

THE IMPACTS OF INFLATION AND INFLATION UNCERTAINTY ON SECTORAL STOCK MARKET RETURNS: EVIDENCE FROM TURKEY

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ABSTRACT

Purpose- The purpose of this study is to analyse the impacts of inflation and inflation uncertainty on BIST 100 and its sub-sectoral indexes including industrial, financial, services, material, energy, technology, information tech, telecommunication and banks during January 2004-August 2021. The first explanations about the effect of inflation on asset prices based on Fisher(1930)'s interest theory. As stated by Fisher (1930), the expected nominal return of a financial asset should be equal the expected inflation plus expected real return. Afterwards, many studies showed inflation and its uncertainty negatively affect asset prices. Stock prices involve information about the future values of macroeconomic variables such as inflation. The welfare costs of inflation can emerge in case of inflation uncertainty. Hence, it is important to research relationship between stock market returns, inflation and inflation uncertainty.

Methodology- The study employs different GARCH-type models to measure inflation uncertainty. With comparing alternative models according to model selection criteria, EGARCH(1,1) is chosen as most appropriate model for inflation. In EGARCH model, it is assumed that the effect of negative shocks on conditional variance is higher than positive shocks. Conditional volatility obtained from this model represents inflation uncertainty. Afterwards, nonlinear ARDL (NARDL) model is applied to analyze short-run and long-run relationship among BIST 100 and sectoral indices, inflation and inflation uncertainty. By means of this model, we can decompose effects of positive and negative shocks. NARDL model enables to be tested linear and nonlinear cointegration relationship. This model leads to be examined short-run and long-run effects by considering asymmetric and nonlinear components. Thanks to this model, how much of deviations from long-run equilibrium are corrected after one period can be determined.

Findings- The analysis reveals that there are long-run cointegration relationship among stock indices returns, inflation and inflation uncertainty. Positive and negative shocks in inflation do not have a statistically significant effect on BIST 100, services, energy and telecommunication sectors returns in both short-run and long-run. However, positive and negative shocks in inflation statistically significantly and negatively affect materials and technology sectors in both short-run and long-run. A negative shock in inflation have a statistically significant and negative effect on financial, banks and industrial sectors only in short run while on information technology sector in both short-run and long-run. However, we do not find any evidence that inflation uncertainty affects sector returns.

Conclusion- based upon the analysis Findings it may be concluded that central banks may provide financial stability by controlling inflation with monetary policies implemented by them. At this point, interest rate emerges as an important monetary policy instrument. Also, the credibility of central banks is an important factor in ensuring financial stability. Consequently, the findings from this study provide significant information for financial investors and policy makers.

Keywords: Inflation, inflation uncertainty, stock prices, EGARCH model, NARDL model

JEL Codes: E31, E44, C22

REFERENCES

Albulescu, C. T., Aubin, C., & Goyeau, D. (2017). Stock prices, inflation and inflation uncertainty in the US: testing the long-run relationship considering Dow Jones sector indexes. *Applied Economics*, 49(18), 1794-1807.

Alexakis, P., Apergis, N., & Xanthakis, E. (1996). Inflation volatility and stock prices: evidence from ARCH effects. *International Advances in Economic Research*, 2(2), 101-111.

Antonakakis, N., Gupta, R., & Tiwari, A. K. (2017). Has the correlation of inflation and stock prices changed in the United States over the last two centuries?. *Research in International Business and Finance*, 42, 1-8.

Azar, S. A. (2013). The spurious relation between inflation uncertainty and stock returns: evidence from the US. *Review of Economics & Finance*, 3, 99-109.

Döpke, J., & Pierdzioch, C. (1999). Financial market volatility and inflation uncertainty: An empirical investigation (No. 913). Kiel Working Paper.

Fisher, I. (1930). *Theory of interest: as determined by impatience to spend income and opportunity to invest it*. Augustusm Kelly Publishers, Clifton.

Lee, K. (1999). Unexpected inflation, inflation uncertainty, and stock returns. *Applied Financial Economics*, 9(4), 315-328.

Nelson, D. B. (1991). Conditional heteroskedasticity in asset returns: A new approach. *Econometrica: Journal of the Econometric Society*, 347-370.

Shin, Y., Yu, B., & Greenwood-Nimmo, M. (2014). Modelling asymmetric cointegration and dynamic multipliers in a nonlinear ARDL framework. In *Festschrift in honor of Peter Schmidt*, 281-314. Springer, New York, NY.