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Approaches to development of an explicit rule of monetary policy

The most well-known explicit rule of the monetary policy is the Taylor rule. This rule was first formulated by the Stanford University Professor John Taylor in 1993. In his subsequent works John Taylor continued his research of methodological approaches regarding the development and implementation of the monetary rules. In the second half of the 90s of the 20th century and the beginning of the 21st century other scientists also studied the ways of development and improvement of monetary rules.

Experts of the National Bank of Ukraine (NBU) have developed a quarterly forecasting model of the transmission mechanism of monetary policy in Ukraine. This model implicitly uses the monetary policy rule for the key interest rate.

The aim of this paper is to substantiate the expediency of developing an explicit monetary rule for the Ukrainian economy. We also examine the main stages of its development: (1) determination of the rule's basic form; (2) estimation of equilibrium values of the rule's parameters; and (3) determination of the parameters that should be included in the rule.

We have analyzed the methodical approaches to its formation. In particular, the procedure for calculating the value of the equilibrium GDP, which is used in the formation of the policy rule, was determined. A multivariate regression model, which confirms the presence of a statistically significant relationship between the main parameters of the monetary rule, was developed:

$$\Delta m = 0{,}16 - 1{,}10\Delta v + 0{,}87(\Delta x - \Delta x^*) + 1{,}87\Delta q^*$$

where Δm is the money supply growth (M3 aggregate); Δv is the velocity of money growth; Δx is the growth of nominal GDP; Δx* is the growth of equilibrium nominal GDP; Δq is the growth of equilibrium real GDP.

In our opinion, the conception of “monetary rules” as any other economic conception that involves the use of certain stable relationships between macroeconomic parameters for solving the current economic problems, has several deficiencies. These deficiencies are caused by the unstable nature of socio-economic relations and the complexity of forecasting of the economic agents’ behavior at macroeconomic level. Based on the general content of research publications Van Lear William identifies five major deficiencies in the development and implementation of monetary rules.

However, we believe that two key theses in support of monetary rules negate most of the deficiencies cited in the scientific literature. Firstly, all developers of monetary rules, including John Taylor, warn against their mechanical application and emphasize the importance of their use along with other decision making instruments (expert judgment, modeling, etc.) of the monetary authorities. Secondly, at the moment there is no theoretically substantiated and empirically confirmed alternative to monetary rules. This thesis is particularly important during the use of inflation targeting regime.

The findings of this study can be used by the National Bank of Ukraine to develop a monetary rule. It should be noted that an explicit monetary policy rule will have a limited sphere of application until the full implementation of inflation targeting regime in Ukraine. It should be used only as an additional instrument for analyzing the effectiveness of the monetary policy. However, after the transition to inflation targeting and the renewal of stable relationships between the money supply and price dynamics in the economy of Ukraine (which will cause the inclusion of inflation indicator in the monetary rule for money supply) this rule can become one of the main instruments in the development and implementation of the monetary policy.

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