Fast and slow investment in asset markets: How does risk taking change?

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In the finance industry mutual fund companies compete for money to invest. The inflow of new investments into a fund is strongly dependent on past returns. A consequence is that mutual fund companies seek to improve their investment managers’ performance by offering performance-based incentives (Ma et al., 2018). In rank-order tournaments with peer performance as benchmarks, mutual fund companies offer higher salaries to those whose performance ranks highest, at the same time as those whose performance ranks lowest run the risk of demotion or even losing their jobs (Kempf et al., 2009).

Studies of experimental markets in which business school students trade risky assets show that rank-based incentives to the traders increase risk taking (e.g. Fang et al., 2017; Kirchler et al., 2019). In Kirchler et al. (2019) professional investors participating in experimental asset markets likewise increase risk taking if incentivized by performance ranks, and in contrast to students, they do this even though payment is independent of the performance ranks. Intangible benefits of winning thus appear to augment economic incentives (Dijk et al., 2014).

A possible explanation of increases in risk taking induced by rank-based incentives is that an above-average bias in comparing oneself with competitors results in overconfidence (Gärling et al., 2019). One complementary explanation is that an anticipated loss when lagging behind increases risk taking (Kuziemko et al., 2014), and another the belief that risk taking is a winning strategy (Eriksen and KvalØy, 2017).

A feature of trading in experimental markets is that participants make buy, sell or hold decisions under time pressure. Kirchler et al. (2017) compare gambling choices limited to 7 seconds to gambling choices after a forced delay of 20 seconds. They find that risk taking increases for losses but decreases for gains. A possible explanation is that fast choices more than delayed choices are influenced by affective responses (Persson et al., 2018).

In order to investigate whether fast trading is an important cause of increased risk taking, we conduct an on-line experiment to observe whether rank-based incentives have different effects on risk taking in slow deliberate investment decisions than fast trading decisions in experimental markets. A sample of 123 business school students volunteered to participate. They were asked to imagine acting as managers of a stock portfolio in a fund company and asked to make investment decisions with consequences for their portfolio. Six investment options were graphically and numerically presented as normally distributed returns constructed according to an expected value (3) by variance (2) orthogonal experimental design. In order to provide information about the investment options, the participants were first asked to rate how beneficial investing in each option would be for the fund company. An approximately equal number of the participants were then assigned to seven between-groups conditions before they were asked to invest a given sum or not in each option. They were informed that one option would be picked randomly. If they had invested in this option, the outcome was determined and disclosed after all choices had been made. If they had not
invested in the option, they knew they could use the sum in future investments. In one of the conditions the sum to be invested acted as the reference point in judging whether the expected outcome would be a gain or loss. In the other six conditions the fund company had set a performance benchmark which acted as an additional higher reference point. In three of the conditions the benchmark was the market index and in the remaining three conditions the average performance of portfolio managers in competing fund companies. The three conditions with the index or average as benchmarks differed in that there would be no consequences for payment of reaching or not reaching the benchmark, a bonus of 20% of how much the return exceeds the benchmark, or the bonus in conjunction with a penalty of 20% of how much the return fails to reach the benchmark.

Statistically significant increases with the expected value and decreases with the variance of the investment options are observed for both the ratings and the subsequent investment choices. A significant difference is observed when comparing the condition without a benchmark with the conditions with benchmarks. The results do however not differ statistically between the market index and the average performance benchmarks. Adding a penalty as a consequence of not reaching the benchmark has significant effect compared to bonus payments or no payments.

A main finding is that the benchmarks result in less investments. In the conditions with no payment and bonus, investing more would be equally beneficial as in the condition with no benchmark. As in previous experimental markets research (Kirchler et al., 2017), exceeding the benchmark thus appears to be motivation. Another main finding is that a penalty of not reaching the benchmark has the effect of decreasing investments further. This suggests that more investments are made in order to reach the benchmark unless penalized. This is likewise consistent with previous research. Although directly measuring the consequences of fast and slow investments in experimental markets may conclusively answer the question raised, the results presented here suggest that “risk-as-analyzed” may contribute as much as “risk-as-feelings” (Loewenstein et al., 2001) to increased risk taking in rank-order tournaments. The results also highlight the importance of comparing own performance with performance of others, whether all others in the market or a designated category of others.

References


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