

Discussion of

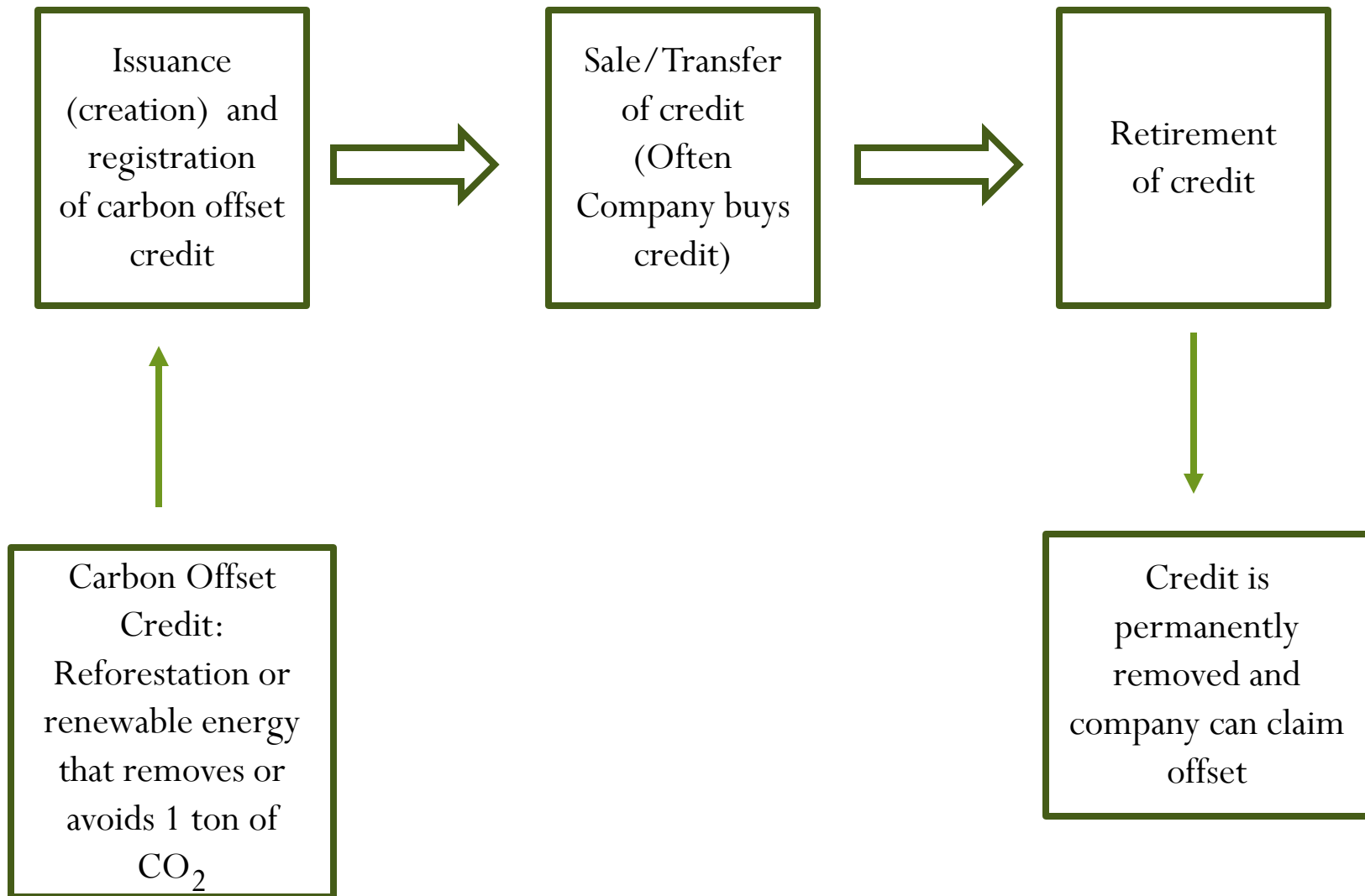
Discussion of “Do Investors Care about Carbon Offsets?” by Yeow Hwee Chua and Liuyang She

Laura T. Starks

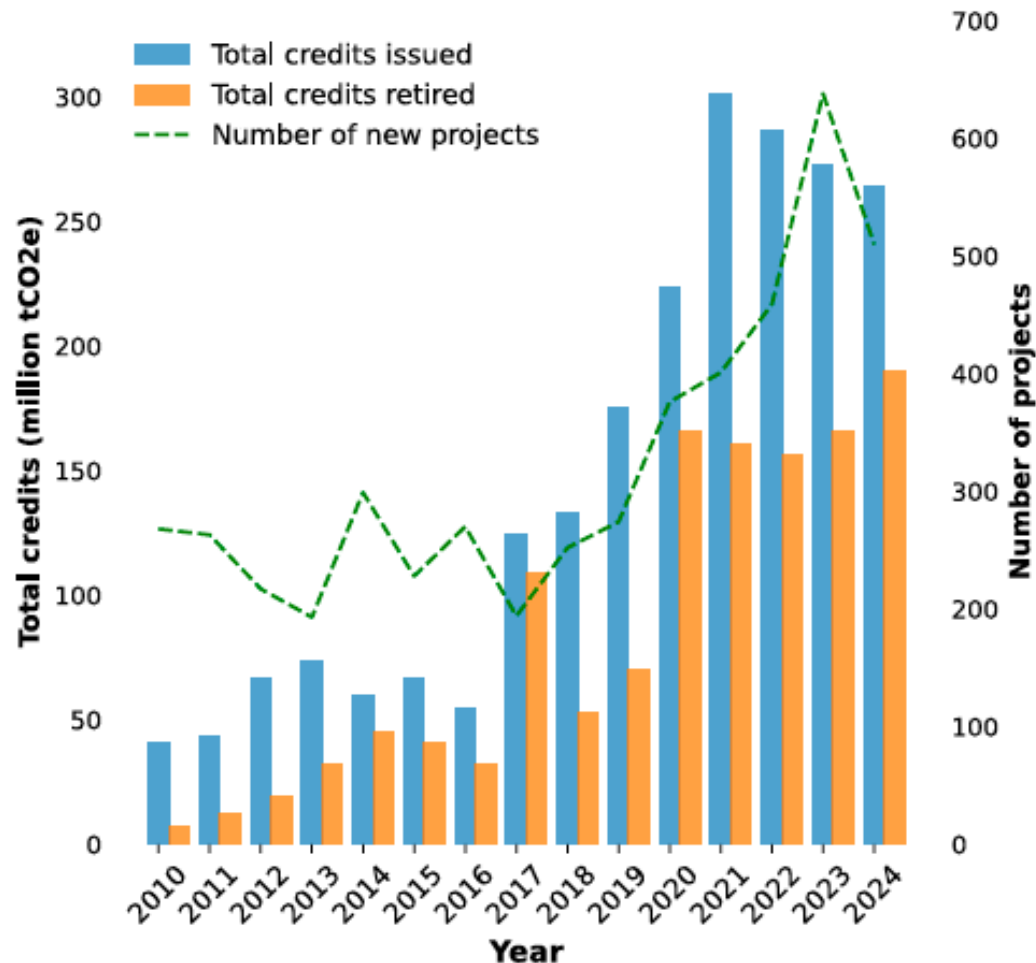
McCombs School of Business

University of Texas at Austin

Lifecycle of a Carbon Offset Credit for a Corporation



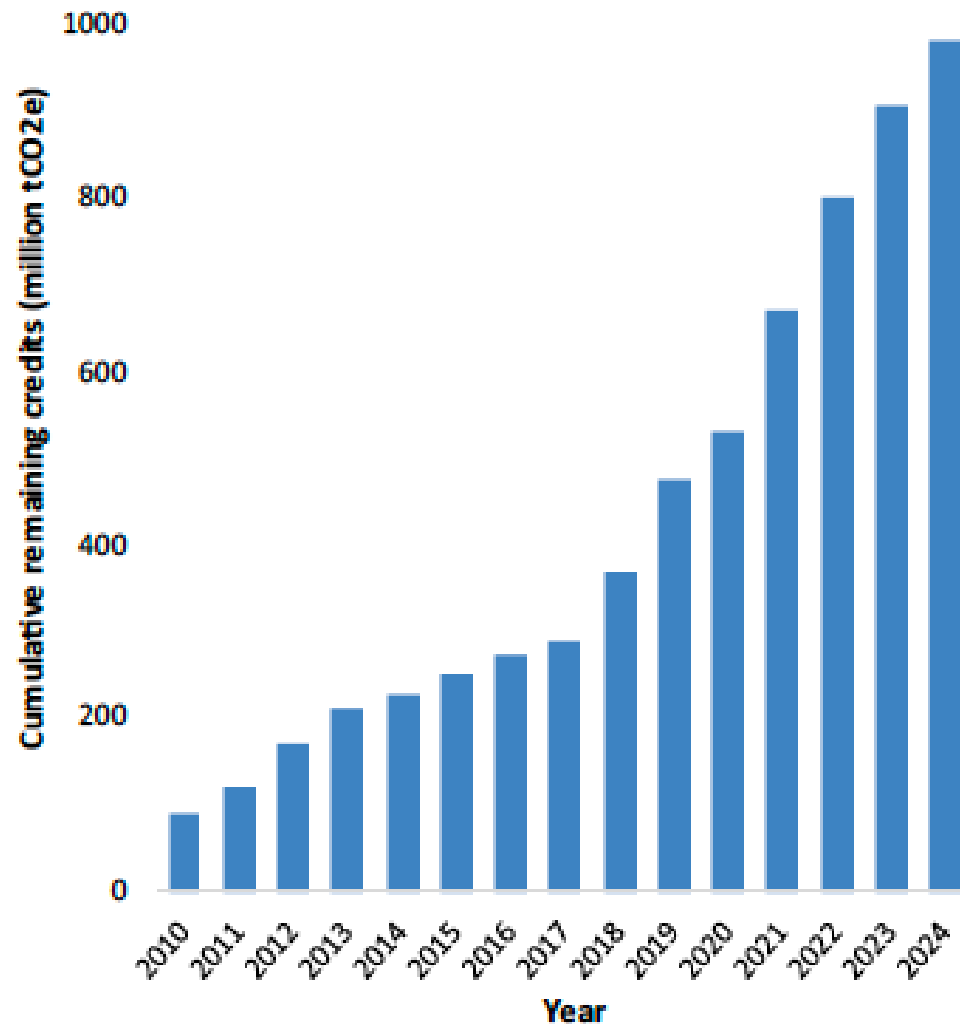
Importance of Voluntary Carbon Market



From: "The dynamics of voluntary carbon markets: An empirical analysis of the carbon credits lifecycle" Ying Liu and Pedro Gurrola-Pérez World Federation of Exchanges, February 2025

Cumulative Remaining Credits

(Credits Issued less Credits Retired)



Importance of Voluntary Carbon Market

Germany's recent coalition agreement calls for the EU to allow up to three percentage points of its 2040 net-zero target to be met using international credits. France is voicing similar requests.

It has been estimated that this could unlock demand for more than **one billion** international carbon credits between 2030 and 2040.

This forecasts huge demand in the carbon credit markets so we need to understand them better!.

Use of Carbon Offsets by Corporations

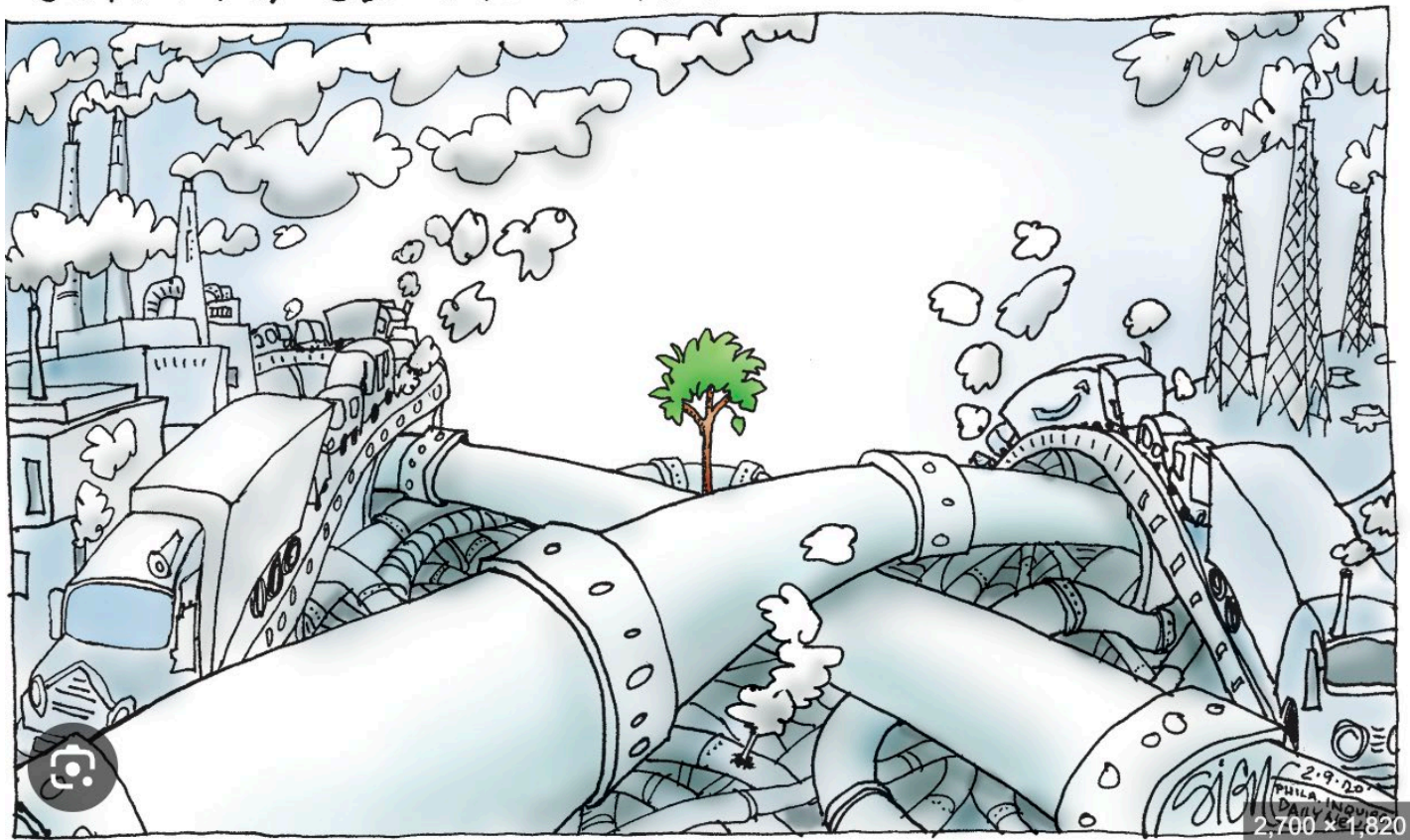
- Kim, Lee and Wu (2024 SSRN WP) Conclusions
- Firms with smaller carbon footprints use offsets more intensively and strategically to reduce their emissions indirectly. They often use low-quality credits.
- Heavy emitters tend to reduce their footprints directly and tend not to use carbon offsets.

Current paper

- Two primary innovations:
 - Considers investors' reactions (rather than firms' actions)
 - Considers quality of credits to investors
- Proposed hypotheses
 1. Investors value the retirement of credits
 2. Investors think the retirements are greenwashing by firms.

Investors consider it simply greenwashing

OUR NEW CLIMATE PLAN: PLANT A TREE!...



Major findings and conclusions focused on investors

- Stock market reactions over 15 trading days following the retirement of carbon offsets: a CAR of 1.126%
- Driven primarily by high-quality carbon offsets, e.g., removal offsets and those with recent vintage years.
- Conclusions: Investors demonstrate a sophisticated understanding of the voluntary carbon market, distinguishing between high- and low-quality offsets and consistently prioritizing quality over quantity.
- Investors view high-quality carbon offset retirements as strong signals of a firm's reputation and environmental commitment.

Additional analyses

These seem like separate papers:

- Relationship between temperature anomalies and firms' decisions on which carbon offsets to retire.
- Theoretical signaling model to examine firm decisions and investor reactions

Comments and Suggestions

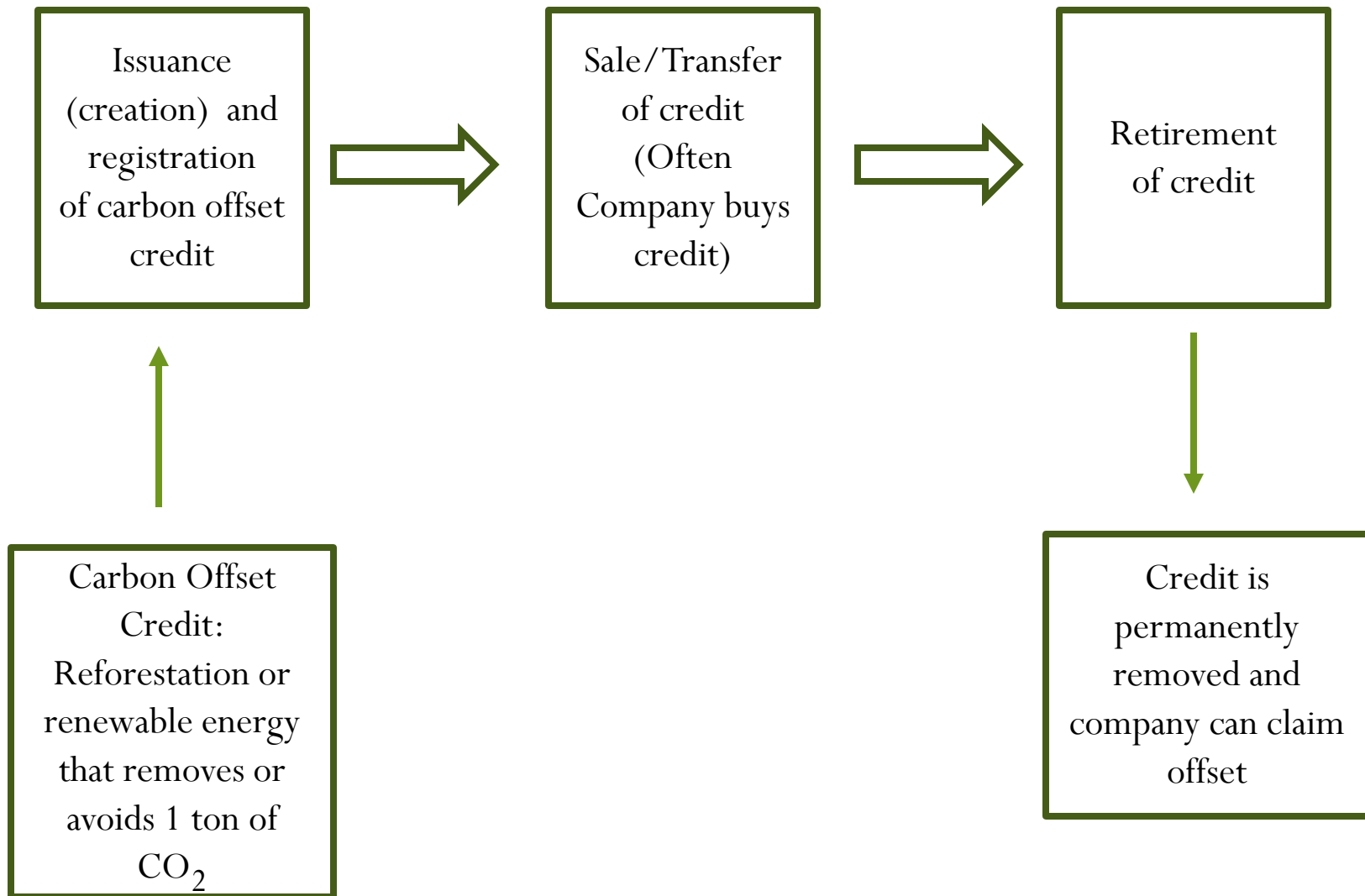
Questions: Shouldn't there exist 3 hypotheses for investor reactions?

1. Investors consider the retirement to be valuable
2. Investors think the retirement is not valuable (e.g., greenwashing)
3. Investors are indifferent

Timing of when investors get the news

- The retirement announcement is not the first information.

Lifecycle of a Carbon Offset Credit for a Corporation



Timing of when investors get the news

- The retirement announcement is not the first information.

Unpacking Microsoft's mega-purchases in durable carbon removal

The tech giant has purchased more durable credits this month than all companies combined in 2024.

By Jim Giles | April 24, 2025 *(Updated on May 9, 2025)*

Questions: About the CARs

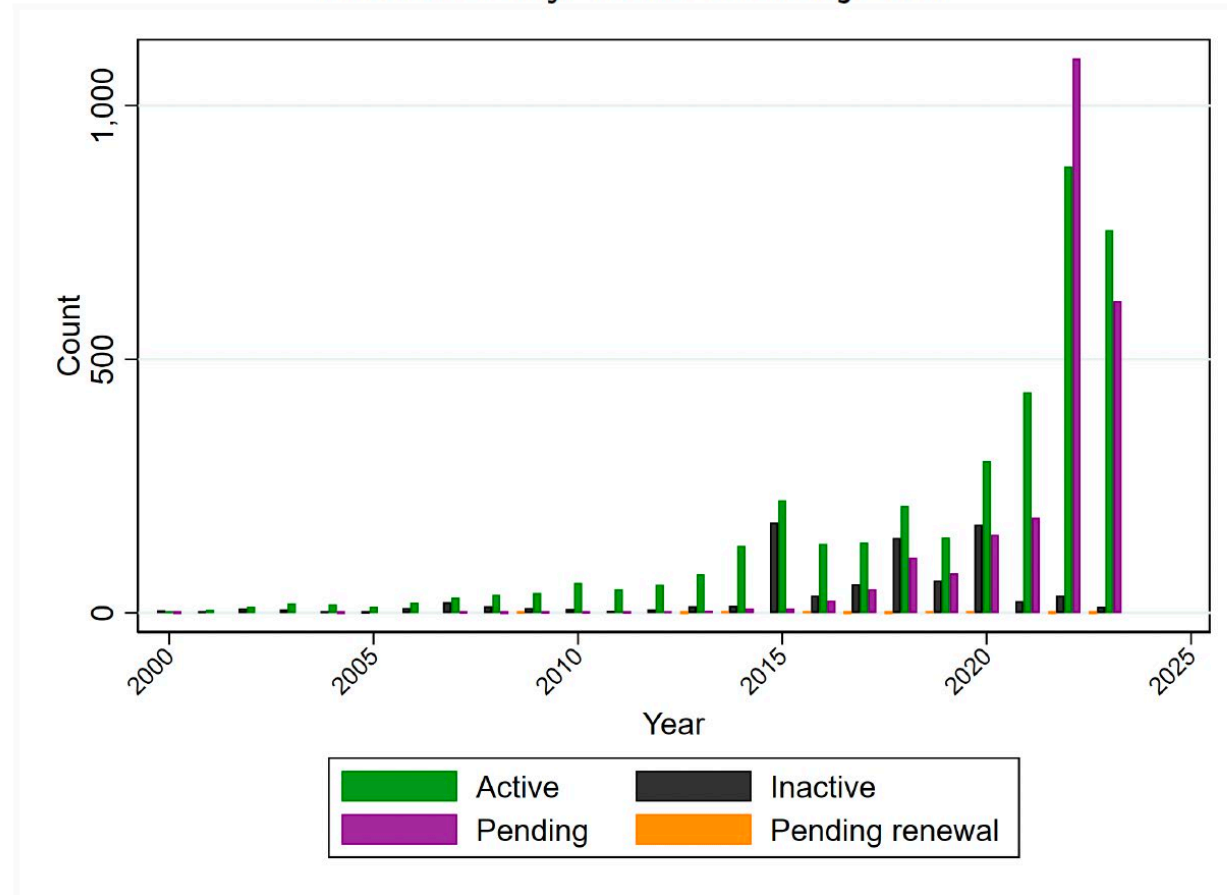
- The CARs are very large: 1.1% CAR over a 15-day period is a huge number
- Are the CARs really driven purely by information about carbon offsetting? Could other information be affecting them as well?
- For example, do firms time their offset credit retirements with other information release decisions?
- Could co-benefits from the projects help explain the results?

Carbon offset co-benefits

- Many carbon offsets include co-benefits:
 - Public-health improvement
 - Job creation
 - Biodiversity protection

Carbon Offset Projects Mentioning Biodiversity Over Time

Biodiversity-Related Projects



From “Biodiversity Co-Benefits in Carbon Markets? Evidence from Voluntary Offset Projects” by Zoey Zhou and Douglas Almond, SSRN WP, May 2025

Carbon offset co-benefits

- Many carbon offsets include co-benefits:
 - Public-health improvement
 - Job creation
 - Biodiversity protection
- The co-benefit of biodiversity protection has increased in recent years and has become increasingly valued by corporations and investors
 - Can you separate those out?

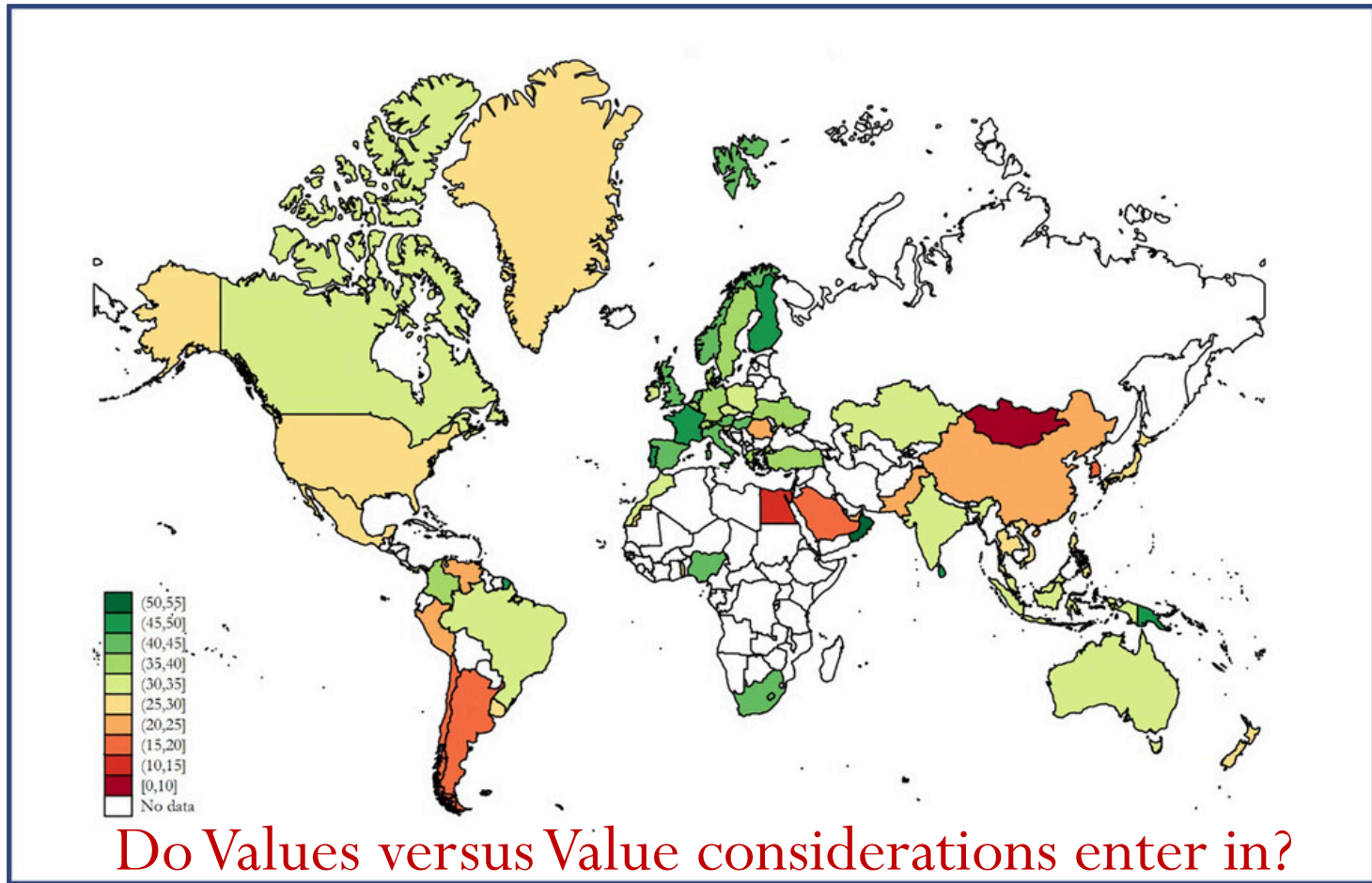
Questions: About the quality of the carbon removal projects

- Why are there so relatively few high-quality removal projects?
- Are there other benefits from using lower-quality offsets (e.g., greenwashing)?
 - Investors/stakeholders who are duped by greenwashing are probably not as attentive to daily changes in the registry data but perhaps follow ESG ratings. ESG ratings don't do a very good job at reflecting the quality of offsets and are more sensitive to reported emissions, which firms can manipulate with low-quality offsets (see Kim, Li, and Wu, 2024).
- Are investors being fooled?
 - Could you use popular third-party carbon project ratings (e.g., BeZero, Sylvera, Calyx) to assess whether investors are likely to perceive an offset project as high-quality?

Who are the investors?

- Could you examine investor holdings of the firms to determine variations in reactions across different types of investors?

What about the role of social norms?



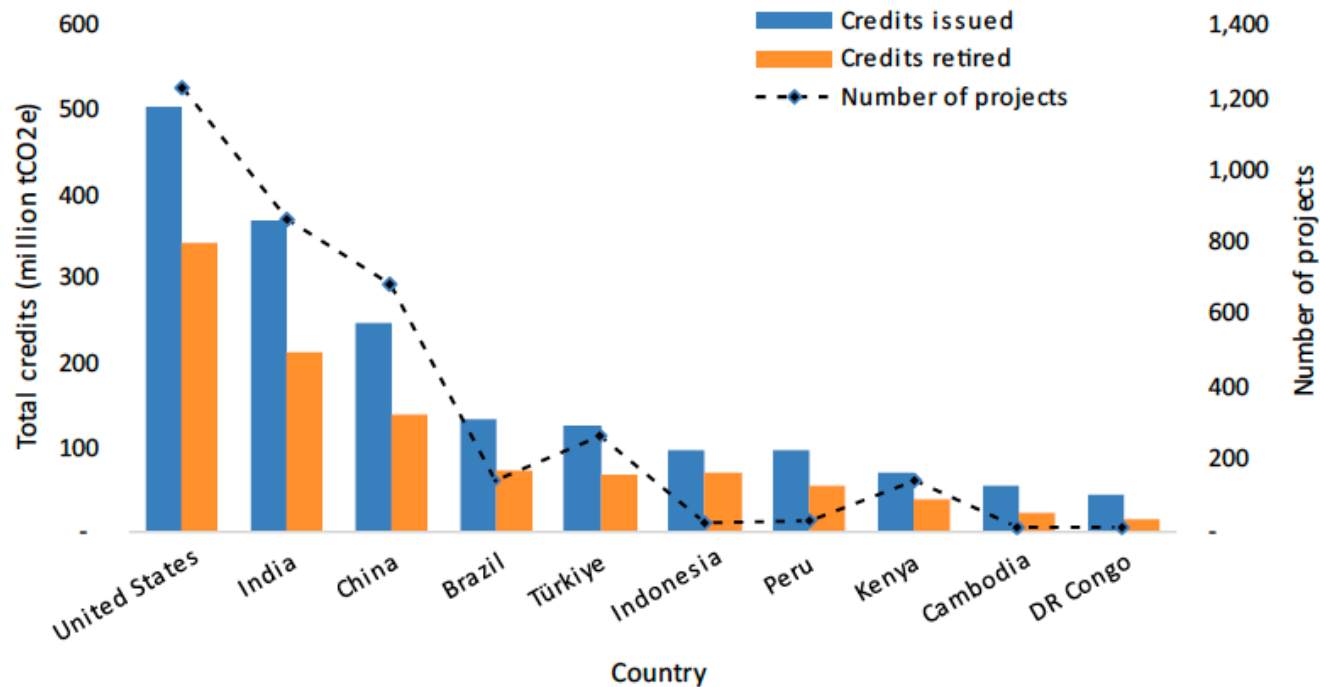
Do Values versus Value considerations enter in?

Green stocks across countries using S&P E Scores

Figure 6 from Starks (*Journal of Finance*, 2023)

Does the market reaction vary by developer country?

Figure 4 Carbon projects by developer country (Top 10 countries by number of credits issued)

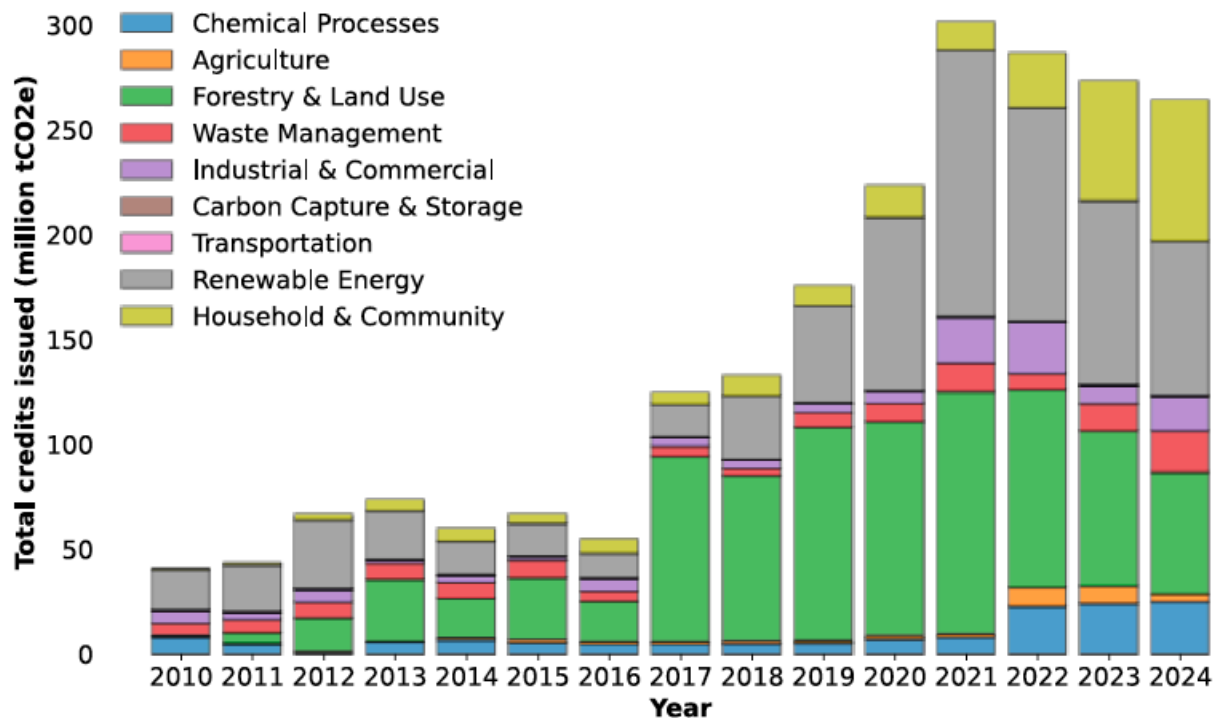


This figure plots the total credits issued and retired by projects that are developed in each country (left), and the number of projects of each country (right).

From: "The dynamics of voluntary carbon markets: An empirical analysis of the carbon credits lifecycle" Ying Liu and Pedro Gurrola-Pérez, World Federation of Exchanges, February 2025

Does the market reaction vary by project category?

Figure 10 Carbon credits issuance by project category



This figure plots the amount of carbon credits issued from the year 2010 to 2023, the projects are grouped by their scope.

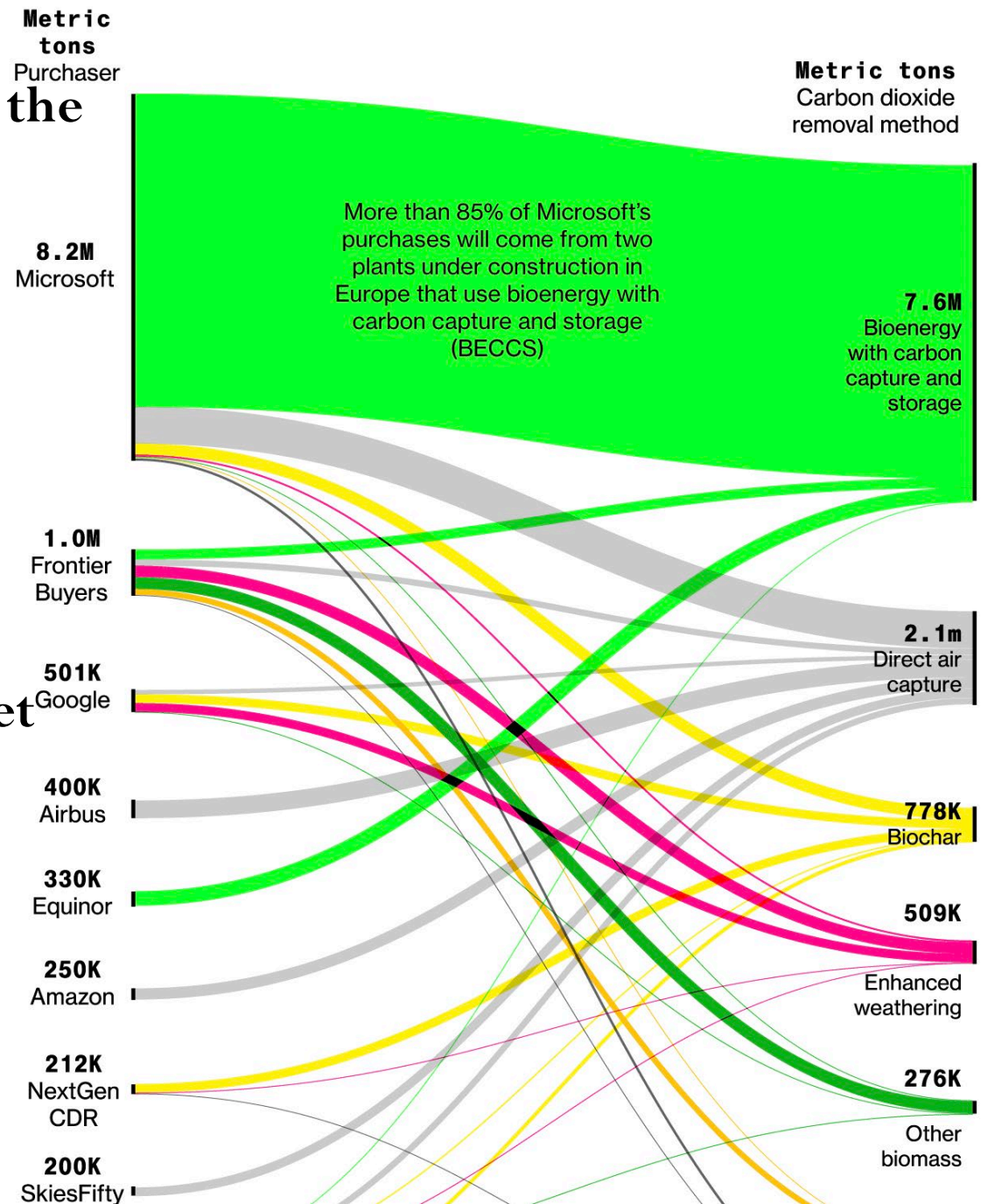
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What about changes in the markets over time?

The Carbon Removal Market is Changing!

Top 10 Buyers in Carbon Removal Market

Bloomberg, Apr 16, 2025



Overall

- Very important topic and very interesting research
- The authors' approach has great potential for generating a better understanding of the voluntary carbon market and its future.
- I look forward to future versions!