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Monetary and banking policy transmission through interest rates: an empirical application to the USA, Canada, the UK and the Eurozone

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Abstract

The main purpose of this paper is an examination of the pass-through interest rate transmission from the wholesale rates (central bank and/or money market rates) to the retail rates (deposit and lending rates) of the banking system. Knowledge of the transmission substantially helps us to calculate the pass-through interest rate margin or mark-up in the banking systems under examination (USA, Canada, the UK and the Eurozone). The selection of the wholesale interest rate is also an important part of this pass-through transmission framework because it is related to the money supply process and therefore the central bank's policy capabilities. In the empirical part, a Johansen (1988) cointegration based error-correction procedure (ECM-GE) is implemented for the wholesale interest rate selection. Then an LSE–Hendry general-to-specific model (GETS)

is applied, for the revelation of the banking sector pass-through interest rate behaviour. In the empirical part, on the issue of the wholesale interest rate selection, the USA and the Eurozone seem to favour the Money Market rate while the UK and Canada favour the central bank policy rate. The results indicate two types of interest rate pass-through behaviour, with market structure implication – namely, the US and UK banking systems contrasted with Canada–Eurozone.

Keywords:

interest rate pass-through behaviour | monetary policy transmission | asymmetries

JEL Classifications:

E52 | E43

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Notes

1. Mark-up: the existing long-run spread (difference) between deposit and lending rates.

2. The term ‘vehicle policy variable’ implies that interest rate variable is used by the central bank as an intermediate policy variable in order to succeed a final target such as inflation rate, exchange rate, etc.

3. For a brief summary of these theories, see Toolsema, Sturm, and De Haan (2001).

4. As Neuwark and Sharpe (1992) indicate, asymmetry in a market is less pronounced when competition is fierce.

5. The econometric process implemented in the second part of our study (the causal relationship between money market and central bank rates) is a typical Johansen

cointegration-based error-correction procedures (ECM-GE). This method is well known and we do not consider that it is necessary to be further explained here – see, for example, Lutkepohl and Reimers (1992).

6. See Goodwin and Harper (2000) for the advantages of the TAR model over the simple ECM proposed by Von Cramon-Taubadel (1998).

7. Meyer and Von Cramon-Taubabel (2004) provide a comprehensive discussion of the possible types and causes of asymmetric price adjustments together with a brief review of the relevant empirical results.

8. In econometric terms, the corresponding 'activation' will be triggered in Equation 4 with the help of dummy variables (e.g. DUM). More specifically, all positive coefficients will take the value of 1 when a positive change in the dependent variable occurs and will be zero otherwise (1–DUM).

9. This model is tested according to the Non-Linear Least Squares (NLLS) methodology.

10. The ability of testing both negative and positive short-run pass-through elasticities ($\beta^{-}_{W,t}$ and $\beta^{+}_{W,t}$) in the same model is actually enriching the Cottarelli and Kourelis (1994) pass-through interest rates multipliers – and especially their EC form (see Toolsema, Sturm, and De Haan 2001) – with positive and negative values. More analytically, due to the GETS model we are in a position now to estimate two different impact multipliers (a negative and a positive one) plus two interim multipliers (not to mention the two different speeds of adjustments).

11. This is the minimum band 1 dealing rate (1981–1996) and as a continuation to this a repo rate (1997–2005) and finally its official bank rate (2006 onwards).

12. Note that the UK deposit rate variable, which is provided by the IMF International Financial Statistics, is terminated at 1999m1.

13. The data set availability for this variable commences from 1999m1.

14. The data set availability for this variable commences from 1994m3.

15. Actually for the loan rate we used Germany's and France's mortgage rates while for the deposit rate we used the simple deposit rate in the case of France, and the three-month deposit rate in the case of Germany. All these rates are available from the IMF International Financial Statistics data set.

16. It is important to report here that, due to the existing IMF data availability, the EU money market pass-through behaviour to the retail rates is examined commencing from 1997m1.

17. We can alternatively calculate jointly the ($\varphi_1 + \gamma$) pass-through coefficients of Equation 4a. However in almost all the examined loan and the deposit market rate cases, the contribution of the γ coefficient is minor.

18. Note that the wholesale selection rate does not change when we apply the VAR-EC tests after the Bank of England's independence (1997).

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