Corporate net zero transition and financing cost: Evidence of impact from global energy and utilities sectors

Executive Summary

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Abstract

We study whether net zero transition (NZT) affects loan pricing in the energy and utilities sectors of the loan market. We find that firms with higher levels of overall NZT disclosure experience lower cost of debt in the loan market, controlling for loan-specific and firm financial characteristics. This association is much more pronounced in Europe than in North America and other emerging markets. We also identify relevant NZT actions contributing to such a relation. Firms disclosing clear emission reduction targets which align with the Paris Agreement enjoy lower loan spreads. Additionally, environmental R&D expenditure and improved energy efficiency policies are associated with lower loan spreads. Moreover, effective governance actions, such as environmental management training and ESG-linked executive compensation, reduce climate risks and loan spreads.

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The views expressed in this paper are solely the responsibility of the authors and do not necessarily reflect the opinions of the acknowledged individuals.

Executive summary

We investigate the impact of net zero transition (NZT) disclosures on the cost of debt in the energy and utilities sectors globally.

Driven by growing investor pressure and climate regulations, many firms have disclosed net zero transition plans. However, questions remain about how providers of finance incorporate these disclosures into their decisions. In this study, we aim to address how these disclosures affect loan financing – in particular, via the cost of debt – in the utilities and energy sectors. We also examine which specific aspects of these disclosures are relevant to financing decisions.

We conduct our investigation using a global sample of 62,825 loan facilities during 2002-2022, with borrowers located in 47 countries. We run an empirical analysis of how key NZT disclosure aspects impact loan spreads while controlling for firm and loan-level characteristics. Our NZT score measures cover disclosures on four key NZT aspects: Targets and Panning, Financial Actions, Policy Implementation, and Governance.

Our empirical analysis, including causality checks[1], reveals that firms with higher NZT scores benefit from lower loan spreads and, therefore, lower cost of debt, indicating that lenders view such firms more favourably due to their commitment to reducing carbon emissions. Our key findings include the following.

First, better NZT disclosures result in lower loan spreads.

Our results indicate a statistically significant relationship between overall NZT disclosures and reduction in loan spreads. In our global sample, a one-standard-deviation increase in the NZT score reduces the cost of a bank loan by 2.86 basis points (bps), which is a 2% decrease relative to the sample mean of 148.95 bps. The size of the effect is more pronounced in Europe, as we discuss below.

This finding suggests that banks favour firms with more comprehensive NZT disclosures, viewing them as lower risk and more creditworthy. This implies that companies could enhance their NZT disclosures to secure more favourable loan terms, potentially reducing overall financing costs. Moreover, the findings support the implementation of regulations on comprehensive net zero disclosures, which could lower the cost of capital for compliant firms and foster a faster low-carbon transition.

Second, the impact of NZT disclosures is mostly observed in Europe.

We observe that the impact of NZT disclosure is variable across jurisdictions. The NZT score has a strong and significant impact in Europe, with a one-standard-deviation increase in the NZT score

[1] While causality requires full control of an experiment, which is typically absent in ex-post analysis like ours, external shocks (such as the Paris Agreement) provide a way to establish causality by enabling a so-called “natural” experiment.

leading to a 20.7bps reduction in loan spreads. The size of effect is significant higher – over 7 times – than what we observe on the global sample.

We also observe a significant reduction in loan spreads in Europe associated with improved NZT disclosures after 2008. The impact was even more pronounced following the Paris Agreement in 2015, with a 72.4bps reduction in loan spreads per standard deviation increase in the NZT score, 3.5 times of what we observed for 2002-2022.

On the other hand, the reduction in loan spreads is only marginally statistically significant in North America, reflecting the emerging recognition of NZT disclosure in loan pricing there. Furthermore, the relationship is not statistically significant in emerging markets, implying that NZT disclosure is not yet reflected in loan pricing in these regions.

These regional and time variations of the NZT disclosure impacts could be explained by the differences in environmental policy and regulation across regions. For example, previous research by us and others shows that climate higher levels of climate policy stringency can reduce loan financing costs in the energy and utilities sectors.[2]

Third, NZT disclosure components have a variable impact on loan pricing.

NZT Dimensions	NZT components	Economic significance
Target and planning	Emission reduction target year	NS*
	Emission reduction target percentage	-1.4 basis points
	GHG Emissions Paris Agreement Aligned	-1.7 basis points
	GHG Emissions Intensity Paris Agreement Aligned	-1.4 basis points
Financial actions	Environmental R&D expenditure	-1 basis points
	Environmental investments	NS
Policy implementation	Energy efficiency policy	-2.5 basis points
	Environmental supply chain policy	NS
Governance	Environmental management team	-2.9 basis points
	Environmental management training	-6.4 basis points
	Remuneration for climate performance	NS
	Executive Compensation for ESG	-5.2 basic points

NS*: Not statistically significant.

Under the Target and Planning category, disclosures on emission reduction targets, as well as total emission and emission intensity reduction alignment with the Paris Agreement contribute to lower loan costs. The reduction in loan spreads for one-standard-deviation increase for each of these disclosures is 1.4bps, 1.7bps and 1.4bps, respectively. While these effects are moderate, the results imply that these NZT disclosure elements are all relevant components that are priced by banks.

[2] Zhou et al. (2024) found that climate change policy is a key transition risk impacting cost of debt. Stroebel & Wurgler (2021) identified climate change regulation as the most significant risk to businesses and investors.

Under the Financial Actions category, disclosure on environmental R&D expenditure is negatively related to the cost of loans. A one-standard-deviation increase in disclosure on R&D expenditure is associated with a 1bps drop in loan spreads, highlighting the importance of technological innovation in reducing climate risks. This result implies that investors agree that technological innovation is the key factor in addressing climate change.[3] However, we do not find such a significant impact of disclosure on broader environmental investment indicators.

Under the Policy Implementation category, firms with improved disclosures on energy efficiency policies benefit from the reduction in loan spreads. A one-standard-deviation increase in disclosure on energy efficiency policy is associated with a 2.5bps drop in loan spreads. This finding supports that energy efficiency can play a significant role in combating climate change.[4] However, we do not find an impact of disclosure on environmental supply chain policies.

Under the Governance category, disclosures on environmental governance, including environmental management team and training and ESG-linked executive compensation, reduce loan spreads. The reductions in loan spreads for one standard deviation increase for each of these disclosures are 2.9bps, 6.4bps, and 5.2bps, respectively. A particularly interesting finding is that disclosure on management training disclosure has the highest. The results indicate that disclosure of governance elements to facilitate net zero transition reduces climate change risks and is integrated into the pricing of loans.

In conclusion, the study provides robust evidence that firms' progress in net zero transition disclosures is increasingly factored into the cost of debt, particularly in Europe post-2008.

We find that lenders are incorporating NZT disclosures into their risk assessments, resulting in more favourable loan terms for firms with strong commitments to reducing carbon emissions. The findings underscore the growing financial benefits for companies to align with global climate goals.

Future research may investigate how NZT plan disclosures and credibility impact pricing in other asset classes (e.g., equity). Future research may also investigate whether legislation of NZT plans affects corporate NZT performance – disclosure as well as credibility – and asset allocation towards low carbon activities.

[3] Töbelmann, D., & Wendler, T. (2020). The impact of environmental innovation on carbon dioxide emissions. Journal of Cleaner Production, 244,11878.

[4] Popp, D. (2010). Innovation and climate policy. *Annual Review of Resource Economics*. Vol. 2:275-298

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