Speculative trading, prospect theory and transaction costs.

Summary: A speculative agent with prospect theory preference chooses the optimal time to purchase and then to sell an indivisible risky asset to maximise the expected utility of the round-trip profit net of transaction costs. The optimisation problem is formulated as a sequential optimal stopping problem, and we provide a complete characterisation of the solution. Depending on the preference and market parameters, the optimal strategy can be “buy and hold”, “buy low, sell high”, “buy high, sell higher” or “no trading”. Behavioural preference and market friction interact in a subtle way which yields surprising implications on the agent’s trading patterns. For example, increasing the market entry fee does not necessarily curb speculative trading, but instead may induce a higher reference point under which the agent becomes more risk-seeking and in turn is more likely to trade.

MSC:
60G40 Stopping times; optimal stopping problems; gambling theory
60J60 Diffusion processes

Keywords:
sequential optimal stopping; S-shaped utility; transaction costs; entry-and-exit strategies

Full Text: DOI arXiv

References: