

This blog review Emi Nakamura's paper ***The Power of Forward Guidance*** published in 2016 and extend the discussion to the current Chinese context.

## Paper Review

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The power of central bank forward guidance, such as promising a low interest rate in a looming economic meltdown, has been discussed by immense literature. However, the effect of forward guidance implied by basic New Keynesian model is incredible. The agents will immediately increase his consumption in response of a promise to lowering interest rate. As a result the effect accumulating for 5 years can be 18 times stronger than one in the next quarter. The unrealistic feature must be reconciled by an improved model.

The basic Keynesian model neglect the borrowing constraint emphasized by many literatures. Given this constraint, individual who want to sustain a high consumption in some period in the future would touch the bound before the implementation of policy. Moreover, the incentive of intertemporal substitution is offset by the exposure to risk of lowering assets.

There are some 'solutions' to the 'forward guidance puzzle'. For example, a shortage of safe assets makes forward guidance less effective and sticky information works because the Phillips curve is less forward looking. Even more, doubts are cast on the premise of the puzzle: whether the central bank can engender substantial changes in long-term interest rates. Some model predict a small difference whether there are borrowing constraints while others generate larger effects on output than Emi's model. This paper is an extension of the previous work and address the conflicts with other literature by using different assumptions.

Here comes to the setting of the model.

- The agents face uninsurable, idiosyncratic income risk and borrowing constrains. Markets are incomplete. Price rigidity.
- consider a shock lowering output by 4 percent and make the real rate decline so that the zero lower bound is tight for 5 years.

The first chapter focus on the reason why Basic NK model produce such incredibly large effects. The IS curve implied by BNK is

$$x_t = E_t x_{t+1} - \sigma(i_t) - E_t \pi_{t+1} - r_t^n$$

and the Phillips curve:

$$\pi_t = \beta E_t \pi_{t+1} + \kappa x_t$$