

Extended Abstract

Purpose

Monetary policy as one of the main means of controlling and regulating the economy, has a significant effect on economic variables such as exchange rates, inflation and economic growth. The effect of monetary policy on the trend of macroeconomic variables can cause significant changes in the country's economic situation. Based on this, in the present study, the state dependent effects of monetary aggregates on macroeconomic dynamics during the period of 2001:02-2021:04 have been investigated.

Methodology

The result of the review of past studies indicates that in each of the studies, the effect of one of the monetary variables (money volume, liquidity, monetary base, bank interest rate) on inflation and economic growth has been investigated. One of the differences between the present study and the previous studies is that the variables of money volume, liquidity and monetary base are considered as monetary aggregates and the effect of each of these variables on inflation and economic growth in different regimes is investigated. It has been placed to determine which monetary variable has the greatest effect on macroeconomic variables in different economic regimes, and also to determine the symmetrical or asymmetrical effect of monetary variables on macroeconomic variables. Also, due to changes in economic policies and political crises, there may be a structural failure in the studied time series, which has not been considered in previous studies, so another feature of the present study is that by using Lee and Strazisich's unit root test (2003), structural breakpoints of monetary totals and macroeconomic variables have been identified and after detrending the examined variables according to the method suggested by Lee and Strazisich (2003), the residuals of the studied variables have been extracted and specified in the model; Therefore, due to the occurrence of structural failure, time series models with fixed parameters are not sufficient to describe such changes (Piger, 2007) and the appropriate approach for modeling such behaviors is state-dependent models that have a non-linear structure; In the current study, the macroeconomic variables undergo a change of status or regime change according to the effect of monetary aggregates, that is, in each regime, monetary variables have a different effect on macroeconomic variables; Therefore, in order to include this change in the modeling process, models in the form of Markov regime change regression models have been used, and in order to prevent multiple collinearity between monetary variables, each monetary variable are specified separately in the conditional variance equation. The results of Markov switching GARCH model with fixed transition probability (MS-FTP-GARCH (1,1)) indicate money volume, liquidity and monetary base in both low and high inflation regimes have a positive and significant effect on inflation, Due to the different coefficients of monetary variables, the asymmetric effect of monetary variables on inflation is evident. The results of examining the reaction of economic growth to monetary aggregates in different states show that in the regimes of low and high economic growth, monetary variables have a negative and significant effect on economic growth and this effect is asymmetric. Also, the results of the estimation of six separate Markov switching GARCH model with fixed transition probability (MS-FTP-GARCH (1,1)) show that among the monetary aggregates, the monetary base variable has the greatest effect on inflation and economic growth.

Finding

According to the results of the present study, in the low and high inflation regime, the monetary base variable plays a significant role in the escalation of inflation because the increase in the monetary base causes the growth of liquidity in the country, and as a result, the speed of demand in the economy exceeds the speed of supply in the economy, and as a result, it leads to inflation in the country; Also, the results show that in both recession and boom regimes, the increase in the monetary base leads to an increase in the amount of money and liquidity. With the increase of banknotes and certificates in the hands of the people, which means the increase in the amount of money, inflation has increased and this factor leads to a decrease in purchasing power, which ultimately causes a decrease in the demand for final goods and services and causes a decrease in economic growth.

Conclusion

Also, as much as the volume of liquidity increases, it causes inflation and a decrease in the value of real assets and ultimately leads to a decrease in GDP and a decrease in economic growth. It leads to inflation,

so one of the solutions to achieve inflation reduction is monetary discipline and prevention of liquidity intensification. One of the first steps to prevent the increase in liquidity is to balance the government's expenses and revenues; Also, considering that the increase in the monetary base and the subsequent increase in the volume of money and liquidity lead to a decrease in economic growth, governments encourage investors by measures such as reducing the risk of productive investments, reducing the time of implementing productive investment projects, and increasing the productivity of the production sector. to invest in productive economic sectors and liquidity is directed towards production and economic growth is formed. Therefore, the control of the components of monetary totals, considering the importance of each one in low and high inflation and economic growth situations, can be considered as a strategic point for economic policy makers.