

Investigating the Impact of Cryptocurrency Tail Risk on Liquidity and Exchange Rates Growth with Time Varying Parameters (TVP-VAR)

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Abstract

The purpose of this study is to estimate the cryptocurrency tail risk and its effects on macroeconomic variables, especially real exchange rates and liquidity growth in Iran have been evaluated. For this purpose, statistical information for the period 2010-2020 based on the frequency of monthly data has been used. The approach used in this paper was the vector autoregression method with time-varying parameters (TVP-VAR). In the first part, the risk tail index was extracted using the threshold value for cryptocurrencies (bitcoins). Comparing the results of the VAR and TVP-VAR models, it can be seen that the shock from the Bitcoin virtual currency area has led to an initial decline in liquidity growth and exchange rates. However, after 2 periods, the effect of this shock reached its highest value and led to an increase in the growth of liquidity and the exchange rate, and the effect of this shock disappeared in the long run and converged towards the equilibrium value. The results obtained from the shock from the virtual currency area in the VAR model show that the variables of liquidity growth and exchange rate in all three cases have shown a positive reaction to this shock and the effect of this shock has disappeared in the long run.

Keywords: Tail Risk; Cryptocurrency; Monetary policy; Vector autoregression with time varying parameters (TVP-VAR).

JEL Classification: E33, F31, O33, N44.

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