Optimal Investment Timing with Linearly Additive Geometric Brownian Motions: The General Case[*]

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Abstract. I extend the study by Hu and Øksendal (Finance Stoch. 2:295–310, 1998) and consider the problem of investment timing in which both revenue and cost components consist of linearly additive geometric Brownian motions. It is shown that the optimal stopping region contains the convex hull of the stopping regions for all two-dimensional cases. I also provide sufficient conditions that guarantee that the stopping region coincides with the convex hull.

Keywords: geometric Brownian motion, optimal stopping time, continuation region, convex hull.

JEL classification: D81, G11.