

Abstract

Using a new Keynesian dynamic stochastic general equilibrium (DSGE) model, we analyze the effects Quantitative and Qualitative Easing (QQE) on the Japanese economy with a focus on the bond market. The model has standard new Keynesian real and nominal frictions which include investment adjustment cost, monopolistic price setting and nominal rigidity. A special banking friction in the form of an aggregate bank run risk is introduced to motivate a bank reserve demand function. The supply of bank reserve that comprises the monetary base is modelled by a Central Bank resource constraint which is dynamically linked to the government budget constraint assuming a transfer payment by the Central Bank to the Treasury to finance government debt. In line with the Japanese monetary policy scenario, QQE is modelled as purchase of long term government bonds by the Central Bank from commercial Banks with a two percent inflation target and target debt/GDP ratio. Such a QE operation changes the asset composition of commercial banks and augments the monetary base. A positive QE shock lowers the real yield to maturity and real holding period returns of the bonds of longer maturity. The real macroeconomic effects of such QE operation is overall positive. We also do policy simulation of a lower overnight borrowing rate and a negative shock to interest rate on reserve to capture the other elements of QQE operation. The effects of the latter monetary policy are similar to QE.

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