

How investors value green innovation in the corporate bond market

Yasmine van der Straten is a PhD Candidate in Finance at University of Amsterdam and will join Nova SBE as Assistant Professor in September 2025. Her research focuses on the financing of adaptation and the green transition. One of her papers examines how climate transition risk affects the cost of capital and whether investors value green innovation.

While policymakers stress the importance of achieving net-zero emissions by 2050, current progress falls short of what is needed to limit global warming to 1.5-2 degrees Celsius. Delays in climate action increase the risk of a disorderly transition, leaving firms increasingly exposed to regulatory, technological, and legal risks. Forward-looking financial investors may anticipate these transition risks and adjust firms' cost of capital accordingly. We focus on the corporate bond investors, given that bond financing serves as the marginal source of capital for many firms globally, and particularly so for emission-intensive firms. In the corporate bond market, emission-intensive firms may face a higher transition risk premium – reflected in higher yield spreads – due to investors' concerns about climate-related risks. However, investments in green innovation may help reduce this premium, by signaling a company's effort to transition to greener technologies. Our research explores whether corporate bond investors recognize and reward firms' efforts to transition toward greener

Yasmine van der Straten
PhD Candidate in Finance at University of Amsterdam



technologies since the adoption of the Paris Agreement in December 2015.

Using global firm-level data on greenhouse gas emissions and data on firm financing in the corporate bond market, we find strong evidence of a positive transition risk premium. Firms with higher carbon emissions face significantly higher bond yield spreads, showing that investors factor climate transition risk into corporate debt markets. However, our results also indicate that the transition risk premium is lower for firms actively investing in green innovation – measured by their share of green patents. A one standard deviation increase in a firm's green patent ratio lowers its transition risk premium by about 20 percent.

Our findings are robust across several tests. We control for key bond characteristics to ensure that the observed carbon premium is not driven by factors like credit risk, liquidity, or maturity. We also verify that our results are not merely reflecting a rise in bond issuance due to banks reducing lending to emission-intensive firms, nor are they driven by the ECB's Corporate Sector Purchase Programme. We further account for the rise of green financing instruments, such as green bonds, to ensure that the transition risk premium we identify is distinct from the well-documented 'greenium' – the yield discount associated with green bonds. Finally, we confirm that our results hold when applying a stricter definition of green innovation. We also find that the effect is stronger for firms with more technologically successful green patents, as measured by their citation count.

Our findings suggest that while investors tend to penalize carbon-intensive firms

with higher borrowing costs, they also recognize and reward those making efforts to transition to greener technologies. This indicates that corporate bond market investors differentiate based on firm's green innovation efforts. In other words, investors do not only respond to a company's current carbon footprint but also consider the extent to which they invest in green technologies to mitigate climate change.

Institutional investors play a particularly important role in this process. Using confidential holdings data, we find that European institutional investors, especially mutual funds, have a relatively higher demand for bonds from emission-intensive firms engaged in green innovation. These investors influence bond yield spreads related to climate transition risk, as the yield discount associated with green innovation is more pronounced when European mutual funds hold a larger share of the bond. Our findings point toward risk pricing as the primary channel through which environmental performance influences bond yield spreads. This suggests that investors with greater risk-bearing capacity play a crucial role in channeling capital toward firms making efforts to decarbonize.

As investors increasingly account for climate risks in capital allocation decisions, this can create stronger incentives for firms to invest in green technologies, to benefit from lower financing costs.

Reference

- Boermans, M., Bun, M., & Van der Straten, Y. (2024). Funding the fittest? Pricing of climate transition risk in the corporate bond market. De Nederlandsche Bank Working Paper No. 797.