

Portfolio Carbon Footprint 2022

Calculation methodology

Below is the formula for the calculation of portfolio carbon footprint

$$\sum_N^i \left(\frac{\text{Current value of investment}_i}{\text{Investee company's enterprise value}_i} \times \text{Investee company's Scope 1 and Scope 2 GHG emissions}_i^{\text{a}} \right) \div \text{Current portfolio value (\$ million)}$$

Scope 1: Direct GHG emissions that occur from sources owned or controlled by the investee company.

Scope 2: Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the investee company.

Scope 1 and **Scope 2** GHG emissions from investments and debts are allocated to the reporting institution based on the proportional share of investment or debt in the investee company. The current portfolio value (in USD) is used to normalize the data.

BEA Union Investment Management Limited (BU) makes reference to the PCAF Standard in calculating the portfolio carbon footprint for various asset classes. For bridging GHG emission data gaps, BU has adopted a hierarchy approach as follows: where investee companies do not report GHG emission, BU uses direct CO2 emission if available, and then Bloomberg proprietary model for GHG emission estimation.

Portfolio Carbon Footprint (as at 30 December 2022)

Fund Name	Asset Type	Portfolio Carbon Footprint (tonnes/ USD\$ million)	Portfolio Coverage (%)
BU Investment Series OFC			
BU China Phoenix Fund	Equity	26.3	100.0%
BU RMB Core Bond Fund	Fixed Income	221.0	92.5%
BU Asia Pacific Flexi Allocation Fund	Mixed Assets	85.8	99.7%
BU China Gateway Fund	Mixed Assets	166.5	97.9%
BU Fund Series OFC			
BU APAC Bond Fund	Fixed Income	92.3	97.1%
BU Asian Bond Fixed Maturity Fund 2025	Fixed Income	278.9	95.2%
BEA Union Investment Series			
BEA Union Investment Asian Opportunities Fund	Equity	78.4	100.0%
BEA Union Investment China A-Share Equity Fund	Equity	96.4	92.2%
BEA Union Investment Asian Bond and Currency Fund	Fixed Income	322.6	86.2%
BEA Union Investment Asian Bond Target Maturity Fund 2023	Fixed Income	275.7	98.6%
BEA Union Investment Asian Corporate Target Maturity Fund 2023	Fixed Income	384.7	96.3%
BEA Union Investment Asian Strategic Bond Fund	Fixed Income	181.6	92.7%
BEA Union Investment China Bond Selection Fund	Fixed Income	234.6	86.4%
BEA Union Investment Asia Pacific Multi Income Fund	Mixed Assets	89.2	98.8%
BEA Union Investment Capital Growth Fund			
BEA Union Investment Asia Strategic Growth Fund	Equity	84.9	100.0%
BEA Union Investment Global Equity Fund	Equity	41.2	99.7%
BEA Union Investment Greater China Growth Fund	Equity	18.3	100.0%
BEA Union Investment Hong Kong Growth Fund	Equity	32.8	100.0%
BEA Union Investment Asia Pacific Investment Grade Bond Fund	Fixed Income	123.2	97.3%
BEA Union Investment Global Bond Fund	Fixed Income	160.4	97.5%
BEA Union Investment Hong Kong Dollar (HK\$) Bond Fund	Fixed Income	61.5	92.0%

MPF Fund Name	Asset Type	Portfolio Carbon Footprint (tonnes/ USD\$ million)	Portfolio Coverage (%)
BEA (MPF) Master Trust Scheme			
BEA (MPF) Asian Equity Fund	Equity	74.4	89.8%
BEA (MPF) Global Equity Fund	Equity	34.6	86.2%
BEA (MPF) Greater China Equity Fund	Equity	19.9	100.0%
BEA (MPF) Hong Kong Equity Fund	Equity	29.3	90.3%
BEA (MPF) Global Bond Fund	Fixed Income	139.7	100.0%
BEA (MPF) Age 65 Plus Fund	Mixed Assets	135.6	100.0%
BEA (MPF) Balanced Fund	Mixed Assets	80.9	70.2%
BEA (MPF) Core Accumulation Fund	Mixed Assets	87.2	100.0%
BEA (MPF) Growth Fund	Mixed Assets	54.1	57.7%
BEA (MPF) Stable Fund	Mixed Assets	101.0	76.5%
BEA (MPF) Industry Scheme			
BEA (Industry Scheme) Asian Equity Fund	Equity	74.3	89.9%
BEA (Industry Scheme) Greater China Equity Fund	Equity	18.9	97.1%
BEA (Industry Scheme) Hong Kong Equity Fund	Equity	29.2	90.2%
BEA (Industry Scheme) Age 65 Plus Fund	Mixed Assets	135.7	100.0%
BEA (Industry Scheme) Balanced Fund	Mixed Assets	81.3	70.1%
BEA (Industry Scheme) Core Accumulation Fund	Mixed Assets	87.2	100.0%
BEA (Industry Scheme) Growth Fund	Mixed Assets	54.5	57.9%
BEA (Industry Scheme) Stable Fund	Mixed Assets	101.0	76.7%
BEA (MPF) Value Scheme			
BEA Asian Equity Fund	Equity	76.6	100.0%
BEA Global Equity Fund	Equity	40.4	100.0%
BEA Greater China Equity Fund	Equity	17.8	100.0%
BEA Global Bond Fund	Fixed Income	155.4	100.0%
BEA Age 65 Plus Fund	Mixed Assets	135.7	100.0%
BEA Balanced Fund	Mixed Assets	92.0	98.3%
BEA Core Accumulation Fund	Mixed Assets	87.2	100.0%
BEA Growth Fund	Mixed Assets	70.0	98.3%
BEA Stable Fund	Mixed Assets	108.2	94.5%

*Portfolio coverage (%): Percentage of a fund's holdings which are covered with GHG emission data.

Assumptions & Limitations

- Portfolio carbon footprint data shown does not cover GHG emission data of Exchange Traded Funds (ETFs) or third party collective investment schemes that may be held by the fund.
- Time lag in data availability.
- GHG emission data coverage vary by countries and companies.
- Portfolio carbon footprint data is only a snapshot in time, which is not a forward looking indicator.

No portfolio carbon footprint data will be available for a fund if the coverage of its underlying securities is under 50%. BU's carbon footprint methodology is considered as working in progress, which is subject to periodic review and revision in the light of regulatory requirements, data availability and the evolution of climate change issues.