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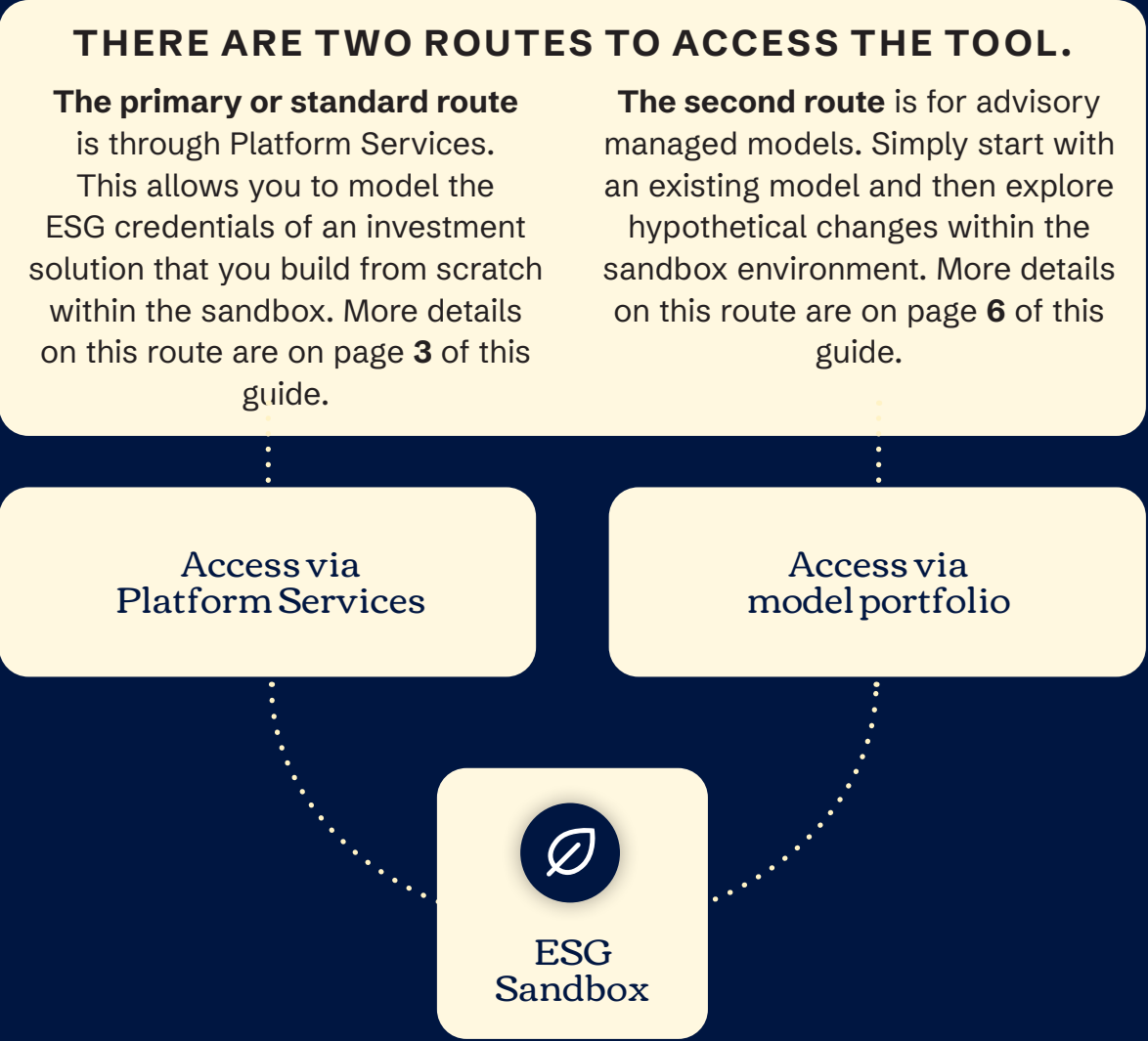
AVIVA GUIDE TO ESG Sandbox

LIFE'S BETTER WITH A PLAN

 **AVIVA WEALTH**

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How to access the standard sandbox

- 1

Selecting **‘ESG Profiler (Sandbox)’** from the landing screen will present you one of two options:
- 2

On your first visit you will be given with the option to **‘Create a new ESG sandbox’**.
- 3

On subsequent visits you will be able to see your directory, which will list previously created sandboxes. From here you can open a saved copy by clicking the **‘Sandbox name’** or start a to new sandbox from scratch by clicking **‘Create a new ESG sandbox’**.

Platform services

1

Notifications Client Report Maintenance Corporate actions Platform Guides ESG Profiler (Sandbox) Adviser Hub

Welcome to the ESG sandbox.

You have not yet added any sandboxes.

You can create a sandbox from our investment range and check how it performs from an ESG perspective.

2

Create a new ESG sandbox

AVIVA

ESG Sandbox Directory

Directory

3

Create a new ESG sandbox

Sandbox name	Created date	Last modified	Actions
Balanced ESG	06/06/2023	06/06/2023, 15:26	
Cautious Model WIP	06/06/2023	06/06/2023, 15:26	
Mrs Example Client	06/06/2023	06/06/2023, 15:27	

1

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Using the standard sandbox

- 1

To 'create a new ESG sandbox' please give it a unique name and then click '**Add**'.
- 2

A blank template will appear. From here, simply click '**Add investment**' to search for any fund, model or equity that you have permission to use.
- 3

You can add any combination of assets – once you're finished, just click '**Add selected**'.
- 4

The benchmark which the investments selected are compared against can be changed using the '**Benchmark**' dropdown. A new Sandbox will use the MSCI ACWI benchmark by default.

Create a new ESG sandbox

Create a new sandbox

Please enter the name of the new sandbox

Example Sandbox

1

Cancel

Add

AVIVA

ESG Sandbox

Directory

Help guide

Example Sandbox

MSCI ALL COUNTRY WORLD INDEX Factsheet

Benchmark

MSCI ALL COUNTRY WORLD INDEX

2

Add an investment

If more than 50% of the assets held in a fund do not qualify for ESG analysis, this is flagged on the basis that the assets available for analysis represent fewer than the majority of assets in the fund. For example, this could occur in the case of a bond fund where the majority of assets are sovereign bonds.

Data available for securities and corporate bonds (and exclusive of asset types deemed not relevant for ESG analysis) should have coverage of at least 65% of the fund's holdings calculated by weight. For more information please consult the [reference guide](#).

This sandbox currently has no investments. Please use the 'Add an investment' button to begin.

Aviva Investors

3

Add selected (0)

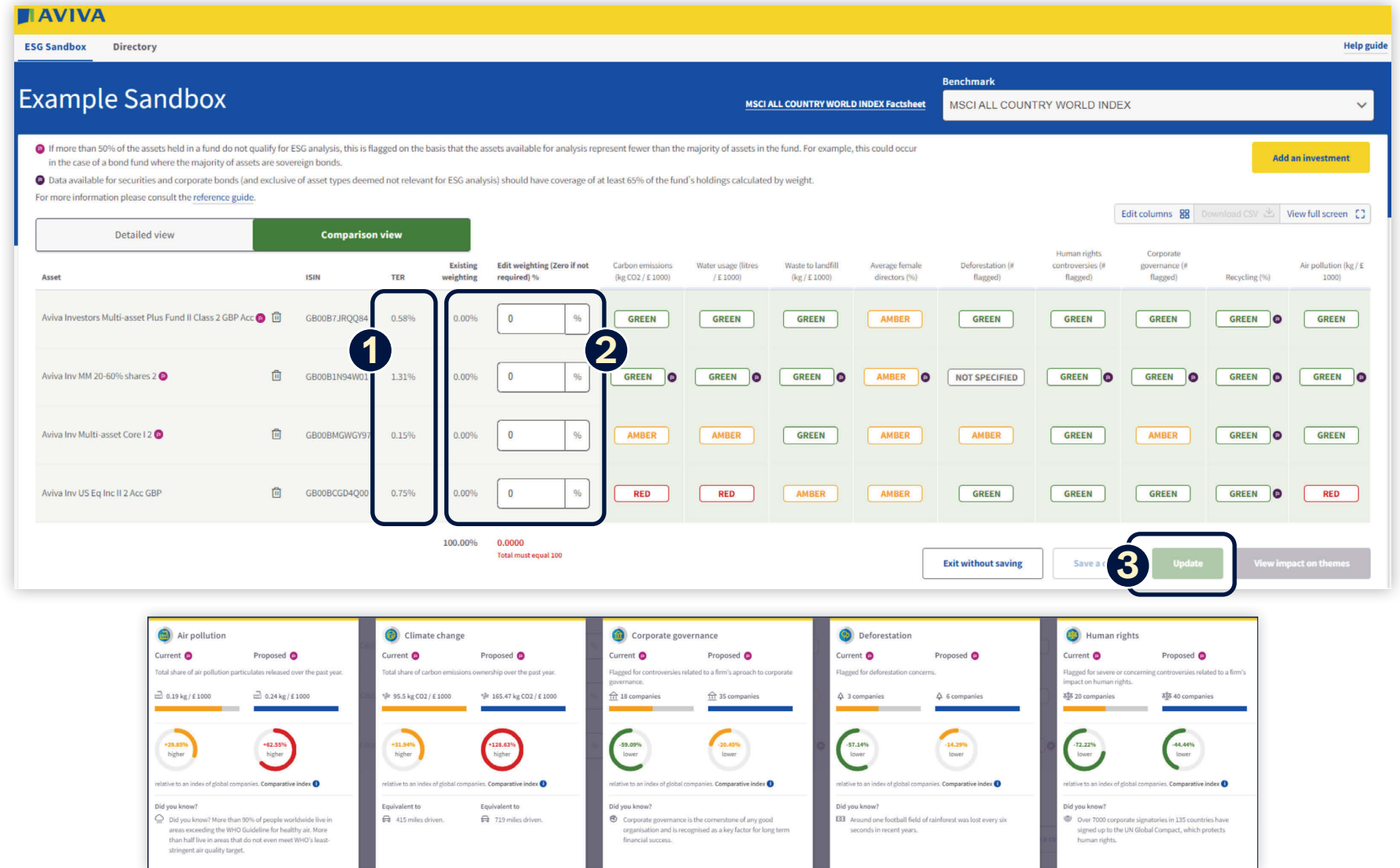
90 funds matching your search criteria

Fund name	ISIN	Add
Aviva Investors Climate Transition Global Credit Iyh Acc	LU2324721625	3
Aviva Investors Climate Transition Global Credit Ryh Acc	LU2324721898	
Aviva Investors Climate Transition Global Credit Syh Acc	LU2324721971	

Using the standard sandbox

You will be returned to the sandbox with the data from those selected investments loaded.

- 1 Where applicable a **Total Expense Ratio (TER)** will be displayed.
- 2 Simply **align the % weighting to each asset** to start exploring against the main themes.
- 3 Once you are happy with the weightings, click **'Update'**. This locks in the base make-up of that model and allows the modelling of changes
- 4 Now you have a sandbox with a baseline view, you will be able to see **'Existing weighting'** and **'Edit weighting'** columns. These give you the ability to explore how changes will impact the metrics.
- 5 You can use **'View Impact on themes'** to see how different investment/weightings will impact each theme against the current selection.



How to access the model portfolio sandbox

The second route to access the ESG Profiler sandbox is via an existing model portfolio on the Aviva Platform:

- 1 Navigate through Platform Services to the **Model portfolios** section.
- 2 Once in model portfolios, simply click on the model you wish to import, then within the right-hand navigation, click the **'ESG Profiler (Sandbox)'** action.
- 3 The system will ask you to name the ESG Sandbox to be stored within the directory (the model name will be pre-populated). Add to this if you wish, click save and the ESG Sandbox will load, with all details based on the model make-up.

The screenshot displays the Aviva Platform Services interface. At the top, a blue header bar contains navigation links: Notifications (334), Client Report Maintenance, Corporate actions, Platform Guides, and ESG Profiler (Sandbox). Below this, a white navigation bar features icons and labels for Business reporting, Transfer tracker, Bulk switch/redirect, Completed applications, Model portfolios (highlighted with a red circle and '1'), and Remuneration statement. The main content area is titled 'Example Sandbox' and contains a table with model details: Model ID (533451), Total value (£0.00), Inflows last 3 months (£0.00), Model type (Adviser), Total no. of accounts invested (0), Outflows last 3 months (£0.00), Created by (Rogue PhoenixNonWL), Average account size (£0.00), and Auto-rebalance method (Not Specified). To the right of this table is an 'Actions' menu with options: Edit model portfolio, Bulk rebalance, Bulk switch/redirect, Copy model portfolio, Create model portfolio, and ESG Profiler (Sandbox) (highlighted with a red circle and '2'). Below the table are tabs for Assets, Permissions, and Clients invested. The 'Assets' tab is active, showing a donut chart and a table of assets with columns for Asset, Last price, and Allocation. The assets table lists: Aviva Inv MM 20-60% shares 2 (£1.5949, 35%), Aviva Investors Multi-asset Plus Fund II Class 2 GBP Acc (£1.7701, 15%), and Aviva Inv US Eq Inc II 2 Acc GBP (£2.638, 50%). A modal dialog box is open at the bottom right, titled 'Provide a new name for this model', with a text input field containing 'Example Sandbox' (highlighted with a red circle and '3') and 'Cancel' and 'Save' buttons.

Model ID:	Total value:	Inflows last 3 months:
533451	£0.00	£0.00

Model type:	Total no. of accounts invested:	Outflows last 3 months:
Adviser	0	£0.00

Created by:	Average account size:	Auto-rebalance method:
Rogue PhoenixNonWL	£0.00	Not Specified

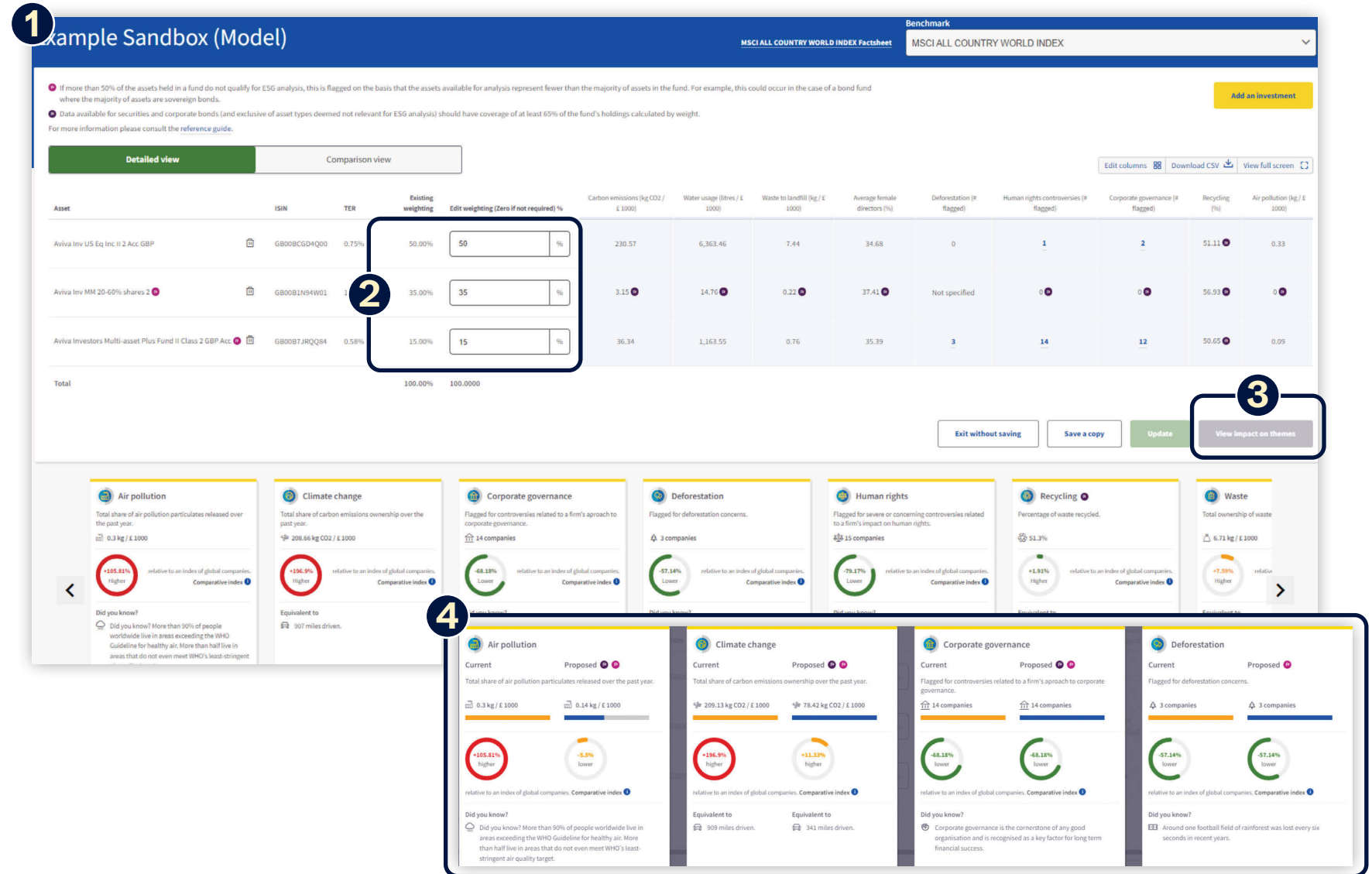
Assets	Last price	Allocation
Aviva Inv MM 20-60% shares 2	£1.5949	35%
Aviva Investors Multi-asset Plus Fund II Class 2 GBP Acc	£1.7701	15%
Aviva Inv US Eq Inc II 2 Acc GBP	£2.638	50%

Using the model sandbox

The system will store your newly named sandbox within the directory:

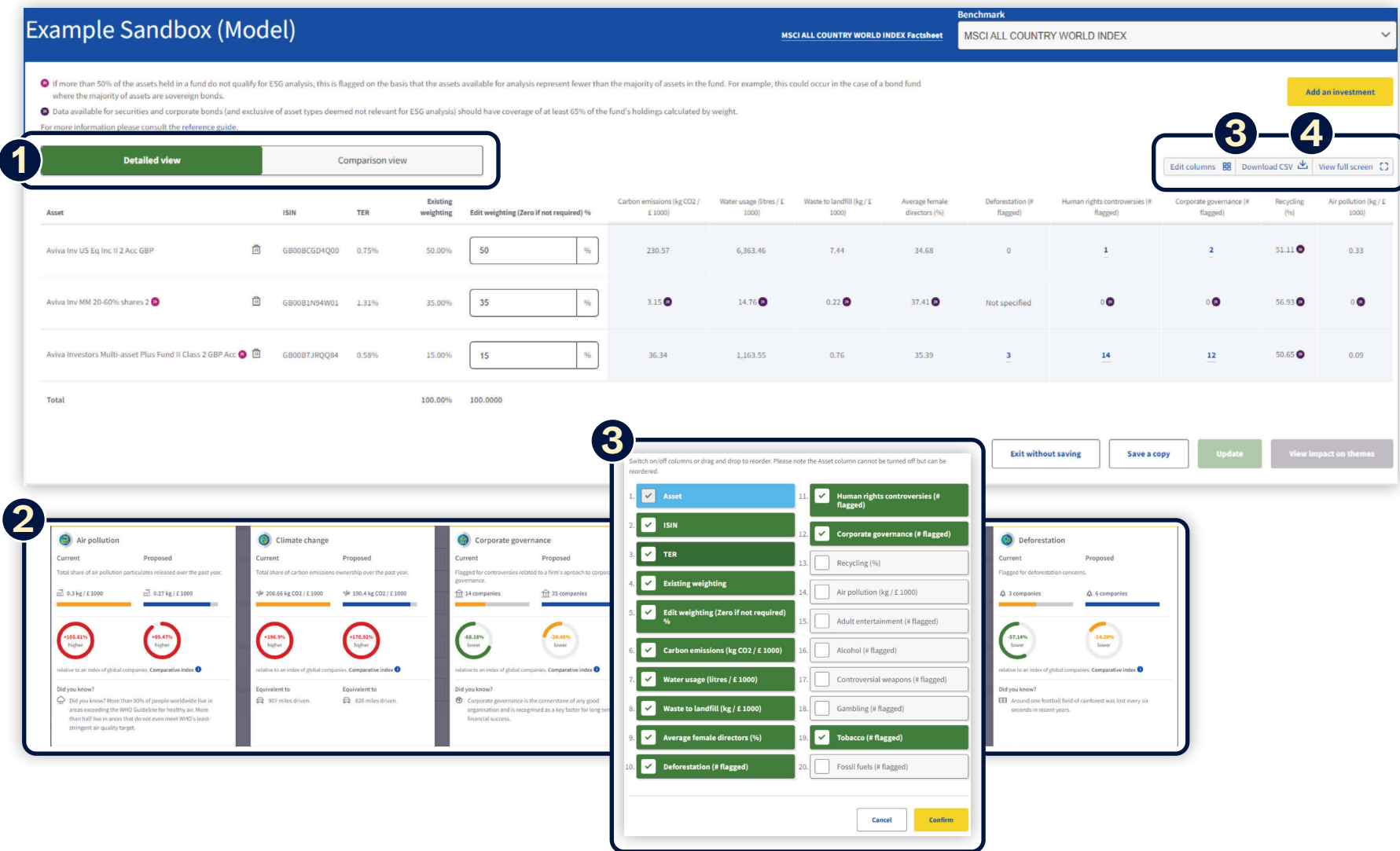
- 1 The ESG Sandbox will load, with all details based on the model. From here you can try out any change you wish to make to that model portfolio.
- 2 Simply **amend the %, remove and/or add new assets** to meet the prospective change to the model.
- 3 Once complete, click **‘View impact on themes’**.
- 4 This will present a comparison of current and prospective models for each metric.
- 5 At this point you can either **‘Update’**, which will set the new **‘make-up as the existing weighting’** or **‘Save a copy’**, which will move this new weighting to a new sandbox. Choosing this option will preserve the previous solution, instead of replacing it.

Please note, this is the only way to manipulate the make-up of a model. If you add a model to a blank ESG Sandbox, you cannot manipulate the constituent holdings.



Understanding and exploring the current metrics of a sandbox

- Once you have a populated a sandbox, regardless of the route, you will be able to view the current metrics associated with that model.
- 1 You can explore **detailed** and **comparison** views at asset level.
 - 2 Each of the ESG preferences are presented at the bottom – these are the aggregated figures.
 - 3 It is possible to edit the table to include the six available key exclusionary filters. Simply click ‘**Edit columns**’ to be presented with the options.
 - 3 You can export the key data into an excel document by clicking ‘**Download CSV**’. This spreadsheet will include all information covering asset detail, % splits, fund codes and ESG data.



Directory management

- 1

All saved sandboxes, regardless of access route, will be saved within the **Directory**.
- 2

From here you can:
 - Click the name to open that sandbox
 - Duplicate an existing and create a new sandbox with the existing sandbox as the start point.
 - Rename or delete the sandbox.

AVIVA

ESG Sandbox

Directory1

Directory

Create a new ESG sandbox

2

Sandbox name	Created date	Last modified	Actions
Balanced ESG	06/06/2023	06/06/2023, 15:26	⋮
Cautious Model WIP	06/06/2023	06/06/2023, 15:26	⋮
Mrs Example Client	06/06/2023	06/06/2023, 15:27	⋮

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Appendix: ESG Tool reference guide

REFERENCE GUIDE

FNZ Impact (The tool) provides information on your client's current portfolio for certain specific ESG themes. The information doesn't show whether the fund that your client invests in has any specific ESG aims or whether it employs a particular ESG strategy to achieve its aims. In addition, UK market has no defined criteria for the assessment of ESG factors currently and there are still some market wide gaps of reliable ESG data which mean that we are unable to provide all of the information that we would like to provide on some of the themes presently. The tool will be updated when reliable data is available. It is important that you refer to this reference guide for details of the ESG themes that the tool covers, and the methodology and assessment criteria used.

There is growing consensus that considering environmental, social and governance topics, including climate change, is supportive of fiduciary duty. The ESG & Responsible Investing area of the platform aims to further inform you in making choices with regard to your clients' investments by aligning both their financial goals and their values where appropriate. This is achieved through providing information about the environmental, social and governance aspects of investments into the platform, giving you and your client the opportunity to understand your client's preferences from the perspective of these considerations, and then applying these insights to the selection of investments where appropriate.

Limitations exist given inconsistencies in the market and gaps in data provision. Given the subjective nature of some ESG ratings, funds could be rated differently elsewhere.

This tool may be able to support you in advising your clients to assist them to make choices with regard to their investments by assessing the sustainability credentials of portfolios, however please note that the tool is not a substitute for a suitability assessment which remains the sole obligation of the advisor.

WHAT IS ESG AND WHY IS IT IMPORTANT?

Given the rise in awareness of significant global environmental and social challenges, many of us have made lifestyle changes to align with our values around managing our own impact on the future world. This is now beginning to extend to clients, wishing to align their investment objectives with their broader values.

As a result of these developments, investment managers, financial advisers and end investors are now incorporating ESG considerations into investment analysis, decision-making, and suitability.

Appendix: ESG Tool reference guide

WHAT ARE ESG FACTORS?

Environmental factors

These factors focus on the natural world, including elements such as carbon management, resource use (both renewable and non-renewable), and air pollution. Examples include:

- ▶ **Climate change and carbon emissions/reductions**
- ▶ **Biodiversity**
- ▶ **Resource depletion, for example fossil fuel use**
- ▶ **Waste management**
- ▶ **Water usage**
- ▶ **Deforestation**

Social factors

These are factors that affect the lives of people, including the management of human resources, employee rights, and local community rights. Examples include:

- ▶ **Human rights**
- ▶ **Gender and diversity**
- ▶ **Modern slavery**
- ▶ **Working conditions**
- ▶ **Employee relations**

Governance factors

These relate to how businesses are run, including their relationship to broader stakeholders, for example issues inherent to the business model or industry best practice. Examples include:

- ▶ **Bribery and corruption**
- ▶ **Tax strategy**
- ▶ **Board structure**
- ▶ **Political contributions**
- ▶ **Whistle-blower schemes**

HOW IS ESG DATA SOURCED?

This platform solution aims to enable alignment and transparency across key ESG metrics by striving to move towards the dissemination of disclosed impact data in the areas where this data is most prevalent and available. This aims to align with industry calls for greater transparency and consistency from bodies such as the **International Financial Reporting Standards Foundation** and **UN Principles for Responsible Investment**.

In line with other methodologies, the solution takes a ‘dashboard’ approach – aiming to source raw data for a variety of key metrics rather than aggregate scores where possible – when looking at a company or at the portfolio level. The solution sources and aggregates these data from some of the world’s most widely used ESG data providers and the data selection process involves a

continual, detailed review of market providers given the pace at which the market is evolving. Added to this, specialist sources can be used to supplement insights. The insights generated, which represent an aggregation of widely used ESG data sources available in the market today, are designed to support investors of all kinds seeking to achieve a range of objectives, including measuring, and reporting on controversial industry exposure, carbon emissions, diversity & inclusion progress, and company governance. They also aim to support advisers in selecting and implementing appropriate investment strategies and factoring sustainability research into their investment and risk management processes. To learn more about data providers used, visit the **Find out more section**.

COVERAGE

Whilst disclosure has improved in recent years, for example as evidenced by disclosures to the Carbon Disclosure Project, gaps remain. Data is currently unavailable for some metrics, for some firms in some geographies, and some of the most significant developments in the field of ESG data include filling in these gaps in the data, adding new metrics and improving consistency – all of which will aid comparability across companies.¹

Given the above, for company level data, coverage displayed is dependent on the availability of underlying data. It is therefore achieved subject to the availability of data from selected data providers. If data is not available, no data will be displayed.

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ESG Tool reference guide

For fund data, the following applies:

In line with industry standards set by data providers, a threshold of 65% or more of a fund's constituent components (by weight) should be covered in order for fund level data to be provided, achieved subject to the availability of data. The calculation performed first assesses the percentage of assets which qualify for ESG analysis. Of this percentage, which is rebased to represent 100%, resource usage data (in the case of carbon, waste, water) or percentage data points (e.g., percentage of women on boards) are aggregated and a weighted average for this portion of the portfolio is calculated and displayed.

Data is always displayed where it is available. Cash positions, and other asset types deemed to be not relevant for ESG analysis are removed prior to calculating a fund's gross weight. Currently this includes the removal of sovereign bonds which will not be covered currently given the lack of standardised reporting methodologies. Where weighted averages are provided these are based on the number of companies within the portfolio for which data is available.

¹ Generation Investment Management (2019), **The future of ESG Data, The Future of ESG Data | Generation Investment Management LLP (generationim.com).**

Flags

For data to meet coverage criteria without being flagged, coverage of 65% of the underlying instruments of a fund's gross weight must be achieved.

Flags will be shown where the data provided has not met certain criteria as follows:

- ▶ Data available for securities and corporate bonds (and exclusive of asset types deemed not relevant for ESG analysis as described in the Coverage section) should have coverage of at least 65% of the fund's holdings calculated by weight
- ▶ If more than 50% of the assets held in a fund do not qualify for ESG analysis (as described in the Coverage section), this is flagged on the basis that the assets available for analysis represent fewer than the majority of assets in the fund. For example, this could occur in the case of a bond fund where the majority of assets are sovereign bonds.

Intent of fund manager/investment

At the present time, the insights provided support a view of the current positioning of the fund or company from the perspective of the ESG Preferences selected. The intention of a fund's investment process and whether the fund is presented as ethical, sustainable, ESG, socially responsible or similar, or a company's sustainability objectives, are not provided at this time we are working on this with the aim of providing this in a future development.

Identifying exposure to controversial industries

The tool screens to identify companies with any tie to certain industries, products, and services. This indicates whether any of the in-scope portfolio's market value (please see 'coverage' section of reference guide) is exposed to companies flagged for involvement in the following industries according to MSCI restrictive screen definitions (MSCI ESG Research has developed a framework designed to define involvement in controversial activities; please find more detail [here](#)). If any involvement is present according to the framework, the fund is flagged. The relevant industries can be selected via the 'Edit columns' selector within the tool.

Fund insights are based on exposure to the underlying companies for these controversial industries.

The following can be screened:

- ▶ **Tobacco:** Tobacco products through the producer, distributor, licensor, retailer, supplier, and/or ownership.
- ▶ **Gambling:** Gambling through the operation, support, licensing, and/or ownership.
- ▶ **Adult entertainment:** Adult entertainment, including producer, distributor, retailer, and/or ownership.
- ▶ **Controversial Weapons:** Cluster munitions, landmines, biological / chemical weapons, depleted uranium weapons, blinding laser weapons, incendiary weapons, and/or non-detectable fragments.
- ▶ **Alcohol:** Alcohol, including producer, distributor, retailer, licensor, supplier, and/or ownership.
- ▶ **Fossil Fuels:** Thermal coal, oil and gas in particular reserve ownership, related revenues and power generation.

Appendix:

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Comparison index and traffic light system

A traffic light indicator system (red, amber, green) is used as a basis for communicating an investment's performance in relation to the sustainability metrics used, relative to the comparative index, a universe of global companies as represented by the constituents of your chosen index. This appears throughout the platform, aiming to enable quick and intuitive comparability. Where the comparative index is unsuitable for the selected preference, a default target point is used.

A given metric related to the investment (e.g., the carbon footprint of a fund) is shown with a red, amber, or green colour-coded indicator, communicating whether the associated sustainability metric is relatively better than average (green), worse than average (red) or about average (amber) compared with the comparative index.

It is important to emphasise that the aim of the red, amber, green indicator is not to test whether these thresholds for being classified in the high and low categories are optimal or not, but rather to provide an appropriate system for communicating the product's performance relative to the comparative index. More details on the calculations for deviation from the comparative index level are provided in the

Find out more section.

How often is data updated?

Holdings data is updated in real time. Look through data feeds, for example the holdings held by a client, are updated daily. ESG data feeds are updated monthly (in line with most providers' doing this monthly) though underlying ESG data gathered by providers is updated less frequently as detailed below. Research sources are refreshed twice a year. Data providers are assessed annually or as and when new innovations arrive. Both the appropriateness of the data provider and the quality of any new data sourced (e.g., new data sets for review) are assessed.

Insights may change daily for a fund if underlying holdings are changed. Note that the lag on fund managers' reporting can be upwards of a month in reporting underlying holdings.

- ▶ **Quantitative (carbon footprint information): usually change annually**
- ▶ **Qualitative (e.g., policies, memberships): usually change annually**
- ▶ **Controversies (e.g., news): could change daily**
- ▶ **Exposures (e.g., revenues or activities in potential controversial areas, e.g., tobacco, weapons): usually change annually for a specific company.**

WHAT IS ESG RISK?

ESG risk ratings are provided by some of the world's most widely used ESG specialist research and data providers. ESG risk ratings are designed to measure a company or portfolio's resilience to long-term, industry material environmental, social and governance (ESG) risks. For companies, ESG Risk scores are calculated by third party ESG data providers and these scores are displayed. For funds, a score calculated by the selected third-party provider is displayed. Further information is available here: **MSCI (2021), ESG Fund Ratings - MSCI.**

Appendix: ESG Tool reference guide

WHAT IS ‘TEMPERATURE ALIGNMENT’?

Temperature alignment aims to model an asset’s contribution to the objectives of the **Paris Agreement on climate change (2015)**, specifically the consensus to limit global temperature rise to below 2 degrees of warming by 2050.

The Paris Agreement, the first-ever universal, legally binding global climate change agreement, adopted at the Paris climate conference (COP21) in December 2015 and ratified by around 190 countries, set out a global framework to avoid dangerous climate change by limiting global warming to well below 2°C and pursuing efforts to limit it to 1.5°C.

Using this metric, investors can track a company’s actual and forecasted carbon management and reduction performance and whether further reductions in carbon emissions are being achieved to meet the Paris Agreement Goal of keeping global temperature rise well below 2°C. Data is only available for a subset of the investment universe at this time and may not be displayed for all companies.

WHAT ARE THE KEY THEMES?

Globally recognised sustainability frameworks including those issued by intergovernmental, global standard-setting bodies, and academic actors drive our analysis of core sustainability issues and the metrics which enable measurement of these issues, for example the **Sustainability Accounting and Standards Board**, the **Taskforce for Climate Related Disclosures**, and the **UN Sustainable Development Goals**. This includes a review of impact frameworks, academic and NGO research and data provider intelligence. The following globally recognised frameworks form the basis of the review, considered in order to understand, develop, and verify sustainability issues of note. These reflect the recommendations of intergovernmental groups, global standard-setting bodies, and academic actors.

Appendix:

ESG Tool reference guide - Themes in detail



CLIMATE CHANGE

Promoting a low carbon economy

Why this matters

Climate change and global temperature rises are causing long-lasting changes to our climate system, which threatens irreversible consequences if we do not act. In order to limit warming to 1.5°C above pre-industrial levels as called for in the **Paris Agreement**, global efforts would need to reach net zero CO2 emissions globally around 2050. Companies have an important role to play in achieving carbon reduction, including the disclosure of both carbon emissions and strategies for carbon emission reduction. The lower the carbon footprint figure shown, the lower the environmental impact of the activities that a company is performing, or a portfolio has, from a carbon perspective.

To achieve this goal, companies can reduce carbon emissions by decarbonising their operations and supply chains through continuously improving energy efficiency, reducing the carbon footprint of their operations, products, services, and processes, and setting ambitious emissions reductions targets in line with climate science, as well as scaling up investment in the development of innovative low-carbon products and services.

About this calculation

Ownership of emissions is calculated by dividing a company's total carbon footprint (the carbon emissions of a company from their operations and purchased energy, based on the GHG Protocol) by the total market value of the company, and multiplying this by the amount of the company you own. This is done for each company in the portfolio and added together to give a figure for the whole portfolio. It can also be calculated per £1000, enabling a comparison of one company or fund with another to understand carbon emissions produced on a like-for-like basis.



WOMEN IN LEADERSHIP

Promoting equality for women in the workforce

The United Nations notes that women and girls represent half of the world's population and therefore also half of its potential.

About this calculation

This metric shows the average percentage of female directors in the companies in the portfolio. This is provided for each company in the portfolio. For your total portfolio, a weighted average of all the companies in the portfolio is shown. It is important to note that both over representation and under representation of women in leadership roles can be assessed as amber or red.



WATER SECURITY

Promoting effective and efficient use of water

The **United Nations Sustainable Development Goals** recognise that social development and economic prosperity depends on the sustainable management and sharing of water resources and ecosystems.

About this calculation

This shows the share of the water used by the companies in your portfolio. First, the water a company uses in cooling and processing, plus their purchased water, is added together to understand how much water is being used. Ownership is calculated by dividing this figure by the total market value of the company and multiplying this by the amount of the company owned. This is done for each company in the portfolio and added together to give a figure for the whole portfolio. It can also be calculated per £1000, enabling you to compare one company or fund with another to understand water usage on a like-for-like basis.

Appendix:

ESG Tool reference guide - Themes in detail



WASTE

Minimising negative environmental impact through effective waste management

The impact of the plastic that ends up in the oceans every year in marine ecosystems is just one factor that has encouraged greater awareness of the consequences of poor waste management.

Within current global policy frameworks, waste management features in **UN Sustainable Development Goal (SDG) 11** and **SDG 12**, notably with commitments around preventing, reducing, recycling and reuse.

About this calculation

This shows the share of waste sent to landfill generated by the companies in the portfolio. The total quantity of waste that is generated by the company and is disposed to landfill is calculated by totalling hazardous and non-hazardous landfill and waste produced by the company. Ownership is then calculated by dividing this figure by the total market value of the company and multiplying this by the amount of the company you own. This is done for each company in your portfolio and added together to give a figure for your whole portfolio. It can also be calculated per £1000, enabling the comparison of one company or fund with another to understand waste sent to landfill on a like-for-like basis.



HUMAN RIGHTS

Why this matters

Internationally observed standards, for example the **UN Global Compact**, with over 7000 corporate signatories worldwide, acknowledges the responsibility of businesses to respect, human rights and meet standards in this area. This includes acting with due diligence to avoid infringing the rights of others, and addressing any negative human rights impacts related to their business. They must also abide by international standards and avoid causing or contributing to adverse human rights impacts through their activities and relationships.

About this calculation

This shows the number of companies in the portfolio where severe or concerning controversies related to a firm's impact on human rights have been flagged. This metric flag concerns related to situations such as poor occupational safety records, inadequate anti-discrimination policies, poor whistle-blower protections, or supply chain risk of forced labour. For the total portfolio, the total number of companies who have experienced these incidents is shown.



DEFORESTATION

Promoting stewardship of the world's forests

Net forest loss has decreased by **more than half since the 1990s**, but the loss of forests continues at pace. Managing forests sustainably, and the interrelated issues of halting and reversing land and natural habitat degradation, successfully combating desertification, and stopping biodiversity loss, are not only key to mitigating climate change. Sustainable management also contributes to long-term socio-economic growth, and the integrity of global ecosystems which support life as we know it on earth. Companies can implement strategies to incentivise sustainable land use, responsible forest management and environmental stewardship.

About this calculation

Global Canopy, an NGO backed by the UK and international governments, identifies, and assesses the performance of global companies and financial institutions that are exposed to deforestation through the Forest 500 ranking, www.forest500.org.

Biannually Global Canopy maps companies and financial institutions in forest risk commodity supply chains to select the Forest 500 sample. These companies are selected because they have been evaluated to be the most influential companies in forest-risk supply chains based on their exposure to one or more forest-risk commodities - soy, palm oil, beef, leather, pulp and paper or timber - industries with the most significant impacts on deforestation, according to analysis.

Companies are then scored, with low scores highlighting management practices and deforestation impacts of greatest concern. If companies achieve a bottom score of 0 or 1 out of 5, they are flagged. For a portfolio, the number of companies (scoring 0 or 1) making up the relevant percentage of the portfolio by weight is calculated.

Appendix:

ESG Tool reference guide - Themes in detail



CORPORATE GOVERNANCE

Promoting fair business practices

Governance encompasses the rules, roles, and processes which a company and its board have in place to run its business. Factors surrounding a company's management systems and how it conducts itself have been a part of environmental, social and governance considerations for many years. Issues such as board composition, executive compensation, corporate disclosure, fraud, and insider trading are some of these considerations. Striving towards good practices in this area contribute to a fairer, more just and well-run corporate environment.

About this calculation

This shows the number of companies in the portfolio where issues related to a firm's corporate governance have been flagged. This metric flags concerns related to the following categories, poor auditing and accounting, corruption, bribery & fraud, governance structures, controversial investments, the appropriate behaviour of executives and independence of boards. For the total portfolio, the total number of companies who have experienced these incidents is shown.



RECYCLING

Promoting recycling for a sustainable future

Growing waste levels pose a serious risk to ecosystems and human health. Every year, an estimated **11.2 billion tonnes of solid waste** is collected worldwide (UN) and emissions from solid waste, for example landfill, contribute to global greenhouse gas emissions. In 2018, less than 10% of plastic waste was recycled. Waste from electrical and electronic equipment containing new and complex hazardous substances is also a key challenge.

About this calculation

This shows the percentage of waste recycled by the companies in the portfolio. The total quantity of waste that is generated by the company is calculated, and the amount recycled calculated as a percentage of this total. This is done for each company in your portfolio, and this is then used to create a weighted average for a fund or your whole portfolio.



AIR POLLUTION

Promoting cleaner air for all

Keeping our air clean is crucial for health and wellbeing globally. As highlighted by the UN, air pollution is the single greatest environmental risk to human health and one of the main avoidable causes of death and disease globally, with some estimated **7 million deaths** (2016) across the world attributed to indoor and outdoor air pollution.

About this calculation

The air pollutant metric shows the quantity of air pollution particulates released by the companies invested in at company, fund or portfolio level for a universe of global companies who report this data. The total quantity of harmful particulates in tonnes aggregated across the following air pollutants.

- ▶ **Acid Rain, Eutrophication, and Smog Precursors**
- ▶ **Dust and Particles**
- ▶ **Ozone Depleting Substances**
- ▶ **Volatile Organic Compounds**
- ▶ **Metal Emissions**

This air pollution figure is generated for the company and ownership is then calculated by dividing this figure by the total market value of the company and multiplying this by the amount of the company you own in your portfolio.

Find out more

SUSTAINABILITY FRAMEWORKS & RESOURCES

The following globally recognised frameworks are considered in order to understand, inform, and verify sustainability issues of note reflected in the solution, and can provide useful resources for further reading.

- ▶ **SASB (“SASB Materiality Map®” n.d.)**
- ▶ **Global Reporting Initiative (GRI, 2020)**
- ▶ **International Integrated Reporting Council (IIRC, 2013)**
- ▶ **Carbon Disclosure Project (CDP 2020, 2019)**
- ▶ **Task Force for Climate Related Disclosures (TCFD, n.d.)**
- ▶ **Carbon Disclosure Standards Board (CDSB, 2020)**
- ▶ **UN Sustainable Development Goals (United Nations n.d.)**
- ▶ **Cambridge Institute of Sustainability Leadership (CISL 2019)**
- ▶ **UN Global Compact (United Nations, n.d.)**
- ▶ **EU Taxonomy (EU, 2021)**
- ▶ **The Sustainable Finance Disclosure Regulation**
- ▶ **UN Principles for Responsible Investing**

DATA PROVIDERS

The data providers currently used are as follows:

	Sustainability providers	
Measurement	Core	Additional
ESG Providers	Sustainalytics MSCI	
Specialist metrics	Trucost (environmental, carbon) *	Forest500.org, by Global Canopy (Deforestation)
Look through analysis	Morningstar *	
Stewardship	Minerva	

Find out more

USE OF COMPARISON INDEX & RED, AMBER, GREEN INDICATOR DISPLAY




For each metric, there will be a Red Amber Green status against either:



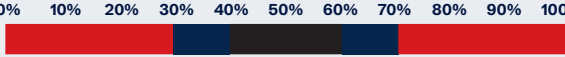

- ▶ A comparison index metric value as a target point
- ▶ A default target point

Boundaries for each of the Red, Amber, Green status will be defined based on the target point




Default levels

Analysis provided context for appropriate deviation from the comparison index level which is sufficient to meaningfully define “high” and “low” yet not so large as to be considered unrealistic. Taking a three-tier approach, 100% is split equally into three categories to create an even spread numerically between red, amber, and green categories where the comparison index represents the baseline. Hence, in the case of carbon emissions, we defined the red/green categories as: “relative to the comparison index, the CO2-emission of this investment is c.30 percent or more, higher/lower than average”. The CO2-emission associated with the amber colour is described as “about average”.

Metric	Comparison
 Carbon Emissions	Metric values that are lower than the target point will move towards the Green status. * Metric values that are higher than the target point will move towards the Red Status. * Default target point: MSCI World All Countries Index metric value. Default upper amber limit: 133.33% of target point. Default lower amber limit: 66.67% of target point.
 Water used in litres	Metric values that are lower than the target point will move towards the Green status. * Metric values that are higher than the target point will move towards the Red Status. * Default target point: MSCI World All Countries Index metric value. Default upper amber limit: 133.33% of target point. Default lower amber limit: 66.67% of target point.
 Corporate Governance (only at fund level and portfolio)	Metric values that are lower than the target point will move towards the Green status.* Metric values that are higher than the target point will move towards the Red Status.* Default target point: MSCI World All Countries Index metric value. Default upper amber limit: 133.33% of target point. Default lower amber limit: 66.67% of target point.

Metric	Comparison
 Waste to landfill in kg	Metric values that are lower than the target point will move towards the Green status. * Metric values that are higher than the target point will move towards the Red Status. * Default target point: MSCI World All Countries Index metric value. Default upper amber limit: 133.33% of target point. Default lower amber limit: 66.67% of target point.
 % of women directors	Metric values that deviate away from the target point will move towards the Amber status and then the Red status. Default target point: default target of 50%. Default green limit: 10% away from target point. Default amber limit: 20% away from target point. 
 Companies negatively impacting deforestation (only at fund level and portfolio)	Metric values that are lower than the target point will move towards the Green status. * Metric values that are higher than the target point will move towards the Red Status. * Default target point: MSCI World All Countries Index metric value. Default upper amber limit: 133.33% of target point. Default lower amber limit: 66.67% of target point.

Find out more

Metric	Comparison
 Human Rights (only at fund level and portfolio)	<p>Metric values that are lower than the target point will move towards the Green status. *</p> <p>Metric values that are higher than the target point will move towards the Red Status. *</p> <p>Default target point: MSCI World All Countries Index metric value.</p> <p>Default upper amber limit: 133.33% of target point.</p> <p>Default lower amber limit: 66.67% of target point.</p>
 Recycling in %	<p>Metric values that are lower than the target point will move towards the Green status.</p> <p>*Metric values that are higher than the target point will move towards the Red Status.</p> <p>*Default target point: MSCI World All Countries Index metric value.</p> <p>Default upper amber limit: 133.33% of target point.</p> <p>Default lower amber limit: 66.67% of target point.</p>
 Air pollution in Kg of particles recorded	<p>Metric values that are lower than the target point will move towards the Green status.</p> <p>*Metric values that are higher than the target point will move towards the Red Status.</p> <p>*Default target point: MSCI World All Countries Index metric value.</p> <p>Default upper amber limit: 133.33% of target point.</p> <p>Default lower amber limit: 66.67% of target point.</p>

Important Information

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