

# May Monetary Policy Affect to Long Run Expectation of Non-Stationary Real Interest Rate

Yun-Yeong Kim

discussant: Hong Chong Cho  
Department of Economics, Dankook University

June 15, 2017

# Summary

## 1. Theoratically

- The paper introduces an augmented non-stationary test of real interest rate within a cointegrated VAR model of interest rate, inflation and output gap reflecting the New Keynesian framework
- shows an interest rate shock trend including monetary policy shock (INTTREND) may be extracted from a non-stationary real interest rate using B-N decomposition
- proves the existence of INTTREND in the real interest rate
- shows that a long run effect of monetary policy shock to the real interest rate may be estimated consistently.

## 2. Empirically

- it shows that there is stochastic trend in the real interest rate
- observes that (i) 1% increase of federal fund rate may approximately induce 0.4% increase of the real interest rate's long run expectation (RELEX),
- (ii) relatively higher RELEX after 2007, that may explain why the US economy has not rapidly recovered.

## Empirical Questions

1. Johansen co-integration coefficient vs Engle-Granger OLS estimator
  - two estimated cointegration errors seem to have different features
  - so isn't the choice too arbitrary?
2. RELEX
  - a long run conditional expectation of real interest rate
  - non-stationary part from the real interest rate
  - stochastic trend of real interest rate  $\Rightarrow$  interpretation
  - cointegration component misspecification? robustness check beyond New Keynesian theory ex) exchange rate?
  - other than three component of INTTREND, INFTREND, OUTPUTTREND
3. RELEX moves differently from FFR or ex post real interest rate
  - residual effect? anything else than the nominal interest rate, real interest rate, inflation, and output gap
  - expectation may behave depending on the formation of expectation such as the mean reversion?