

Discussion Paper

No. 2017-108 | December 08, 2017

***Stock price related financial fragility and growth patterns***

Answer to referee #1:

First of all, let me thank the referee for the time and effort dedicated to inspect the text and for the thoughts that were ignited by the comments. This is especially valuable since the referee is not familiar with agent-based models. Hence his or her concerns provide the opportunity to highlight some lack of clarity in the text which might have been overlooked by reviewers familiar with the concepts, context and language that is used in this branch of economic research.

There are therefore some comments on a broader scale, e.g. that the model lacks a labour market, household behaviour and – especially – a central bank. Even if the model contains only few types of agents, the rich dynamics stem from heterogenous members of the firm type. The model aims specifically at the supply side and tries to mimic actual behaviour in a credible fashion. This aims at the opportunity to identify the dynamics induced by the financing aspect and not having additional dynamic drivers from the demand side. Also, it is not obvious, which policy the central bank should follow, especially if we observe different philosophies of central banks already in the western world. Furthermore, what should household behaviour look like in a multiple-period world where households would also be heterogenous? The same applies to the labour market and the crucial point here is that it would not be clear as to what extent the economy should be considered a closed one or an open one. Therefore, the referee suggested to improve the understanding by creating a baseline case and then model the three transmission channels in comparison to that case. This is already in the current paper as the baseline model is Delli Gatti et al (2005) and two of the three channels are modeled as special case of that. (See page 2: “Two of the three model extensions comply with the original paper as it is a special case of the extended model. Therefore, the original model will serve as a benchmark case. The third variation is only slightly different and exhibits similar dynamics.”)

Nevertheless, there is the opportunity for improvement following those suggestions that are more specific. Those will be addressed in an updated version of the paper.

- Entering firms increase overall endowment: they do. As mentioned earlier, as the financing aspect of setting up firm activity (production) is the focus, endowment is not an important limitation in this concept but access to financial means are. It would not be clear whether resources could be accessed from trade or how resources would be limited at each period as in a dynamic world it is credible that resources would be used over time and not at once.
- The interest rate is unrealistic: I agree, but feel the need to ask for clarification. How should the interest rate look realistically and what should be the driver for

that dynamics? Nevertheless, I do understand that further and clearer explanation how 'the' interest rate is computed in the model and what information it carries.

- The boom-bust modeling (of the stock prices) is unsatisfactory: also at this point, there is no hint in which respect this is meant. More information would be needed for meaningful improvement.

The next version of the paper will contain more explanation to the issues addressed which I am positive will facilitate readability, understandability and acceptance by a broader readership.