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Default Prediction Models: The Role of Forward-Looking Measures of Returns and Volatility

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Abstract

This paper proposes a variant application of the Merton distance-to-default model by employing implied volatility and implied cost of capital to predict defaults. The proposed model's results are compared with predictions obtained from three popular models in different setups. We find that our "best" model, which contains both forward-looking proxies of returns and volatility outperform other models, carries a default prediction accuracy rate of 89%. Additional analysis using a discrete-time hazard model indicates the psuedo-R^2 values from regression models that include the two forward-looking measures are as high as 51%. Overall, our results establish the informational relevance of implied cost of capital and implied volatility in predicting defaults.

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