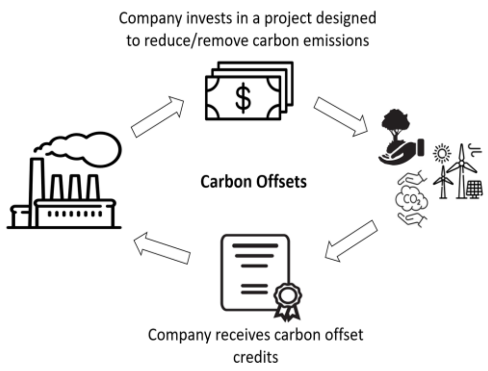
Navigating the Green Tightrope

Analyzing firm reliance on carbon offsets for decarbonization

Exhibit 1: Carbon Offset Reliance



Note: For illustrative purposes

As the urgency to decarbonize intensifies, carbon markets, both mandatory and voluntary, have become a key tool for achieving a long-term net-zero goal. Firms trade emissions via standardized carbon markets, such as the EU ETS, which regulate carbon emissions through a cap-and-trade mechanism, or through carbon offsets in the voluntary market. Offsets can play a critical role in the transition to a low-carbon economy, but they are not without controversy. Do firms simply rely on offsets to avoid the potentially harder task of sustainably decarbonizing their operations, or do they use offsets in a truly additive fashion to reduce their carbon footprints? Are some offsets better than others? In our recent paper "Navigating the Green Tightrope: Carbon Offsets, Decarbonization, and Risk," we investigate whether firms rely on carbon offsets as a substitute or a complement to their own decarbonization activities, whether risk measures reflect a firm's reliance on offsets, and the factors that explain variation in offset prices.

We find that:

- **Firms that decarbonize more also use more offsets**, implying that firms rely on carbon offsets as a complement to their decarbonization activities rather than a substitute.
- **Organizations with higher emissions rely less on offsets,** suggesting that organizations that have "more room" to reduce emissions use fewer offsets.
- **There is little evidence that market-based and analyst-driven measures of risk reflect the inherent risk in different decarbonization and offset reliance strategies.**
- We can explain roughly two-thirds of the variation in offset prices with a simple model and find higher prices for: removal versus reduction, European and North American offsets versus the rest of the world, and for forestry, land, and household/community-based (e.g. clean cooking) projects versus other types.

Investors can use these results to understand offset markets and thereby better identify companies that are likely to use offsets effectively, as well as to understand which offsets themselves are the best vehicles for efficiently funding real reductions in carbon emissions.

For more on this topic, see our 2024 working paper: **"Navigating the Green Tightrope: Carbon Offsets, Decarbonization, and Risk"** by Alexander Cheema-Fox, Megan Czasonis, Piyush Kontu and George Serafeim

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