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Estimating cost of capital in firm valuations with arithmetic or geometric mean – or better use the Cooper estimator?

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Abstract

We test the extent and determinants of bias effects of the arithmetic as well as the geometric mean estimator and the estimator of Cooper [1996. Arithmetic versus geometric mean estimators: Setting discount rates for capital budgeting. European Financial Management 2 (July): 157–67] regarding discount rate estimation for firm valuation by way of a bootstrap approach for 13 different countries. The Cooper estimator is superior to both the geometric and the (conventional) arithmetic mean estimator. However, a ‘truncated’ version of the arithmetic mean estimator leads generally to better estimation outcomes than the Cooper estimator. This means that, in order to reduce problems of upward-biased firm value estimates, expected cash flows beyond a certain time horizon are completely neglected in terminal value estimation. Such an approach seems particularly reasonable for the valuation of young growth

companies as well as for companies from quickly developing countries such as Brazil, China, or Thailand, because the bias in terminal value estimation is increasing in the growth rate of future expected cash flows.

Keywords:

arithmetic mean | cost of capital | estimation bias | firm valuation | geometric mean

Keywords:

G12 | G34 | G24

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