Measurement Standards

Emissions were calculated using *PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition*.

5.1.2.2. GHG Emissions Consolidation Approach

Emissions have been consolidated using the financial control approach.

5.1.2.3. Source of Emissions Factors

Emissions factors were sourced from the GHG Protocol. They reflect the 100-year time horizon global warming potentials (GWP) relative to CO_2, and were adapted from the IPCC Fifth Assessment Report[18].

5.1.2.4. Summary of Exclusions

No asset or asset class was excluded from emissions calculations.

5.1.2.5. Methods & Assumptions

FundRock has partnered with Emmi Solutions Pty ("**Emmi**") to calculate all the metrics found in these Statements. FundRock has provided Emmi with data on the Fund, dated as of 31 March 2024, and Emmi has used this data to produce the metrics found herein. These metrics are subject to Emmi's limitations and assumptions summarised in this section of the climate statements. Further detail can be found in Emmi's website[19].

Emmi takes a waterfall approach to estimate Scope 1, 2, and 3 emissions, selecting the most robust available method for each investee. Where reported emissions are unavailable, Emmi uses estimations based on physical activities (e.g.,

[17] Carbon footprint is exclusive of Scope 3 Emissions, as recommended by TCFD (*Implementing the Recommendations of the Task Force on Climate-related Financial Disclosures*, p 53).

[18] See Fifth Assessment Report — IPCC.

[19] The referred website contains a link to a page on climate scenario analysis methodology – this product was not used by FundRock.

investees' energy consumption), or estimations based on economic activity (e.g., investees' industry). To perform estimations, Emmi uses certain business metrics, such as revenue and geography, and relies on machine learning: their models are trained on data from public companies gathered from CDP and sustainability reports.

Calculating metrics nonetheless requires trade-offs between coverage and robustness. The results of these trade-offs are summarized in the coverage and PCAF figures below:

Fund	Coverage	PCAF Score
Bentham Global Income PIE Fund	100%	4.25

PCAF[20] scores range from 1 to 5 and provide a summary of the data's quality. A score of 1 reflects the best quality data and means that the investee company has performed an emissions calculation based on the GHG Protocol that has been verified by a third-party. A score of 5 is the most uncertain as estimates the emissions of the investee company based on sector and region averages or benchmarks[21]. The PCAF scores reported above is a weighted average of the PCAF score for the Fund's investees.

5.1.2.6. Quantification Uncertainties & Their Effects

As mentioned above, GHG Emissions data relies on estimations, which are reflected in the PCAF scores. A score of 3 or higher implies that estimations have been performed, which means that actual emissions may differ from those reported above; the closer the score is to 5, the larger the estimation uncertainty..

Note that the availability of data is something over which FundRock, Bentham, or Emmi do not exercise any control; availability is reliant upon investees publishing or making available data on their emissions.

5.2. Transition Risks

FundRock have measured their exposure to transition risks by assessing the carbon budgets of the Funds' investees under different scenarios, their potential carbon liability, and their emissions reduction requirements. All these metrics are further explained below.

All figures reported under this section are weighted averages of the figures for the Fund's investees.

FundRock and Bentham advises caution when considering the transition analysis below. The analysis should not be used for making investment decisions or for fund comparison. While all data on GHG Emissions relies on some degree of estimation, this is significantly more pronounced for credit issuers and structured securities, to the point that their reliability becomes fraught. The analysis below relies on simplifying, industry-based assumptions and/or assumptions based on fund averages.

5.2.1. Carbon Budget Overspend

The tables below show the amount (in metric tons of CO_2e) by which the Fund's investees exceed their carbon budget in the relevant year, in each scenario[22].

Emmi (on FundRock and Bentham's behalf) calculates carbon budgets by:

(A) Comparing investees' financial metrics (such as earnings, market cap, and net assets) to their carbon emissions, establishing ratios.

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[20] *Partnership for Carbon Accounting Financials*.

[21] PCAF (2022). The Global GHG Accounting and Reporting Standard Part A: Financed Emissions. Second Edition.

[22] The three scenarios used to calculate the transition risk metrics are SSP1-RCP1.9 (the 1.5°C scenario), SSP2-RCP2.6 (2°C scenario), and SSP2-No Policy (3-4°C scenario).

(B) Comparing said financial metrics to key global economic metrics (such as GDP, global wealth, and global debt), to assess how much of the global economy is represented by the investees.

(C) Scaling emissions for investees according to the ratios established in steps (A) and (B) above.

(D) Comparing investees' earth-scale emissions to the 1.5°C, 2°C, and 3-4°C scenarios global carbon budgets to calculate the investees' emissions reductions requirements as a percentage of the global carbon budget.

(E) Scaling down the earth-scale carbon budget overspend back to the investees' actual size.

Emissions are assumed to remain constant at their 2023 levels. Consequently, an overspend will almost inevitably be reported in the 1.5°C and 2°C scenarios, as they require substantial emissions reduction. This is intentional: this and the other metrics in this Section 5.2 illustrate the maximum risk of not reducing emissions, not the potential rewards for doing so.

Scenario	2030	2050
1.5°C Scenario	4,083.58	5,407.77
2°C Scenario	2,364.07	3,649.49
3-4°C Scenario	1,638.18	1,542.12

5.2.2. Potential Carbon Liability

Similar to the carbon budget overspend, to calculate this metric Emmi (on FundRock and Bentham's behalf) assigns a carbon budget to investees, under which they would have to operate in a certain scenario. This budget is based on certain factors, which reflect **(i)** how governments might apply a price to GHG Emissions from investees[23] and **(ii)** the investees' financial resilience against the implementation of any such costs.

Through this process, Emmi sets GHG Emissions thresholds, which could create a carbon liability for investees if exceeded. The impact of this overspend on the relevant asset's valuation is then calculated:

- For equities, the present EBITDA multiple is obtained by dividing present enterprise value by EBITDA; carbon emissions overspend for the relevant year is multiplied by the carbon price for the same year[24], and the resulting amount is deducted from the present EBIDTA; and the adjusted EBITDA is multiplied by the present EBITDA multiple.
- For fixed interest instruments, yearly carbon emissions overspend are multiplied by the applicable carbon prices *until the instrument's maturity*, and the results are brought to their present value using its yield to maturity as the discount rate. Such present value is then deducted from the instrument's current price.

The difference between the current enterprise value (for equity) or current instrument price (for fixed interest) and their adjusted values is the percentage value erosion reported as potential carbon liability.

As with carbon budget overspend, emissions are assumed to remain constant at their 2023 levels.

Scenario	2030	2050
1.5°C Scenario	15.09%	24.13%
2°C Scenario	2.03%	3.06%
3-4°C Scenario	0.56%	0.61%

5.2.3. Emissions Reduction Requirements

The reduction requirements figures in the table below illustrate the rate by which the GHG Emissions of the Fund's investees would have to be reduced to align with the GHG budget for the relevant temperature increase target, by the

[23] No assumption is made on how this liability would be paid by investees. It could be (e.g.) via direct carbon taxes or a requirement for mandatory acquisition of credits in carbon trading schemes.

[24] See Section 5.3.

year therein indicated. They essentially communicate by how much emissions would have to be reduced to avoid the carbon liabilities reported in Subsection 5.2.2 above.

Scenario	2030	2050
1.5°C Scenario	33.22%	71.99%
2°C Scenario	12.73%	27.48%
3-4°C Scenario	4.64%	4.08%

5.3. Price per CO_2 Tonne

Emmi sources base carbon prices (in US dollars) from the CSIRO[25] 2°C carbon price modelling, and using this to imply carbon prices for specific carbon trajectories. The carbon prices used were:

Year	1.5°C Scenario	2°C Scenario	3-4°C Scenario
2010	10	10	10
2030	218	36	10
2050	821	115	10

5.4. Management Remuneration

Neither FundRock nor Bentham have elected to link any part of management remuneration to CRR&O.

5.5. Other Metrics: Temperature Alignment

This metric assesses investees against global carbon budgets based on IPCC scenarios, placing their emissions on a spectrum between 1.5°C and 4°C. It is based on theories and metrics similar to those used to calculate the transition risks metrics reported in Section 5.2 above.

Fund	Temperature Alignment
Bentham Global Income PIE Fund	2.11°C

[25] *Commonwealth Scientific and Industrial Research Organisation*, an Australian Government agency responsible for scientific research.

SCHEDULE A. CLIMATE-RELATED RISKS

Name	Type	Term	Sector/Geography	Description
Policy & Regulatory Impacts	Transition	Short/Medium	All/Global	Increasingly stringent climate change regulations (e.g. disclosure, emissions reduction, green buildings requirements, etc.) creating additional processes and costs.
Disruption to Business Operations	Physical	Medium/Long	All/Global	• Increase in extreme weather events causing damage to physical assets [e.g., facilities, equipment, infrastructure (such as roads, airports, ports, or data centres)], disabling utilities (such as energy), or otherwise disrupting services or operations. • Increase in temperature increasing demand for energy. • Increase in extreme weather events impacting employees' ability to work or customers' ability to access services.
Disruption to Production & Supply Chain	Physical	Medium/Long	All/Global	• Disruptions to production caused by extreme weather events closing facilities, causing loss of power, damaging equipment, impairing employees' ability to work (e.g., because of H&S issues), affecting productivity (e.g., decreased crop yield or machinery performance caused by excess heat), or requiring additional controls. • Physical impacts upstream and downstream the supply chain impacting employee access to facilities, ability to get required materials, or ability to get products or services to market. • Droughts impacting water availability, affecting manufacturing processes. • Impacts to health of employees through heat stress, rise in infectious diseases, poorer water quality, and injury in extreme weather events, impacting on ability to work. • For Agriculture only: (i) gradual weather changes (such as temperature or precipitation) impacting stock and crop quality and yield; (ii) increase in proliferation of pests.
Economic Impacts on Customers (Physical)	Physical	Medium/Long	All/Global	Second order effects of climate-change (such as job-loss, potential declines in economic growth, population migration, geopolitical conflict, etc.) affecting financial position of customers/potential customers.
Economic Impacts on Customers (Transition)	Transition	Medium/Long	All/Global	Second order effects of climate-change (such as job-loss, potential declines in economic growth, population migration, geopolitical conflict, etc.) affecting financial position of customers/potential customers.

Name	Type	Term	Sector/Geography	Description
Environmental Damage	Physical	Medium/Long	All/Global	• Increased flooding increasing the risks of discharge by coal mines of contaminated water into surrounding areas, causing environmental damage and impacting on community health and safety. • Increased rainfall leading to chemical releases and oil spills (oil and gas), causing environmental damage and impacting on community health and safety.
Increased Carbon Price	Transition	Medium/Long	All/Global	• Energy, materials, operations, or transport/distribution increasing in cost due to carbon price. • Emissions may be subject to carbon price, increasing operational costs.
Increased Demand for Services/Products	Physical	Medium/Long	All/Global	Increased demand caused by industry-specific factors [e.g., cardiovascular and respiratory illnesses, malnutrition, skin cancer, climate anxiety, and heat stress for health industry; energy (for cooling) in energy industry; water in utilities industry], creating overload risk.
Litigation Risk	Transition	Short/Medium	All/Global	Lawsuits being raised against companies failing to meet climate expectations or requirements.
Policy & Regulatory Impacts	Transition	Short/Medium	All/Global	Increasingly stringent climate change regulations (e.g. disclosure, emissions reduction, green buildings requirements, etc.) creating additional processes and costs.
Stakeholder Preference Change	Transition	Short/Medium	All/Global	Increasing stakeholder expectation of entity to be proactive in reducing their emissions and in addressing their climate-related risks.
Stranded Assets (Physical)	Physical	Medium/Long	All/Global	Extreme weather events (such as inundation, storm surge, wildfires, or floods) damaging or devaluing assets or properties.
Stranded Assets (Transition)	Transition	Short/Medium	All/Global	Emissions-intensive assets becoming costly to run due to increased carbon price (e.g., coal burners and diesel-fuelled tractors).
Technology Adoption & Implementation	Transition	Medium/Long	All/Global	Failure to or unsuccessful investment in low-emissions technologies during adaptation phase.
Flood	Physical	Medium/Long	All/Global	Flood can damage property and local infrastructure, spread diseases, impact the fertility of soil, cause large destruction of infrastructure, and lead to an increase in refugees.

Name	Type	Term	Sector/Geography	Description
Large Amount of Policy Intervention	Transition	Short/Medium	All/Global	Policy intervention (e.g. high carbon price, large climate funds, disclosure requirements, emission reduction targets) reducing an economy's GHG Emissions intensity and driving innovation.
Mean Temperature Increase	Physical	Medium/Long	All/Global	Increasing mean temperatures **(i)** making pests and pathogens (human, animal, and plant-based) outbreaks more frequent and severe, posing a threat to both human health and food security; **(ii)** negatively impacting agriculture yields due to the increased heat stress experienced by plants and animals; and **(iii)** increasing the risk of geographical movement disruption (people and goods) due to a desire to minimise spread of disease.
Migration	Transition	Medium/Long	All/Global	Mass migration to reduce impacts of physical climate perils in those areas that are worst affected, either within or to outside the region.
Physical Risk Impacting Government	Physical	Medium/Long	All/Global	Physical risk increasing governmental expenditure due to increased costs of infrastructure, increased demand on emergency services, and greater reliance on government for financial support. This is exacerbated by **(i)** the impacts of physical risk on the private sector reducing governmental revenue (decrease in income collected from taxation due to a weaker economy); and **(ii)** difficulty in obtaining finance due to decreasing government bond credit ratings.
Political Unrest	Transition	Medium/Long	All/Global	Political unrest resulting from increased impacts of physical climate perils and inaction of governments.
Poor Climate Policies and Commitments	Transition	Medium/Long	All/Global	Minimal policy intervention, leading to GHG Emissions intensity likely remaining and entities likely continuing operations as usual. The economy may face second order impacts.
Reliance on Emissions Intensive Sectors	Transition	Medium/Long	All/Global	Economies reliant on GHG intensive sectors (e.g. oil and gas, agriculture, coal, manufacturing, fracking) being impacted as the world transitions to renewable energy and low carbon products.
Sea Level Rise	Physical	Medium/Long	All/Global	Sea levels rising due to the thermal expansion of the oceans and the melting of ice sheets and glaciers.
Slow Transition	Transition	Medium/Long	All/Global	The geography is seen as not transitioning fast enough to a low-emission economy, decreasing reputation and attraction.

Name	Type	Term	Sector/Geography	Description
Transition Risk Impacting Government	Transition	Medium/Long	All/Global	Transition risk can increase governmental expenditure due to increased administrative costs for policy interventions and increased expenditure on infrastructure. This is exacerbated by **(i)** the impacts of transition risk on the private sector reducing governmental revenue (decrease in income collected from taxation due to a weaker economy); and **(ii)** difficulties obtaining finance due to decreasing government bond credit ratings.
Water Stress & Drought	Physical	Medium/Long	All/Global	Lack of adequate precipitation causing reduced soil moisture or groundwater, diminished stream flow, crop damage, and general water shortage.