2024 MOSKOWITZ PRIZE WINNER
RESEARCH BRIEF

ABOUT THE PRIZE

The Moskowitz Prize recognizes research that exhibits empirical excellence and the potential to inform responsible business and investing practices in the real world.

Climate Capitalists

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As multiple stakeholders seek to motivate businesses to "go green," approaches beyond carbon taxes are required.

This study shows that the cost of capital for green firms/investments—based on data extracted from corporate conference calls with investors—has decreased since the rise of sustainable investing in 2016, potentially providing all firms incentive for greener production.

SUMMARY OF FINDINGS

How can we encourage companies to adopt greener production methods and reduce emissions?

Carbon taxes remain too low to drive much change, so society requires alternative ideas and incentives to motivate firms to "go green." The authors study a potentially promising approach: making it attractive for firms to utilize greener production by lowering the cost of capital required for green investments. Previously, the cost of capital firms used to guide investment decisions was not easily observed; so the authors take a novel research approach by analyzing new data extracted from firms' corporate calls with investors.

The results show that the cost of capital used by greener firms and for greener investments has decreased since 2016, as financial markets and governments have increased their attention to climate change, as evidenced by rising assets under management in sustainable funds. Specifically, the authors find that green firms have a perceived cost of capital that is 1 percentage point lower than that of brown firms. Overall, the findings suggest that lowering the cost of capital for green investments, for example through directed investments by financial investors and governments, can at least partly facilitate the transition to a green economy.

The Cost of Green Investments?

Sustainable investing has surged well into the trillions over the past decade, with support from organizations ranging from the European Central Bank to giant asset-manager BlackRock to the Catholic Church. It has been suggested that the growth in sustainable investment lowers firms' cost of capital for green investments, motivating greener production practices. Yet it has been challenging to measure businesses' actual cost of capital to date, yielding inconclusive research results.

The authors propose a new way to overcome that research challenge: using data from corporate conference calls to analyze firms' perception of their cost of capital, based on insights regarding companies' investment decisions and associated costs. Along with that empirical analysis, the authors develop a theoretical model highlighting two channels for how lower cost of green capital might shift allocation toward greener investment: cross-firm, such that capital is reallocated from brown to green firms as the latter use green capital more efficiently; and within-firm, where individual firms favor green projects as the cost of green capital declines.

Mining Corporate Calls

To study the perceived cost of green capital, the authors analyzed conference-call data from 730 US and European firms with emissions sufficiently large to have environmental impact, over the period from 2002 to 2023. They manually recorded mentions of cost of capital and discount rates, to understand perceived cost of capital.

The researchers combined that information with "greenness" (i.e., environment-related) scores from investment-research-firm Morgan Stanley Capital International (MSCI), which provides ESG scores for

businesses across sectors, to separate sampled firms into two groups: green firms, or sustainable businesses that actively implement sustainable practices to reduce environmental impact; and brown firms, which are less likely to consider carbon emissions and other environmental impacts in business decisions. They also considered the total assets under management (AUM) of sustainable funds over time, to understand shifts in sustainable investing.

The Real-World Impact of Lower Cost of Capital
The research returned several key findings:

- Lower cost of capital for green firms: Until 2016, green and brown firms in the US and Europe had similar perceived cost of capital. After that year, as sustainable investing has risen, green firms have had a significantly lower perceived cost of capital—1 full percentage-point, on average—than their brown counterparts.
- Lower cost of capital in action: As a result, major energy and utility businesses (Shell, BP, others), have begun using lower costs of capital and discount rates for their renewable energy divisions.
- Commitment to emission reduction: Companies in sectors with a larger spread between green and brown capital costs have made a commitment to larger emission reductions, highlighting the real-world impact of the lower cost of capital for green firms driven by rising sustainable investing.

Overall, the research shows the material impact of sustainable investing on firms' perceived cost of capital, shifting capital allocation toward greener investments through both cross- and within-firm channels and ultimately helping to reduce carbon emissions. The authors have also launched a "cost of capital" project to understand how firms' perceived cost of capital and their discount rates are determined, develop over time, and influence corporate investment.

KEY DATA

- Firm perceptions of cost of capital (WACC) and discount rates from corporate conference calls (manual reading of calls available on Refinitive and FactSet databases)
- MSCI ESG ratings of firms (environment pillar score)
- Assets under management in sustainable funds (UNCTAD)
- Greenhouse gas emissions (S&P Trucost)
- Pledged emissions reductions (MSCI Climate Targets and Commitments dataset)

PRACTICAL IMPLICATIONS

- *There is potential for a cost-of-capital channel to at least partly facilitate the transition to a green economy, even absent carbon taxes and improvements in green technologies.*
- *Firms are willing to adjust the relative cost of green capital over time, implying that large-scale efforts directed at lowering the cost of green capital could affect real green investment.*
- *Public- and private-sector investors can understand that rising investment in sustainable funds and businesses has had positive environmental impact, reinforcing the multifaceted value of such investments.*

QUESTIONS FOR FUTURE RESEARCH

On the relationship between asset purchases and green firms' cost of capital:
To what extent do directed asset purchases of funds, central banks, and governments shift the cost of capital of greener firms?

On returns required for green and brown investments:
Which firms are considering using different required returns for green versus brown projects and why?