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# The portability of altman's Z-score model to predicting corporate financial distress of Slovak companies

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## Abstract

The paper challenges the widespread use of Altman's bankruptcy formula known as the "Z-score model" in Slovak corporate practice and comes with the goal to verify its usability in the Slovak economic environment. To this end, a definition of financial distress is adopted that summarizes weaknesses of Slovak enterprises stemming particularly from liquidity drain and operating losses. The verification juxtaposes three variants of the Z-score model and assesses their prediction ability using a data set of Slovak enterprises for the period from 2009 until 2013. Both the original 1968 Z-score model and the revised 1983 Z-score devised for the US economic environment are compared with the Z-score model re-estimated to the Slovak data copying the methodological procedure of Altman. The results indicate that Altman's bankruptcy formula is portable into the Slovak economic conditions and useful for predicting

financial difficulties in view of the adopted definition of financial distress. Altman's original and (especially the) revised formulation of the Z-score model are preferable if overall classification accuracy is the main interest. Finally, it is advisable to re-estimate the coefficients of the Z-score model if financially distressed enterprises are the focus and the goal is to classify distressed enterprises as best as possible.

Keywords:

Altman's bankruptcy formula   Slovak enterprises   financial distress   classification accuracy  
true positive rate

JEL Classification:

G33   M40

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## Additional information

### Notes on contributors

Martin Boďa

Martin BOĎA (Slovakia, 1984) orientates his scientific work to applications of a wider spectrum of quantitative methods in finance and economics. His scientific preparation is founded in the area of economics and finance (finance, banking and investment; tourism) and of quantitative methods (mathematical statistics and financial mathematics; probability and mathematical statistics). His professional orientation may be broken into three chief fields: (1) efficiency measurement in banking, (2) applications of data envelopment analysis in finance, (3) financial risk measurement.

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## Vladimír Úradníček

Vladimír ÚRADNÍČEK (Slovakia, 1963) has his scientific work continually directed towards application of quantitative methods in the area of finance, corporate economics and management. His scientific and professional activities are targeted at four compact parts: (1) pricing of financial derivatives, (2) financial mathematics and financial analytics, (3) corporate financial health prediction, and (4) investigation of economic sustainability and convergence issues. Vladimír Úradníček currently occupies the position of Vice-Dean at the Faculty of Economics of Matej Bel University in Banská Bystrica, Slovakia.

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