

DEVALUATION WITH THE EXCHANGE RATE FLOOR IN A SMALL OPEN ECONOMY

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Abstract

Many developed countries have recently implemented unconventional monetary policy instruments to stimulate low inflation with interest rates at the zero lower bound (ZLB). To our best knowledge, this paper is the first one rigorously evaluates impact of devaluation induced by the commitment of central bank to keep exchange rate above the declared exchange rate floor. For this purpose, we employ a medium-sized small open economy New Keynesian DSGE model estimated for the Czech Republic, incorporate devaluation with the exchange rate floor as a persistent one-time shock—similar to risk premium shock in the uncovered interest rate parity condition—and account for the ZLB with piecewise linear algorithm. We assume that central bank uses exchange rate floor to devalue currency by 5 percent, as it approximately did in the Czech Republic in November 2013, and estimate that this devaluation leads to higher annual inflation by 1.2 percent in the first year and by 0.6 percent in the second year; the long-run pass-through to inflation is about 40 percent. The results are conditioned upon binding ZLB: the optimal interest rate being below ZLB such that central bank does not respond to devaluation with its increase. If central bank responded with usual interest rate increase, the long-term pass-through to inflation would be only about 20 percent. These findings could be generalized since the simulation of the exchange rate floor is independent of other shocks which affected the Czech Republic at that time and the estimated parameters for the Czech Republic are standard in small open economy DSGE literature.