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ENVIRONMENTAL RISK ASSESSMENT AND RISK MANAGEMENT FOR GREEN FINANCE DECISION-MAKING

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Abstract

This study addresses the challenges of environmental risk assessment and management in green finance decision-making. We propose two novel methods: an environmental risk prediction model based on a multistage fusion regression network and an environmental risk consensus decision-making method. The multi-stage fusion regression network model captures the dynamic characteristics of environmental risks and provides accurate predictions, outperforming existing models such as CNN, RNN, LSTM, and DBN. The consensus decision-making method improves the efficiency and quality of group decision-making by adjusting evaluation information between decision-makers, particularly in large-scale decision-maker groups. Experimental results demonstrate the effectiveness of the proposed methods in enhancing the accuracy, stability, and consensus of environmental risk assessment and management. Our findings provide valuable insights and practical tools for green finance practitioners to optimize their investment portfolios, reduce potential environmental risks, and promote sustainable development.

Key words: consensus decision-making, environmental risk assessment, green finance, multi-stage fusion regression network, prediction model, risk management

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