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The Impact of Irrational Economic Policies on Borsa Istanbul, Interest Rates, and Inflation in Turkey: A Time Series Analysis

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Abstract

This study aims to examine the relationship between Borsa Istanbul (BIST), interest rates, and inflation during the period of irrational economic policies from 2018 to 2023. The Johansen Cointegration model (1991, 1995) was employed to investigate the long-term relationship between the variables. Using monthly data, the dynamics between the BIST100 index, interest rates, and inflation were analyzed. The findings of the study indicate that as interest rates and inflation decrease, the BIST100 index tends to rise. This suggests that lower interest rates and inflation stimulate investment and consumption, thereby supporting economic growth. Additionally, a linear relationship between inflation and exchange rates was identified, predicting that the exchange rate would increase at least by the inflation rate.

Keywords: Borsa Istanbul, Interest Rate, Inflation

1. INTRODUCTION

The price of most assets is determined by supply and demand under market conditions. In contrast, the short-term interest rate is set by the central bank. The central bank uses the interest rate as part of its monetary policy to ensure liquidity in the market efficiently. According to (Brigham and Houston, 2015) if a central bank increases the amount of money in the market, the interest rate falls, and consumption and investment increase. National income increases, and economic growth takes place. Corporate profits and stock prices rise. Unemployment decreases, and there is an economic revival. After a while, inflationary pressures rise in the market. In this case, the central bank reduces the money in the market. If money is reduced, interest rates rise, and consumption and investment fall. The economy shrinks, corporate profits, and stock prices fall. In an environment of economic slowdown, unemployment rises and individuals become unhappy. Moreover, interest rates rise in an economy with budget deficits and trade deficits. The rise in interest rates causes the economy to slow down and shrink again.

There are multiple definitions of interest rates in the literature. The most well-known of these is the quoted or nominal interest rate. The nominal interest rate consists of four risk components. These risk components are real risk-free rate of interest, inflation premium, default risk premium, liquidity premium and maturity risk premium. These components are considered as independent variables. The sign of each risk component is positive. This means a positive relationship exists between these risk components and the nominal interest rate. In other words, when these risk components increase, the nominal interest rate also increases.

Moreover, according to (Besley and Brigham, 2011, p. 87) interest rates have two effects on corporate profits. First, since interest is a cost, the higher the interest rate, the lower the corporate profit. Second, interest rates affect the level of economic activity and economic activity, in turn, affects corporate profits. There is also an important relationship between inflation and exchange

rates in financial markets. According to (Dornbusch, 2019) exchange rates usually depreciate when inflation rises. When exchange rates are unstable, inflation can rise.

On the other hand, the Turkish economy has pursued a high interest rate low exchange rate strategy for many years. In this process, inflation declined to single digits, and inflation reached a sustainable level. Later, this policy was abandoned, and a low-interest rate, high exchange rate strategy was adopted. High exchange rates pushed inflation higher than ever due to exchange rate pass-through. In addition, politics in Turkey interfered with the independence of the Central Bank of the Republic of Turkey, causing it to cut policy interest rates several times. As a result, exchange rates and inflation soared, and households became poorer. Prices in financial markets have become unpredictable. After the last presidential election in Turkey, a new economic administration took office. The first statement of the new economic administration was on "transparency, predictability and return to the rational ground." In other words, the new economic administration acknowledged that irrational policies were implemented in the Turkish economy for a certain period. This made it necessary to analyze the relationship between Borsa Istanbul, interest rates and inflation during the irrational economic policies period in Turkey. In this framework, this study aims to analyze the relationship between Borsa Istanbul, interest rates and inflation during the irrational period.

2. LITERATURE REVIEW

This section summarizes the studies in which the concepts of stock market, interest rate and inflation are mentioned in the titles of the articles.

(Blanchard, 1981) analyzed the relationship between GDP, the stock market and interest rates. According to the findings of the study, an increase in GDP raises stock prices. An increase in interest rates, on the other hand, decreases stock prices. Declines in stock prices have a negative effect on interest rates with one lag. (Geske and Roll, 1983) examined the relationship between stock returns and inflation. According to the findings of the study, monetary expansion increases stock returns while increasing inflation. This depends on the fall in interest rates. A fall in interest rates stimulates investment and consumption. Increased investment and consumption increase stock returns, while an increase in the money supply increases inflation. (Solnik, 1983) analyzed the relationship between stock prices and inflation expectations. According to the findings of the study, there is a negative relationship between these two variables. Higher-than-expected inflation expectations lower stock prices. This is because higher inflation expectations increase investors' perception of risk. Titman and Warga, 1989) examined the predictive power of stock returns on interest rates and inflation. According to the findings of the study, stock returns have a weak predictive power on future interest rates. Stock returns have a moderate predictive power on future inflation. Therefore, it shows that the predictive power of stock returns on interest rates and inflation is limited. Domain et al. (1996) examined the relationship between expected inflation, interest rates and stock returns. According to the findings of the study, expected inflation and interest rates have a negative impact on stock returns. An increase in expected inflation and interest rates decreases stock returns. This is due to the decrease in investors' profit expectations and risk appetite. Wu, (2000) analyzed the relationship between stock prices and exchange rates in Singapore. According to the findings of the study, there is a cointegration between these two variables. Stock prices show causality from exchange rates. Increases in exchange rates decrease stock prices. Wu, (2001) analyzed the relationship between exchange rates, stock prices and money markets in Singapore. According to the findings of the study, increases in exchange rates decrease stock prices and increase money market interest rates. Nieh and Lee (2001) examined the relationship between stock prices and exchange rates in G-7 countries. According to the findings of the study, there is a cointegration between these two

variables. Increases in exchange rates decrease stock prices. This can be explained by the fact that an increase in the exchange rate reduces the exports and profitability of companies, which leads to a decrease in stock prices.

Apergis and Eleftheriou (2002) examined the relationship between interest rates, inflation and stock prices in the Athens Stock Exchange. According to the findings of the study, interest rates and inflation have a negative impact on stock prices. Wongbangpo and Sharma, (2002) examined the dynamic interactions between the stock market and macroeconomic fundamentals in ASEAN-5 countries. According to the study's findings, stock prices are affected by macroeconomic fundamentals. GDP growth increases stock prices, while inflation decreases stock prices. Moreover, there is a dynamic interaction between stock prices and macroeconomic fundamentals. A fall in stock prices may adversely affect macroeconomic fundamentals. (Goyal, 2004) analyzed the causality relationship between interest rates, inflation and exchange rates. According to the findings of the study, economic structure and the degree of openness affect the order of causality between these variables. In closed economies, interest rates cause inflation, while in open economies, inflation causes interest rates. Exchange rates affect interest rates and inflation in flexible exchange rate regimes, while interest rates and inflation affect exchange rates in fixed exchange rate regimes.

Engel and West, (2005) examined the relationship between exchange rates and key indicators. According to the findings of the study, there is a long-term relationship between exchange rates and key indicators. Interest rate spread, inflation and output have a significant impact on exchange rates. When the interest rate differential increases, the exchange rate moves in favor of the currency with the higher interest rate. When inflation increases, the exchange rate moves in favor of the currency with lower inflation. When output increases, the exchange rate moves in favor of the currency with higher output. Kurihara, (2006) finds that Japan's quantitative easing policy has a significant impact on the exchange rate and stock prices. The depreciation of the Japanese yen increases the exports and profitability of Japanese firms, leading to higher stock prices.

Ortiz et al. (2006) examined the hedging properties of stocks against inflation and exchange rates in Brazil and Mexico. According to the findings of the study, stock returns are not an effective hedging instrument against inflation and exchange rates in the long run in Brazil and Mexico. Tabak (2006) analyzed the dynamic relationship between stock prices and exchange rates in the Brazilian economy. According to the findings of the study, there is a significant relationship between stock prices and exchange rates. Stock prices follow exchange rates. This is due to the fact that investors predict the performance of the Brazilian economy from stock prices. This relationship holds both in the short and long run. Al-Abadi and Al-Sabbag (2006) examined the relationship between interest rate sensitivity, market risk, inflation and bank stock returns. According to the findings of the study, interest rate sensitivity negatively affects bank stock returns. Market risk and inflation positively affect bank stock returns. Ratanapakorn and Sharma, (2007) examined the relationship between US stock returns and macroeconomic variables. According to the findings of the study, in the long run, all macroeconomic variables have a statistically significant effect on stock returns. In the short run, all macroeconomic variables except exchange rate and long-term interest rates have a statistically significant effect on stock returns.

Faust (2007) analyzed the high-frequency responses of exchange rates and interest rates following macroeconomic announcements. According to the findings of the study, exchange rates and interest rates move significantly following macroeconomic announcements. This volatility depends on the deviation of the announced data from expectations and usually occurs at the time of the announcement. The volatility is usually short-lived and fades within a few minutes. Chen,

(2009) forecasts the bear stock market using macroeconomic variables. According to the findings of the study, slowing GDP growth, rising inflation, rising unemployment, rising interest rates and depreciation of the exchange rate are possible signs of a bear stock market. The reason for these signs is that economic growth slows, investor risk perception increases, economic activity declines, investment becomes less attractive and import costs increase.

Jareño and Navarro (2010) examined the relationship between stock returns, interest rates and inflation shocks. According to the findings of the study, higher interest rates and inflation shocks reduce stock returns. While rising interest rates increase investors' risk perception, inflation shocks increase investors' uncertainty. This leads investors to shift from riskier assets to less risky assets and lower stock returns. Kasman et al. (2011) examined the effects of interest rate and exchange rate volatility on banks' stock returns and volatility in Turkey. According to the findings of the study, interest rate and exchange rate volatility negatively affect banks' stock returns and volatility. Katechos (2011) analyzed the relationship between exchange rates and stock returns. According to the findings of the study, exchange rates have a significant effect on stock returns. A higher exchange rate increases corporate profits by increasing exports and decreasing imports. This, in turn, causes stock prices to rise. Also, a higher exchange rate makes it more attractive for foreign investors to invest in that country. This, in turn, contributes to higher stock prices. (McKinnon, 2011) analyzed global inflation and international monetary reform. According to the study's findings, exchange rates and interest rates contribute significantly to global inflation. The effect of exchange rates on global inflation is greater than the effect of interest rates. (Ehrmann et al. 2011) analyzed international financial transmission channels. According to the findings of the study, stock prices are the most important instrument of the international financial transmission channel. Bond prices and exchange rates also play an important role. (Constantinos et al. 2012) examined the relationship between inflation and stock prices in Greece. According to the findings of the study, increases in inflation decrease stock prices, while decreases in inflation increase stock prices.

Pimentel and Choudhry (2014) analyzed the impact of high inflation and interest rates on stock returns in Brazil. According to the findings of the study, high inflation and interest rates have a negative impact on stock returns. Sensoy and Sobaci (2014) analyzed the dynamic relationship between the exchange rate, interest rate and the stock market in Turkey. According to the findings of the study, exchange rate volatility shocks cause short-term changes in the relationship between these variables. However, these changes do not have a long-term effect. Therefore, policymakers and investors should not be concerned about these changes. (Engel, 2016) analyzed the relationship between exchange rates, interest rates and risk premiums. According to the findings of the study, the interest rate spread and the risk premium have a significant impact on the exchange rate. An increase in the interest rate spread and risk premium causes the exchange rate to move against the currency with a higher interest rate and risk premium relative to the country. (Jareño, Ferrer & Miroslavova, 2016) analyzed the sensitivity of the US stock market to interest rates and inflation rates. According to the study's findings, interest rates and inflation rates have a negative impact on the US stock market. Mgammal (2018) analyzed the effects of inflation, interest rates and exchange rates on stock prices in Saudi Arabia and the United Arab Emirates. According to the findings of the study, these variables negatively affect stock market prices. Charef and Ayachi (2018) examined the relationship between exchange rates, inflation, interest rate differentials and export prices of goods in Tunisia. According to the findings of the study, there are bidirectional causality relationships between these variables. Sen et al. (2020) examined the long-term relationship between interest rate, inflation rate and exchange rate in five fragile EMEs. According to the findings of the study, there is a long-term relationship between these

variables. An increase in interest rates leads to a fall in inflation rates and a rise in the exchange rate. An increase in inflation rates leads to an increase in the exchange rate.

Eldomiaty et al. (2020) examined the impact of inflation and interest rates on stock prices. According to the findings of the study, these variables have a significant impact on stock prices. An increase in inflation and interest rates decreases stock prices. Algarini (2020) examined the impact of GDP, foreign direct investment, inflation rate and interest rate on stock market values in Saudi Arabia. According to the study's findings, inflation and interest rates negatively affect stock market values. Economic growth and foreign direct investment, on the other hand, positively affect stock market values. Okorie et al. (2021) examined the relationship between inflation, exchange rate and stock market returns in Nigeria. According to the findings of the study, there is a positive relationship between inflation and exchange rate, a weak positive relationship between inflation and stock market returns, and a weak negative relationship between exchange rate and stock market returns. Philips et al. (2022) examined the cyclical relationship between the exchange rate and inflation rate, oil prices and stock returns. According to the findings of the study, the exchange rate and inflation rate play an important role in this relationship. An increase in oil prices may lead to a rise in the exchange rate, which in turn may lead to a fall in stock returns. On the other hand, an increase in inflation rates weakens the relationship between oil prices and stock returns.

As a result, interest rates and inflation affect the stock market. For investors, taking into account changes in interest rates and inflation makes it easier to predict stock market performance.

3. THEORETICAL FRAMEWORK

In the literature, there are various theories that explain the relationships between interest rates, inflation, and stock market returns.

The Fisher effect explains the relationship between interest rates and inflation. Fisher (1930) is an important study that examines the fundamentals of interest rates and helps determine interest rates. The study argues that interest rates reflect the time value of money, expected inflation and risk. The time value of money means that the value of money today is higher than the value it will have in the future. Expected inflation estimates how much prices will rise in the future. Inflation is an important factor affecting interest rates. According to (Mundell, 1963) an increase in the inflation rate reduces the real interest rate. An increase in the inflation rate reduces the return on investments. This means that the nominal return on investments actually decreases due to inflation. According to Mankiw (2014) there is an inverse relationship between interest rates and inflation. An increase in the interest rate leads to a decrease in inflation, while a decrease in the interest rate leads to an increase in inflation. Central banks use the interest rate to control inflation. Central banks raise interest rates when they want to reduce inflation. This reduces the demand for investment and slows down production. Thus, it slows the increase in prices and lowers inflation. When central banks want to increase inflation, they lower interest rates. This increases investment demand and accelerates production. According to (Romer, 2018) the relationship between interest rates and inflation is stronger in the short run. In the long run, other factors can also affect inflation. Moreover, the relationship between interest rates and inflation depends on the effectiveness of monetary policy. If monetary policy is effective, it is possible to control inflation by changing interest rates.

The relationship between interest rates and stock returns is explained by modern portfolio theory. Markowitz (1952) explains this relationship indirectly. Interest rate is a factor that affects investors' risk and return preferences. Therefore, the interest rate can indirectly affect stock returns. Markowitz (1991) and Markowitz and Todd 2000) explain the relationship between interest rates and stock returns. Both of these studies show that the interest rate affects investors'

risk and return preferences. When interest rates rise, investors start to prefer less risky investments. This may lower stock returns. When the interest rate falls, investors start to prefer riskier investments. This may increase stock returns. According to (Sharpe (1964) there is a positive relationship between the return on risk-free assets and stock returns. This implies that high risk-free asset returns are associated with high stock returns. However, an increase in the interest rate may reduce investors' interest in risky investments. This may lower stock returns. According to Lintner (1965), when interest rates rise, investors start to prefer investments with lower risks and more stable returns. This may lower the returns on risky investments such as equities. When interest rates fall, investors start to prefer investments with higher risks and higher returns. Thus, it may increase the returns on risky investments such as equities. (Campbell et al. 2002) study **does not explain a direct relationship** between interest rates and stock returns. However, the study suggests that the interest rate is a factor that affects investors' risk and return preferences. Interest rate is a factor that affects investors' risk and return preferences. Therefore, the interest rate may indirectly affect stock returns. Cochrane (2005) argues that the interest rate is a factor that affects systematic risk. When interest rates rise, systematic risk increases. This can lower stock returns. When the interest rate falls, systematic risk decreases. This may increase stock returns. Fama (1970) defines the basic assumption of the efficient market hypothesis. According to the EMH, markets are a random process, priced according to all available information, and investors are not likely to consistently exceed market returns.

As a result, these theorems are still valid today.

4. METHODOLOGY

The aim of this study is to determine the relationship between Borsa Istanbul (BIST), interest rates and inflation during the period of irrational economic policies. The Johansen Cointegration (1991 and 1995) model is used to investigate the long-term relationship of the variables. The Johansen model is a time series analysis method used to determine whether variables have a long-term relationship and what this relationship is. Monthly data were used in the study. The period analyzed is between 2018 and 2023. Table 1 shows the descriptive statistics.

Table 1. Descriptive Statistics: Summary

	DLOG BIST100	DLOG REFERENCEINTERESTRATE	DLOG CONSUMERPRICEINDEX
Mean	0.038804	0.001802	0.025562
Median	0.046834	-0.005331	0.016650
Maximum	0.225651	0.363903	0.127298
Minimum	-0.167536	-0.162735	0.000266
Std. Dev.	0.089952	0.104091	0.026552
Observations	57	57	57

5. LIMITATIONS OF THE STUDY

According to Johansen and Juselius (1988), Granger (1999), and Gujarati and Porter (2010), Johansen cointegration analysis is an econometric technique used to determine the long-term

relationship of variables. This technique determines whether the variables are in a circle of units and, if so, how many cointegration vectors there are. It is also quite powerful in determining the direction and strength of the relationship of variables. It can be used to analyze different types of variables and is highly sensitive in determining whether there is a structural break between variables. However, Johansen's cointegration analysis is based on a complex mathematical model, which can make the analysis difficult to understand and apply.

6. METHODOLOGY

The VAR-based cointegration model developed by Johansen (1991, 1995) can be expressed as follows (Reviews User's Guide, 2022, p. 1245).

a VAR forecast with p lags:

$$y_t = A_1 y_{t-1} + ... + A_p y_{t-p} + Bx_t + \varepsilon_t \qquad (1)$$

Where y_t is the k vector of non-stationary I(1) variables, x_t and is the d vector of deterministic variables and ε_t innovations vector? This VAR estimation can be rewritten as:

$$\Delta y_t = \prod y_{t-1} + \sum_{i=1}^{p-1} \Gamma_i \Delta y_{t-i} + Bx_t + \varepsilon_t \qquad (2)$$

where:

$$\prod = \sum_{i=1}^{p} A_i - I, \qquad \Gamma_i = -\sum_{j=i+1}^{p} A_j \qquad (3)$$

VAR is an econometric model that shows how variables are related over time. y_t It is a vector representing the variables in the VAR model. I(1) indicates that the variables are non-stationary at level but become stationary by taking the first-order difference. x_t Is a vector representing the deterministic variables in the VAR model. ε_t is a vector representing innovations in the VAR model.

The $\prod$ matrix is the coefficient matrix that shows the relationship between the variables. The reduced rank, $r < k$, is the number of nonzero coefficients in the $\prod$ matrix. The number of cointegration relationships is equal to the reduced rank of the $\prod$ matrix. The cointegration vectors B are vectors that show the long-term relationship between the variables.

7. RESULTS

In the first stage of the study, whether the variables are stationary or not is investigated. For this purpose, Levin, Lin Chu, Pesaran and Shin, ADF and PP tests were used. These tests are used to determine whether the variable is stationary or not. The p-values in Table 2 are less than 0.05. This result indicates that the variables are stationary.

Table 2. Group unit root test: Summary

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-3.75569	0.0001	3	165
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-4.52504	0.0000	3	165
ADF - Fisher Chi-square	36.9423	0.0000	3	165
PP - Fisher Chi-square	36.1059	0.0000	3	168

In the second stage of the study, the optimal lag level of the system was determined. For this purpose, various information criteria were used. The information criteria in Table 3 indicate that the optimal lag is 1.

Table 3. VAR Lag Order Selection Criteria

Lag	LogL	LR	FPE	AIC	SC	HQ
0	211.3205	NA	6.65e-08	-8.012327	-7.899755	-7.969170
1	**254.7137**	**80.11051***	**1.77e-08***	**-9.335142***	**-8.884855***	**-9.162513***
2	259.3629	8.046651	2.10e-08	-9.167803	-8.379800	-8.865701
3	265.0858	9.244687	2.41e-08	-9.041760	-7.916043	-8.610187
4	272.1389	10.57968	2.64e-08	-8.966880	-7.503447	-8.405835
5	275.6006	4.793101	3.37e-08	-8.753868	-6.952720	-8.063350

In the third stage of the study, we examine whether the characteristic roots are within the unit circle. This examination shows whether the system moves in a stationary manner. The characteristic inverse roots shown in Figure 1 are within the unit circle. This indicates that the system is stationary. A shock to the system causes it to move away from its equilibrium position. However, the system returns to its equilibrium position as soon as the shock effect disappears. In other words, shocks to the system are not permanent.

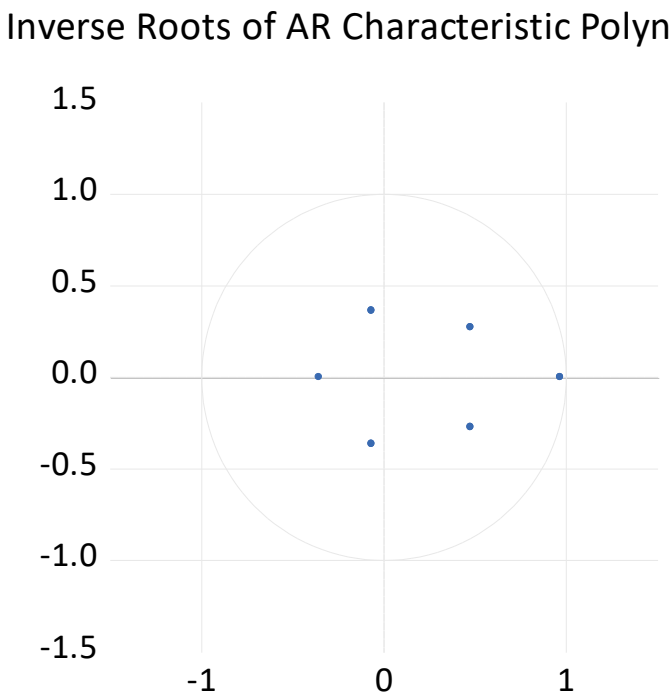

Figure 1. Characteristic Roots

In the fourth stage of the research, Johansen's cointegration analysis was conducted. This analysis is used to determine whether the variables have a long-term relationship. Johansen's analysis starts with sorting the variables from exogenous to endogenous. This ordering can be done by Granger causality or a priori evaluation. In this study, the variables are ordered by a priori evaluation.

Johansen's analysis uses two hypothesis tests to determine the level of cointegration of variables: " *H_0: There is no cointegration. H_1: There is cointegration*".

The prob values in Table 4 are less than 0.05. This means that the H0 hypothesis is rejected. In other words, there is a long-term relationship between BIST100, interest rates and inflation (BIST100, Interest Rate and Consumer Price Index) variables.

Table 4. Johansen Cointegration

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.432658	48.62589	35.01090	0.0010
At most 1 *	0.236374	21.41986	18.39771	0.0183
At most 2 *	0.161860	8.475375	3.841465	0.0036

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

In the fifth stage of the study, the cointegration equation was obtained. The cointegration equation is an equation that shows the long-term relationship between variables.

Table 5. Cointegration Equation

DLOGBIST100	DLOGREFERENCEINTERESTRATE	DLOGCONSUMERPRICEINDEX
1.000000	0.138618	0.342984
	(0.08514)	(0.41663)
Corrected marks	-	-

The cointegration equation in Table 5 is written as follows:

$$BIST100 = -0.13 * Interest\ \ Rate - 0.34 * Consumer\ \ Price\ \ Index + \varepsilon_t \qquad (4)$$

This equation shows that Interest Rate and Consumer Price Index variables have a negative impact on the BIST100 index. In technical terms, a 1% decrease in the interest rate increases the BIST100 by 0.13%, while a 1% decrease in the consumer price index increases the BIST100 by 0.34%. These results are consistent with the theoretical framework of the study. Low-interest rates and inflation support economic growth by encouraging investment and consumption. This causes the BIST100 index to rise. The findings suggest that there is a long-term relationship between BIST100, interest rates and inflation. This relationship is such that the BIST100 index increases as interest rates and inflation decrease.

In the sixth stage of the research, the presence of a structural break in the system is analyzed. A structural break can be defined as a sudden and permanent change in the behavior of a variable. For this purpose, Cumulative Sum of Recursive Residuals (CUSUM) and Cumulative Sum of Square of Recursive Residuals (CUSUMSQ) tests are used. These tests determine the presence of a structural break using the confidence interval of the estimated model. The CUSUM and CUSUMSQ plots shown in Figure 2 and Figure 3 show that the system is within the confidence interval and there is no structural break. These results are valid for all series. The structural break tests show that the long-term relationship of the system is stable.

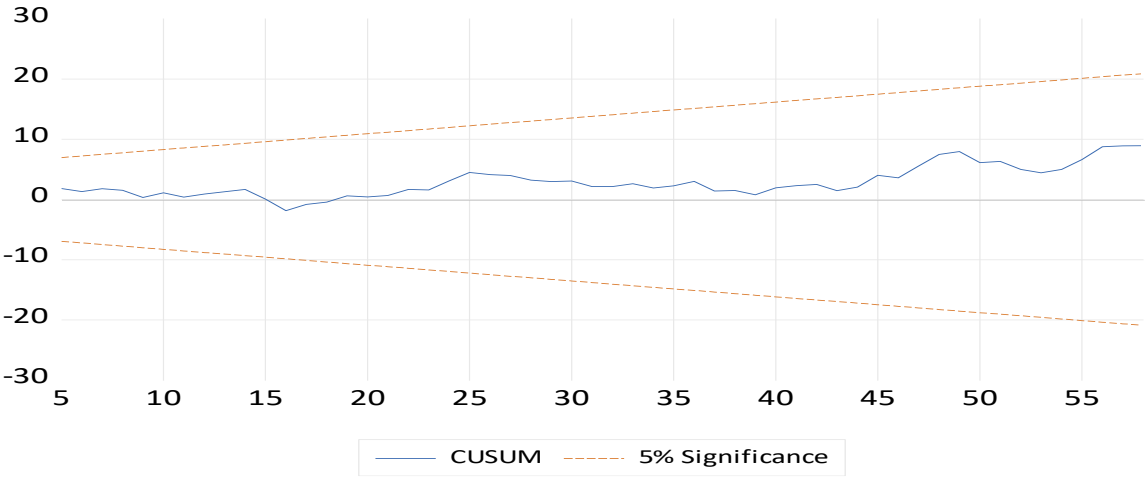

Figure 2. CUSUM

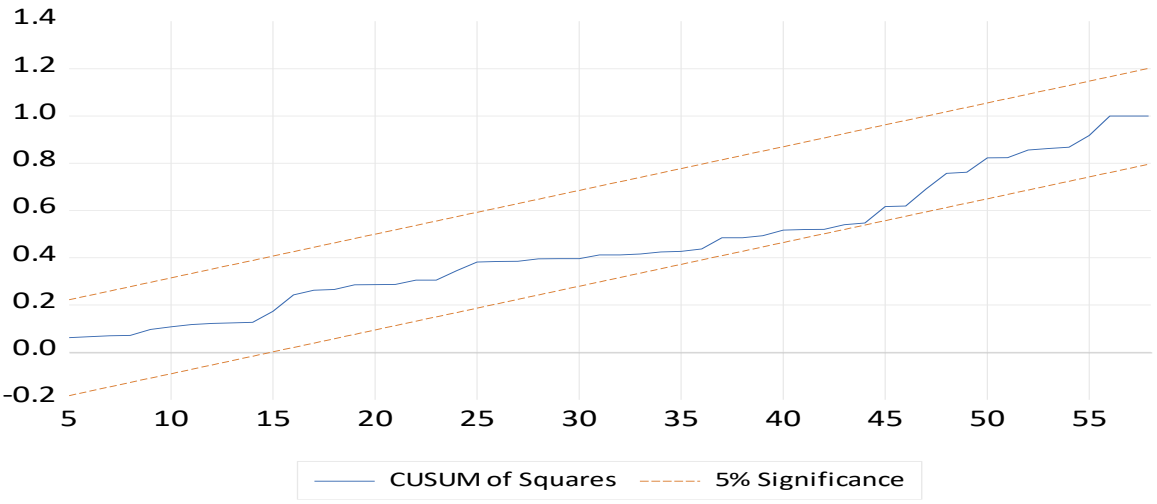

Figure 3. CUSUMSQ

In the last stage of the study, the presence of autocorrelation problems among the series is examined. Autocorrelation is the presence of a relationship between error terms. In the case of autocorrelation, the model estimates may be inaccurate. For this purpose, the Breusch-Godfrey Serial Correlation LM test is used. This test is a statistic that measures the correlation between error terms.

The p-value of the LM test in Table 6 is 0.5417. This value is greater than 0.05. Therefore, the null hypothesis H0 cannot be rejected. In other words, there is no autocorrelation between the series. Autocorrelation analysis shows that there is no autocorrelation between the series.

Table 6. Breusch-Godfrey Serial Correlation LM Test

Breusch-Godfrey Serial Correlation LM Test:			
Null hypothesis: No serial correlation at up to 1 lag			
F-statistic	0.377327	Prob. F(1,53)	0.5417
Obs*R-squared	0.402936	Prob. Chi-Square(1)	0.5256

These results support the validity of the research findings.

8. DISCUSSION AND CONCLUSION

This study analyzed the long-term relationship between the BIST100 index, interest rates, and inflation. The findings indicate that as interest rates and inflation decrease, the BIST100 index rises. These results are consistent with the existing literature (Fisher, 1930; Mundell, 1963; Mankiw, 2014; Romer, 2018; Markowitz, 1952; Markowitz, 1991; Markowitz and Todd, 2000; Sharpe, 1964; Lintner, 1965; Campbell et al., 2002; Cochrane, 2005; Fama, 1970). However, the relationship between interest rates, inflation, and stock returns is complex, varying based on the general state of the economy and investors' risk-return preferences. In this context, interest rates and inflation are key determinants of economic activity, as low rates encourage investment and consumption, leading to an increase in the BIST100 index. Moreover, there is a linear relationship between inflation and exchange rates.

This study highlights the need for policymakers to consider the potential impact of the BIST100 index when setting interest rate and inflation policies. Investors, on the other hand, should closely monitor changes in interest rates and inflation while investing in the BIST100 index. Finally, the irrational policies implemented in Turkey have not significantly disrupted the expectations of the theoretical framework, and these policies have been sustained due to the internal dynamics of the economy. However, uncertainty and distortions in asset pricing could not be avoided.

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