導讀 by 陳冠儒

貨幣與總體 seminar 第一周導讀：
Title of the paper: Monetary policy before and after the crisis (by Tzu-Yu Lin)

What is the research question of the paper?
The paper investigated the welfare implications of the pre-crisis and the post-crisis monetary policies. The pre-crisis monetary policy tools considered in this paper are: 1) the Taylor rules with interest rate smoothing; 2) the counter-cyclical LTV ratio policy. The post-crisis monetary policy tool considered in this paper is the credit policy allowing monetary authorities to engage in direct lending.

Why should we care about it?
For economics master/PhD year one students, we can see the relevance of DSGE models and the associated impulse response functions to actual macroeconomics research. Of course, complicated modifications and extensions have been made to the DSGE framework to study the research question in the paper. For more mature economists, the paper attempts to develop a DSGE model which incorporates two financial frictions (hopefully, closer to reality) to study the welfare implications of pre-crisis and post-crisis monetary policies, which might be of relevance to macroeconomists and central bankers.

What is the author's answer?
(1) Both the pre-crisis and post-crisis monetary policies are Pareto optimal.
(2) The post-crisis policy allowing for aggressive credit intervention enhances social welfare and entrepreneur's welfare the most compared to other alternative policies. However, the post-crisis policy faces a trade-off between volatility and level of variables of interest. For example, the credit intervention produces higher levels of consumption, house holding and GDP, but it also results in higher volatility.
(3) The interest rate rule corresponding to output gap and inflation, preforms better to improve household's well-being by reducing volatility of variables such as consumption, house holding, house prices and GDP.

How did the author get there?
The author developed his/her own version of DSGE model based on existing DSGE models, with financial frictions introduced In both borrowers' and lenders' sides. The model features households, financial intermediaries, entrepreneurs, monopolistically competitive retailers, and a central bank. Also, the model included a housing market and incorporated a collateral constraint faced by non-financial firms. The central bank in the model conducts Taylor-type interest rate rule, pre-crisis macro-prudential LTV ratio following feedback rule, or post-crisis credit market intervention. Then, the author investigated how the model behave in response to shocks given estimated parameter values, and to further highlight the effect of different policies, the author compares the three models: (1) the model with the conventional Taylor rule monetary policy, called the "baseline" model; (2) the baseline model with the countercyclical LTV ratio policy responding to output, and (3) the baseline model added with the credit policy. The different types of shocks are technology shock, housing demand shock, and bank net worth shock.