

Toehold Purchase Problem: A comparative analysis of two strategies

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Toehold purchase, defined here as purchase of one share in a firm by an investor preparing a tender offer to acquire majority of shares in it, reduces by one the number of shares this investor needs for majority. In the paper we construct mathematical models for the toehold and no-toehold strategies and compare the expected profits of the investor and the probabilities of takeover the firm in both strategies. It turns out that the expected profits of the investor in both strategies coincide. On the other hand, the probability of takeover the firm using the toehold strategy is considerably higher comparing to the no-toehold strategy. In the analysis of the models we apply the apparatus of incomplete Beta functions and some refined bounds for central binomial coefficients.

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