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THE IMPACT OF MACROECONOMIC FACTORS ON STOCK RETURNS

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Abstract:
This study focuses on analyzing the effects of independent variables on two different stock markets, namely France and Turkey. To investigate these effects, a number of independent factors, including interest rates, inflation, exchange rate and GDP growth were analyzed. The study was carried out over a 21-year period, from January 2003 to December 2023, using quarterly data. The impact of the macroeconomic variables and the causal relationship between both countries are studied using methods such as the Unit Root test, Co-integration test, Heteroskedacity test, Autocorrelation test, Correlation, and Regression. The results show a significant positive relationship between GDP growth and stock index in both markets, as well as a positive relationship between exchange rate and stock returns. However, the difference occurs in the other independent variables, for inflation rate the impact is positive in Turkish market and is statistically insignificant in French case. Interest rate affects French market negatively and was found insignificant in Turkish case. These findings provide valuable insights for investors in understanding the drivers of stock market performance. Further research is needed to explore additional factors influencing stock returns.

Keywords:
Stock index, GDP, regression

1. Introduction
During several decades, many academics, professionals and analysts studied the relationship between economic indicators and stock returns. It is frequently believed that several fundamental macroeconomic variables, including the interest rate, GDP growth, exchange rate, inflation rate, and global economic policy uncertainty index, are accountable for the stock return. In view of its high significance to key decision-making policies related to portfolio management and economic policy decisions these studies serve key purposes for researchers too.
A comparative study between France (a developed market) and Turkey (an emerging market) investigates the effects of various essential macroeconomic variables on stock returns. This research covers macroeconomic factors such as GDP growth rates, inflation rates, foreign exchange rates, interest rates and global economic policy uncertainty. The main goal of this study is to find out how these different kinds of factors affect stock market performance in the two countries by comparing their effects. By doing so, it seeks to reveal the diverse dynamics and sensitivities within developed and emerging markets thereby giving an extensive understanding of macroeconomic influences on share prices.
By studying the relationships between these important economic indicators and stock market performance, Investors may make decisions that are more accurate and manage the complexity of the financial markets.

2. Literature Review
Several macroeconomic variables, including GDP growth, inflation, interest rates, and currency rates, have an impact on stock returns. The effect of these variables on stock returns has been the focus of numerous financial studies.

2.1. *GDP growth*
The macroeconomic component of GDP growth has been demonstrated to positively impact the stock returns. According to studies, firms tend to make greater profits when the economy is expanding, which might increase stock

returns. In the United States, for instance, research by (Nai-Fu Chen et al., 1986) discovered a positive correlation between GDP growth and stock returns. (Hsing &Hsieh, 2012) conducted additional research on the German stock market (Poland). GDP growth, real intrigued rate, inflation rates, exchange rates, and the yield on long-term government bonds were considered as independent variables in the study. The researchers concluded that while real interest rates, exchange rates, inflation rates, and bond yield have a negative impact on the stock market, real GDP has a positive effect on stock prices.

2.2. Inflation Rate

A crucial macroeconomic factor affecting the performance of stocks is inflation, which is measured, in this study, using the Consumer Price Index (CPI). The impact of CPI is variable depending on context-specific circumstances because companies face varying challenges during different periods of fluctuating inflations over timeframes big enough to make an impact on the firm's economic activities owing borrowing costs.

The relationship between fluctuations arising unexpectedly with natural expected rises being viewed as positive or negative has required close examinations. In fact, (Eugene Fama, 1981) found that unexpected deflation had adverse effects while (BEKAERT & HARVEY, 1995) showed more positive effects analyzing in nations with high inflation rates. They contend that companies delivering goods and services at such high-inflation territories managed to increase profits by maintaining ascending pricing strategies to keep up with mounting inflation thereby making a positive contribution to their stock returns. Furthermore, past studies found a significant relationship between inflation rate and stock returns. For instance, (Choundhry, 2001) found a significant positive relationship between inflation rate and stock returns in four Latin America countries: Mexico, Chile, Argentina and Venezuela. In their study, (Wongbangpo et al., 2002) examined effects of the goods market on five Asian nations: Singapore, Malaysia, Philippines, Indonesia, and Thailand. They discovered a negative correlation between the CPI and stock prices. This study validated the long-held hypotheses of (Eugene F. Fama & G. Schwert, 1977), (Sweeney & Warga, 1986), and (Prem C. Jain, 1988) that there is a negative correlation between the CPI and stock markets. Building on that claim, a new research study by (Adams et al., 2004) discovered that an intraday 1% shift in the CPI decreased stock market returns by -1.289%. This research strengthened the claim that CPI (inflation) adversely affects both the long- and short-term stock market returns.

2.3. Interest Rates

Interest rates are another dynamic macroeconomic factor influencing stock returns negatively when they surge upwards but positively when they dip down. A study by (Nai-Fu Chen et al., 1986) found that there is a negative relationship between interest rates and stock returns in the United States. (Fung &Lie, 1999) examines empirically the nature of the impact of the exchange rate and interest rate on Malaysia stock market index. The stock market index is negatively impacted by interest rates, according to findings. Investors will move their money from higher-risk securities like the stock market to savings or fixed-income investments when interest rates are high. In contrast, investors are going to move money out of savings accounts to make stock market investments in the hopes of earning a larger return when the interest rate is too low. (Ahmad Muhammad et al., 2010) examines the relationship between interest rates, stock returns, and exchange rates in the Pakistani market. For this purpose, data is gathered on short-term interest rates, currency exchange rates, and stock market returns from 1998 to 2009. The effect of interest rate and exchange rate fluctuations on stock returns is studied using a multiple regression model. The results show that throughout the sample period, changes in interest rates and exchange rates had a significant impact on stock returns. While interest rate fluctuations have a negative impact, the exchange rate has a positive one.

2.4. Exchange Rates

Exchange rates are another important macroeconomic factor that can affect stock returns, particularly for companies operating internationally since they tend to bear the brunt of currency appreciation or depreciation concerning home base or target market leading inevitably to lower or higher profitability levels respectively. (Rudiger Dornbusch, 1976) conducted research on German markets and found negative relationships between exchange rate fluctuation/deviations while in similar research,(Kim & Park ,2015), discovered surprisingly more significant negative correlation between Korean markets' returns and currency volatility trends over varying periods as explored

in the paper of (Basabi Bhattacharya & Jaydeep Mukherjee, 2008). The value of the trade balance, foreign exchange reserves, exchange rates, and stock prices are not causally linked, according to the article's findings.
In their paper, (Adam & Tweneboah, 2008) investigate how macroeconomic factors affect Ghanaian stock market fluctuations. They examined the relationships, both short- and long-term, between the stock market and macroeconomic factors such as the consumer price index, foreign direct investment, Treasury bill rates, and exchange rates between 1991 and 2006. Using Johansen's multivariate co-integration test, it was discovered that there is a strong correlation between inflation and stock price movement, and that interest rates have relatively little effect on it. The study also suggested that rather of focusing only on interest rates, investors should pay more attention to inflation and exchange rate
(Tandelilin, 2012) finds that Indonesian stock market is one whose productivity is influenced significantly by several variables including favorable GDP growth levels, interest rate and inflation. Based on Tandelilin's findings, a high GDP growth, favorably accompanied by lower interest and inflation results would affect positively the potential returns for investors invested into stocks. However, a stronger exchange rate is negatively associated with stock returns.
These findings are consistent with previous research on the impact of macroeconomic factors on stock returns in other markets. For example, (Eugene F. Fama & Kenneth R. French, 1988) found a positive relationship between economic growth and stock returns, while studies by (Eugene Fama, 1981) and (BEKAERT & HARVEY, 1995) found that inflation can have a negative or positive impact on stock returns depending on the context. Similarly, the study by (Nai-Fu Chen et al., 1986) found that changes in interest rates had a significant impact on stock returns in the United States.
Overall, the literature suggests that macroeconomic factors can have a significant impact on stock returns, although the nature and strength of the relationship can vary depending on the specific factors and the context. Further research is needed to fully understand the mechanisms behind these relationships and to develop effective investment strategies that consider macroeconomic factors.

3. Presenting the Macroeconomic Model

In this study, we aim to explore the relationship between stock returns and several macroeconomic variables including GDP, inflation, exchange rate, interest rate and global Economic Policy Uncertainty (for France case). To achieve this, we will employ a multiple regression analysis. Our model is based on the following equation:

$$Stock\ market\ index = \beta 0 + \beta 1 * GDP + \beta 2 * Inflation + \beta 3 * Exchange\ Rate + \beta 4 * Interest\ Rate + \beta 5 * GEPU + \varepsilon$$

Where:
Stock return: Quarterly percentage change in index
GDP: Quarterly percentage GDP growth rate
Inflation: Quarterly percentage change in Consumer Price Index
Interest rate: Quarterly Central Bank interest Rate
Exchange rate: Quarterly currency change against the U.S Dollar
GEPU: Quarterly change in global Economic Policy Uncertainty index

4. Methodology and Data

With respect to proper scientific practice standards, the methodology for this study involved utilizing quarterly data set spanning years of 2003-2023 (84 observations). To ensure meaningful data was collected & analyzed reputable sources such as the World Bank or Federal Reserve Bank of St. Louis were referenced frequently. In order to determine whether strong relationships or simply coincident correlations exist between these chosen variables and stock market performance, regression model will be used along with other statistical measures identified.

5. Results and Interpretation

5.1. Descriptive Statistics

The result from the descriptive statistics of France (Cf. Table1) showed the average return for the period was 0.012 while the standard deviation was 0.07 meaning that there was a small dispersion of the returns around the mean. The highest return was 0.135 while the lowest was -0. 227. The average GDP growth in France was 0.3%, which is

relatively low. For the inflation (change in cpi) the average was 0.168% which is good for the country, the highest rate was 6% and the lowest was -0.4%.for the interest rate it was between -0.3% and 4.4% and exchange rate was with an average of 0.16% which means local currency was appreciating against dollar with a low pace. For the change in global Economic Policy Uncertainty index, the average was 4.7% with a standard deviation equal to 28%, which means that there is a high dispersion of the mean.

Table1. Descriptive statistics of France market

	Change in index	GDP growth	Interest rate	change in ex.rate	change in cpi	change in GEPU
Mean	0,01248867	0,00321882	0,022885067	0,00167172	0,01688806	0,04774105
Standard error	0,0077979	0,00253424	0,001694272	0,00501971	0,00151803	0,03084144
Median	0,02116275	0,0032845	0,027145924	0,00328279	0,01578309	0,02928405
Std.Dev	0,0714689	0,02322673	0,015528258	0,04600644	0,01391298	0,28266651
Minimum	-0,2277311	-0,1221151	-0,00319337	-0,1138291	-0,0042324	-0,4903781
Maximum	0,13544458	0,15591521	0,04484654	0,11221579	0,06066803	0,76678837
Sum	1,04904824	0,27038107	1,922345595	0,14042435	1,41859736	4,01024832
Number of observations	84	84	84	84	84	84

The result from the descriptive statistics of Turkey (Cf. Table2) showed the average return for the period was 0.06 while the standard deviation was 0.13 meaning that there was dispersion of the returns around the mean. The highest return was 0.62 while the lowest was -0.32. The average GDP growth in Turkey was 1.34 %, which is relatively high. For inflation the average was 3.7 % quarterly which is relatively high for the country, the highest rate was 28% and the lowest was -0.37%.For the interest rate it was between 8.75% and 55% and exchange rate was with an average of -3% quarterly which means local currency was depreciating against dollar with high pace.

Table 2. Descriptive Statistics of Turkey.market

	change in index	GDP growth	interest rate	change in EX. R	change in CPI
Mean	0,06001615	0,01338252	0,19145833	-0,0296434	0,03713289
Standard error	0,01486402	0,00305154	0,01184971	0,00915967	0,0048463
Median	0,0618277	0,01490947	0,1575	-0,0203701	0,02643866
Std.Dev	0,13623098	0,02796782	0,10860438	0,08394974	0,04441703
Minimum	-0,3104683	-0,1071334	0,0875	-0,3185685	-0,0036988
Maximum	0,54969251	0,16411679	0,55	0,2077408	0,28286721
Sum	5,04135675	1,12413145	16,0825	-2,4900465	3,11916247
Number of observation	84	84	84	84	84

5.2. Correlation Analysis

Correlation analysis of French market (Table 3) shows that there was a positive relationship between GDP and index returns (0.23), the study found same for the exchange rate a strong positive correlation (0.23). Therefore, there was a low negative correlation between interest rate and index return (-0.008) Moreover for the inflation (change in cpi) it was a negative relationship with index return (-0.13), and a high negative correlation between stock return and economic policy uncertainty index (-0.42).

Table 3. France Market Correlation

	Change in index	GDP growth	change in IR	change in EX.R	change in CPI	change in GEPU
Change in index	1					
GDP growth	0,23173373	1				
change in IR	-0,0087087	0,70346712	1			
change in EX.R	0,22999542	0,09783788	0,10336206	1		
change in CPI	-0,1326458	-0,0004195	-0,0666996	-0,006400	1	
change in GEPU	-0,4207138	-0,0417543	-0,044443	-0,110811	0,00425562	1

Correlation analysis for Turkish market (Table 4) shows that there was a strong positive relationship between GDP and stock index (0.21), the study found same for the exchange rate a positive correlation (0.21). Therefore, there was a negative correlation between the interest rate and stock index (-0.04). For the inflation (change in cpi) it was a positive relationship with index return (0.33) which is completely the opposite of French market.

Table 4. Turkey Market Correlation

	% change in price	*GDP growth*	*change in IR*	*change in EXR*	*change in CPI*
% change in price	1				
GDP growth	0,20520984	1			
change in IR	-0,0290395	0,00800405	1		
change in EXR	0,21141647	-0,1188941	-0,1650108	1	
change in CPI	0,33683907	-0,0883238	0,31766415	-0,263766	1

5.3. Unit Root Test

Prior to running the regression analysis, the primary importance lies in the requirement of verifying the data's stationarity, and this is important for the credibility of regression results. A unit root test is the method used to identify the stationarity of the data. Stationary data is crucial for getting accurate and correct information through the application of known regression models. Besides, if the data is stationary, the relationships between the variables can be accurately interpreted.

The study employed Augmented Dickey Fuller (ADF) test to check the stationarity of the time series data of selected variables.

Hypothesis:

H0: data series is not stationary

H1: data series is stationary

Table 5. Results of ADF Test for French Market (probability value)

Variable	Level		1st difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
% CPI	0.0312	0.048	0.001	0.0008
% EX. rate	0.00	0.00	0.00	0.00
% in Int.rate	0.00	0.00	0.00	0.00

GDP growth	0.001	0.00	0.001	0.00
% GEPU	0.001	0.00	0.00	0.00

As shown in Table 5 and Table 6, for both markets, at level and at 1st difference the p value of all macroeconomic variables are less than the level of significance (5%), so the null hypothesis H0 is rejected at 5% level. we can conclude that all macro-economic variables are stationary at level and at 1st difference

Table 6. Result of ADF test for Turkish market (probability value)

Variable	Level		1st difference	
	Intercept	Trend and intercept	Intercept	Trend and intercept
% CPI	0.0027	0.0004	0.00	0.000
% EX. rate	0.00	0.00	0.001	0.00
% in Int.rate	0.00	0.00	0.00	0.00
GDP growth	0.001	0.00	0.00	0.00

5.4. Co-integration Test

The next step is to determine the long-term relationship between macroeconomic variables and stock market index. We consider all the variables and SMI that are stationary at level and first difference. The results of the Johansen Cointegration test for the variables and stock market index of France are shown in Table 7.

Hypothesis:

H_0: There is no cointegration between macroeconomic variables and CAC40.

H_1: There is cointegration between macroeconomic variables and CAC40.

Table 7. Results of Cointegration Test for France Market

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value (0.05)	Prob.**
None	0.591516	147.4666	83.93712	0.0000
At most 1	0.303034	76.73766	60.06141	0.0011
At most 2	0.259407	48.21722	40.17493	0.0064
At most 3	0.156369	24.27596	24.27596	0.0470
At most 4	0.121162	12.32909	12.32090	0.1101
At most 5	0.088588	4.129906	4.129906	0.9456

Trace test result (Table 7) show that three of co-integration equations between stock market index and macroeconomic variables at 0.05 significance level. This means that the examined variables can maintain long-term equilibrium with one another. Hence, null hypothesis mentioned above proposing absence of co-integration is dismissed leading to the conclusion that macroeconomic variables do have long term relationship with stock market index.

Table 8. Results of Cointegration test for Turkish Market

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value	Prob.**
None *	0.503967	149.0933	88.80380	0.0000
At most 1 *	0.404430	93.70540	63.87610	0.0000

At most 2 *	0.298274	52.76478	42.91525	0.0039
At most 3 *	0.210215	24.78197	25.87211	0.0679
At most 4	0.074759	6.138353	12.51798	0.4429

According to Trace test (Table 8), there are four co-integrating equations coinciding with macroeconomic variables and stock market indexes at the 0.05 significance level. This leads to a long-term equilibrium relationships between the variables under examination. Consequently, the null hypothesis that there is no co-integration is rejected.

5.5. Multicollinearity Test

According to the classical assumptions of linear regression using Ordinary Least Squares (OLS), a good regression model should be free from multicollinearity.

Table 9. Multicollinearity Test for French market

Variable	Coefficient variance	Uncentered VIF	Centered VIF
Change in CPI	0.224941	2.513106	1.008814
Change in int.rate	6..90E-06	2.019483	2.002306
Change in ex.rate	0.020875	1.025048	1.023680
Change in GEPU	0.00548	1.042953	1.013689
GDP growth	0.159291	2.029689	1.990991
C	0.000109	2.554042	NA

The VIF values for all the variables are significantly less than 10 for both markets (Table 9 and Table 10). Since the VIF values are well below the threshold of 10, it can be concluded that there is no significant multicollinearity among the independent variables in the model. This implies that each variable contributes unique information to the regression model without excessive redundancy. Therefore, the above results suggest that the regression model is appropriately specified and free from multicollinearity, ensuring reliable and interpretable estimates of the regression coefficients.

Table10: Multicollinearity test for Turkish Market

Variable	Coefficient variance	Uncentered VIF	Centered VIF
Change in CPI	0.098319	2.033926	1.191293
Change in int.rate	0.003807	1.126968	1.121802
Change in ex.rate	0.025568	1.246324	1.106675
GDP growth	0.214634	1.270019	1.031096
C	0.000334	2.077965	NA

5.6. Autocorrelation Test

The Breusch–Godfrey test is used to test the presence of serial correlation that has not been included in a proposed model structure and which, if it were present, incorrect conclusions would be obtained.

Hypothesis:

H_0: there is not autocorrelation

H_1: autocorrelation exist

Table 11. Autocorrelation Test for French Market

F-statistic	1.816132	Obs*R-squared	3.831489
Probability	0.1696	Prob. Chi-Square	0.1472

The test results for France (Table 11) show an F-statistic of 1.816132 with a corresponding p-value (Prob. F (2,76)) of 0.1696. Additionally, the Obs*R-squared value is 3.831489 with a p-value (Prob. Chi-Square(2)) of 0.1472.The p-values for both the F-statistic and the Chi-Square statistic are greater than the significance level of 0.05. we fail to reject the null hypothesis (H0) of no serial correlation.

Based on these results, we conclude that there is no evidence of autocorrelation in the residuals of the regression model. This implies that the assumption of no serial correlation in the error terms is satisfied, which is a key requirement for the validity of the Ordinary Least Squares (OLS) regression estimates. Therefore, the regression model can be considered reliable and unbiased with respect to autocorrelation.

Table 12. Autocorrelation Test for Turkish Market

F-statistic 0.037690		Obs*R-squared	0.082152
Probability 0.9630		Prob. Chi-Square	0.9598

The test findings for Turkish Market (Table 12) indicate a p-value of 0.9630 and an F-statistic of 0.037690. Furthermore, the Obs*R-squared value has a p-value of 0.9598 and is 0.082152.Both Given that these p-values exceed the significance level of 0.05, the null hypothesis (H0) indicating no serial association cannot be rejected.

5.7. Heteroskedasticity Test

White test is a statistical test that evaluates the stability of the variance of the residuals in a regression model.

Table 13. Heteroskedasticity test for studied markets

	French market	Turkish market
F-statistic	1.189879	1.18235
Probability	0.2927	0.3584

Hypothesis:

H_0: Homoscedasticity is present

H_1: Heteroskedasticity exist

The determination of heteroscedasticity in a linear regression model is based on the p-value. If the p-value of the calculated F-statistic is greater than the alpha level of (5%), we accept (H0), indicating that heteroscedasticity is not present. Conversely, if the p-value of the F-statistic is less than the alpha level of (5%), we reject (H0), suggesting that heteroscedasticity exists.For both markets probability value is greater than 5% (0.2927 for France and 0.3584 for Turkey) we accept the null hypothesis.

The results indicate no evidence of heteroscedasticity, confirming that the assumption of constant variance is met, which is beneficial for the reliability of the linear regression model.

5.8 Regression Results and Interpretation

The analysis of multiple regression is useful for understanding how many independent variables are related to a dependent.table15 below explain the results of the French market.

Table 14. Regression Model (French market).

Variable	Coefficient	T-statistic	Probability
GDP growth	1.440102	3.608255	0.0005
Inflation (CPI change)	-0.797526	-1.681550	0.0967
Interest rate	-0.007763	-2.955716	0.0041
Exchange rate	0.277871	1.923225	0.0581
GEPU index	-0.100573	-4.297891	0.0000

Several independent variables are associated with the dependent variable through the multiple regression analysis. Interest Rate and the GDP Growth, at a 5% confidence level, are the important factors having p-values of less than 0.05. The coefficient for interest rate, specifically, is -0.007763. Besides that, we derived a t-statistic of -2.955176 (p-value: 0.0041), and the coefficient for GDP growth is 1.440102, we have recorded a t-statistic of 3.608255 and p-value: 0.0005.

Regarding Exchange Rate, this envisages the dependent variable to be positively influenced with the coefficient of 0.277871 and a p-value of 0.0581, which is marginally significant. This clause implicates that increasing the exchange rate associates with increasing the stock market index. In addition, GDP growth has a positive and strong effect, since its coefficient is 1.440102, which mean the CAC40 index moves by 144% whenever the GDP increases by 1% while maintaining all other independent variable constant.

According to estimated results shown in Table14, the Global Economic Policy Uncertainty Index bears a significantly negative impact on the dependent variable, backed up by the results of a coefficient of -0.100573 and a p-value of 0.0001. Consequently, an increase global economic policy uncertainty index will affect the stock market index negatively. The inflation rate is another cause of the dependent variable's negative impacts, the coefficient of which is -0.797526. Studies conducted in various markets show that as the CPI rises, investor spending and investment fall, or, to put it another way, investors become less willing to take on risky investments, which eventually has an impact on the stock market. Interest rate is another negative contributor to the dependent variable, with a coefficient of -0.007763.

The F-statistic is 8.068224 with a probability value of 0.000004 less than 5%, indicating that the overall regression model is statistically significant. The adjusted R^2 value is 0.298638, implying that the independent variable explained approximately 29.86% of the stock market index in France. This indicates a moderate level of explanatory power for the regression model.

The second regression analysis pertains to the Turkish case and includes four independent variables: inflation rate (change in CPI), exchange rate, interest rate, and GDP growth. The results are detailed in the Table 15.

Table15. Regression Model (Turkish market)

Variable	Coefficient	T-statistic	Probability
GDP growth	1.425171	3.076223	0.0029
Inflation (CPI change)	1.527900	4.872780	0.0000
Exchange rate	0.577710	3.612943	0.0005
Interest rate	-0.081401	-1.319313	0.1909

One of the most important findings gained by the multiple regressions tests for the Turkish case. At 5% significance levels, three variables are significant predictors of the dependent variable .These factors are the inflation rate, the Exchange Rate, and GDP Growth.
Specifically, the coefficient for inflation rate is 1.527900 with a t-statistic of 4.872780 and a p-value of 0.0000, indicating a strong positive impact on the stock index, It can be explained as, in country with high inflation rates Turkish citizens are turning to the stock market as a way of protecting their wealth against the inflation because traditional savings lose purchasing power.. As far as effects are concerned, exchange rate positively affects the dependent variable because its coefficient equals 0.577710with t-statistic of 3.612493 while its p-value equals 0.0005, which indicates that it is marginally significant. Consequently, this implies an increase in exchange rate goes hand-in-hand with increase in stock market index as well as GDP growth that has strong positive impact whose coefficient equals 1.425171 and a p value of 0.0209 hence indicating that higher GDP growth corresponds with higher returns from stock market.
However, Interest Rate has a negative coefficient of -0.084101 but is not statistically significant at the 5% level, with a t-statistic of -1.319313 and a p-value of 0.1909 greater than 5%. That is why, although the influence is negative, the variable is not a good estimator in this model.

6. Conclusion

In our attempt to gauge how various macroeconomic indicators namely, GDP growth, inflation, interest rate, economic policy uncertainty, and exchange rate, impact stock returns in France and turkey; we conducted exhaustive statistical analyses using EViews software on quarterly data from 2003 to 2023. The findings indicated that among the five independent variables tested for their association with stock performance, only inflation rate exhibited insignificant relationship for France's case and interest rate change for turkey's case
The analyses of France and Turkey reveal insightful contrasts and parallels that reflect the distinctive economic landscapes of a developed and an emerging market; both countries' regression demonstrates how macroeconomic variables affect stock returns.
In the case of the French model, the Consumer Price Index (CPI) modifications are insignificant at 5% level, and negative coefficient (-0.797526.) This implies that inflation measured by CPI, does not play a crucial role at in determining stock returns in France. On the other hand, in Turkey, CPI changes have a highly positive coefficient value of 1.527900 and a p-value equal to 0.0000 hence making it very clear that inflation has a strong influence on stock market outcomes within an emerging economy where inflationary pressures are typically more volatile and impactful on the economy.
Exchange rate changes show positive effects on stock returns for both nations; however, their impact is more pronounced and statistically significant in Turkey (coefficient of 0.577710, p-value of 0.0009) than it is in France (coefficient of 0.277871, p-value of 0.0581). This difference underscores the higher sensitivity of Turkish markets to currency fluctuations, likely due to its greater exposure to foreign investment and external economic shocks.
Changes in interest rates have asymmetric impacts on the two markets. For example, interest rates also negatively affect stock returns in France (coefficient of -0.007663, p-value of 0.0041), showing an inverse relationship between interest rates and stock prices as is typical in developed economies. However, for Turkey, the effect of interest rates is not statistically significant (coefficient of -0.081401, p-value of 0.1909).
Further evidence indicates GDP growth positively drives stock returns across both countries as they have similar coefficients (France: 1.440102, Turkey: 1.425177) and very significant p-values (France p-value: 0.0006, Turkey p-value: 0.0209). This consistent finding highlights the fundamental role of economic growth in driving stock market performance across different economic contexts.
To conclude, a comparative analysis of the stock markets of Turkey and France indicates that macroeconomic variables impact stock returns differently. Stock prices are positively affected by GDP growth and the exchange rate for France, while global economic policy uncertainty and interest rates have negative effects; inflation remains insignificant. On the other hand, exchange rate, inflation and GDP growth have positive impacts on Turkey's stock market while interest rates do not. These dissimilarities highlight how developed and emerging markets differ in terms of their economic settings and investor behaviors. Investors must pay attention to such nuances so as to make investment plans that cater for different economies.

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