Notes on MNS (2016)

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November 2, 2018

1 Overview and results

Main results:

1. In standard NKM there is an outsized response of output/consumption to forward guidance.
2. In a NKM with idiosyncratic labor income shocks and borrowing constraints, the response of output/consumption to forward guidance is far lower.
3. Something about ZLB [fill in]

1.1 Intuition [for my own understanding]

2 Result #1

I've replicated this in AIM. Some notes on the AIM code

- Note that the variable r_t in the code is the deviation of the real rate from the natural rate: $\tilde{r}_t = i_t - \mathbb{E}_t \pi_{t+1} - r_t^n$. With this note, you can easily map my code back to the exposition in the paper.

3 Result # 2

This is the main result of the paper, and it requires solving MNS's heterogeneous agent model. This is a hard problem. Based on what I've read so far:

- Value function iteration is too slow for this kind of problem (rate of convergence is β).
- I think I need to use some kind of approximation method (e.g. splines) to approximate the policy function for consumption [I think this is referred to as 'projection' (as opposed to perturbation)]
- I also somehow need to simulate the distribution of asset holdings (e.g. with a histogram?)
- The weird part is how to update the guessed solution to move it closer to an equilibrium...

Useful resources:

- https://sites.google.com/a/nyu.edu/glviolante/teaching/quantmacro [which points to some books too]