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# Using DEA and financial ratings for credit risk evaluation: an empirical analysis

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## Abstract

The article deals with the methodologies for credit risk evaluation. It describes an empirical analysis carried out on a sample of Italian firms belonging to the leather manufacturing and wholesale industry. The study uses the efficiency, calculated through data envelopment analysis (DEA), and the credit rating at the same time. As long as efficiency is calculated by using inputs and outputs strictly linked to the credit reliability of the firm, the study confirms that there is a relationship between efficiency and credit rating, and then that efficiency can be considered as an early warning index for evaluating credit risk.

## Keywords:

credit risk

credit rating

DEA

efficiency

MORE

leather industry

## Notes

<sup>1</sup> Firms moving upwards and right have the following characteristics: efficiency increases and rating becomes not less than the previous one. Firms moving downwards and left have the following characteristics: efficiency decreases (or becomes not less than the previous one) and rating becomes not less than the previous one.

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