

MODELING CURRENCY CRISES IN NIGERIA: AN APPLICATION OF LOGIT MODEL

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Abstract

Currency crises inflict significant social and economic costs on economies that have suffered its occurrence. Thus, statistical models have been developed over the years to construct reliable early warning systems as part of strategies for preventing or reducing the devastating effects of such crises. To the knowledge of this study, no recent work has been done in this regard with respect to Nigeria, especially following the 2008/09 global financial crisis. Using a logit model, this paper estimates the probabilities of currency crises in Nigeria as a logistic function of selected macroeconomic variables. Particularly, it provides answer to the question of whether real exchange rate misalignment is a useful leading indicator. The empirical investigation used quarterly data for the period 2000:Q1 to 2012:Q4. Model results show that the likelihood of currency crisis in Nigeria increases when the real exchange rate is misaligned; the exchange rate is volatile; oil price declines; debt/GDP ratio increases; and the current account balance to GDP ratio declines. Real exchange rate misalignment has overarching influence on the tendency for currency crash during the estimation period. The paper therefore recommends regular assessments of the value of the Naira exchange rate vis-à-vis its equilibrium level with a view to implementing appropriate policy responses to arrest or avoid prolonged and substantial misalignments. Since all the variables entered the equation in their one period lags, the estimated model constitutes a reliable early warning system to policy makers on the possibility of impending currency crisis in the country.

Keywords: Exchange rate misalignment, exchange market pressure, logit model