

Report - 2020 AFAANZ Research Grants Round 2

(1) Name, Position, and Contact Details for each applicant (at the time of the grant award)

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(2) Project Title

Retail Investors' Activity and Climate Disasters

(3) Updated Project Summary (500 words), including any variations between the project undertaken and the original application

This paper assesses the impacts of climate disasters on retail investors' trading activity and their role on stock pricing and firms' fundamentals from January 2010 to December 2018. It follows the novel approach of Boehmer et al. (2021), relying on publicly available U.S. equity transaction data to identify marketable retail purchases and sales and assumes that the retail investors' location is at the firms' headquarters. The authors define retail investors as sellers if the transaction prices are just above a round penny and buyers if they are just below a round penny. In addition, it uses unique and hand-collected climate disaster information, such as the exact dates of the occurrence of major disasters, i.e., those with damages above \$1 billion. Hence, it accounts that certain events may last fewer or more days, making the available monthly occurrence dates irrelevant. By using daily retail investors' activity measures such as the total trading volume, buy and sell volume, the order imbalances (i.e., the difference between buys and sells divided by the sum of buys and sells), and climate disasters, our paper is the first to provide answers to the following questions. Do climate disasters affect the trading behavior of retail investors? If yes, does their trading around them display certain returns? What is the role of retail investors in stock pricing during climate disasters? Can they correctly predict future returns during these events? Or are retail traders more likely to make mistakes in their trading decisions during disasters? What about their role in correctly predicting news about firms' fundamentals? If retail investors have new information about a firm's cash flows, their imbalances would correctly predict the earnings surprises (i.e., the proxy for firms' fundamentals). Lastly, can retail traders' trading induce a comovement in returns and own order imbalances around climate disasters?

In particular, we start our analysis by exploring whether climate disasters influence the daily retail investors' activity, such as order imbalances and buy and sell volume, in Section 3.1. We then assess the relationship between order imbalances and short and long-run returns around climate events in Section 3.2. In Sections 3.3, 3.4, and 3.5, we examine the determinants of order imbalances during climate disasters and whether the past retail investors' order flows can i) predict future returns and earning surprises and ii) provide relevant information to construct a profitable trading strategy during climate disasters. The last sections, i.e., Sections 3.6 and 3.7, investigate if

retail investors' trading around climate disasters can lead to comovement in returns and order imbalances.

Overall, the final objectives of the paper are generally in line with the main application. In addition, due to the not-so-relevant results for the corporate news and post-earnings-announcement drift, we decided to include an additional comovement analysis at the return and order imbalances level.

(4) Funds Granted

\$6500

(5) Detailed Report on Expenditure of Funds against Budget Items, with variations explained

1) Spatial Hazard Events and Losses Database for the US - 1,400AUD (initial) to 900AUD (final)
Academic discount.

2) News data from Thomson Reuters News Analytics – 3,200AUD (initial) to 2,350AUD (final)
The results for the corporate news were not-so-relevant; thus, we also looked at some data from Trade Navigator.

3) Research assistants – 1,900AUD (initial) to 3,250AUD (final)

The research assistant required more time to address the objectives of the application. For instance, relying on the month when a climate disaster occurs from SHELDDUS and google search engine, the research assistant had to manually find and collect the exact days for the start of all the climate disasters. Due to a large number of climate disasters and to obtain meaningful results, we focused on those with damages above \$1 billion. This research has led to the exact dates of over 1300 climate disasters.

(6) Outcomes, for example, working papers, presentations and publications (give full details, including abstracts)

Working Paper is privately available and publicly available once the conference's program is finalized.

(7) Future Intentions for this Project (give full details)

a) Conference submissions –

- i)** World Finance Banking Symposium (Miami, December 2022)
- ii)** New Zealand Finance Meeting (Auckland, December 2022)
- iii)** To also be submitted to other conferences available in 2023

b) Journal submissions – After conference presentations to be submitted to the *Journal of Financial and Quantitative Analysis* (A*- ABDC)

c) Grant applications – To be considered depending on the conferences' discussions

(8) Summary of Outcomes and Benefits

- A better understanding of the impacts of climate change on retail investors with applicability to investors from Australia and New Zealand
- This paper's evidence may help policymakers better implement and create new policy addressing the climate change risks on the broader economy and capital markets.
- Most possibly a high-rank publication
- Presentations at the conferences and various meetings
- Networking with academic staff working in this area of expertise
- Good future opportunities to possibly work and collaborate with other academics on a similar area of expertise
- A significant contribution to the retail investor literature

Overall, the finalization of this project would not have been possible without this grant.