

TCFD Product Report Murray Income Trust PLC

31 December 2022
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Portfolio Overview

Murray Income Trust PLC

Fund investment objective	To achieve a high and growing income combined with capital growth through investment in a portfolio principally of UK equities.
Purpose of the report	<p>Climate change is the biggest challenge confronting us all. There is no planet B. At abrdn we view this in two ways, firstly by demonstrating leadership in our operations and secondly by reducing the carbon intensity in our own portfolios with a focus on real world decarbonisation towards net zero.</p> <p>abrdn recognises the growing demand from investors for more climate-related information about their investments, as such, we have made disclosures we believe are consistent with the TCFD Recommended Disclosures within this report and we will continue to evolve and enhance our TCFD reporting, in line with data and industry developments.</p> <p>The Financial Stability Board (FSB) created the Taskforce on Climate-related Financial Disclosures (TCFD) to develop recommendations on the types of information that companies should disclose to support investors in appropriately assessing and pricing a specific set of risks related to climate change.</p> <p>In Policy Statement 21/24 the Financial Conduct Authority (FCA) have created a regulatory framework for asset managers, life insurers and FCA-regulated pension providers to make climate-related disclosures consistent with the recommendations of the TCFD.</p> <p>Due to the evolving nature of carbon metrics and methodologies and in some cases the nascent disclosure of carbon data in some asset classes and sectors there can be situations where we have low aggregated data coverage at a portfolio level. As a house we have adopted a principle of only reporting where we have greater than 50% data coverage - measured as the % of the portfolio's assets under management for which carbon data has been disclosed, partially disclosed or estimated by S&P Trucost.</p> <p>We expect that the number of portfolio's where we have not reported due to low data coverage will decrease over time as methodologies and reporting disclosures improve. This includes fund-of-fund structures and assets which due to their location or structure have nascent corporate disclosures. In particular we will focus on working with third parties and data providers to improve coverage. However, at this stage we have adopted a conservative approach to ensure that reported data does not give a skewed perception of carbon impacts. For example if carbon data is only available for low carbon sectors but this only relates to a small portion of the holdings, this could lead to the entire portfolio appearing to be low carbon. However, once more carbon intensive sectors are reported in time, this could significantly alter the overall position and as such, we have taken the decision to only report where we have the majority (>50%) of data available.</p> <p>There are some investment types that due to their nature are not possible to report or estimate carbon metrics. These are typically money market investments that do not have a carbon profile, or synthetic products where methodological constraints mean that they are considered out of scope of these reports.</p> <p>For the first year of reporting, we are only reporting on credit bonds, listed govt bonds and listed equities due to poor or inconsistent data coverage in other asset types. We will review this year on year, and seek to enhance coverage in future years through alternative data providers, direct engagement and supporting broader industry initiatives.</p>
Benchmark	FTSE All Share

Carbon Analysis

Murray Income Trust PLC

Carbon footprinting refers to the use of various carbon metrics that are a useful starting point for understanding exposure to carbon within a portfolio and can be informative in identifying potential climate transition risks. Carbon metrics are also one of the various metrics that can help investors better understand the impact of their investments on the climate.

We split carbon metrics out by Scope 1, 2 & 3 in line with the Greenhouse Gas Accounting Protocol Standards best practices.

It is important to consider that carbon footprinting has inherent limitations. Firstly, emissions data is backward-looking and should be complemented with forward-looking analysis of the entity's transition plans. Secondly, each carbon metric has its own idiosyncratic strengths and weaknesses, and each metric can be driven by short-term volatility unrelated to emissions. Lastly, emissions are not necessarily the most appropriate indicator of climate risk. For example, there are many climate solutions that operate within carbon intensive sectors, potentially falsely implying elevated climate risks when compared to other sectors or a broad market benchmark.

Carbon Data Disclosure

Data Disclosure	Portfolio	Benchmark
Trucost Data Coverage (%)	100.0	98.6

For public equities and credit, our climate scenario analysis suggests that by far the biggest climate risk for portfolios is associated with the transition away from fossil fuel energy to low carbon alternatives. Physical climate risks tend to be much more modest in the economic impact. So the core risk for investors arises from companies with carbon intensive products (e.g. coal, oil, gas) or operations (e.g. mining, electric power generation) that are highly exposed to this transition.

These activities are highly concentrated in a small number of sectors. Power utilities, oil and gas and materials account for roughly 60% of the carbon intensity of the MSCI World equity index, but these sectors only have around 12% of the weight in the index. By contrast, the technology, financials and healthcare sectors, which together account for half the index weight, only emit 5% of its carbon emissions.

There is variation across different equity regions. The carbon intensive sectors are not evenly distributed across regional equity and bond indices. For example, UK, US, Europe and Japan equity benchmarks have a weighted average carbon intensity of (80-160tCO₂e/\$m revenue), but a few, particularly those focused on emerging markets have higher exposures (350tCO₂e/\$m).

Our public market portfolios will have pockets of exposure to carbon intensive activities, particularly those with income targets that tend to hold large positions in extractive industries; or with exposure to benchmarks that have a higher concentration of high-emitting industries. In other strategies, these exposures can be diluted by much larger exposures to business sectors and asset classes with little climate risk.

Where we do have exposure to sectors with higher carbon intensity, the credibility of their decarbonisation targets is a consideration, as is the impact of these emissions on their valuation and operational performance.

Engagement is a principle focus to encourage companies with significant emissions to develop strategies to decarbonise their businesses and reduce their exposure to the financial risks that can come from poor adaptation and mitigation.

Carbon Analysis

Murray Income Trust PLC

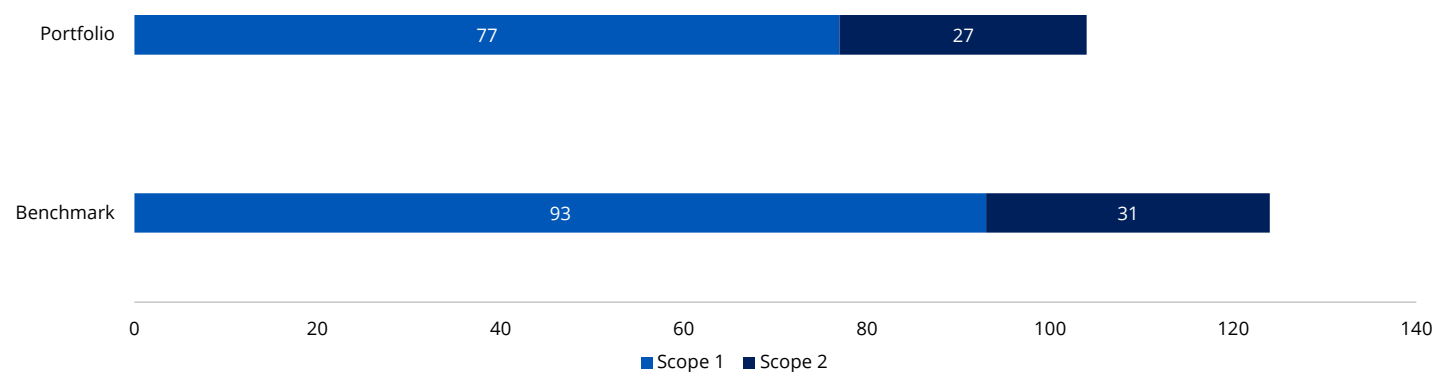
Portfolio Carbon Intensity

Weighted Average Carbon Intensity

Weighted average carbon intensity (WACI), is a normalised carbon intensity figure, expressed as tCO₂e/million USD revenue. The portfolio weighting of each holding is multiplied by the ratio of the investee company's emissions normalised by the investee company's revenue.

In this instance company revenue is used to normalise emissions to allow for investors to account for a company's size and economic activity (e.g. typically larger companies will have a greater total emissions footprint but may be more carbon efficient on an intensity basis). Company revenue is a useful proxy for the economic activity of a company. Normalising emissions allows for more accurate comparisons between companies of different sizes and between funds of different sizes. However, volatility in revenues will impact WACI results and such revenue volatility is not always perfectly tied to actual economic activity or total emissions. Moreover, normalising emissions by revenue means that WACI does not perfectly reflect the carbon impact of an investment on the real-world.

How carbon intensive are the companies in my portfolio?



Portfolio Carbon Intensity

How carbon intensive are the companies in my portfolio?

In tonnes of CO ₂ e/million USD revenue	Weighted Average Carbon Intensity Scope 1 + 2	Scope 1	Scope 2
Portfolio	104	77	27
Benchmark	124	93	31
Relative Carbon Intensity (%)	84.1	83.4	86.0

A portfolio with a relative carbon intensity less than 100% indicates a lower carbon intensity versus the benchmark.

For example a portfolio with 90% relative carbon intensity has an intensity that is 10% lower than the benchmark.

Scope (1-3) emissions definitions - 1: Direct emissions 2: Indirect emissions 3: Upstream Value Chain emissions

Trucost data is partly based on estimated figures. Therefore, the reporting should be estimated based on the best available data and used for guidance.

The fund's carbon footprint is 16% lower than the benchmark. The main contributors towards the carbon footprint are SSE PLC, Anglo American PLC and TotalEnergies SE. We note that in 2022 we conducted a multi-stream engagement with SSE on a range of topics, including the integration of consideration of renewables investments and ESG metrics into the remuneration policy, board oversight and the company's decarbonisation strategy through a collaborative engagement with CA100+. In addition, abrdn is engaging with Anglo American and TotalEnergies as part of our engagements with our Top 20 financed emitters under our Net Zero framework.

Carbon Analysis

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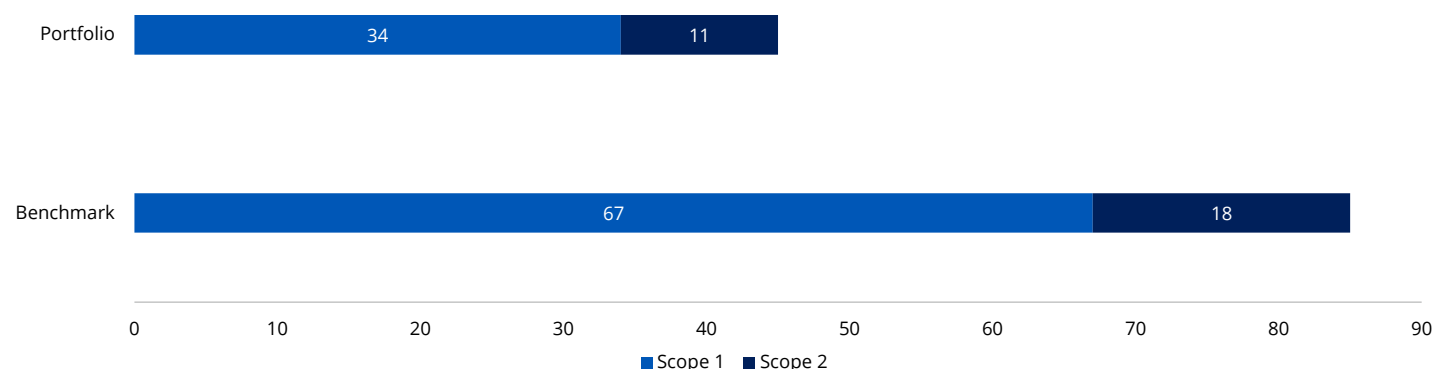
Portfolio Carbon Footprint

Economic Emissions Intensity

Economic Emissions Intensity (EEI) is a normalised carbon intensity metric, expressed as tCO₂e/million USD invested. The portfolio weighting of each holding is multiplied by the ratio of the investee company's emissions normalised by the investee company's enterprise value including cash (EVIC). This is equivalent as dividing the portfolio Financed Emissions by the portfolio's AUM.

In this instance EVIC represents the total value of a company's equity and debt, allowing investors to normalise emissions by company size, based on equity and debt valuations. (i.e. typically larger company's will have a greater total emissions footprint but may be more carbon efficient on an intensity basis). Normalising emissions allows for more accurate comparisons between companies of different sizes and between funds of different sizes. However, volatility in EVIC will impact EEI results and EVIC volatility is not always perfectly tied to actual economic activity or total emissions. Moreover, normalising emissions by EVIC means that EEI does not perfectly reflect the carbon impact of an investment on the real-world.

How carbon intensive are the companies in my portfolio?



Portfolio Carbon Intensity

How carbon intensive are the companies in my portfolio?

In tonnes of CO ₂ e/million USD Invested	Economic Emissions Intensity Scope 1 + 2	Scope 1	Scope 2
Portfolio	45	34	11
Benchmark	85	67	18
Relative Carbon Intensity (%)	53.4	51.5	60.2

A portfolio with a relative carbon intensity less than 100% indicates a lower carbon intensity versus the benchmark.

For example a portfolio with 90% relative carbon intensity has an intensity that is 10% lower than the benchmark.

Scope (1-3) emissions definitions - 1: Direct emissions 2: Indirect emissions 3: Upstream Value Chain emissions

Trucost data is partly based on estimated figures. Therefore, the reporting should be estimated based on the best available data and used for guidance.

Carbon Analysis

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Greenhouse Gas Emissions

Total Financed Emissions

Total Financed Emissions calculate the absolute total emissions, expressed as tCO₂e, that are attributed to the investor. The methodology used follows the Partnership for Carbon Accounting Financials (PCAF) and is recommended by TCFD. The attribution factor is calculated by taking the monetary size of the investment and dividing it by the investee company's enterprise value including cash. This attribution factor is then multiplied by the company's total emissions to calculate the final Financed Emissions result.

It is important to consider that Financed Emissions will be principally driven by the size of the investment made in a company and therefore, larger funds will tend to have higher Financed Emissions. Moreover, volatility in a company's EVIC can lead to changes in Financed Emissions between equity and credit investors.

What emissions are "owned" by the portfolio based on company ownership?

In tonnes of CO ₂ e	Emissions Scope 1 + 2	Scope 1 (direct)	Scope 2 (direct)
Portfolio	58,948	44,576	14,373
Benchmark	110,471	86,591	23,880
Relative to benchmark (%)	53.0	51.0	60.0
tCO ₂ reduced versus benchmark	51,523	42,015	9,508

Total emissions owned increase with the size of the portfolio and are therefore not comparable across funds.

Carbon Analysis

Murray Income Trust PLC

Exposure to Carbon Intensive Sectors

Even though the climate transition will have far-reaching consequences across supply-chains, when considering carbon exposure, the majority of emissions are highly concentrated in just a few sectors, as classified by GICS/BICS.

We have determined the GICS Industry Groups: Utilities, Energy, Materials and Transportation as representing 'Carbon Intensive Sectors'. Below we outline the portfolio weighted exposure to these sectors.

We consider a 'high concentration' to be a 1.5x exposure relative to a representative benchmark.

Carbon Intensive Sector	Portfolio Weight %
Materials	11.39
Energy	7.67
Utilities	7.42

Climate Scenario Analysis

Murray Income Trust PLC

Climate change scenario analysis provides a quantitative assessment of the financial impact of a range of potential future climate change pathways and related policy and technology scenarios on investments.

These impacts are driven by:

Transition risks and opportunities: direct and indirect carbon costs, and abatement measures to counteract these costs; demand destruction for emissions-intensive goods, and demand creation for goods with abatement potential.

Physical risks: impacts of chronic physical risks and increased physical damages to real assets caused by more extreme weather events; adaptation measures to help counteract these risks.

Market dynamics: the ability to compete in the market and pass on climate-related costs.

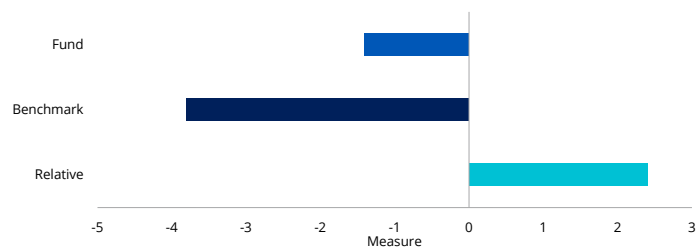
Our analysis provides bottom-up quantification of the financial implications of these direct and indirect economic shocks. The analysis considers the specificities of each security and its sensitivity to those shocks, and thereby assesses the impact on annual value stream. These are consolidated into financial impacts at asset level and can then be aggregated to assess the impact at fund level.

Scenario 1 - Early Action ('orderly' transition)

Strict and immediate policy action is put in place and is steadily ramped up to achieve an orderly transition that results in a global temperature rise of 1.7°C by 2100. **Comments**

Impact on fund value	Weighted total impact on fund value -1.4%	Key holdings impacting projected fund value to the downside in this scenario include SSE, Total Energies, BP, Genus and Mondi. All of these names offer attractive income exposure that is difficult to source in other sectors.
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Performance relative to benchmark	Fund performance vs benchmark is 2.41%
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Early Action scenario

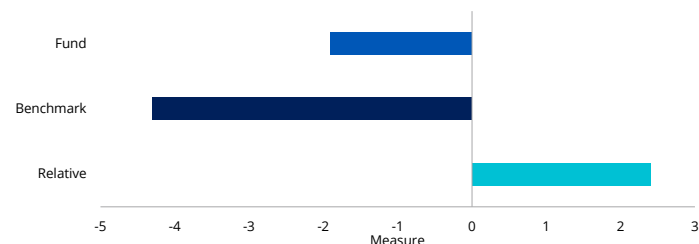
Ambitious policy, particularly in Europe and the transport and power sectors across developed markets, begins to be implemented immediately- resulting in a less disruptive transition. Steady, but significant reduction in fossil fuel demand, with a steep and immediate decline in coal. This results in a steady decrease in global emissions, and a steady increase in carbon taxation. Non-fossil fuel power generation reaches 100% and electric vehicles make up 94% of the market by 2050. This is a bespoke abrdn scenario and is based on the REMIND model.

Climate Scenario Analysis

Murray Income Trust PLC

Scenario 2 - Stricter Action ('disorderly' transition)

The implementation of strict policy action is delayed until 2030, resulting in a disorderly transition and a global temperature rise of 1.9°C by 2100.	Comments
Impact on fund value	Weighted total impact on fund value -1.93%
Performance relative to benchmark	Fund performance vs benchmark is 2.39%

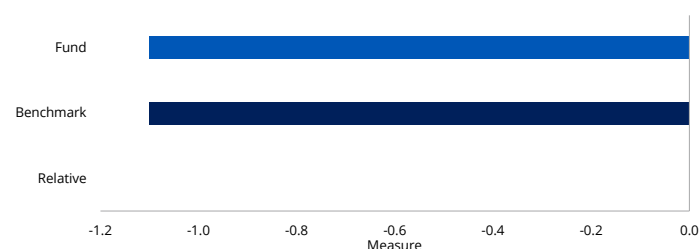


Stricter Action scenario

Policy is ambitious enough, particularly in the transport and power sectors across developed markets, to reduce warming to below 2°C. However, implementation of stricter policy is delayed, particularly in the industry and buildings sectors- resulting in a more disruptive transition. Whilst oil and gas show a steady reduction in fossil fuel demand, the decline in coal is delayed. This results in a delayed decrease in global emissions, and a minimal increase in carbon taxation until 2030 when there is a rapid increase to achieve the necessary decarbonisation. Non-fossil fuel power generation reaches 100% and electric vehicles make up 92% of the market by 2050. This is a bespoke abrdn scenario and is based on the REMIND model.

Scenario 3 - Current Policy ('hot house world')

No new policy action is implemented beyond what is already in place, resulting in a global temperature rise of 3.2°C by 2100.	Comments
Impact on fund value	Weighted total impact on fund value -1.11%
Performance relative to benchmark	Fund performance vs benchmark is -0.04%



Current Policy scenario

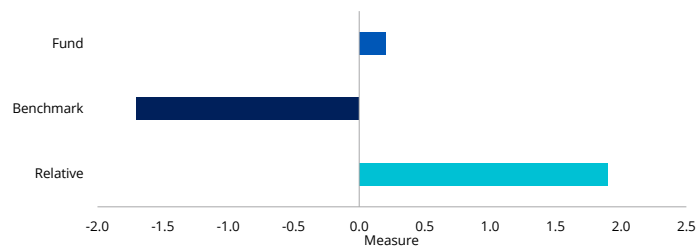
No new policy action is implemented across any regions and sectors. This means that action remains far below what is required to limit warming and by 2100 global temperature rise reaches 3.2°C. Whilst oil demand shows a minimal decline, due to electrification of the transport system, the demand for gas and coal increases. Emissions steadily rise and there is no increase in world carbon price. Non-fossil fuel power generation reaches 79% and electric vehicles make up 73% of the market by 2050. Physical risks are significantly increased as a result of the high global temperature rise. This is an 'off-the-shelf' NGFS scenario and is based on the REMIND model.

Climate Scenario Analysis

Murray Income Trust PLC

Scenario 4 - Probability-Weighted Mean (house view)

Weighted average based on our latest assessment of probability across our full suite of 16 scenarios, resulting in a global temperature rise of 2.3°C by 2100.		Comments
Impact on fund value	Weighted total impact on fund value 0.17%	Key holdings impacting projected fund value to the downside in this scenario include SSE, Total Energies, BP, Genus and Mondi. All of these names offer attractive income exposure that is difficult to source in other sectors
Performance relative to benchmark	Fund performance vs benchmark is 1.86%	



Probability-Weighted Mean scenario

This scenario is derived from the probabilities which we attach to our full suite of 16 scenarios. 83% of that weight comes from our bespoke scenarios which allow policy to vary across regions and sectors. Approximately 1/3 of the weight is assigned to scenarios that result in keeping global temperature rise below 2°C, but only 7.5% of the weight is assigned to scenarios minimising warming to less than 1.8°C.

Climate Scenario Analysis, Impact Drivers

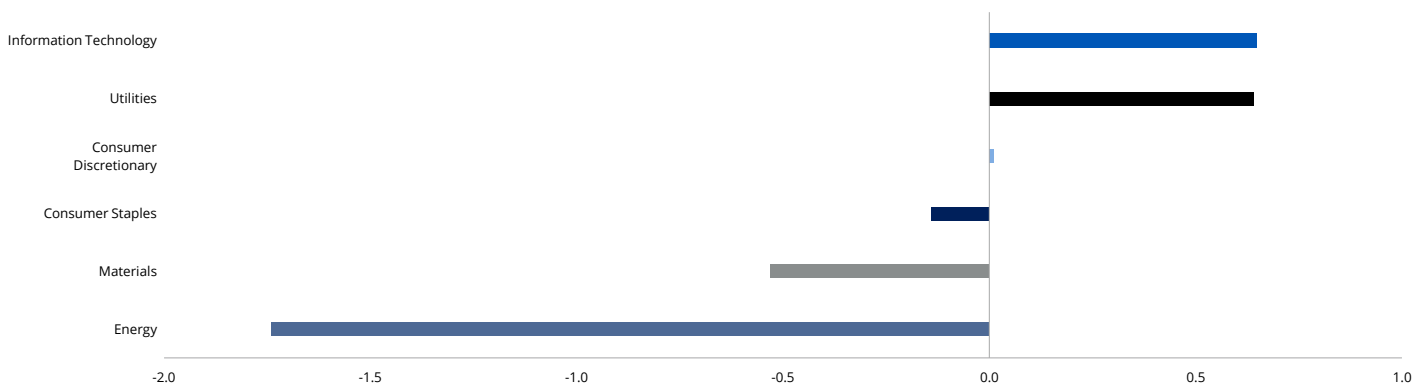
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Early Action ('orderly' transition)

Strict and immediate policy action is put in place and is steadily ramped up to achieve an orderly transition that results in a global temperature rise of 1.7°C by 2100.

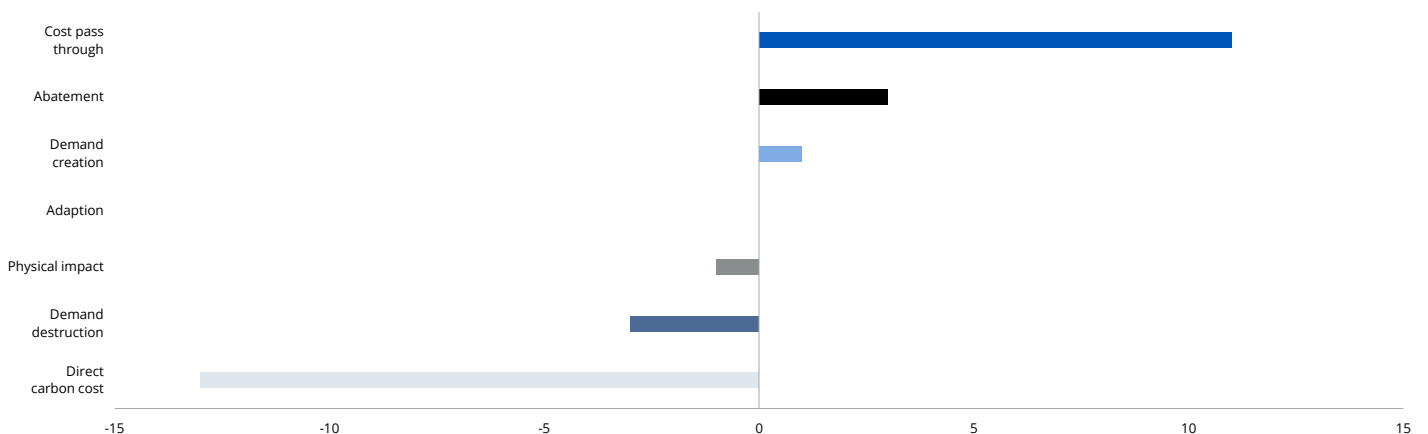
Strong, early policy will favour low-carbon companies in high-carbon sectors. Utility and Energy companies reliant on fossil-fuels will be negatively impacted. Electricity utilities will benefit from increased electrification, with renewable firms particularly benefitting. Industrials, Materials and Technology firms that produce raw materials or products required for the transition will see significant uplift in value. Auto firms (Consumer Cyclical) that have not moved to electric vehicle production will be heavily impacted.

Top / Bottom Performing Sectors



Portfolio Impact Drivers

Total value impact is derived from the sum of seven constituent impact drivers which can be disaggregated to show what is driving the uplift or impairment within a fund.



Climate Scenario Analysis, Impact Drivers

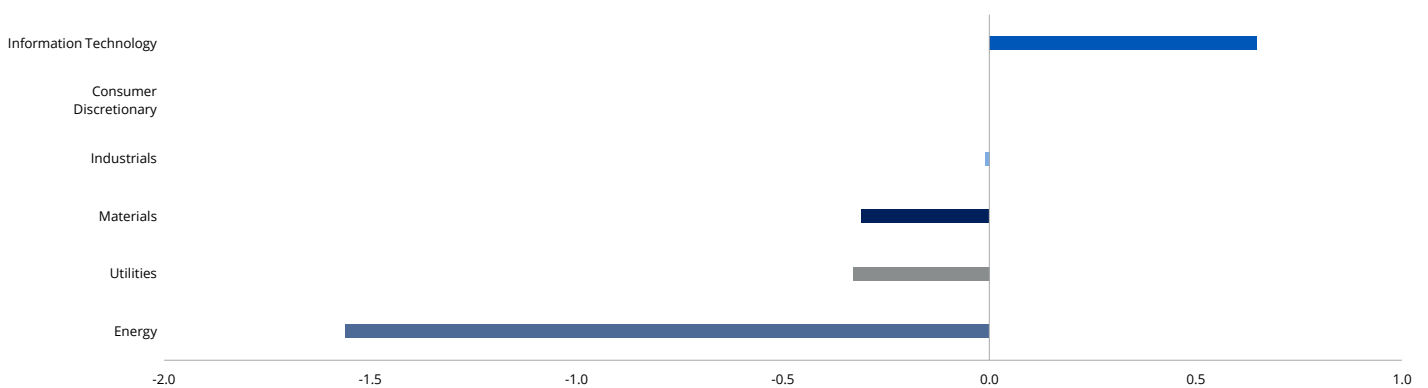
Murray Income Trust PLC

Stricter Action ('disorderly' transition)

The implementation of strict policy action is delayed until 2030, resulting in a disorderly transition and a global temperature rise of 1.9°C by 2100.

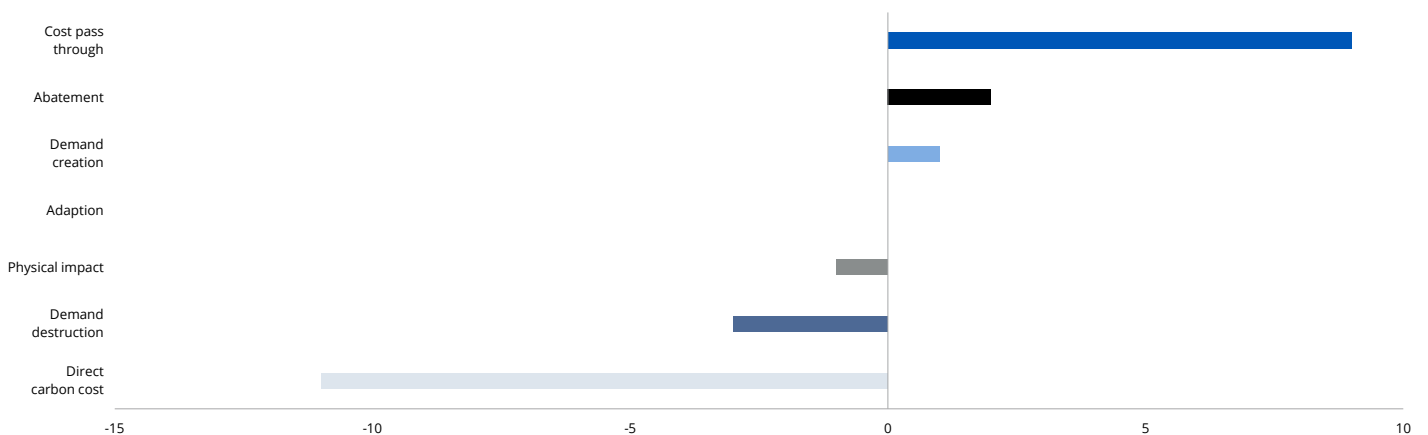
Delayed implementation of policy will initially favour high-emitting companies. But this is reversed in 2030 as they begin to be much more strongly taxed. Utility and Energy companies reliant on fossil-fuels will be negatively impacted. Electricity utilities will benefit from increased electrification, with renewable firms particularly benefiting. Industrials, Materials and Technology firms that produce raw materials or products required for the transition will see significant uplift in value. Auto firms (Consumer Discretionary) that have not moved to electric vehicle production will be heavily impacted.

Top / Bottom Performing Sectors



Portfolio Impact Drivers

Total value impact is derived from the sum of seven constituent impact drivers which can be disaggregated to show what is driving the uplift or impairment within a fund.



Climate Scenario Analysis, Impact Drivers

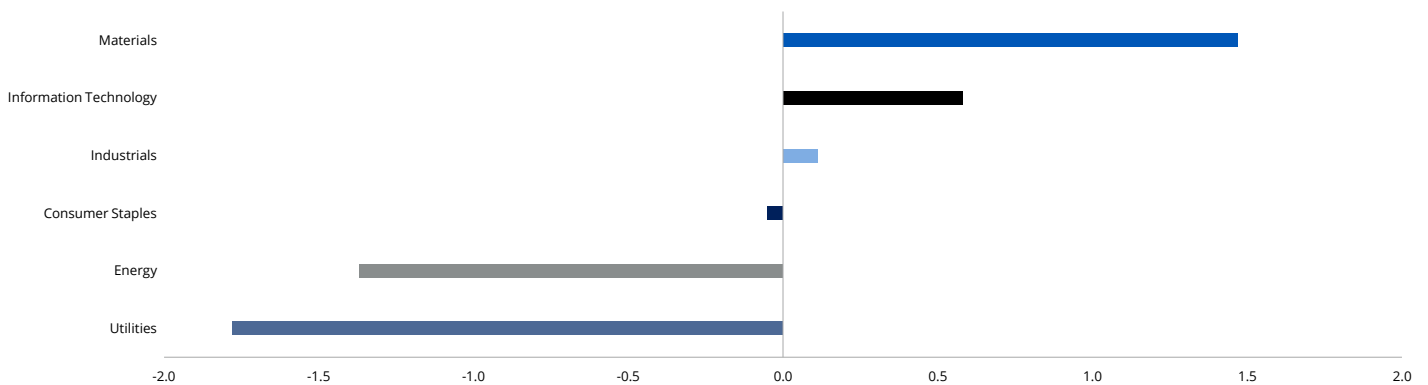
Murray Income Trust PLC

Current Policy ('hot house world')

No new policy action is implemented beyond what is already in place, resulting in a global temperature rise of 3.2°C by 2100.

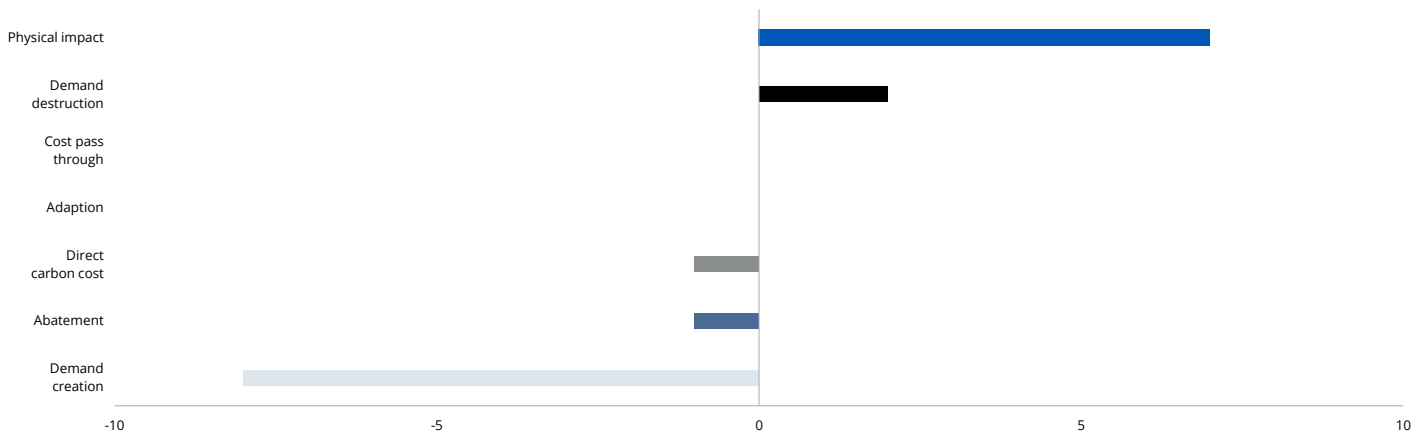
No new policy will favour high-emitting companies particularly in developing markets. Whilst electricity utilities will still benefit from increased electrification, renewable firms in many regions will not be able to compete. The demand for raw materials or products required for the transition will not increase, and the industry and building sectors will remain very carbon intensive.

Top / Bottom Performing Sectors



Portfolio Impact Drivers

Total value impact is derived from the sum of seven constituent impact drivers which can be disaggregated to show what is driving the uplift or impairment within a fund.



Climate Scenario Analysis, Impact Drivers

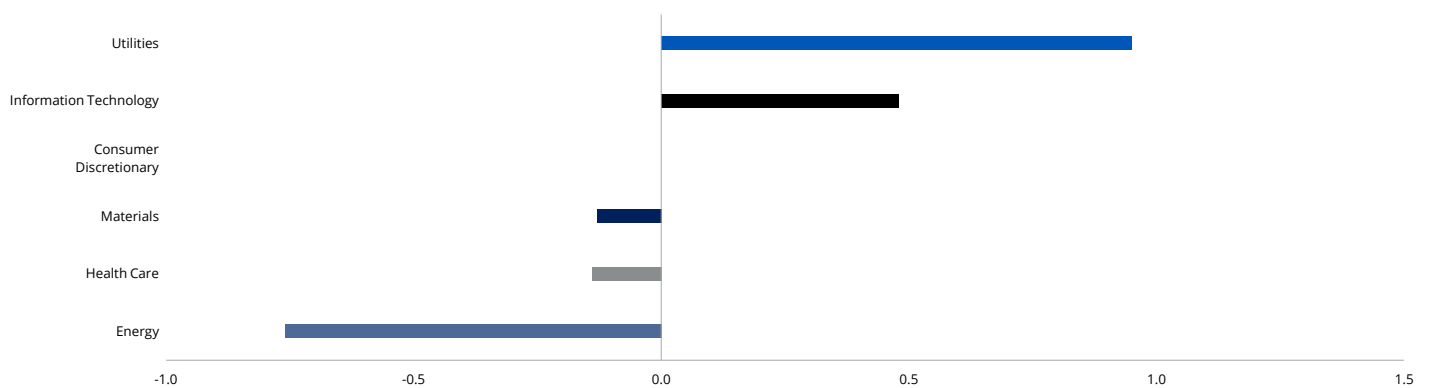
Murray Income Trust PLC

Probability-Weighted Mean (house view)

Weighted average based on our latest assessment of probability across our full suite of 16 scenarios, resulting in a global temperature rise of 2.3°C by 2100.

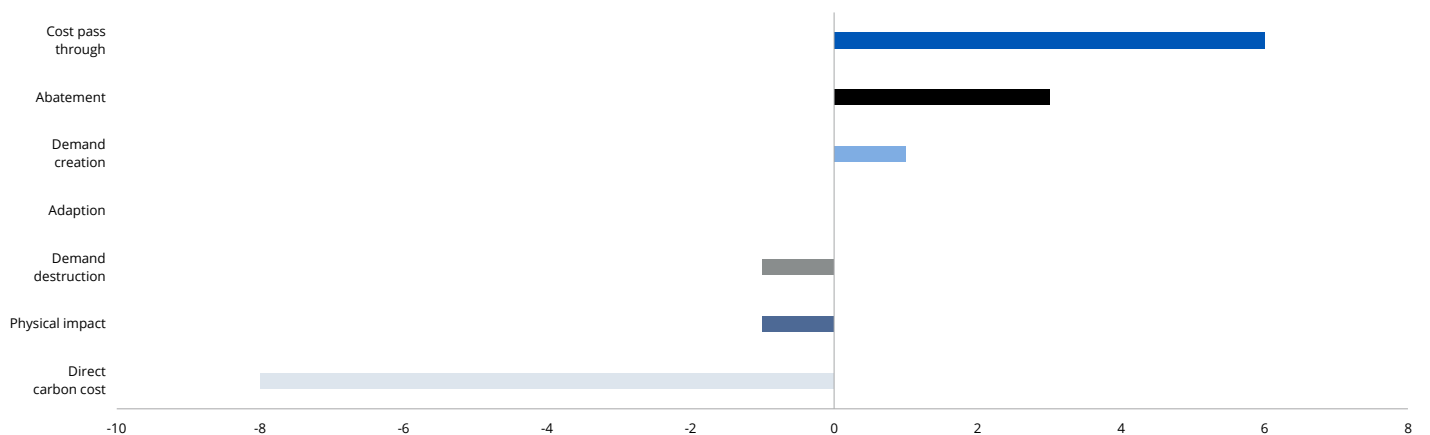
A slow start to the implementation of policy will initially favour high-emitting companies. But as taxation increase from 2030, this will be reversed. Utility and Energy companies reliant on fossil-fuels will be negatively impacted. Electricity utilities will benefit from increased electrification, with renewable firms particularly benefitting. Firms that produce raw materials or products required for the transition will see significant uplift in value. Low-carbon companies in high-carbon sectors will be favoured, but the uplift will be reduced compared to stronger policy scenarios.

Top / Bottom Performing Sectors



Portfolio Impact Drivers

Total value impact is derived from the sum of seven constituent impact drivers which can be disaggregated to show what is driving the uplift or impairment within a fund.



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Glossary

Data Point	Definition
Carbon Emissions - Scope 1	Greenhouse gas emissions generated from sources which are owned or controlled by the company.
Carbon Emissions - Scope 2	Greenhouse gas emissions generated from the consumption of purchased electricity, heat or steam by the company.
Carbon Emissions - Scope 3	Greenhouse gas emissions that are a consequence of the activities of the company, but occur from sources not owned or controlled by the company, upstream and downstream of a company supply-chain, such as, the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity related activities (e.g.T&D losses) not covered in Scope 2.
Carbon emissions / Greenhouse Gas	Carbon emissions is used as a generic term for the main greenhouse gas (GHG) emissions (carbon dioxide, methane, nitrous oxide, F-gases) in our reporting. This is synonymous to the term carbon dioxide equivalent (CO2e).
Carbon dioxide equivalent (CO2e)	This metric utilises global warming potentials of all the greenhouse gases as defined by the International Panel of Climate Change to calculate a single consistent metric for GHG impact in carbon dioxide equivalent terms.
Weighted Average Carbon Intensity (WACI)	Weighted average carbon intensity (WACI), is a normalised carbon intensity figure, expressed as tCO2e/million USD revenue. The portfolio weighting of each holding is multiplied by the ratio of the investee company's emissions normalised by the investee company's revenue.
Financed Emissions	This is the absolute tonnes of carbon dioxide equivalent (tCO2e) that is attributed or 'owned' by an investors, based on the value of the investment in an investee company. This metric is consistent to the PCAF Financed Emissions methodology, which is integrated into TCFD recommendations.
Economic Emissions Intensity (Carbon Footprint)	Economic Emissions Intensity (EEI) is the terminology used by PCAF - who introduced the use of EVIC. This metric is synonymous with 'carbon footprint'. EEI is a normalised carbon intensity metric, expressed as tCO2e/million USD invested. The portfolio weighting of each holding is multiplied by the ratio of the investee company's emissions normalised by the investee company's enterprise value including cash (EVIC). This is equivalent as dividing the portfolio Financed Emissions by the portfolio's AUM.
Enterprise value including Cash (EVIC)	Is a denominator used in both the Financed Emissions and Economic Emissions Intensity, EVIC is equivalent to traditional financial measure of EV, however, with cash included. This concept was developed by PCAF to produce a consistent Financed Emissions metric that can be used equivalently across equity and debt investors.
Carbon Intensive Sectors	We have determined the GICS Industry Groups: Utilities, Energy, Materials and Transportation as representing 'Carbon Intensive Sectors'.
Climate Change Scenario analysis	Climate change scenario analysis provides a quantitative assessment of the financial impact of a range of potential future climate change scenario pathways and related policy and technology scenarios on investments.
Probability Weighted Scenario	Weighted average scenario based on our latest assessment of probability across our full suite of 16 scenarios, resulting in a global temperature rise of 2.3C by 2100.
Early Action Scenario ('orderly' transition)	Strict and immediate policy action is put in place and is steadily ramped up to achieve an orderly transition that results in a global temperature rise of 1.7C by 2100.
Stricter Action Scenario ('disorderly' transition)	The implementation of strict policy action is delayed until 2030, resulting in a disorderly transition and a global temperature rise of 1.9C by 2100.
Current Policy Scenario ('hot house world')	No new policy action is implemented beyond what is already in place, resulting in a global temperature rise of 3.2C by 2100.
Transition Risk	Climate risks associated with the transition to a low-carbon economy, these include, demand creation, demand destruction, technology risk, carbon price risk, market risks etc.
Physical Risk	Climate risks associated to the physical impacts of climate change, these can be broadly categorised into acute risk (short-term impacts) and chronic risk (long-term impacts).
Climate Value at Risk	The associated financial risk measured based on a selected climate scenario.
GICS / BICS	GICS: Global Industry Classification Standard is an industry taxonomy developed by MSCI and Standard & Poor's. BICS: Bloomberg Industry Classification System is an industry classification system developed by Bloomberg.
PCAF	Partnership for Carbon Accounting Financials.
Glasgow Financial Alliance for Net Zero	The Glasgow Financial Alliance for Net Zero (GFANZ) is a global coalition of leading financial institutions committed to accelerating the decarbonization of the economy.
Net Zero Investment Framework	The Net-Zero Investment Framework was developed by the Institutional Investors Group on Climate Change (IIGCC), it produced an alignment metric that is now being referred to as the maturity scale approach (as defined by GFANZ).
NZIF Maturity Scale Alignment	This alignment metric enables investors to cover the Binary Target Approach in more detail, categorising companies into levels of alignment as defined by the IIGCC NZIF recommendations.
Abatement	Abatement refers to the act of reducing the emissions of an activity (synonymous with decarbonisation).

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