# TCFD Reporting & Climate VaR (Value at Risk) Methodology

Investment firms subject to TCFD reporting, must produce a TCFD product report for each in-scope fund.

TCFD
TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

The report must contain 3 things:

1. Core Metrics
2. Additional Metrics
3. Scenario Analysis

The report must contain these 5 'core metrics':

1. Scope 1 & 2 greenhouse gas emissions
2. Scope 3 greenhouse gas emissions
3. Total carbon emissions
4. Total carbon footprint
5. Weighted average carbon intensity

As 'additional metrics', firms must also "as far as is reasonable practicable" include the following calculations in each fund level report:

- Climate Value-at-Risk
- Metrics showing which climate warming scenario the fund is aligned to, such as an 'Implied Temperature Rise'

Firms must also include a qualitative, and where there is higher exposure to carbon-intensive sectors, a quantitative analysis of the 3 transition scenarios.

These 3 scenarios, as explained by the NGFS (Network for Greening the Financial System), are:

- **‘Orderly’: early action to keep global warming below a 2°c scenario**
- **‘Disorderly’: action to keep global warming below a 2°c scenario which is late, disruptive and sudden**
- **‘Hot house’: limited action which has led to significant global warming and physical risks**

## How can Integrum ESG support you with these reporting requirements?

Integrum ESG generates a spreadsheet for clients, that will inform a fund-level TCFD report with all the data specified above.

The sheet contains the data for each holding, which is then aggregated at the fund level.

| | A | B | C | D | E | F | G | H | I | J |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Company | ISIN | Scope 1 (tCO2e) | Scope 2 (tCO2e) | Scope 3 (tCO2e) | Sum of Scope 1 & 2 (tCO2e) | Total emissions (tCO2e) | Revenue ($M) | Portfolio Weighting | WACI (tCO2e per $1m revenue) |
| 2 | | | | | | | | | | |
| 3 | Overall Fund - Long | | 62251203 | 14562421 | 1336578221 | 76813624 | 1413391845 | 526887.69 | 100% | 2497.28 |
| 4 | ASOS PLC CFD | GB0030927254 | 3351 | 11497 | 1506834 | 14848 | 1521682 | 4861.099619 | 3% | 3.05 |
| 5 | MELROSE INDUSTRIES PLC CFD | GB00BZ1G4322 | 159372 | 615662 | 85978 | 775034 | 861012 | 9307.28 | 1% | 83.27 |
| 6 | NATWEST GROUP PLC CFD | GB00B7T77214 | 16240 | 2385 | 55302 | 18625 | 73927 | 16246.06 | 2% | 1.15 |
| 7 | OSB GROUP PLC CFD | GB00BLDRH360 | 154 | 0 | 363680 | 154 | 363834 | 846.64 | 2% | 0.18 |
| 8 | OXFORD INSTRUMENTS PLC CFD | GB0006650450 | 667 | 806 | 3 | 1473 | 1476 | 453.57 | 1% | 3.25 |

- Each of the 5 core metrics is generated using the latest data disclosed by each company for which there is a holding in the fund – and displayed in a separate column.

- The ‘Implied Temperature Rise’ metric for the fund is calculated using the open source Cambridge University Model *“Understanding The Climate Performance of Investment Funds”*.

- The Climate VaR is calculated using a notional carbon price (that is to say an annual fee that every company must pay, for every tonne of CO2e it emits).

    - The Integrum ESG methodology multiplies a company’s latest annual CO2e emissions by a notional carbon price, to generate a total annualised cost for its CO2e emissions.

    - We then calculate what this represents as a % of the company’s operating profit (using the company's latest reported EBIT figure or appropriate proxy).

    - Our methodology assumes that the Climate Value-at-Risk of this company is the same as this reduction to operating profit; i.e. the % reduction to operating profit represents the % of the company’s overall value at risk from global warming.

- Integrum ESG also uses this Climate VaR calculation to model the 3 transition scenarios.
    - There is a different notional carbon price for each scenario, starting at $90 per tCO2e, and rising in the ‘disorderly’ and the ‘hot house’ scenarios.
    - Thus our spreadsheet will contain 3 Climate VaR values for the fund and for each of its holdings.
    - The Climate VaR of each company is multiplied by the weighting of the exposure to that company within the fund.
    - The Climate VaR under the ‘hot house’ scenario will of course be greater than the Climate VaR under the ‘orderly’ scenario.

The notional carbon prices used in each scenario are shown clearly on the spreadsheet.

If they wish, clients can change these prices in the first row where they are shown, and the Climate VaR analyses will instantly recalculate to reflect the impact of these new carbon emission costs.

| | A | B | C | D | E |
|---|---|---|---|---|---|
| 1 | Company | Implied Temperature Rise of the Fund | Climate VaR (Orderly) | Climate VaR (Disorderly) | Climate VaR (Hothouse) |
| 2 | | | | | |
| 3 | Overall Fund - Long | 1.8 | 2.84% | 3.70% | 5.69% |
| 4 | ASOS PLC CFD | | 0.01% | 0.02% | 0.02% |
| 5 | MELROSE INDUSTRIES PLC CFD | | 0.04% | 0.05% | 0.07% |
| 6 | NATWEST GROUP PLC CFD | | 0.03% | 0.04% | 0.06% |
| 7 | OSB GROUP PLC CFD | | 0.02% | 0.03% | 0.05% |
| 8 | OXFORD INSTRUMENTS PLC CFD | | 0.01% | 0.02% | 0.02% |

**If you would like learn more about our TCFD Reporting & Climate VaR calculations, contact a member of our team at anytime:**

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