

# Green Financing and Financial Risk Management in Indian Renewable Energy Investments: Evidence from India

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## ABSTRACT

This study explores relation between green financing and financial risk management in renewable energy sector. As the nation strives to meet its renewable energy targets, mobilizing sufficient capital and effectively managing associated risks have emerged as critical challenges. The research aims to analyse the current mechanisms of green financing and evaluate financial risk management practices, providing a comprehensive understanding of their role in fostering sustainable energy investments. The study employs a mixed-methods approach, incorporating quantitative data analysis and qualitative insights from industry reports, case studies, and expert commentary. Key findings highlight the growing significance of green bonds, sustainability-linked loans, and blended finance models in addressing financing gaps, while also revealing persistent challenges such as high financing costs, regulatory complexities, and limited investor confidence. The research further identifies major financial risks, including market fluctuations, policy uncertainty, and credit risk, and evaluates the effectiveness of risk mitigation strategies like public-private partnerships, risk-sharing frameworks, and enhanced policy interventions. The results of the study highlight the importance of innovative financial instruments, improved risk management tools, and greater stakeholder collaboration to align financial mechanisms with India's renewable energy objectives. The study advocates need for further research in the area of integrating advanced technologies with data-driven solutions into green finance strategies. The financial eco system plays an important role in achieving a long term sustainable, low carbon economy.

**Keywords:** Green Financing; Financial Risk Management; Renewable Energy Sector

