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EFFICIENCY CRITERIA FOR UKRAINE'S MONETARY POLICY

Throughout its modern history, Ukraine has faced a series of profound economic disruptions, driven by full-scale war, global financial crises, geopolitical instability, structural reforms, and external shocks. These conditions have reshaped the operational environment for monetary policy, revealing the limitations of conventional policy assessment tools. As the National Bank of Ukraine (NBU) navigates new constraints, it becomes imperative to reassess how the effectiveness of monetary policy is defined and measured. The objective of this research is to formulate an adaptive conceptual framework for evaluating the effectiveness of the monetary transmission mechanism, particularly under conditions of extreme uncertainty and dynamic institutional change.

A number of works highlight the time-varying characteristics of monetary transmission mechanism in general, and the interest rate pass-through in particular (Hauzenberger et al., 2021; Hlazunov et al., 2023; Jannsen et al., 2019; McKinnon, 1992), tying its changes to either phase of the economy's development, financial crises or uncertainty period. The central bank would react to these shifts by adjusting its policy design. Hence, in order to analyze and improve the monetary policy frameworks under such conditions, there is a need to have a holistic measure of monetary policy efficiency, that is flexible enough to adjust to the changing policy setup.

However, the existing conventional monetary policy efficiency metrics fall into one of two categories: the ones based on the "goal vs result" (Cecchetti et al., 2004) principle, and the ones based on the "input vs result" (Montes et al., 2024; Dolinskyi, 2023) principle. Whereas we deem both approaches valid, there is a need of an approach that combines the two principles, while being adaptable enough to be applicable for a changing setup of Ukrainian monetary policy landscape and its challenging macroeconomic context.

The primary aim of this study is to develop a coherent and flexible methodology to evaluate the transmission efficiency of Ukraine's monetary policy under volatile conditions. The approach aims to assess the real-time ability of the monetary system to stabilize macroeconomic variables in response to internal and external disturbances. The research builds on prior work by Cecchetti et al. (Cecchetti et al., 2004), Briec et al. (Briec et al., 2012), and Montes et al. (Montes et al., 2024), and aligns with international efforts to enhance macroeconomic policy resilience.

The methodology involves several stages: (1) a comprehensive literature review of traditional and modern efficiency metrics in monetary policy, (2) systemic analysis of Ukraine's transmission mechanism in the context of crisis and recovery, and (3) formulation of an adaptive efficiency coefficient using variable time-sensitive weights and penalties for excessive instrument volatility.

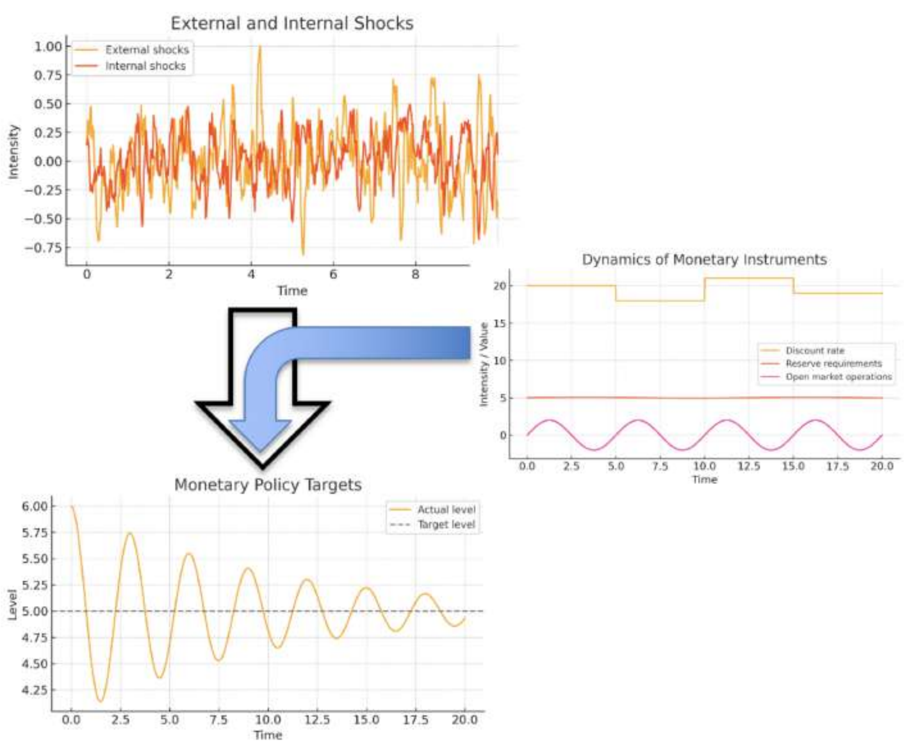

Figure 1. The "controlled shock filtering" concept of monetary policy

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Our research proposes a novel metric of transmission efficiency, expressed as a dynamic function sensitive to the stability of monetary tools and their alignment with declared policy targets. This coefficient incorporates a penalty for dispersion in monetary signals (e.g., interest rate variability, inconsistent FX interventions), while rewarding alignment with macro-financial stabilization goals. The efficiency coefficient E_t is proposed as follows (1):

$$E_t = \frac{w_t Var(S_t) - Var(T_{t+h} - \mu_{t+h})}{Var(I_t)} \quad (1)$$

where S_t denotes aggregated economic disturbances caused by internal and external factors, I_t represents the aggregated monetary policy actions (i.e., changes in monetary instruments), $T_{t+h} - \mu_{t+h}$ stands for the aggregated detrended deviations of targeted variables with lag h, and w_t is a time-varying adjustment weight vector used to harmonize the scale of input and output shocks.

This indicator, once the weights are calibrated, reflects the core expectations and assumptions regarding monetary policy effectiveness:

1. The greater the filtered difference w$w_t Var(S_t) - Var(T_{t+h} - \mu_{t+h})$, the higher the effectiveness score;

2. The lower the variance of monetary instruments, the higher the effectiveness score;

3. The metric incorporates both the “target–outcome” and “effort–outcome” principles, thus adequately capturing the effectiveness of both the monetary transmission mechanism and monetary policy as a whole.

Central to the approach is the concept of “controlled shock filtering” –treating the monetary transmission mechanism as a subsystem within the broader financial-economic system whose role is to filter and smooth out disruptions. This perspective mirrors emerging views in macro-financial literature, particularly in the post-crisis discourse (Ge, 2019; Hauzenberger et al., 2021; Stiglitz, 2012). The metric's adaptiveness is enabled by its structure: the weights on instrument volatility, policy lags, and channel responsiveness can shift over time based on empirical trends, calibrating the tool to the unique country's policy profile. The metric can detect early warning signs of policy drift or unintended transmission blockage, guiding mid-course corrections.

The proposed framework has practical value for both central banks and academic researchers. For the NBU, it offers a flexible diagnostic tool that complements existing inflation-targeting and forecasting models. By embedding this coefficient in regular monitoring dashboards, the Bank can gain a richer view of policy performance during crises.

Additionally, the metric may serve as a template for other emerging markets with volatile environments. For researchers, it creates a basis for cross-country comparative studies of monetary resilience, particularly in periods of extreme stress. The framework also supports adaptive monetary rules, policy communication strategies, and scenario-based forecasting models.

The study concludes that in conditions of extreme uncertainty, monetary policy efficiency must be reconceptualized as a dynamic, system-aware process. The adaptive metric proposed herein accounts for the interplay of structural constraints, policy objectives, and market responses. It emphasizes institutional flexibility, communication clarity, and a holistic view of stabilization capacity. Future improvements may involve embedding this metric into structural macroeconomic models, enhancing its empirical grounding, and extending its use to monetary-fiscal coordination analysis. The findings underscore the evolving role of central banks like the NBU in managing not only inflation but overall financial system resilience.

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