

METHODOLOGY DOCUMENTATION

AlliedOffsets Buyer Rating Methodology

How buyer ratings are derived from retirement activity, price behaviour, credit quality and emissions context

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Overview

The AlliedOffsets Buyer Rating is a letter grade, from D through to A+, assigned to companies that retire carbon credits. It summarises how a company engages with the carbon market: how recently and consistently it retires credits, what it pays relative to the wider market, the quality of the credits it chooses, how promptly it retires credits after they are issued, and how its retirement volume compares to its own reported emissions. Each company receives two ratings — one measured against all rated companies, and one measured against companies in the same sector. The purpose is to give buyers, investors, project developers and analysts a single comparable indicator of carbon market engagement that can be used alongside the underlying data.

Data Inputs

Field / Parameter	Description	Source / Notes
Buyer account	The company credited with the retirement or purchase. Used as the unit of analysis throughout.	Registry retirement records and CDR purchase announcements
Retirement date	The date a credit was retired. Used to determine how recent a company's activity is and to assign it to two-year, three-year and five-year windows.	Registry retirement records
Vintage start date	The start of the period in which the emission reduction or removal occurred. Used to derive average vintage year and the gap between vintage and retirement.	Registry retirement records
Vintage end date	The end of the vintage period. Carried through the dataset but not used in scoring.	Registry retirement records
Estimated transaction price	The estimated price paid per credit for a given retirement. Used to derive volume-weighted average prices.	AlliedOffsets price estimation
Transaction credit volume	The number of credits in a given retirement or purchase. Used both as a volume measure and as the weighting for all price and vintage averages.	Registry retirement records and CDR purchase announcements
Announcement date	The date a carbon removal purchase was publicly announced. Used in place of a retirement date for removal purchases.	CDR purchase announcements

Field / Parameter	Description	Source / Notes
Amount paid	The total consideration reported for a carbon removal purchase. Divided by tonnes purchased to derive an implied price per tonne.	CDR purchase announcements
Tons purchased	The volume of removals in a publicly announced purchase.	CDR purchase announcements
Announcement source link	The source reference for a removal purchase. Used to exclude records that duplicate data already captured from registry sources.	CDR purchase announcements
Credit quality index	An index score reflecting the assessed quality of the credits a company has chosen. Carries a fifth of the overall score.	AlliedOffsets buyer quality index
Company name	The reference name for the company, used to match transaction records to company attributes.	AlliedOffsets buyer reference data
Sector	The company's industry classification. Used to group companies for sector-relative ranking and to derive sector price fallbacks.	AlliedOffsets buyer reference data
Scope 1 and 2 emissions	The company's reported direct and purchased-energy emissions. Compared against annualised retirement volume to assess retirement activity in proportion to a company's own footprint.	AlliedOffsets buyer reference data
Responsiveness	A measure of how responsive the company is as a market participant. Carries the smallest weight in the overall score.	AlliedOffsets buyer reference data
Headquarter location	The company's head office location. Held in the dataset but not used in the rating.	AlliedOffsets buyer reference data
Annual revenue and employee count	Company size indicators. Held in the dataset but not used in the rating.	AlliedOffsets buyer reference data
Broker indicator	A flag identifying companies likely to be acting as brokers rather than end buyers. Held in the dataset but not used in the rating.	AlliedOffsets buyer reference data

Logical Flow

1

Assemble carbon removal purchases

Publicly announced carbon removal purchases are collected and an implied price per tonne is derived from the reported consideration and volume. Records with no volume, no named buyer, or a buyer described as an individual or an aggregate of multiple parties are excluded, as are records sourced from a registry already captured elsewhere in the dataset.

2

Combine removals with registry retirements

Registry retirement records are combined with the removal purchases into a single transaction set. Each record carries a buyer, a retirement or announcement date, a vintage period, an estimated price per credit, a volume, and the buyer's credit quality index score.

3

Build the company reference set

Company-level attributes are assembled: sector, reported Scope 1 and 2 emissions, responsiveness, and size indicators. Text placeholders used for missing values are cleared, and where a company appears more than once its numeric attributes are averaged. Companies with no reported Scope 1 and 2 emissions figure are excluded at this point and therefore receive no rating.

4

Match transactions to companies

Transactions are matched to the company reference set on company name, ignoring differences in capitalisation and spacing. Only companies present in both the transaction data and the reference data proceed to scoring.

5

Derive company-level metrics

For each company the model calculates total credits retired, volume-weighted average prices over all time and over the last two and three years, average vintage year, average years between vintage and retirement, retirement volume in proportion to reported emissions, and the volume retired more than two and more than five years ago.

6

Derive sector price fallbacks

Average prices are calculated for each sector across all companies in that sector with price data available. These averages are used in place of a company's own price where that company has no price data of its own. Where a sector average is also unavailable, a market-wide average is used for the two-year and three-year price measures.

7

Rank companies into percentiles

Each metric is converted into a percentile rank so that companies are measured relative to one another rather than against fixed thresholds. Every metric is ranked twice: once across all rated companies, and once within the company's own sector. Companies that have retired credits in the last two years are ranked on the full set of metrics. Companies that have not are set aside at this point and ranked only on their historic average price, since the recency-sensitive metrics would not be meaningful for them.

8

Combine metrics into a single score

The percentile ranks are combined into one weighted score per company, and that score is itself converted into a percentile so that companies can be placed against the distribution of all scores. This is done once across all companies and once within each sector.

9

Assign a letter rating

The score percentile is mapped to a letter rating from D through to A+. Companies with no activity in the last five years, and companies with no activity in the last two years, are assigned ratings through a separate set of rules rather than through the weighted score. Each company receives an overall rating and a sector-relative rating, with the sector rating left blank where no sector is recorded.

Key Calculations

Implied price per tonne for removal purchases

The total consideration reported for a publicly announced removal purchase is divided by the tonnes purchased. Where either figure is missing, no price is derived and the record contributes volume but no price signal.

Volume-weighted average price

Each transaction's price is multiplied by its credit volume, these are summed across all of a company's transactions, and the total is divided by the company's total credit volume. This means large transactions influence the average more than small ones. The result is rounded to two decimal places.

Two-year and three-year average prices

The same volume-weighted calculation, restricted to transactions retired within the last 730 days and 1,095 days respectively. Both are measured from the date the model is run, so a company's position shifts as older transactions fall outside the window.

Average vintage year

The vintage start year of each transaction is weighted by its credit volume and averaged across the company's transactions, then rounded to a whole year. A more recent average vintage year ranks higher.

Average years from vintage to retirement

For each transaction, the number of years between the vintage start year and the retirement year is calculated, weighted by credit volume, averaged, and rounded to a whole year. A shorter gap ranks higher, on the basis that it indicates credits are being retired closer to when the underlying reduction or removal occurred.

Emissions relative to retirement volume

The company's reported Scope 1 and 2 emissions are divided by its annualised retirement volume, calculated as the credits retired in the last three years divided by three. A lower figure means the company is retiring more credits relative to the size of its own footprint, and ranks higher. Where this figure cannot be calculated, the company's raw Scope 1 and 2 emissions figure is used in its place.

Activity windows

Two measures capture how recently a company has been active: the volume retired more than two years ago and the volume retired more than five years ago. Subtracting these from total volume gives the volume retired within each window, which determines whether a company is treated as active, dormant, or inactive.

Sector average price

The average of all company-level average prices within a sector, calculated separately for the all-time, two-year and three-year measures. Companies with no price data of their own are excluded from this average, so it reflects only companies with observable pricing.

Percentile ranking

Each metric is converted to a percentile between 0 and 1 describing where a company sits relative to the others in the set. Percentiles are calculated twice, once against all rated companies and once against companies in the same sector. For metrics where a lower value is better — the vintage-to-retirement gap, and emissions relative to retirement volume — the ranking is reversed so that a higher percentile always means a stronger position.

Weighted component score

The percentile ranks are combined into a single score using fixed weights: two-year average price at 20 per cent, credit quality index at 20 per cent, emissions relative to retirement volume at 20 per cent, vintage-to-retirement gap at 15 per cent, all-time average price at 10 per cent, average vintage year at 10 per cent, and responsiveness at 5 per cent. The weights total 100 per cent.

	The same calculation is performed on the sector-relative percentiles to produce a parallel sector score.
Score percentile	The weighted score is itself converted to a percentile, so that a company's rating reflects its standing against the distribution of all scores rather than the raw score value. The sector score is ranked within its own sector.
Rating band assignment	The score percentile is mapped to a letter grade: the top 7.5 per cent receive A+, the next 20 per cent A, the next 40 per cent A-, the next 15 per cent B+, the next 7.5 per cent B, the next 9 per cent B-, and the bottom 1 per cent C+. Companies with no retirements in the last two years receive C where their historic average price sits at or above the median and C- where it sits below. Companies with no retirements in the last five years receive D regardless of any other measure.

Assumptions

- Ratings are relative, not absolute. A company's grade reflects its position against the other companies in the rated population at the time the model is run, not performance against a fixed standard. As the population or the market changes, a company's grade can move without any change in its own behaviour.
- Companies with no reported Scope 1 and 2 emissions figure are excluded from the rating entirely. They are not rated low — they are absent from the dataset.
- Where a company has no price data of its own, the average price for its sector is used in its place. Where the sector average is also unavailable, a market-wide average is used for the two-year and three-year price measures.
- Where a company's average vintage year cannot be calculated, a value of 2015 is assumed. Where the gap between vintage and retirement cannot be calculated, a gap of four years is assumed.
- Where a responsiveness score is unavailable, a default value of 1.00 is applied.
- For publicly announced carbon removal purchases, a vintage start date of 1 January 2022 is assumed in all cases, as vintage information is not reported for these purchases.
- Where a removal purchase has no announcement date, a date of 31 December 2022 is assumed.
- Removal purchases sourced from Puro.earth announcements are excluded to avoid double-counting against retirement data already captured from that registry.
- Records where the buyer is described as an individual or as an aggregate of multiple unnamed parties are excluded, as they cannot be attributed to a single company.
- Emissions relative to retirement volume annualises three-year retirement volume by dividing by three, regardless of whether the company was active across all three years. A company active in only one of the three years is measured as though its activity were spread across all three.
- Price figures are estimated rather than transacted values, and are derived from AlliedOffsets price estimation rather than from confirmed contract prices.
- The weights applied to each component are fixed and were set by AlliedOffsets. They are not derived from the data and do not adapt as the market changes.

Limitations

- The rating covers only companies whose retirements can be attributed to a named account in registry data or in public removal purchase announcements. Bilateral and over-the-counter activity that is not publicly disclosed or registry-recorded is not captured.
- Company matching relies on name comparison. Companies that transact under multiple names, subsidiaries, or trading entities may be treated as separate companies or may not be matched at all.
- The sector-relative rating is only as reliable as the sector classification and the number of companies in that sector. Sectors with few rated companies produce percentile ranks based on a small comparison set, and companies with no recorded sector receive no sector rating.
- The rating reflects observable purchasing and retirement behaviour. It is not an assessment of a company's wider climate strategy, the integrity of any individual project it has supported, or the validity of any claim it makes about its emissions.

Output

For each rated company the model returns two letter grades. The overall rating places the company against all rated companies. The sector rating places it against companies in the same sector, and is blank where no sector is recorded. Both use the same scale: A+, A, A-, B+, B, B-, C+ for companies that have retired credits in the last two years; C or C- for companies whose most recent activity is between two and five years ago; and D for companies with no activity in the last five years. These ratings are written back to the buyer dataset alongside the underlying company attributes, replacing any previously calculated ratings.