UNIVERSITI TEKNOLOGI MARA

TECHNICAL REPORT

A COMPARISON OF KMV-MERTON AND KMV-EDF MODEL IN PREDICTING DEFAULT RISK OF COMPANIES

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IN THE NAME OF ALLAH, THE MOST GRACIOUS, THE MOST MERCIFUL

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ABSTRACT

This research implemented the KMV-Merton model and KMV-EDF model to predict the default risk of AA and C rated companies which are UEM Sunrise Berhad and Talam Corporation Berhad respectively. By using this model, the distance to default and probability to default of the companies are predicted. The comparison and validation of the predicted default risk of the two companies is also done by the actual rating of companies.

In this study, the credit risk of the company is often discussed as the risk of the default of the company. Default of the company is usually associated with the bankruptcy of the company. We are interested in the credit event or default event which is defined as a failure to accomplish a predetermined liabilities or to meet requirements detailed in the agreement. KMV-Merton and KMV-EDF model will calculated distance to default and probability to default of the companies.

Based on calculating the distance to default, the result shows that UEM Sunrise Berhad is better than Talam Corporation Berhad in managing their company from being bankrupt. As for the credit rating companies, the default probability is evaluated to get the predicted credit rating companies. From both models, it can be conclude KMV-EDF model is way more better for company to use since it give the better result for the companies than KMV-Merton model.

For the recommendation, other companies can use this model to predict the probability of default. Besides, to make the lower credit ratings, the companies have to know how to manage their debt by reducing the expenses.

As conclusion, KMV-Merton and KMV-EDF models are able to predict probability of default and distance to default for AA and C rated companies. There are slightly difference in value for distance to default and probability of default for both models. This is because both models are using difference formula in calculating distance to default.

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