EU Taxonomy
Methodology

Introduction
The EU taxonomy is a classification system of environmentally sustainable activities. Large EU corporations will disclose information that indicates how aligned the company’s revenue, operating expenditure, and capital expenditure are to the EU goal of being net-zero by 2050. The EU taxonomy will eventually cover six environmental green “objectives” and will be extended to cover social objectives and to identify “brown” activities.

EU-domiciled funds (or funds sold into the EU) must also calculate and disclose their portfolio’s alignment with the EU taxonomy by providing an aggregation of the alignment of the underlying holdings. This methodology paper describes the calculation of those fund-level metrics. Morningstar calculates, at the fund level, the revenue alignment of the climate mitigation objective only, using underlying data from Sustainalytics. This data may be estimated or collected data.

Calculation timings
The calculation will be performed upon the collection of the portfolio, and only data that is available to the market on the portfolio date will be used in the calculation of the aggregate values.

Holding types
Not all security types are EU-taxonomy-eligible; for example, cash and commodity positions do not have associated revenues and therefore cannot be evaluated. The EU taxonomy regulation currently does not provide an evaluation mechanism for government/sovereign bonds (including, for this methodology, supranational and municipal bonds) and the regulation also provides that derivative positions should not be assessed.

For the purpose of these calculations, Morningstar will assign one of five EU taxonomy holding types to all securities:
- Cash or cashlike investments
- Commodities
- Government bonds (including supranational and municipal bonds)
- Derivatives
- Corporate securities (Including stock, corporate bonds, property, and any other holdings, including unidentified holdings)
Portfolio 'look through'

Morningstar will first attempt to "look through" any funds that are held by the portfolio to find the underlying holdings that are indirectly held. The "look through" function goes up to 10 portfolios "deep"; that is, when a portfolio holds a fund and in turn that fund hold other funds, the "look through" process will assess 10 "levels" of portfolios. The exception to this rule is for funds that are synthetically replicated; for the purpose of the principal adverse impact calculations, they will be treated as being equivalent to the portfolio holding derivatives. The derivative holding will not be "looked through," and for the purposes of the calculations are treated as "other holdings" — that is, not corporate nor sovereign holdings.

Portfolio weights

Morningstar calculates portfolio weights based on the proportion of a portfolio a holding represents once any fund holdings have been "looked through." The weights are based on the market value of the securities. For the EU PAI calculations, some additional steps will be taken to calculate the final portfolio weight:

1. Any securities that have both long and short positions will be "netted out" — that is, the short position weight will be subtracted from the long position weight;
2. Any remaining short positions will be removed;
3. Any currency offsets will be removed;
4. The portfolio weight will then be recalculated on the netted-out long positions only.

\[ W_R = \frac{\text{Portfolio Weight}_i}{\sum_{i=1}^{n} \text{Portfolio Weight}_i} \]

Where

\[ W_R \rightarrow \text{Rescaled portfolio weight} \]

\[ \text{Portfolio Weight}_i \rightarrow \text{Original portfolio weight} \]

\[ i=1, n \rightarrow \text{All long, noncash offset holdings} \]
EU Taxonomy Calculations

The calculations will be based on the EU taxonomy holding type and underlying corporate-level data from Sustainalytics; Morningstar will link the corporate holding in the portfolio with the corporate-level data collected or estimated by Sustainalytics. Corporate bond holdings are linked to the issuing company’s alignment data. Note: Green bonds will use the same underlying taxonomy data as a standard corporate bond — that is, the data of the issuing entity — they will not have their own separate alignment data.

First, Morningstar will calculate the percentage of the portfolio that is covered by Sustainalytics research.

\[ Portfolio \text{ CCM Covered}_R = \sum_{i=1}^{s} W_R \]

Where

\[
\begin{align*}
Portfolio \% \text{ Covered}_R & = \text{ The proportion of the portfolio covered by Sustainalytics corporate research} \\
i = 1, s & = \text{ All securities with Sustainalytics corporate research}
\end{align*}
\]

Sustainalytics undertakes company-level activity-based research to assess the proportion of a company’s revenue that is aligned to the EU taxonomy for the climate change mitigation objective. This is aggregated at a portfolio level to calculate the proportion of the portfolio that is in sustainable investments.

\[ Portfolio \text{ CCM \% Sustainable Investments revenue} = \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue} \]

\[
\begin{align*}
W_R & = \text{ Rescaled portfolio weight} \\
CCM \% \text{ aligned Revenue} & = \text{ The percentage of a company’s revenue aligned to the EU taxonomy objective for climate change mitigation}
\end{align*}
\]

This will be further broken down into the proportions where the company-level data was reported by the corporation or estimated by Sustainalytics.

\[ Portfolio \text{ CCM \% Sustainable Investments revenue (reported)} = \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue (reported)} \]
The sustainable investment portion of the portfolio can also be broken down to the contribution type, whether it is an "Own Contribution," "Enabling," or "Transition" activity, as defined by the regulation. "Own Contribution" refers to economic activities that are being performed in an environmentally sustainable way. "Enabling" activities are those that enable a substantial contribution to be made by other activities, such as the manufacture of a component that improves the environmental performance of another activity. "Transition" activities contribute to a transition to a net-zero emissions economy in 2050 but are not currently close to a net-zero carbon emissions level. These activities are critical to the economy but must significantly enhance their performance beyond the industry average, without lock-in to carbon-intensive assets or processes.

\[ \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue (estimated)} = \text{Portfolio CCM \% Sustainable Investments revenue (estimated)} \]

\[ W_R = \text{Rescaled portfolio weight} \]

\[ \text{CCM \% aligned revenue (estimated)} = \text{The percentage of a company's revenue aligned to the EU taxonomy objective for climate change mitigation as estimated by Sustainalytics} \]

\[ \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue own contribution} = \text{Portfolio CCM \% Sustainable Investments revenue own contribution} \]

\[ \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue enabling} = \text{Portfolio CCM \% Sustainable Investments revenue enabling} \]

\[ \sum_{i=1}^{n} W_R \times CCM \% \text{ aligned revenue transition} = \text{Portfolio CCM \% Sustainable Investments revenue transition} \]

\[ W_R = \text{Rescaled portfolio weight} \]

\[ \text{CCM \% aligned revenue own contribution} = \text{The percentage of a company's revenue aligned to the EU taxonomy objective for climate change mitigation defined as Own Contribution} \]
CCM % aligned revenue

*enabled* = The percentage of a company's revenue aligned to the EU taxonomy objective for climate change mitigation defined as Enabling

CCM % aligned revenue

*transition* = The percentage of a company's revenue aligned to the EU taxonomy objective for climate change mitigation defined as Transition

The holdings of the portfolio that are not aligned will be classified as:

- Eligible but not aligned (the activity can be assessed but failed one of the required criteria to be aligned)
- Not eligible (the activity or holding cannot be assessed under the EU taxonomy)
- No research available (the holding or activity has no research available and so the alignment cannot be determined; in these cases, the alignment is assumed to be 0%. This is the prudent approach and prevents potential greenwashing).

The "eligible but not aligned" calculations are similar to the aligned calculations, namely:

\[ \text{Portfolio CCM % Eligible not aligned revenue} = \sum_{i=1}^{n} W_R \times \text{CCM % eligible not aligned revenue (reported)} + W_R \times \text{CCM % eligible not aligned revenue (estimated)} \]

\[ W_R = \text{Rescaled portfolio weight} \]

\[ \text{CCM % eligible not aligned revenue} = \text{The percentage of a company's revenue that failed one of the criteria to be aligned with the EU taxonomy objective for climate change mitigation, as reported by the company} \]

This will be further broken down into the proportions where the company-level data was reported by the corporation or estimated by Sustainalytics.

\[ \text{Portfolio CCM % Eligible not aligned revenue (reported)} = \sum_{i=1}^{n} W_R \times \text{CCM % eligible not aligned revenue (reported)} \]

\[ W_R = \text{Rescaled portfolio weight} \]

\[ \text{CCM % eligible not aligned revenue (reported)} = \text{The percentage of a company's revenue that failed one of the criteria to be aligned with the EU taxonomy objective for climate change mitigation, as reported by the company} \]

\[ \text{Portfolio CCM % Eligible not aligned revenue (estimated)} = \sum_{i=1}^{n} W_R \times \text{CCM % eligible not aligned revenue (estimated)} \]
\[ W_R = \text{Rescaled portfolio weight} \]

\[ \text{CCM \% eligible not aligned revenue (estimated)} = \text{The percentage of a company's revenue that failed one of the criteria to be aligned with the EU taxonomy objective for climate change mitigation, as estimated by Sustainalytics} \]

The proportion of the portfolio that is invested in eligible revenues (comprising both activities that are aligned and "eligible but not aligned") will be calculated.

\[ \text{Portfolio CCM \% Eligible} = \text{Portfolio CCM \% Sustainable Investments revenue} + \text{Portfolio CCM \% Eligible not aligned revenue} \]

The "not eligible" portion of the portfolio is a sum of the different types of holdings that cannot be assessed under the EU taxonomy and the activities that cannot be assessed. The activities that cannot be assessed and the different holding types (cash, commodities, government bonds and derivatives that cannot be assessed) are first calculated separately:

\[ \text{Portfolio CCM \% Not eligible activities revenue} = \sum_{i=1}^{n} W_R \times \text{CCM \% not eligible revenue} \]

\[ \text{Portfolio CCM \% Not eligible Cash} = \sum_{i=1}^{n} W_R \text{Cash holdings} \]

\[ \text{Portfolio CCM \% Not eligible Commodities} = \sum_{i=1}^{n} W_R \text{Commodities} \]

\[ W_R \text{Cash Holdings} = \text{Rescaled portfolio weight of the portfolio holdings that are identified as having the EU taxonomy type of cash} \]

\[ W_R \text{Commodities} = \text{Rescaled portfolio weight of the portfolio holdings that are identified as having the EU taxonomy type of commodity} \]
\[ \text{Portfolio CCM} \% \text{ Not eligible Government bonds} = \sum_{i=1}^{n} W_{R, \text{Government Bonds}} \]

\[ W_{R, \text{Government Bonds}} = \text{Rescaled portfolio weight of the portfolio holdings that are identified as having the EU taxonomy type of government bonds (including municipal and supranational bonds)} \]

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\[ \text{Portfolio CCM} \% \text{ Not eligible Derivatives} = \sum_{i=1}^{n} W_{R, \text{Derivatives}} \]

\[ W_{R, \text{Derivatives}} = \text{Rescaled portfolio weight of the portfolio holdings that are identified as having the EU taxonomy type of derivatives} \]

These are then summed to calculate the overall "not eligible" percentage of the portfolio.

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\[ \text{Portfolio CCM} \% \text{ Not eligible revenue} = \sum_{i=1}^{n} (W_{R} \times \text{CCM} \% \text{ not eligible revenue}) + W_{R, \text{Cash}} + W_{R, \text{Commodity}} + W_{R, \text{Government}} + W_{R, \text{Derivative}} \]

The proportion of the portfolio with no research excludes those "not eligible" holdings and consists of other holdings without research and holdings that have not been matched. This will include all real estate and infrastructure holdings where we are unable to assess alignment. For the purposes of the calculations, these are treated as having 0% alignment.

[17]

\[ \text{Portfolio CCM} \% \text{ No research} = \sum_{i=1}^{n} W_{R, \text{No Research}} \]

\[ W_{R, \text{No Research}} = \text{Rescaled portfolio weight of the portfolio holdings that are identified as having the EU taxonomy type of corporate and do not have underlying Sustainalytics research.} \]
Morningstar will also create a statistic called "other investments" for all holdings that are not aligned. This includes all activities that are "eligible but not aligned," "not eligible" activities and holdings, and holdings where the research is not available.

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\[ \text{Portfolio CCM \% Other Investments revenue} = \sum_{i=1}^{n} (W_R \times CCM \text{ \% not aligned revenue}) + W_R \text{Cash} + W_R \text{Commodity} + W_R \text{Government} + W_R \text{Derivative} + W_R \text{No Research} \]

\[ \text{CCM \% not aligned revenue} = \text{The percentage of a company's revenue that is not aligned to the climate change mitigation objective of the taxonomy. This includes activities that are eligible but not aligned and activities that not eligible.} \]

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