DE MONTFORT UNIVERSITY LEICESTER

School of Accounting, Finance and Economics
neil.lancastle@dmu.ac.uk
cam.calderon@dmu.ac.uk

Dr Neil Lancastle and Dr Cam Calderon

Deus Ex Machina II

Abstract

The East Midlands suffers from one of the most significant data skills gaps in the UK, and those students with the strongest data skills are more likely to go into banking and financial services (Advance HE, 2021). To address this gap, we developed a Trading Room simulation module, to develop students' data skills and financial services expertise using real-time data. MSc students are appointed as analysts, given responsibility for trades in a sector of the UK economy, and asked to make buy/sell/hold recommendations using a variety of trading models and strategies. Their financial and ESG performance is tracked in real-time, and students submit a trading diary as part of their end of term assignment.

Reflection and meta-cognition are important elements in self-regulated learning (Wallin & Adawi, 2017). The students' trading diaries offer the possibility to explore how they construct and adapt their epistemological beliefs about trading models in response to real-time events. The diaries will be analysed using a structured, grounded theory approach, whereby the research focuses on the idea of concept co-creation during self-regulated learning (Henwood & Pidgeon, 2006). This is the social constructionist version of grounded theory, where theoretical categories are constructed during the research process (Charmaz, 2006). Data will continue to be analysed until theoretical saturation has been achieved, looking for instances that do not fit (negative cases) to elaborate the theory. In particular, the impact of trading gains and losses on students' learning about trading models will be explored.

More broadly, this research provides insights into the performativity (Mackenzie et al., 2007) of the trading models, filling a gap in the literature by exploring the extent to which real-time events influence how students chose and adapt these models (Svetlova, 2018).

Get expert feedback on the research design → Using content analysis, identify themes in students' trading diaries → Link to performativity and behavioural finance literature → Gain expert feedback on data collection methods using diaries → Re-submit ethical approval and repeat as a full study → Assess whether themes can explain differences in trading and educational outcomes

Trading Simulation

In Week 1, students are appointed as a sector analyst, e.g.: as an Oil and Gas analyst. Each student is given a stock in that sector, picked at random from the FTSE All Share, e.g.: British Petroleum. Students are then taught some theory – how to use the Refinitiv (Refinitiv, 2022) combined alpha model (CAM) – and are asked whether they will HOLD the original company, or SELL and BUY a competitor. For simplicity, and to reduce burn-out, they are told to limit their analysis to no more than 5 competitors, and to trade on only two occasions – in Week 2 and Week 6.

Over subsequent weeks, students are taught alternatives to CAM – Value-Momentum (VALMO), Momentum (MOM), Relative Valuation (RV), Analyst Revisions (ARM), Earnings Quality (EQ), and Beta. In seminars, students discuss which alphas are working for their stock and sector, and the impact of stock-specific and macroeconomic news on performance.

Trading Strategies

1. PASSIVE. The most common trading strategy is to do nothing – passive. Around 20% of students would be expected to HOLD, given 5 competitors to choose from, but the actual proportion is around 50%. In terms of model use, these students write about contradictory models, and uncertainty, as reasons for their inaction

2. MODEL BELIEVERS. This group decide to follow a particular model, usually CAM. There are sub-categories of believer, as follows:

a. COMMITTED. For this group, the data reinforces their choice of model, and they become fully committed to a single model, ignoring other models and news that contradict their decision

b. WAVERERS. For this group, the data are contradictory – their stock underperforms some, but not all, of its peers, and/or other models suggest a different trade – but they continue to believe their choice of model is correct and will perform in the future

c. IRRATIONALS. For this group, the data are clear that their model choice does not explain price performance - for example, MOM or RV are more important in their sector over the period. However, they ignore the evidence and write about how their stock is the best *in reference to the model*

3. QUANTAMENTALS. This third group is the smallest. Their starting point is not the model, but performance data for their stock. They write regular updates using models and news to explain price performance, using data to validate which models and factors offer the best explanations. Their model use is more fluid and reflective than the other trading strategies.

Analysis

We find that models are not consistently used as 'practical decision-making instruments...(under)… conditions of radical uncertainty and symmetrical ignorance' (Svetlova, 2018, p13) since the most common trading strategy is **PASSIVE**. That is, the biggest challenge is inaction – how to bring about change. Where students do trade, our findings confirm Svetlova's 'cultures of model use' (Svetlova, 2018, p144) which includes commitment to a single model; model-switching; and quantamental traders who iterate between data, models and non-models. Unlike Svetlova, we do not find evidence for counter-performative traders. However, we do find irrational traders who ignore the performance of their stock and, instead, see model performance as a proxy for stock performance.

Discussion

We rely on the finance literature to discuss culture of model use.

PASSIVE trading is considered a rational strategy in the finance literature (Fama and French, 2010). However, as students are required to trade, and as they are told to ignore transaction costs, we consider the high proportion of passive investors to be a strong status quo bias (Samuelson and Zeckhauser, 1988). In our follow up work, we will further investigate what are the barriers to decision-making: risk aversion, information overload, low confidence, or other reasons.

We consider model **BELIEVERS** to be different forms of confirmation bias (Nickerson, 1998). **COMMITTED** traders see an illusory correlation between the model and stock performance; **WAVERERS** are dealing with uncertainty by discarding contradictory information; and **IRRATIONALS** can maintain higher levels of cognitive dissonance. In our follow up work, we will investigate whether decision-making is affected by stock characteristics – risk and return – or by student characteristics - performance on the module. Additionally, in the study period, some sectors were more heavily impacted by macroeconomic news – the war in Ukraine – than others, leading to greater uncertainty.

The last group, **QUANTAMENTALS**, are more able to switch between models and other factors, weaving these into fluid stories about stock returns. In our follow up work, we will investigate the factors that lead to their storytelling abilities: do they have better information, or less information; do they have innate personal qualities, such as higher confidence or self-belief; and are there external factors that enhance their ability to make decisions, such as their stock and sector being lower risk.

Key references

Fama, E., & French, K. (2010). Luck versus Skill in the Cross Section of Mutual Fund α Estimates. Journal of Finance, 65(5), 1915–1947. https://doi.org/10.1111/j.1540-6261.2010.01598.x

Henwood, K. L., & Pidgeon, N. F. (2006). Grounded Theory. In G. Breakwell, S. Hammond, C. Fife-Shwa, & J. Smith (Eds.), Research Methods in Psychology (3rd ed.). Sage.

MacKenzie, D. (2006). Is economics performative? Option theory and the construction of derivatives markets. *Journal of the History of Economic Thought*, 28(1), 29–55. https://doi.org/10.1080/10427710500509722

Nickerson, R. S. (1998). Confirmation Bias: A Ubiquitous Phenomenon in Many Guises. In Review of General Psychology (Vol. 2, Issue 2).

Samuelson, W., & Zeckhauser, R. (1988). Status Quo Bias in Decision Making. In Journal of Risk and Uncertainty (Vol. 1).

Svetlova, E. (2018). Financial Models and Society : Villains or Scapegoats? Edward Elgar.

Wallin, P., & Adawi, T. (2017). The reflective diary as a method for the formative assessment of self-regulated learning. https://ntnuopen.ntnu.no/ntnu-xmlui/handle/11250/2475590