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Amid growing internal and external pressures, analyzing how financial networks influence corporate carbon information disclosure (CID) performance is essential for improving transparency in sustainable supply chains. By employing text analysis and network methods, we study how supply chain finance (SCF) networks affect corporate CID performance under external oversight, using data from Chinese listed firms (2010-2022). The findings reveal that SCF networks improve CID performance by stimulating R&D investments. When government regulation is weak, these networks help expand financing channels and compensate for insufficient internal incentives for CID. Media scrutiny enhances firms' ability to leverage SCF networks for low-carbon disclosure. This study offers practical insights for firms to explore innovative supply chain financing strategies and low-carbon management within regulatory frameworks.

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