

Investment and Offtake Trends in the Global Carbon Credit Market

MSCI Carbon Markets



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Contents

Executive Summary	4
1. Introduction.....	6
2 Capital Flows and Market Activity.....	6
2.1 By Deal Type	6
2.2 By Deal Status.....	10
2.3 By Project Type.....	10
2.4 By Source of Capital	11
2.5 By Capital Destination.....	15
Conclusion	16
Appendix	17
Appendix A: Estimation Methodology for Undisclosed Deal Values.....	17
Appendix B: Definitions and Classification Framework.....	19

Executive Summary

This report presents an analysis by MSCI Carbon Markets of capital flows and market activity in the global carbon market between 2021 and 2025. It distinguishes between announced investment and offtake deals collected from public sources.

Market Size and Deal Composition

- Total tracked deal value in 2025 reached USD 22.0 billion, a 72% increase on 2024 and the highest level recorded across the period.
- This was achieved across 467 deals, down from 555 in 2024, with average deal size rising from approximately USD 23 million to USD 47 million, indicating a shift toward fewer, larger deals.
- Offtake activity exceeded investment for the first time, accounting for USD 12.3 billion (56%) of total activity compared to USD 9.7 billion (44%) for investments.
- Offtake activity nearly tripled year-on-year, driven by a small number of large corporate procurement commitments rather than a broadening of the buyer base.
- Direct investment remained dominant at 86% of investment value in 2025, with loan financing accounting for 10% and grants contributing 2%. The emergence of both as recurring structures reflects a gradual broadening of the capital types entering the market.
- Forward agreements and pre-purchases together accounted for 66% of offtake value, reflecting a sustained preference for long-dated contractually binding procurement over non-binding commitment structures.

Deal Status

- Of the USD 22.0 billion tracked in 2025, USD 1.4 billion was completed and USD 4.2 billion was in progress; the remaining USD 13.5 billion represented commitments to deploy capital in future years, reflecting the increasing use of long-dated agreements and multi-year capital structures.
- Procurement commitments continued to outpace deployed capital in 2025, though the share reaching execution has grown for the third consecutive year.

Capital Activity by Project Type

- Capital flows were concentrated in carbon removal projects, with carbon engineering (USD 10.3 billion) and nature restoration (USD 10.1 billion) jointly accounting for 93% of 2025 activity, each growing substantially compared to 2024.
- This reflects an increasing trend of corporates looking to secure higher-quality removal credits through long-term commitments, with the scaling of both categories largely attributable to a small number of large corporate actors.
- Other project categories accounted for a declining share: REDD+ totalled USD 218 million, down from a peak of USD 2.5 billion in 2023, and all other project types collectively represented less than 2% of total 2025 deal value.

Sources of capital and market concentration

- Corporate capital activity grew to USD 11.4 billion in 2025, over half of the annual total, having tripled from 2024 levels.
- Government-backed capital approximately doubled to USD 2.8 billion (from USD 1.4 billion in 2024), representing the fastest-growing institutional capital source across the period.
- Asset manager activity grew modestly to USD 1.4 billion, broadly stable year-on-year. Investment fund activity fell to USD 1.1 billion from USD 2.3 billion — the sharpest decline of any investor category.
- The number of distinct investors declined from 245 to 234, indicating aggregate deal value has grown through larger commitments from a contracting participant base.
- Corporate activity was highly concentrated, with Microsoft accounting for 86% of global offtake value at USD 10.6 billion. Excluding Microsoft, remaining offtake activity totalled USD 1.7 billion, with demand skewed toward engineered removals.

Geographic distribution of capital

- Disclosed capital flows show a clear pattern that broadly maps onto economic development: engineered removal activity was concentrated in high-income countries, primarily the United States and Northern Europe, while nature-based activities dominate in Latin America, Africa, and Asia Pacific.
- The United States was the primary destination for engineered removal capital, while countries such as Brazil, Australia, and India are key recipients of nature-based investment.

1. Introduction

This report presents an analysis of capital flows and market activity in the global carbon credit market between 2021 and 2025. Building on the investment tracking introduced in our 2024 report, this edition reflects an expansion and standardisation of our data collection and classification framework. It distinguishes between offtake agreements, the contractual mechanisms through which buyers secure carbon credit supply, and investments, which represent direct capital flows into the entities and projects that generate those credits. This distinction, alongside a more granular deal-level taxonomy and a standardised approach to estimating undisclosed transaction values, provides a detailed picture of how capital is being deployed across the carbon credit market and by whom.

Methodology

The following analysis draws on MSCI Carbon Markets' tracking of publicly announced offtake and investment transactions in the carbon credit market between 2021 and 2025. All data is sourced from public announcements. Where deal values were not disclosed, estimated values are derived using MSCI Carbon Markets' proprietary offtake price datasets and project cost models, as described below.

The dataset records a range of attributes for each announcement, enabling the analysis to be presented across multiple dimensions including deal type and structure, project category and type, removal focus, buyer and investor identity and type, counterparty and developer characteristics, and geographic location of both capital source and underlying project. Each deal is also assigned a status of committed, in progress, or completed, reflecting the stage of capital deployment at the time of announcement.

Where a deal value was reported, the figure is used directly. Where no value was disclosed, an estimated deal value is derived by multiplying expected credit delivery volumes by a modelled reference price or project cost per tonne of CO₂e, calibrated by project type and year. All aggregated figures in this section represent either reported or estimated deal values on this basis. A full description of the estimation methodology is provided in Appendix A.

2 Capital Flows and Market Activity

2.1 By Deal Type

Total tracked deal value in 2025 reached USD 22.0 billion, a 72% increase on 2024 and the highest level recorded across the period. As shown in Chart 1, the balance between investment and offtake activity has shifted markedly over the past five years. In 2021, the market was almost entirely investment-driven, with USD 4.1 billion in investment and negligible offtake activity. From 2022, both grew in parallel: investment rose from USD 4.3 billion in 2022 to USD 7.5 billion in 2023 and USD 8.2 billion in 2024, while offtake activity reached USD 1.3 billion, USD 3.9 billion, and USD 4.5 billion over the same three years.

In 2025, offtake activity reached USD 12.3 billion, exceeding investment for the first time, while investment value grew to USD 9.7 billion. The deal count data overlaid on Chart 1 reveals contrasting dynamics beneath these totals. Offtake deal count fell from 454 in 2024 to 309 in 2025, even as offtake value nearly tripled, pushing average deal size from roughly USD 10 million to USD 40 million. Investment deals moved in the opposite direction: count rose from 101 to 158 while aggregate value grew more modestly, bringing average deal size down from around USD 81 million to USD 61 million. The market is therefore not growing uniformly, offtakes consolidated around fewer, higher-value deals while investment activity is spreading across a larger number of smaller ones.

Chart 1: Capital Activity and Deal Count by Type (USD Billion)

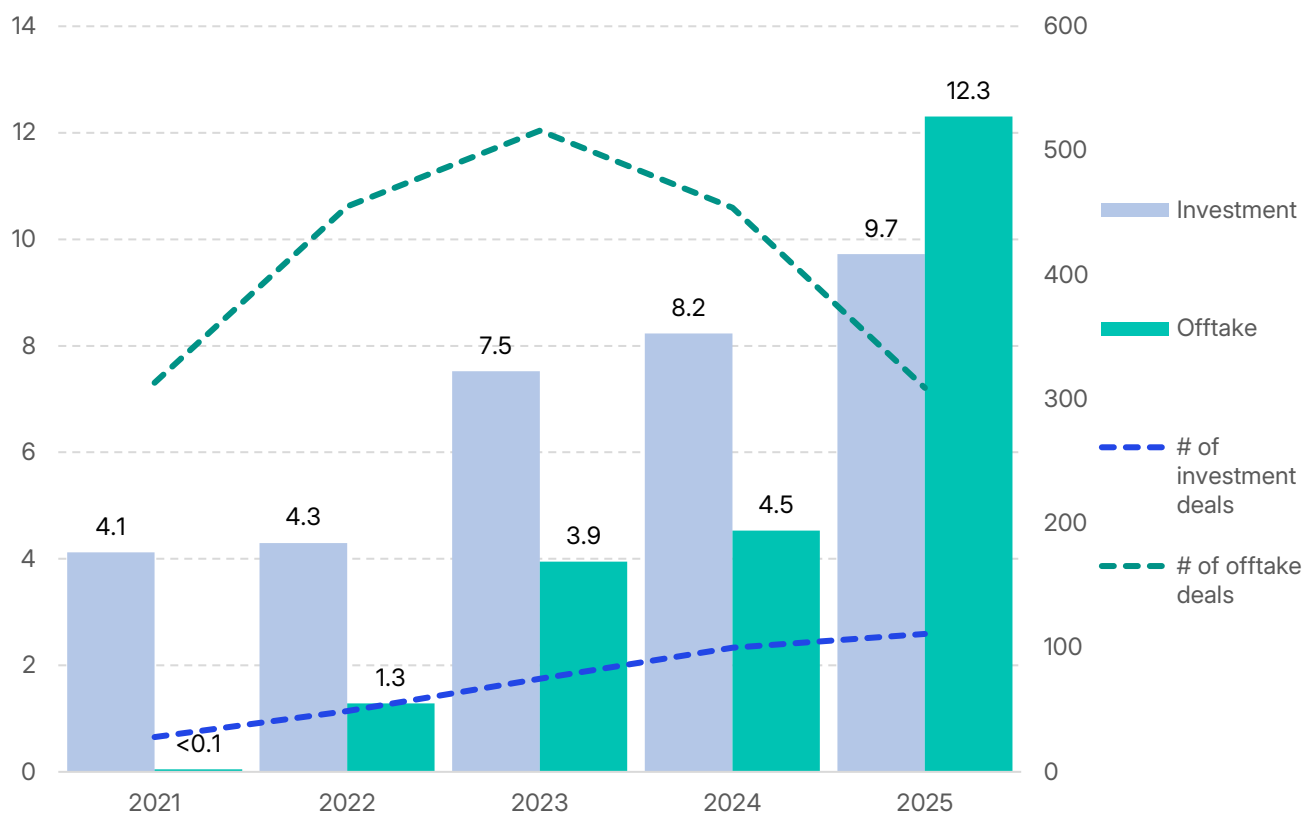


Chart 1: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.1.1 Deal Sub-Types

As shown in Chart 2, direct investment has been the dominant investment structure throughout the period, accounting for 100% of investment value in 2021. Its share declined to 74% in 2024 as grants and loan financing grew, before recovering to 86% in 2025. Grant financing grew from negligible levels to 14% in 2023 and 15% in 2024 before settling at 10% in 2025, directed largely by government and multilateral sources toward nature-based program development. Loan financing also emerged as a distinct structure, reaching 11% in 2024 before falling back to 2% in 2025.

While loan financing remains a modest share of total investment, its emergence as a recurring structure represents a meaningful step in the diversification of how the market is being capitalized. A landmark example is the USD 210 million non-recourse project finance facility structured by JP Morgan alongside a syndicate of lenders to enable Chestnut Carbon to fulfil its 25-year forestry credit delivery agreement with Microsoft.¹ Described as the first time traditional project finance techniques had been applied to a US carbon credit project, the deal illustrates the direction of travel even if debt financing has yet to reach scale across the market.

On the offtake side, the period has seen a consistent shift away from Memorandum of Understanding (MoU) and commitment structures toward more contractually binding forms. Forward agreements accounted for nearly half (46%) of offtake value in 2025, while pre-purchases contributed one fifth. Together these represent the most committed forms of credit procurement where buyers are either locking in future supply from pre-issuance projects or providing upfront capital in return for credits upon project implementation.

The overall picture points to a market increasingly oriented around long-dated forward commitment on both sides. The revenue certainly provided by long-dated offtake agreements is precisely what makes project-level debt financing viable, and the availability of debt in turn enables developers to scale capacity in ways that pure equity financing alone would not support.

Chart 2 & 3: Share of Capital Activity by Deal Sub-Type

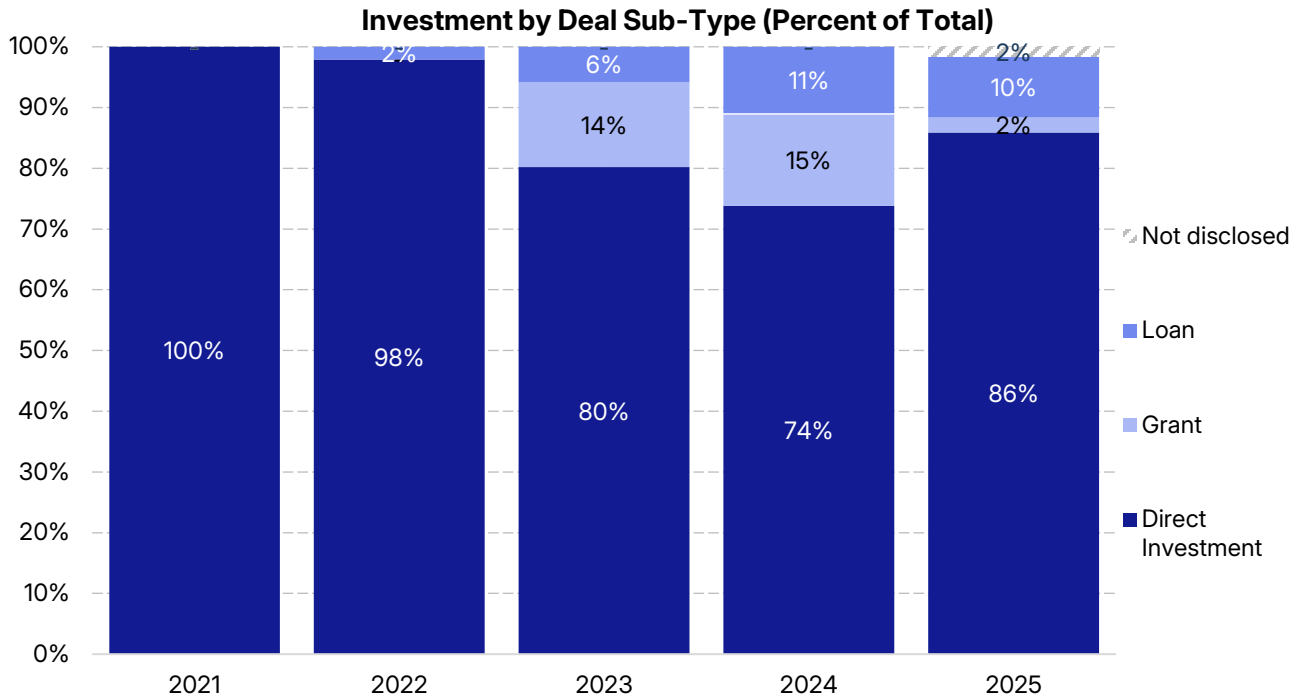


Chart 2: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

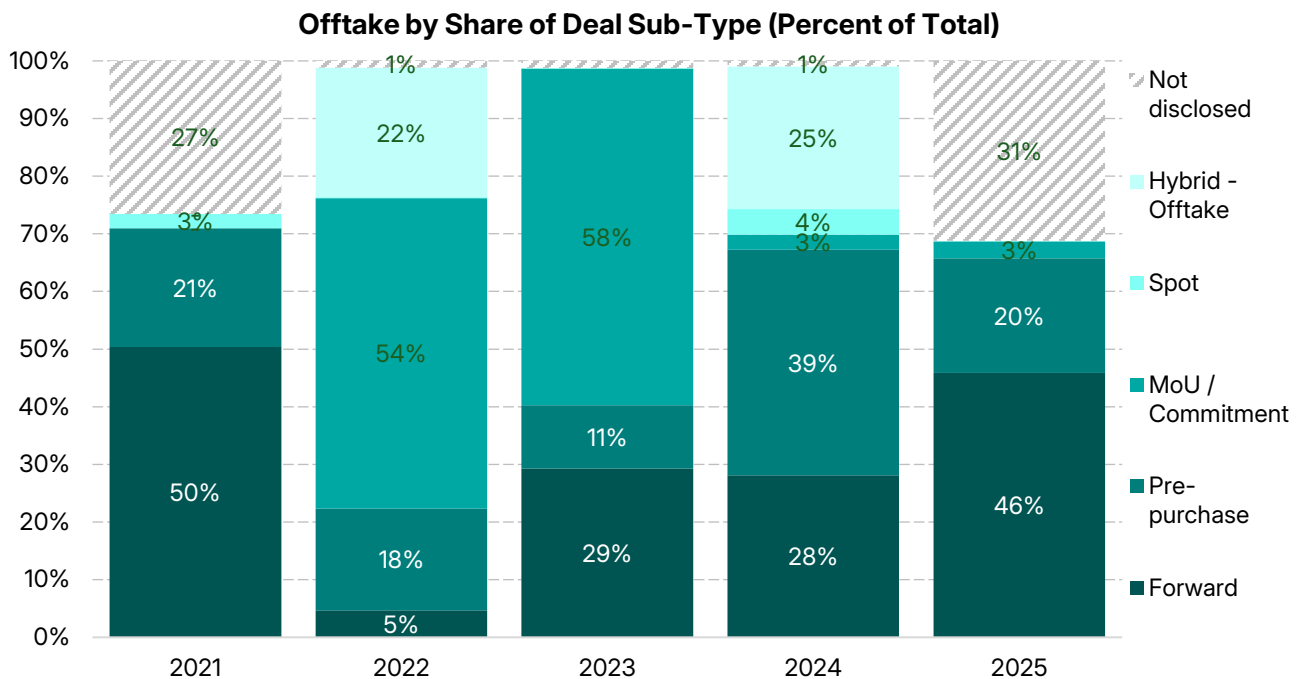


Chart 3: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.2 By Deal Status

Chart 4 breaks tracked deal activity down by status. In 2025, USD 1.4 billion was completed, USD 4.9 billion was in progress, and the remaining USD 15.6 billion — 71% of the year's total — represented committed capital yet to be deployed. While the integrity of that committed share will only be demonstrated through actual delivery in the years ahead, the proportion of capital in progress or completed has grown for the third consecutive year, pointing to an expanding base of transactions moving through to execution.

Chart 4: Capital Activity by Deal Status (USD Billion)

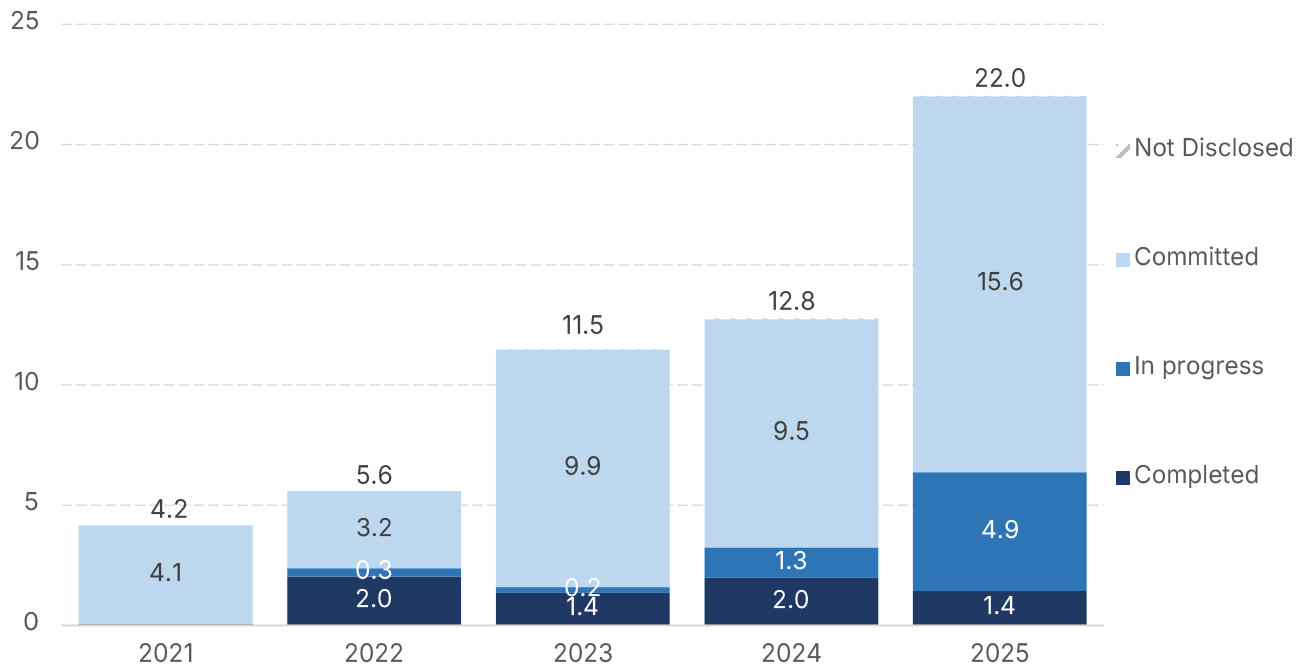


Chart 4: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.3 By Project Type

Nature Restoration and Carbon Engineering jointly accounted for USD 20.4 billion (93%) of the USD 22.0 billion in 2025 deal activity. As shown in Chart 5, the composition of deal activity by project type has shifted considerably over the period, with both categories now dwarfing all others by value (see [MSCI's Carbon Industry Classification \(MCIC\)](#) for project type details).

Carbon Engineering attracted USD 10.3 billion in 2025, more than three times the USD 3.3 billion recorded in each of the two preceding years, driven by a combination of growing corporate offtake commitments for engineered carbon dioxide removal (CDR) credits and direct investment into CDR developers and infrastructure. Nature Restoration reached USD 10.1 billion, more than double its 2024 level of USD 4.5 billion, reflecting a significant increase in the size of offtake agreements and direct investment into nature-based projects. The scaling of both categories in the same year is largely

attributable to a small number of large corporate actors making high-volume commitments across both project types rather than a broad market-wide shift in appetite.

In contrast, REDD+ activity fell for the second consecutive year, declining to USD 218 million in 2025 from a peak of USD 2.5 billion in 2023. All other project types, including Renewable Energy, Energy Efficiency and Non-CO₂ Gases, remained a negligible share of total deal activity.

Chart 5: Capital Activity by Project Type (USD Billion)

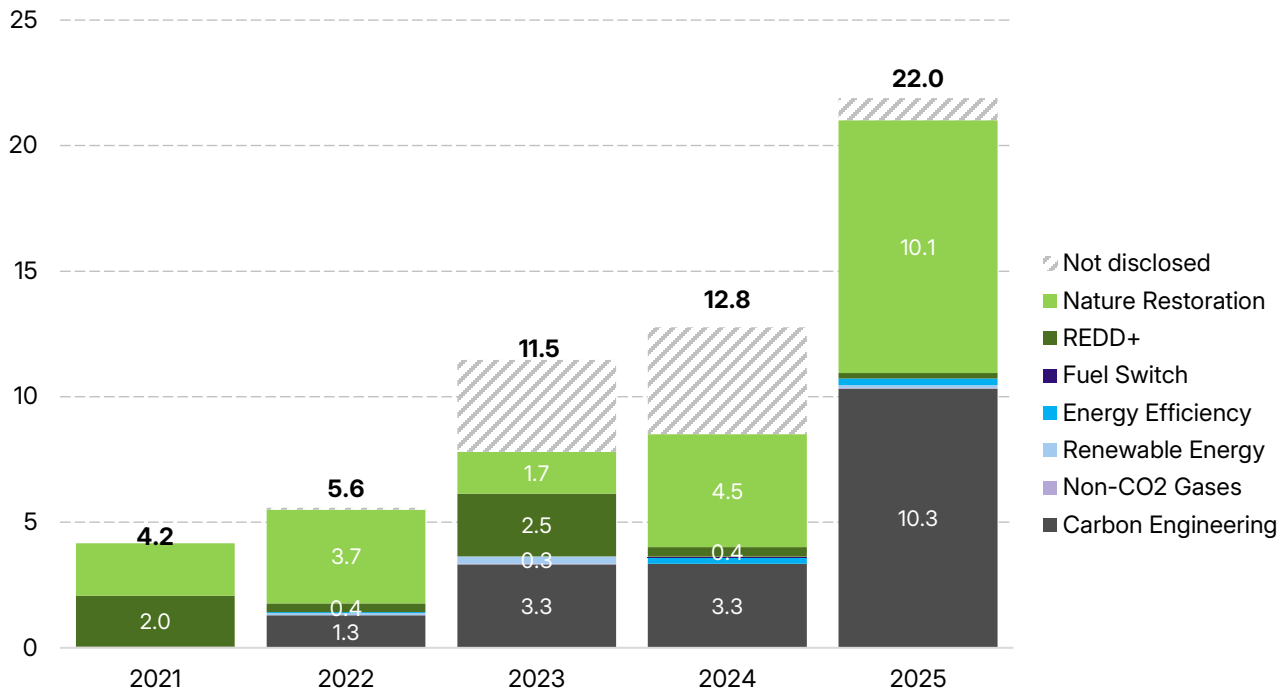


Chart 5: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.4 By Source of Capital

2.4.1 Investor Types

Since 2023 corporates have been a material and growing contributor of early-stage capital to the carbon market, a trend that accelerated sharply in 2025. As shown in Chart 6, corporate deal activity reached USD 11.4 billion in 2025, more than three times the USD 3.2 billion recorded in 2024 and represented over half of total capital activity for the year. This acceleration reflects the increasing scale of corporate forward offtake commitments as well as direct investment by large multinationals. This growth has occurred alongside a slight decline in the number of distinct investors, from 245 in 2024 to 234 in 2025, reinforcing the pattern established elsewhere in this report: aggregate deal value has grown through larger commitments from a stable or contracting participant base.

Asset manager and owner activity grew modestly from USD 1.2 billion in 2024 to USD 1.4 billion in 2025, maintaining a broadly stable level of engagement across the period. Investment fund activity fell from

USD 2.3 billion to USD 1.1 billion, the largest year-on-year decline of any investor category, suggesting a more selective environment for dedicated carbon-focused vehicles.

Government-backed sources contributed USD 2.8 billion in 2025, up from USD 1.4 billion in 2024, driven by sovereign-level commitments to nature-based and engineered carbon programme development and bilateral carbon credit trading arrangements. Multilateral financial institutions contributed USD 0.9 billion, consistent with prior years, directed primarily toward investment in project-level credit generation capacity in developing markets.

The number of distinct investors declined slightly from 245 in 2024 to 234 in 2025, even as total deal value rose 72%. This suggests that market growth has been driven by larger commitments from a contracting participant base rather than a broadening of the investor pool. Among that base, technology majors such as Microsoft have continued to increase their exposure, and their procurement strategies are examined in the following section.

Chart 6: Capital Activity by Investor Type (USD Billion)

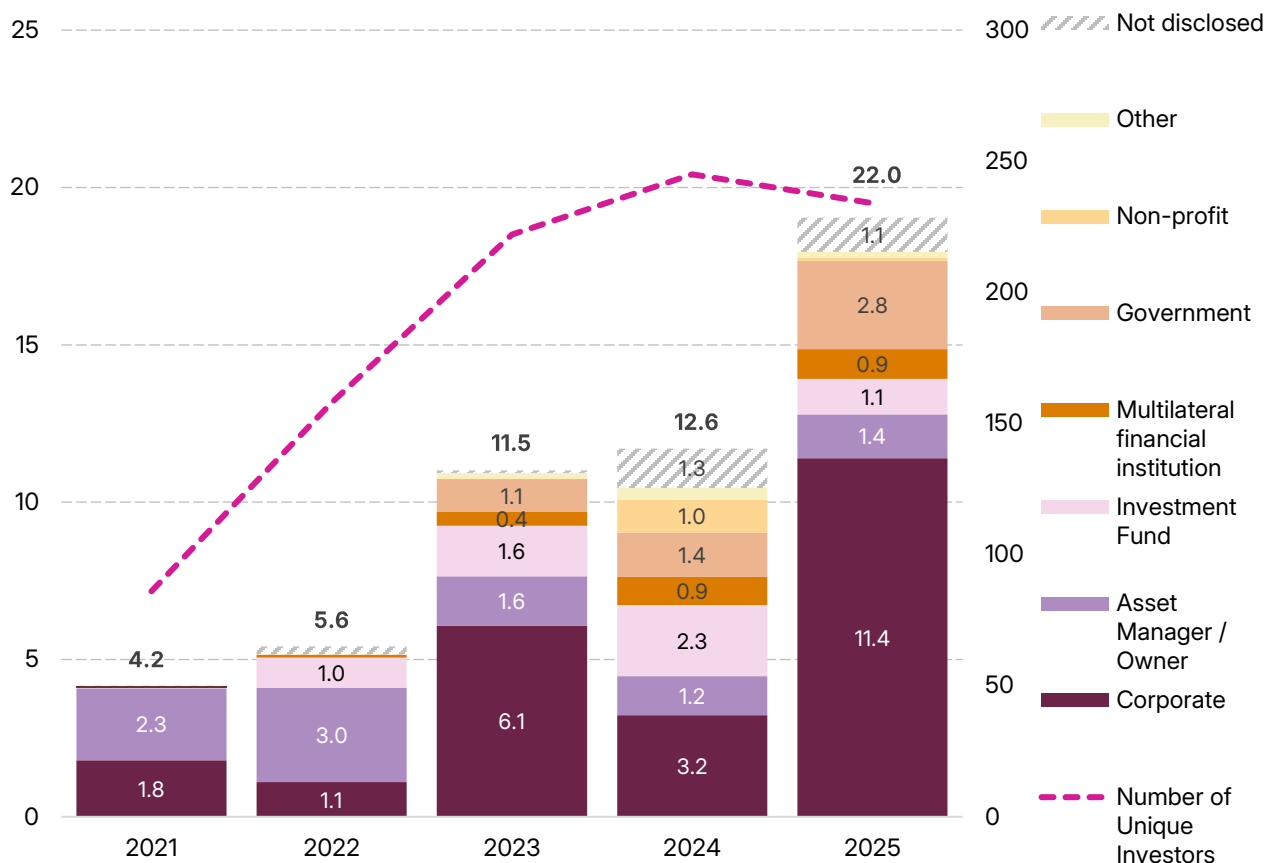


Chart 6: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.4.2 Microsoft's role in the offtake market

The concentration of corporate deal activity becomes more apparent when examining the named buyers behind the offtake figures. As shown in Chart 7, Microsoft's share of global offtake activity has grown

from 19% in 2023 to 32% in 2024, reaching 86% in 2025 at USD 10.6 billion across 23 deals. Microsoft's procurement strategy has targeted both nature-based and engineered removals. Last year they agreed USD 8.4 billion toward engineered removals and a further USD 2.2 billion toward nature-based credits, reflecting a deliberate diversification across project categories and regions.

Microsoft's long-dated procurement commitments have provided select developers with the revenue certainty needed to attract debt financing and demonstrate that large-scale carbon removal contracting is commercially viable. At the same time, a market in which a single buyer accounts for over 80% of value is structurally concentrated, and with the number of distinct market participants stable or declining, the broadening of the buyer base needed to reduce that dependence is not yet visible in the 2025 data.

The significance of this concentration became apparent in early 2026, when reports emerged suggesting Microsoft had paused new carbon removal commitments as part of a broader review of its climate strategy¹. The company subsequently denied having ended its credit buying programme and has not clarified the extent of any slowdown². Whether or not the pause proves temporary, the episode illustrates the structural vulnerability the 2025 data already points toward.

Microsoft's scale of engagement should not be read solely as a concentration risk. As a pioneer of large-scale, long-dated carbon removal contracting, it has demonstrated the commercial viability of this procurement model and established a template that other corporates may follow as pressure to meet future climate commitments intensifies. The cost opportunities that forward offtake structures can offer — securing supply ahead of anticipated price increases — provide an incentive for other buyers to engage at scale. Whether a broader corporate buyer base emerges to replicate that model is the central question the market will need to answer in the years ahead.

¹ Canary Media / Heatmap News, "Microsoft Has Paused Its Carbon Removal Purchases," Heatmap News, April 2026.

² Wes Muñoz, "Microsoft to 'build on and support' existing carbon removal portfolio, denies end to credit buying," Carbon Pulse, April 2026.

Chart 7: Microsoft's Share of Global Offtake Deals by Project Subtype (%)

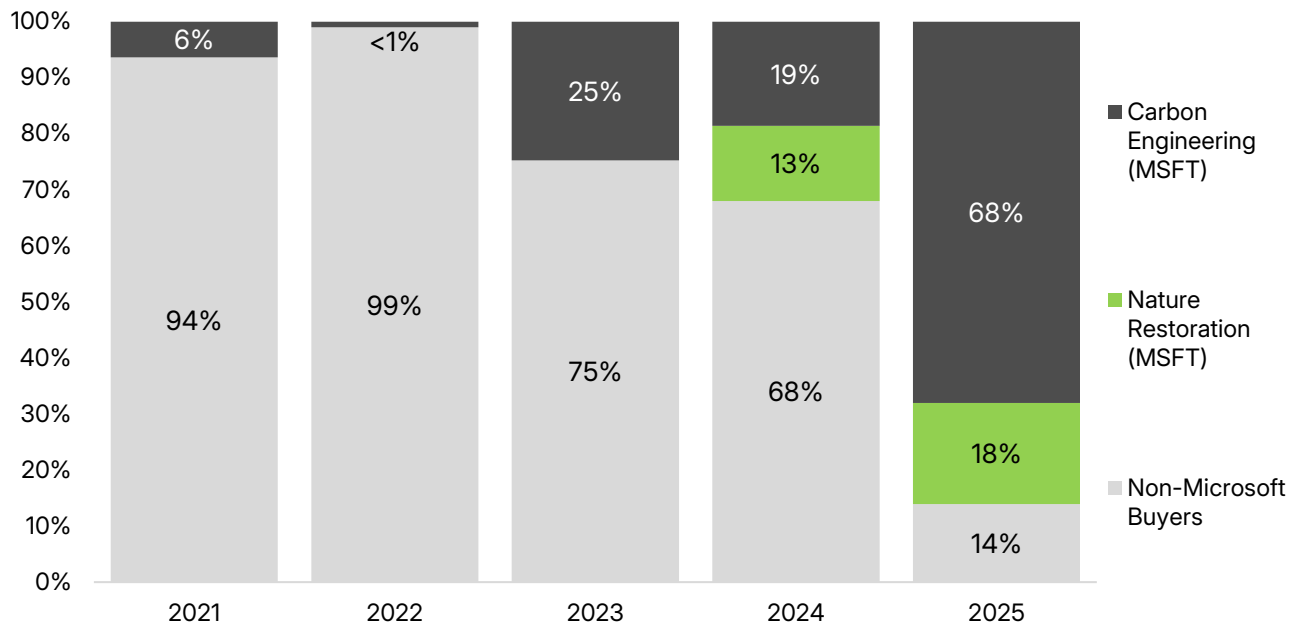


Chart 7: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.4.3 Broader Offtake Activity

Excluding Microsoft's deals, the 2025 offtake market totalled USD 1.7 billion and spread mostly across the next ten largest buyers. As shown in Chart 8, procurement was heavily skewed toward carbon engineering, with eight of the top ten buyers directing capital toward developers generating credits by Bioenergy Carbon Capture & Storage (BECCS) or Direct Air Capture (DAC).

Out of this cohort, Gunvor USA, an energy trading company, led with USD 321 million entirely in Carbon Engineering offtakes. Next was Netflix at USD 294 million as the sole Nature Restoration buyer in the top ten and a notable shift toward higher-integrity supply from a company that faced scrutiny over the quality of its carbon credit use in 2023.

Frontier at USD 213 million and Altitude at USD 176 million both directed procurement into carbon engineering across multiple transactions, as did AstraZeneca at USD 138 million and SkiesFifty at USD 107 million. The remaining buyers, Google, Wild Assets, and JPMorgan Chase, each contributed under USD 50 million, all concentrated in carbon engineering.

The concentration of offtake activity in carbon engineering is consistent with the growth in engineered CDR credit issuances, which reached a record 1.6 million tCO₂e in 2025,³ suggesting that expanding supply pipelines are supporting buyer confidence in engineered removal procurement. Nature-based

³ MSCI Carbon Markets, Projects and Transactions: Issuances and Retirements, accessed via MSCI ONE, April 2026.

demand remains present but is limited to a small number of buyers at this scale. Whether the current skew toward Carbon Engineering reflects a durable preference or the early-stage concentration of a still developing market is something to look for in years to come.

Chart 8: Top 10 Offtake Buyers by Deal Value, Excluding Microsoft (USD Million, 2025)

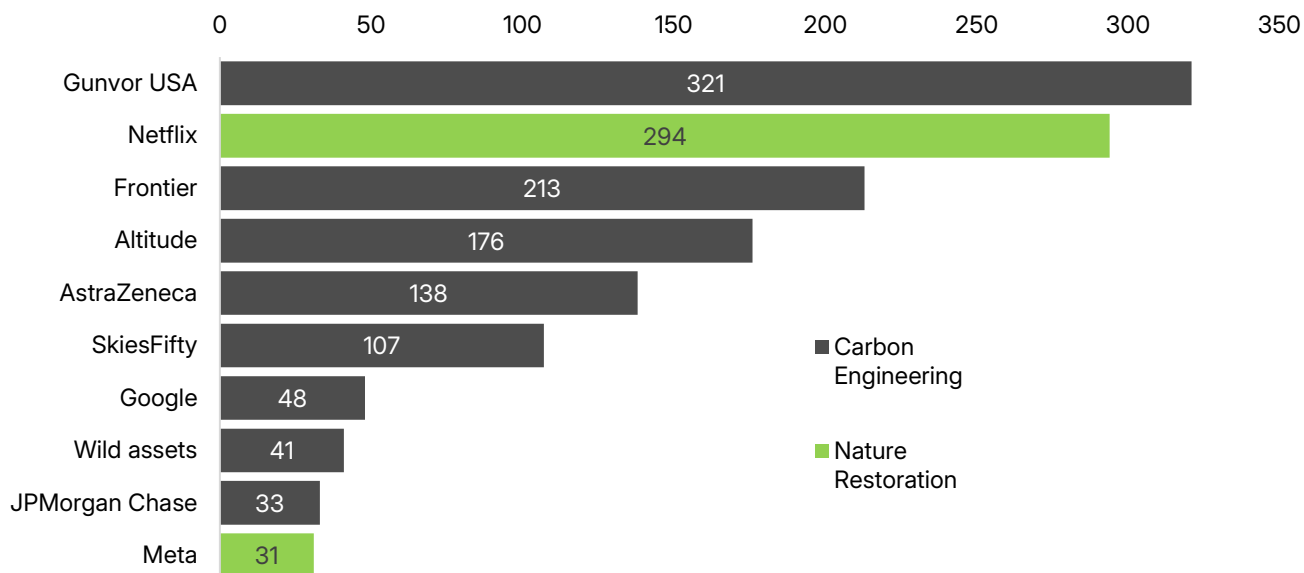


Chart 8: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

2.5 By Capital Destination

In North America, the United States was the dominant destination for carbon capital in 2025, attracting USD 5.4 billion of the USD 5.9 billion recorded across the region. Nature-based activity contributed USD 1.4 billion, reflecting sustained investment and offtake interest in Nature Restoration, namely Improved Forest Management (IFM). Carbon Engineering dominated the region at USD 4.0 billion, reflecting the concentration of capital-intensive removal technologies in wealthier markets. Europe followed at USD 1.5 billion, driven almost entirely by biochar offtake in Sweden — between them, North America and Europe accounted for virtually all disclosed engineered removal activity in 2025.

Beyond North America and Europe, nature-based projects dominated in every other region. Brazil and Bolivia led Latin America and the Caribbean at USD 0.9 billion combined, split across nature restoration projects. Australia accounted for USD 0.8 billion within East Asia and Pacific, almost entirely driven by nature restoration activity. India contributed USD 0.7 billion in South Asia. Sub-Saharan Africa recorded USD 0.5 billion in project-level flows, with Ghana the largest single contributor in the region.

The regional picture presented here should be read as indicative rather than exhaustive. Much of the capital tracked by MSCI Carbon Markets in 2025 was not accompanied by project-level location

disclosure. However, the data reveals a clear geographic split in project type: engineered removal capital activity was heavily concentrated in North America and Europe, while nature-based activity was dominant across the rest of the world.

Chart 9: Capital Flowing to Projects by Country/Region (2025)

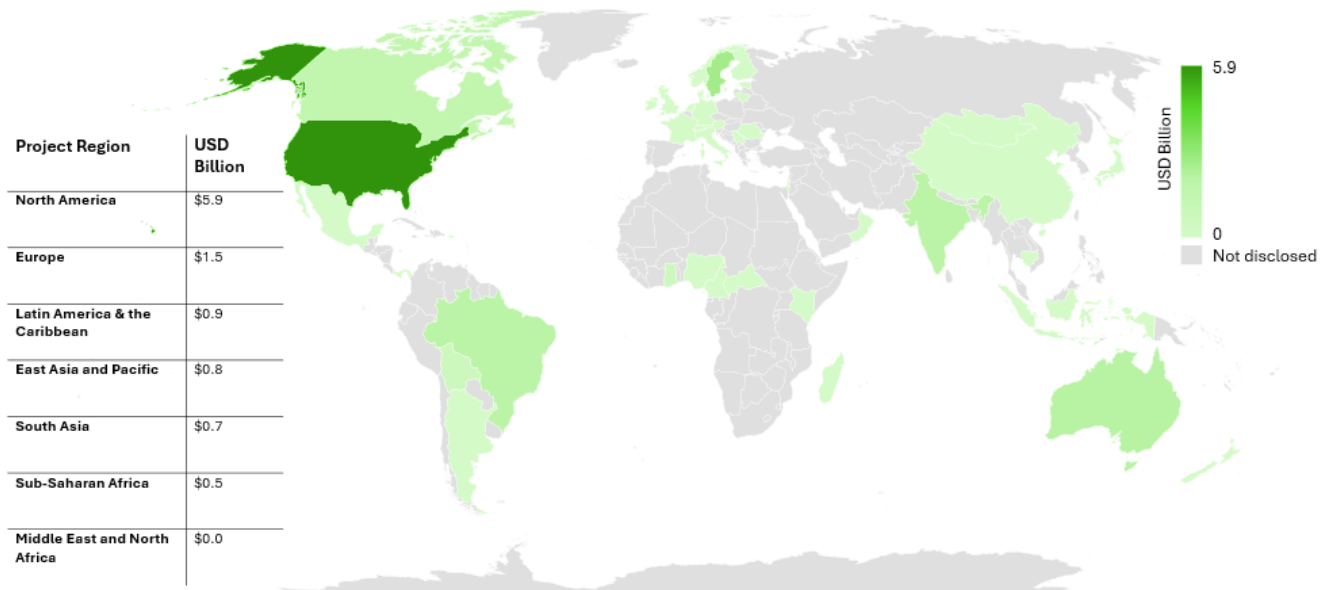


Chart 9: Data as of Dec. 31, 2025. Source: MSCI Carbon Markets

Conclusion

The 2025 data shows a market that is maturing in mechanics but not in participation. On the investment side, direct investment remains the dominant source of capital, with alternative financing structures emerging. On the offtake side, forward and pre-purchase agreements grew at the expense of MoUs and early-stage commitments, so buyers are locking in supply years ahead instead of signaling intent.

The participation picture is narrower. One buyer accounts for over 80% of tracked offtake value, the number of distinct participants fell year on year, and deal value growth came from larger commitments by existing players rather than new entrants. Whether the contracting and financing infrastructure now being built around a small group of large buyers pulls in a wider base, or whether the market stays dependent on a handful of corporates, is the question the 2026 edition will take up.

Appendix

Appendix A: Estimation Methodology for Undisclosed Deal Values

A.A Logic

Where a deal value was explicitly reported in a public announcement, that figure is used directly. Where no value was disclosed, an estimated value is derived by multiplying the expected credit delivery volume (tCO₂e) by a reference price or cost per ton, calibrated by project type and year of announcement. Expected credit delivery volumes are drawn from project-level disclosures in public announcements, including contracted volumes, projected issuance, or stated project capacity. For offtake agreements, reference prices are drawn from MSCI Carbon Markets' proprietary offtake price dataset, reflecting observed market data across project types. For investments, cost per ton estimates are drawn from MSCI Carbon Markets' project cost models, reflecting the capital required to develop and deliver credits rather than their market price.

Estimated values carry greater uncertainty than reported figures and should be interpreted accordingly. The reliability of any given estimate depends on the specificity of project type disclosure and the maturity of available pricing or cost data for that project category — estimates for well-established project types with deep observed price histories are more robust than those for nascent or heterogeneous categories. In 2025, the majority of total tracked deal value by USD was attributable to transactions with reported values, with estimated values accounting for a smaller share concentrated among smaller deals where disclosure was partial. All aggregated figures in this report represent either reported or estimated deal values on this basis.

A.B Undisclosed Deal Values Decision Flowchart

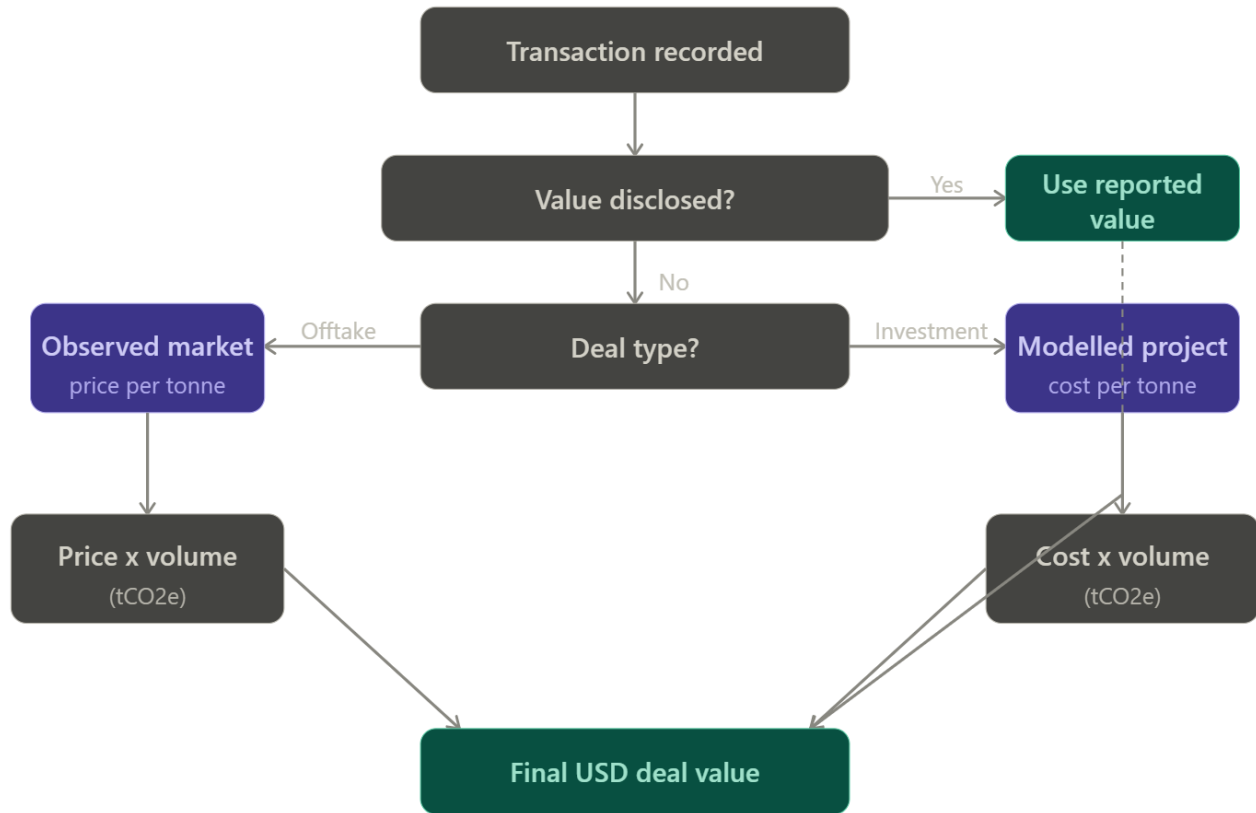


Figure 1: MSCI Carbon Markets

Appendix B: Definitions and Classification Framework

B.A Offtake agreements

Contractual arrangements to purchase carbon credits, classified by structure:

Spot — a one-off purchase of issued credits, typically in the secondary market.

Forward — a contractual commitment to purchase credits at a future date, without direct capital investment in project development.

Pre-purchase — an agreement involving upfront payment or financing in exchange for future credit delivery upon project implementation.

MoU / Commitment — a statement of intent or early-stage agreement to purchase credits, typically announced prior to contract finalisation.

Hybrid — agreements combining elements of multiple structures, such as forward commitments with upfront financing components.

B.B Investments

Financial capital deployed into entities, projects, or platforms involved in carbon credit generation, classified by type:

Direct investment — capital deployed into a company or project, including equity, project finance, strategic investment, or venture funding.

Grant — capital provided without expectation of financial return or repayment.

Loan — capital provided with an expectation of repayment, including credit facilities and project finance loans.

Hybrid — blended or structured finance arrangements combining multiple capital types.

B.C Deal status

Each transaction is assigned a status reflecting the stage of capital deployment at the time of announcement:

Committed — capital formally committed but not yet deployed, including signed agreements where delivery or drawdown occurs in future periods.

In progress — capital deployment or credit delivery partially underway but not yet complete.

Completed — capital fully deployed or credit delivery obligations fully fulfilled.

Not disclosed — insufficient information available to determine deployment stage.

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