

## **Dissertation**

# **Monetary Policy, Inflation and Dollarization in the Economies of Central Asia**

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### **Abstract**

The present dissertation consists of three studies on the issues of inflation, monetary policy effects and dollarization in three economies in Central Asia – Kazakhstan, the Kyrgyz Republic and Tajikistan. These economies have undergone a deep transformation from central planning to market economies. The profound economic transformation which took place after these countries became independent, combined with liberalization of prices and trade, resulted in hyperinflation, general economic instability, and large fiscal and external imbalances. Central banks in the region had managed to combine the policies and tools to take control of inflation in the late 1990s. This was the period when positive economic growth was observed in the region. A negative shock for these countries was caused by the Russian crisis in 1998, though the consequences of this financial turmoil were softened by the measures of the regional central banks concerning the flexibility of the exchange rates. Since 2000, these economies have been characterized by single-digit inflation rates, except Tajikistan, and high positive economic growth.

The monetary policy framework has evolved over the transition period. Macroeconomic stabilization has brought important developments in the financial systems of the countries while at the same time a need for elaborate and efficient monetary policy. Economic developments, financial system advances, and the recent financial crisis stipulate the role of monetary policy as an important tool to maintain financial stability, to support local currencies' purchasing power, and to affect the external sector balance in these economies.

The first chapter examines monetary policy efficiency in Central Asia by investigating the monetary transmission mechanism in the region's economies. To

examine the efficiency of the monetary policy, it is necessary to take into account factors that might impede the transmission, such as high levels of dollarization, weak financial sectors, underdeveloped capital markets, and low monetization of economies. Empirical findings confirm the importance of the exchange rate pass-through in transition economies with high dollarization. The findings also provide an empirical case for deepening the local financial sectors to improve the efficiency of the monetary policy, and to improve resilience to external and other shocks.

The second chapter examines currency substitution and dollarization in Central Asia. Underdeveloped financial markets and periods of high inflation have stimulated dollarization and currency substitution in these economies. This study uses a model with money-in-the-utility function to estimate the elasticity of substitution between domestic and foreign currencies in three economies of Central Asia. Utility derived from holding money balances is represented by a CES function with money holdings denominated in two currencies. The residents are assumed to diversify their monetary holdings due to instability of the domestic currency. The steady state analysis reveals that though currency substitution decreases governments' seigniorage revenue, holding foreign money can be welfare generating if domestic currency depreciates vis-à-vis the currencies in which households' foreign balances holdings are denominated.

The final chapter studies inflation in two Central Asian economies - Kazakhstan and the Kyrgyz Republic. The period covered spans from 1995 to 2008. Stabilizing inflation became a major challenge for the central banks of these countries after they achieved independence. An empirical model of inflation is developed in order to investigate the main factors affecting inflation in these countries. The model accounts for dollarization through assumptions on some of the factors and by examining the use of different monetary aggregates as a measure of money supply. Estimation of the short run inflation equation shows that exchange rate pass-through to prices together with past inflation are important factors of inflation. Moreover, inflation reacts to long term deviations of the money demand from its equilibrium. The empirical methodology is comprised of case by case as well as system estimation. The study also takes into account the possibility of instability of the model's parameters.