

Anonymous - Referee Report 1

May 02, 2019 - 14:34

See attached file

Michael Heinrich Baumann - Reply to Referee Report 1

May 14, 2019 - 14:57

Dear Reviewer,

Thank you very much for your valuable report. The comments are very interesting and will help us to substantially improve our paper. In particular, we will refocus and clarify the presentation of our results. Enclosed please find our reaction to your comments. We would appreciate very much ...[more]

... the opportunity to have our paper "Limitations of stabilizing effects of fundamentalists: Facing positive feedback traders" published in Economics: The Open-Access, Open-Assessment E-Journal.

Comment 1:

First, the analysis is based on the assumption that fundamentalists always respond one period later than chartists, i.e. $D_t^F = -D_{t-1}^C$. That is a very strange assumption. Is there any empirical evidence for such a strong assumption? I don't think that this assumption makes sense especially because fundamentalists are assumed to be rational. If I understand correctly, the model would always produce stable price dynamics when $D_t^F = -D_t^C$ is assumed.

Response:

We thank the referee for pointing out this potentially important issue. We agree with the view that such an assumption would be very strong. However, the mentioned formula refers to the analytical finding that has been summarized in Theorem 5. The underlying assumption of that theorem instead can be characterized as follows: We assumed that trend followers base their investment strategy on the price trend and that fundamentalists use the difference between the fundamental value and the market price to calculate their respective strategy. Based on this assumption, we mathematically prove that "unfortunately" fundamentalists react too slow to stabilize market prices. On the contrary, if one would assume that fundamentalist would be fast as $D_t^F = -D_t^C$ would presumably prevent any bubble. Additionally, it would imply that fundamentalists would neither look at the price nor at the fundamental value, but would correctly anticipate the strategy of the trend followers in order to successfully offset the price changes induced by this type of investor. From our point of view, such an assumption would be in stark contrast to the findings of the literature presented in our literature review.

To avoid a misleading interpretation, we will check and clarify our presentation in the corresponding section.

Comment 2:

Second, authors claim to be the first showing analytically that fundamentalists may not always be able to stabilize markets. Note that many other agent based financial market models have proven analytically that fundamentalists may not compensate

the destabilizing power of chartists. Hence, I don't see the contribution of the paper.

Response:

We thank the referee for addressing our potentially misleading presentation of our contribution.

Indeed, there is a vast of literature, which has time and again shown that chartists can destabilize markets despite the presence of fundamentalists. However, this aspect does not appear to be the novelty in our article. Our analysis focusses on chartists with bounded leverage – an issue that has not been taken into account adequately by the literature so far. Rather, it is often argued that markets tend to stabilize due to chartist that have run out of money before market prices will explode. In this context, we have analytically proven that even in an environment with limited access to finance, i.e. bounded leverage, the investment behavior of chartist can lead to exploding prices.

To clarify our research focus, we will reformulate the introduction and clearly hint to the aspect that our analysis explicitly considers chartist with bounded leverage.

Comment 3:

Third, the model presentation also needs to be substantially improved.

Response:

We thank the referee for this clarifying suggestion. Accordingly, we will carefully check and revise our model representation.

Anonymous - Referee Report 2

May 20, 2019 - 10:54

See attached file

Michael Heinrich Baumann - Reply to Referee Report 2

May 29, 2019 - 08:23

Dear Reviewer,

Thank you very much for your very helpful remarks. The comments will help us to further improve our paper. Enclosed please find our reaction to your comments.

Comment 1:

You can add two more articles to the literature review:

Kim-Markovitz model, that was one ...[more]

... of the first historical models regarding two types of investors:

Kim, Gew-rae, and Harry M. Markowitz. "Investment rules, margin, and market volatility." Journal of Portfolio Management 16.1 (1989): 45.

Bornholdt model that is econophysical spin model, with chartists, fundamentalists, and market maker considered:

Bornholdt, Stefan. "Expectation bubbles in a spin model of markets: Intermittency from frustration across scales." International Journal of Modern Physics C 12.05

(2001): 667-674.

Response:

We thank the referee for this helpful suggestion. Accordingly, we will add the two references to our literature review.

Comment 2:

Figure 4 and 5: please explain explicitly the meaning of the thick solid line and the dashed line in the captions of the figures.

Figure 6 and 7: please explain explicitly the meaning of the solid, dashed, and dotted line in the captions of the figures.

Response:

We thank the referee for pointing out potential ambiguities in our figures. We will clarify our presentation and will revise the respective figures accordingly.

Comment 3:

Discussion of Effects of Linear Feedback Trading: please add the remark similar to that: "this approach does not consider the interactions between traders, that can cause some emergent phenomena, as it assumes that we may have only one trader of each type, which can be treated as representative of all traders of a certain type on the market".

For the importance of emergent phenomena see e.g.:

Tesfatsion, Leigh. "Economic agents and markets as emergent phenomena." Proceedings of the National Academy of Sciences 99.suppl 3 (2002): 7191-7192.

Choi, Thomas Y., Kevin J. Dooley, and Manus Rungtusanatham. "Supply networks and complex adaptive systems: control versus emergence." Journal of operations management 19.3 (2001): 351-366.

Response:

We thank the referee for pointing out to this important issue. It was our aim to show that fundamentalists do not appear to be an adequate stabilizing factor even in an environment with chartists that only have limited access to finance. This finding, taken in isolation, already underlines the importance of intervention measures to stabilize markets. In the context of emergent phenomena such intervention measures would presumably become even more important.

We thank the referee for pointing out the need to be more specific about this issue. Accordingly, we will clarify our presentation in the corresponding section and consider the referee's suggestion.