Implied Probabilities of Default from Colombian Money Market Spreads: The Merton Model under equity market informational constraints

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AUTHORS AND/OR EDITORS León-Rincón, Carlos Eduardo
Informational constraints may turn the Merton Model for corporate credit risk impractical. Applying this framework to the Colombian financial sector is limited to four stock-market-listed firms; more than a hundred banking and non-banking firms are not listed.

Within the same framework, firms' debt spread over the risk-free rate may be considered as the market value of the sold put option that makes risky debt trade below default-risk-free debt. In this sense, under some supplementary but reasonable assumptions, this paper uses money market spreads implicit in sell/buy backs to infer default probabilities for local financial firms. Results comprise a richer set of (38) banking and non-banking firms. As expected, default probabilities are non-negligible, where the ratio of default-probability-to-leverage is lower for firms with access to lender-of-last-resort facilities.

The approach is valuable since it allows for inferring forward-looking default probabilities in the absence of stock prices. Yet, two issues may limit the validity of results to serial and cross-section analysis: overvaluation of default probabilities due to (i) spreads containing non-credit risk factors, and (ii) systematic undervaluation of the firm's value. However, cross-section assessments of default probabilities within a wider range of firms are vital for financial authorities' decision making, and represent a major improvement in the implementation of the Merton Model in absence of equity market data.

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