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INCORPORATING REGRET IN THE DECISION TO SELL STOCKS: AN EMPIRICAL ANALYSIS

Abstract:

In our work we try to replicate experimental findings of Strack and Viefers (2017) on an actual dataset, containing investors trading records. Strack and Viefers (2017) show in a laboratory experiment that investors tend to follow Regret Theory (Loomes and Sugden 1982) in dynamic stochastic choice decisions. Hence, investors do not follow threshold strategy when selling their assets (contradicting Expected Utility predictions) and they are influenced by the past peak of the price process in their decision to sell an asset. Exploiting the LDB dataset (Odean 1999) we try to replicate their findings on actual investors decision. LDB dataset contains records of investment decisions on stock made by USA investors in the period 1991-1996. We start by investigating investors tendency to follow threshold strategy by means of graphical analysis and statistical tests on the distribution of stopping times. We find that several investors do not follow a threshold strategy. Then, we fit three different models to data in order to estimate the effect of price maximum on the propensity to sell a stock. We fit a logit regression, along the lines of Grinblatt and Keloharju (2001), where positions are checked every day there is a selling order in a given portfolio. Then, a value of 1 is assigned to selling decisions and a value of 0 to holding decisions. We fit two different Proportional hazard models where the time to event is the time from the buy date to the selling date of a stock. In the second model we add a frailty term, to account for random heterogeneity of investors. Maximum price is defined as the maximum price of a stock between the buy date and the sell date. In all those three models we find that, when the stock is trading in the gain domain, propensity to sell is higher when the price is close to maximum and when the stock is at a monthly maximum. Propensity to sell is lower the further in time the stock is from the day maximum realized. All these are clear signs of Regret. On top of that, typical departure from rationality are detected, like the Disposition Effect.

Keywords:

Regret theory
Financial decisions on stock
Big data

JEL Classification: G02, D10, C55