How do monetary transmission channels influence inflation in the short and long run? Evidence from the QQE regime in Japan

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ABSTRACT

This paper investigates the effectiveness of the monetary transmission channels of QQE in stimulating the Japan inflation rate in the short and long run. Using monthly data from 2013 to 2018, our results show evidence of asymmetry effect, in which the impact of each channel on the inflation rate is different in the short and long run. Firstly, Tobin's q and foreign exchange rate channels yield higher and positive impact on the inflation rate in the long run relative to short run; Secondly, the inflationary effect of interest rate channel is more significant in the short run; Thirdly, the portfolio rebalance channel is found to have a deflationary effect on inflation rate in both the short and long run, in which the deflationary effect is more pronounced in the long run. These empirical findings highlight the importance of the monetary base, capacity utilization ratio and foreign exchange rate in helping the Japanese economy to achieve the inflation target in the short and long run.

1. Introduction

The Japanese economy has experienced mild deflation since 1990s. The rate of inflation as measured by the changes in the consumer price index (CPI) was in a downward trend since the collapse of real estate and stock price bubble in 1991. Historically, the rate of inflation in Japan exceeded 2%, mainly driven by the consumption tax hike from 3% to 5% (from April 1997 to March 1998) and commodity price hike (mid-2008). Excluding these events, the inflation rate was always at the lower bound and even in the negative territory (Shirai, 2017a).

Since the late 90s, various efforts have been made by the Bank of Japan (BOJ) to stimulate the inflation rate in Japan. For instance, the BOJ introduced the zero interest rate policy in 1999, followed by the quantitative easing in 2000 and subsequently, the comprehensive monetary easing in 2010. In the recent effort on stimulating the price level, the BOJ has implemented the unconventional monetary easing policy known as the quantitative and qualitative monetary easing (QQE) policy since 2014.

Generally, the QQE involves episodes of large-scale purchases of securities funded by an increase in reserve and resulted in the expansion of money supply in the economy. The policy target of QQE is the monetary base. It differs from the previous monetary easing policies which focus on the policy interest rate. The adoption of the monetary base as the policy target is to make it intuitively easier for the economic agents to grasp the scale of monetary easing. As such, the increase in the monetary base would quickly be connected to a large-scale supply of cash, thereby creating an image of inflation in the economy.

Through QQE policy, the BOJ was confident of achieving an inflation rate of 2 per cent with a time horizon of two years. Under QQE policy, three major transmission channels are essential in helping the BOJ to achieve its inflation target.