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Household sector and monetary policy implications. Evidence from Central and Eastern European countries

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Abstract

Amid recent financial crisis, has increased the risks related to the sustainability of the households' banking loans. The purpose of this paper is to analyze the bi-dimensional causality relationship between household sector and monetary policy in the experience of acceding countries Bulgaria, Czech Republic, Latvia, Lithuania, Hungary, Romania between 2007M01-2012M04. Using a Vector Autoregressive Model, we analyze the impact of short term interest rate on loan to deposit ratio for households. Our empirical results suggest that the excessive built-up of financial imbalances related to the households behavior is properly taken into consideration by monetary policy only in Czech Republic, Hungary, Poland and Romania.

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Keywords: financial stability, households, financial crisis, monetary policy, VAR model

1. Introduction

The share of household loans in total bank loans has increased significantly during recent years. From the monetary policy standpoint, a reduction in the policy rate could lead to an unsustainable increase in debt, thereby raising the risk of undershooting the target inflation rate in the future Subhaij, 2009. Santoso and Sukada, 2008 states that there are a lot of channels by which monetary policy influences households sector: interest rate channel, credit channel, exchange rate channel and wealth channel. In this paper, we focus

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exclusively on interest rate channel, because higher indebtedness, as we can observe in last decades, increase the sensitivity of households' behaviour to changes in interest rates.

Using a Vector Autoregressive VAR approach, we analyze the impact of monetary policy on loan to deposit ratio for households in the experience of acceding countries between 2007M01-2012M04.

The remainder is organized as follows. The next section briefly surveys the major contributions of the literature review. Section 3 lays out the data and the methodology used. Section 4 evaluates the empirical results. Section 5 brings the main conclusions and future research.

2. A brief literature review

A strand of literature analyses the implications of rising household debt for monetary policy and the authors can be separated in two camps: the first camp argues that higher level of household debt increases the efficiency of monetary policy because it enhances the sensitivity of households to changes in key policy rate; the second camp states that excess household indebtedness may constrain the effectiveness of monetary policy because fewer households are able to borrow for consumption. There are a lot of studies which analyse how households are affected by and, in turn, affect monetary policy through different transmission in U.K. Much less, however, has been written about the households sector and monetary policy in acceding countries and the studies rely more on the qualitative rather than quantitative. This may be due to the unavailability of high frequency micro-level data.

From the empirical standpoint, Perrson, 2009 and Dey et al., 2008 pointed out that micro-level data would capture better the features of household sector, but this information is restricted.

Flamini and Fracaso, 2009, in a basic New Keynesian framework, show that household's preferences can play an important role in determining optimal interest rate inertia. On the other hand, Filardo , 2009 states that a rise in household debt, in and by itself, is not a sufficient reason to call for a monetary policy response.

We consider that the negative implications of rising the households debt on financial stability call for a proactive attitude of monetary policy promoted by central banks.

3. Methodology

We analyse the relationship between short term interest rate and loan to deposit ratio for households in the experience of several Central and Eastern European countries: Bulgaria, Czech Republic, Latvia, Lithuania, Hungary, Poland and Romania, between 2007M01 and 2012M04. The start of the estimation sample is governed by data availability. The time series were taken from Datastream database. The short term interest rate is measured as three month interbank money market rate and serves as a proxy for monetary policy interest rate. Loan to deposit ratio for households is seasonally adjusted and is computed as follows:

*Loan to deposit ratio=Total loans for households/Total deposits of households*100* (1)

For Bulgaria and Lithuania, we consider that the shocks come from LIBOR EUR 3 months interest rate.

We use a multivariate modelling approach in order to analyze the relationship between money market interest rate and loan to deposit ratio based on the VAR model of order p:

$$Y_t = \upsilon + A_1 Y_{t-1} + \ldots + A_p Y_{t-p} + u_t \tag{2}$$

where the vector Y_t includes the variables of interest, ν are the vectors of intercepts and A_i are the fixed VAR coefficient matrices. $u_t=(u_{1t},\ldots,u_{kt})'$ is an unobservable error term. It is assumed to be a zero-mean independent white noise process with time-invariant, positive definite covariance matrix $E(u_t u_t')=\sum u$.