Referee report on “Money creation and financial instability – An agent based credit network approach”

The authors explore an interesting and original avenue of research which has been growing rapidly in recent years: the development of agent based models of a monetary economy.
In addition, the authors try to achieve macroeconomic (stock-flow) consistency of their results, which is an issue often neglected in similar simulation models, although it is essential for any macroeconomic model to be logically coherent.

1. The authors choose to concentrate on the monetary side of transaction among individuals and banks, adopting very simple assumptions on production and demand of goods and services, which are the rationale for the demand of financial assets.
It is not clear what are the implications of such assumptions for the results in the paper. The demand for cash and bank deposits, which is explicitly modeled by the authors, has a rationale when investment plans must be financed in advance, and depends on the size of such plans, while the demand for liquidity from individuals depends on expenditure and uncertainty.
It would be interesting therefore to discuss more in detail what are the consequences for the results of the paper of their assumptions about investment and consumption of individuals/firms in the model

2. The authors explicitly refer to the stock-flow-consistent (SFC) literature for their assumptions about the balance sheet of all agents in the model. However, the authors' version of stock-flow-consistency seem only to imply the obvious fact that a cash payment for an agent is a cash receipt for another agent, and that both transactions must be taken explicitly into account.
Other requirements of SFC are ignored. To begin with, the authors choose to “close” the balance sheets of agents by calculating “Equity positions” as “the residual between assets and liabilities”. It turns out that the Central bank has no assets! And therefore it is not clear what the Central bank “equity position” is. In the SFC literature, as in reality, the Central bank issues cash in exchange for other financial assets (discount operations etc with banks; government bills etc.; foreign currency, …)

3. In connection to the previous point: the authors justify their assumptions about money demand on the basis of the “standard macroeconomic textbook” which derives the “multiplier of bank deposits” that the authors adopt as the basis of the behavior of agents. The authors seem to ignore the fact that practically all of the SFC literature considers the “standard macroeconomic textbook” approach to be wrong, unrealistic, and inconsistent, since the only way for money to be injected into the system in a way consistent with the “money multiplier” is an helicopter drop, which the authors actually adopt, thus making their model completely unrealistic. In my view it is wrong to talk of “The Endogenous Creation of Money” (page 11) when money is initially created through an exogenous helicopter drop, and only later “endogenously” multiplied through bank deposits.

4. A minor point regards the assumption about banks “withdrawing a credit” (page 9), which again is completely unrealistic, as the authors admit, and when introduced has the potential to create by itself a financial crisis.

I would strongly encourage the authors to further develop this line of research, at least by changing their assumptions about bank behavior towards realism, so that banks can obtain cash from the Central bank to fulfill loan requests – an assumption which will make the C.B. balance sheet look more reasonable.