

Asymmetric effects of monetary policy in different phases of Armenia's business cycle

2019-09-04

WP 19/3/08

Central Bank of Armenia
Harvard University
Working Paper 19/3/08

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September 2019

Abstract

This paper develops empirical models and shows the presence of asymmetric responses of inflation and output in Armenia to the same size of positive and negative monetary policy shocks. Tight monetary policy yields more reduction in output compared to the increase of output in a response to the same size of loose monetary policy. On the other hand, relatively more inflation is created by expansionary policy. The theoretical micro founded model with New Keynesian frictions is developed to explain asymmetries in transmission mechanism of policy. The model is estimated for the Armenian economy using fifteen macroeconomic time series and fifteen structural shocks. Impulse response functions of second order approximated theoretical model, based on estimated structural parameters, match asymmetries from empirical models. The methodology of mixed equations is applied to calculate the contribution of the particular friction in a creation of asymmetry in the transmission mechanism. The asymmetric response of inflation is mostly the result of highly convex Phillips curve of importers. Another part of asymmetry in inflation is created by internal economy's price setting frictions and labor market rigidities. The significant part of asymmetric response in output is caused by nonlinearities in capital and labor markets. Adding curvatures of the small open economy into the second order approximated model, the size of asymmetry increases through the channel of higher

asymmetry in real exchange rate.

Third order theoretical moments of simulated models match directions and sizes of observed data. Variance decomposition of output shows that both demand and supply shocks are important drivers of output. The paper does policy experiments in demand and supply driven business cycle environments. In a demand driven growing economy, the aggressive contractionary monetary policy accelerates the decline of output with diminishing effect on inflation. Aggressive expansionary monetary policy increases the efficiency of creating inflation and decreases the stimulation of output in a demand driven recession. When the economy is in supply driven expansion, the increase in reaction of monetary policy accelerates the decline in output with no significant relative impact on inflation. In a supply driven recession, the aggressive response increases the reaction of output with diminishing effect on inflation.

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