

Referee Report on „Fundamental Uncertainty, Portfolio Choice, and Liquidity Preference Theory “ for Open – Access, Open Assessment E-Journal

Summary

The paper analyzes portfolio decisions and provides a more bounded rational approach to portfolio choice between risky assets and liquidity under fundamental uncertainty. Under the assumption that the individual expectations are dispersed the average decision taken by investors is biased in the sense that other portfolio choices could improve the ex-post performance. Awareness of this fact among some investors opens up possibilities to correct for this investment bias and improves the portfolio performance.

My basic impression of the paper is mildly positive. There appears to be nothing wrong with the technical analysis and the general theme is exciting. On the downside the introduction is written somewhat too baroque, compared to the focussed issue analysed.

Main Comments

1. The introduction and the second section of the paper are written in very baroque style. Thomas Sargent once said that there is one way to compute rational expectations and a million ways to compute non-rational expectations. To a certain extent the author falls prey to this fallacy. The overview given by the author contains a well written passage on approaches to Knightian and Keynesian uncertainty. However the reader does not have the impression that the list discussed is complete. Probably it will never be. Nevertheless the section reflects that the author has an excellent overview on the different approaches to the broad topic. Unfortunately the generalized introduction raises high hopes to which the proceeding sections cannot live up to. More concretely, the author discusses various approaches to model fundamental uncertainty and then highlights one very special application in section 3, which is extremely narrow, namely portfolio choice under fundamental uncertainty.
2. In my eyes the author reports a convincing story that in an environment where beliefs are dispersed some agents that are aware of the fact can realize an excess return by consciously taking into account that the rest of the economy is subject to a bias in dividing the portfolio into risky and non-risky assets. In the light of the introduction of the paper I am not quite sure what the reader is supposed to learn from this. Does the author want to tell us that smart agents will probably make a higher return than ignorant agents? This somewhat illustrates the diremption of the paper. Until the end I am not sure whether to interpret the paper as a contribution to portfolio theory or as a contribution to bounded rationality.
3. The approach presented here is a partial equilibrium approach and does not yet have the format to serve as a template for a macro model. Or to quote the author:

“It should be noted, however, that an adoption of β may be performance-improving only ceteris paribus, i.e. the behaviour of all other agents is unchanged. An unilateral adaption of behaviour creates benefits for the individual. But in contrast, *all* agents adapt their β this would induce a change in ex post realizations $\bar{\mu}, \bar{\sigma}^2$. Without an economic model and assumptions regarding the learning dynamics it is not possible to draw conclusion about the performance in the equilibrium.” p. 11.

To that extent, this article clearly is a contribution to Portfolio Selection and not so much on fundamental uncertainty in a more general setting, where conclusions for the macro-economy can be drawn.

Minor Comments

1. The author seems to have a somewhat outdated understanding of models under rational expectations. If we take for instance Smets and Wouters (2007) as a reference point it is very obvious that an equilibrium under rational expectations is consistent with a distribution of each variable in the model. This distribution is not driven by heterogeneous belief, but by exogenous shocks. Therefore also under a rational expectations equilibrium we can have distributions. Additionally modern business cycle theory encompasses rule of thumb guided firms and households such that the discussion of the author is somewhat too crude.
2. Related to common 1: To me there is no straightforward link from heterogeneous belief to a distribution of a variable. As already mentioned, if the economy is driven by a set of e.g. normally distributed shocks (demand shocks, cost push shocks), then also under rational expectations the realizations of the variables will have a distribution. On the other hand if we have heterogeneity in belief this does not necessarily mean that volatility in prices is higher. On the contrary homogeneous expectations may give raise to higher dispersion in realizations of returns as heterogeneous expectations. To me there is no tight link between heterogeneous expectations compared to homogeneous expectations and the observed distributions in returns.
3. As a consequence of taking a partial equilibrium approach many interesting issues are modelled as a black box. In the introduction the author states that there exists “fundamental uncertainty about the underlying structures, economic relationships, the inferences that could be drawn from past experiences, etc.” Unfortunately the author does not try to model such uncertainties explicitly.

Literature, (only those not cited by the authors)

Smets, Frank; Wouters, Rafael: Shocks and Frictions in US Business Cycles? *American Economic Review*, June 2007; 97(3).