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Testing for two-regime threshold cointegration in the parallel and official markets for foreign currency in Greece

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Abstract

This paper models the short-run as well as the long-run relationship between the parallel and official markets for US dollars in Greece in a threshold VECM framework. Modeling exchange rates within this context can be motivated by the fact that the transition mechanism is controlled by the parallel market premium. The results show that linearity is rejected in favour of a TVECM specification, which forms statistically an adequate representation of the data. Two regimes are implied by the model: the "typical" regime, which applies most of the time, and the "unusual" one associated with economic and political events that took place in Greece during the 1980s. Another implication is that in the parallel exchange rate there are strong asymmetries between the two regimes in the speed of adjustment to the long-run equilibrium. Finally, Granger causality runs from the official to the parallel market in both regimes but not vice versa.

JEL classification: C32; F31

Keywords: Parallel market premium; Non-linearity; Threshold cointegration; Regime switching; Vector error correction models

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1. Introduction

During the last decade, a growing literature has emerged in an attempt to study the importance of the existence of a "parallel" market for foreign currency in one country or in a group of countries. Parallel currency markets, especially for US dollars, are widespread in a number of countries or regions as a result of direct and indirect government intervention in the foreign exchange market. When access to the official exchange market is limited and there are various foreign exchange controls on international transactions on goods, services and assets, then those who need foreign exchange and are not able to obtain all they desire from official sources have an incentive to find an alternative source, whereas those having an excess of foreign exchange prefer to sell it at a price higher than the official rate. The size of this market varies from country to country and depends on the type of exchange and trade restrictions imposed and the degree to which these restrictions are enforced by the authorities (for a general overview of the theory of parallel currencies market, see Agenor, 1992; Montiel et al., 1993; Phylaktis, 1996). Furthermore, it has been made clear that the existence of such markets has important economic and welfare implications, whereas their impact may appear to be substantially important in countries with sustained high inflation or in countries in which the official exchange rate is used as a policy instrument. Thus, in high inflation economies with increased uncertainty, the operation of a parallel market satisfies the excess demand for foreign currency given that economic agents use increased holdings of foreign currency as an efficient mean for hedging against domestic inflation. Thus, a large number of papers have provided important evidence for the workings of such a market in Latin America, in the Pacific basin countries, in Africa, in Greece and other less developed countries.[1]

A parallel market for US dollars existed in Greece since World War II until the early 1990s. Its size has been considerable with the premium being on average 15%. However, Greece's joining of the EEC in 1981 eventually led to the adoption of specific policies that aimed to the abolition of all trade and foreign exchange controls, i.e., a distinct shift in the policy concerning these measures. In particular with respect to the controls on capital flows, the implementation of the financial liberalization process that took place in January 1986 coupled with the complete restructuring of the financial and banking sector has gradually led to the elimination of the black market for dollars by the end of 1993. Kouretas and Zarangas (1998, 2001a,b) and Kanas and Kouretas (2001a,b) have provided extensive evidence about the operation of the parallel market for dollars in Greece by adopting the portfolio balance and the monetary approach to the exchange rate determination. Specifically, with the application of cointegration analysis, they provide substantial evidence in favour of the existence of a stable *linear* long-run relationship between the official and parallel exchange rates as well as support for the purchasing power parity and the monetary model as valid frameworks to analyze movements of either exchange rate.

[1] Although such a market is commonly called "black" instead of "parallel", it is often more appropriate to use the latter rather than the former since as Dornbusch et al. (1983, p. 26) point out with the term "parallel market" we denote a type of "...intermediate position of legality in that it is illegal but also conspicuously public and it would appear officially tolerated".