Journal of Business and Economic Options

JBEO, Vol. 1(2), 39-44

Inflation, Interest and Exchange Rate Effect of the Stock Market Prices

Muhammad Ali[a]

Abstract

This study explores the intricate relationship between macroeconomic factors and stock markets, emphasizing their impact on economic growth. Stock markets are influenced by key variables such as interest rates, inflation, exchange rates, and money supply, though their effects vary across countries and economic conditions. Inflation can diminish stock prices, while interest rates affect corporate profitability. Exchange rate fluctuations influence competitiveness, impacting stock market performance. Through an analysis of specific companies within the Karachi Stock Exchange, the study demonstrates diverse effects of macroeconomic variables. For example, Shakarganj Mills Ltd. exhibited a positive correlation between inflation and stock prices but a negative relationship with interest and exchange rates. In contrast, Ghani Glass Ltd. showed negative correlations with all macroeconomic variables, underscoring the variability in stock market responses. Descriptive statistical analysis further enriches the understanding of these relationships, reinforcing the importance of firm-specific and sectoral analysis. The findings highlight the necessity of context-driven interpretations when evaluating stock market dynamics. Given the varying effects of macroeconomic factors, investors and policymakers must adopt a nuanced approach to financial decision-making. The study contributes to the broader discourse on financial markets by demonstrating how macroeconomic conditions interact with stock prices, influencing investment strategies and economic policy formulation. Understanding these interactions is crucial for navigating global financial markets and ensuring informed decision-making in an ever-evolving economic landscape.

Keywords: Macroeconomics, Stock markets, Exchange rates, Corporate profitability

JEL Codes: B22, L30

1. INTRODUCTION

Stock markets play a vital role in the economies of small, medium, and large-scale countries like Pakistan, Bangladesh, Sri Lanka, Malaysia, and the USA. They facilitate the mobilization of savings from individual investors, which is then directed towards fruitful investments, directly impacting the respective country's economy. Over the past two decades, there has been a growing recognition of the significant influence of macroeconomic factors on stock markets. Researchers have been actively studying and analyzing these factors to understand their impact on stock markets and provide valuable insights to investors regarding potential changes in variables and their effects on stock prices. The impact of macroeconomic variables on stock market behavior is a well-established theory in financial economics (Barro & Ursúa, 2008; Fama & French, 2004; Ali & Rehman, 2015; Muhieddine, 2018). While much of the research has primarily focused on developed countries such as the USA, UK, and Japan (Petersen & Rajan, 1995; Schwert, 1990), it is important to note that underdeveloped countries have distinct characteristics compared to their developed counterparts. In underdeveloped markets, the ratio of risks to returns is typically higher, making investment decisions more challenging (Khilji & Patel, 2007; Ali, 2015; iddiqi, 2018). Investors are primarily driven by the desire for higher profits while being cautious about potential losses. As a result, underdeveloped economies often attract investors seeking higher returns, leading to increased trading activities in these markets compared to developed economies (Demirgüç-Kunt & Levine, 1996; Ali & Ahmad, 2014; Marc & Ali, 2017; Asif & Simsek, 2018). The field of economics encompasses the study of entire economies, sub-continents, and the global economy, including economic markets. Macroeconomics focuses on analyzing the performance, structure, and behavior of an entire economy, as well as understanding the changes in economic activity and their impact on countries, sub-continents, and the world (Okurut & Mbulawa, 2018; Ali & Audi, 2018). To examine changes in economic activity, various variables are considered, such as inflation rate, interest rate, and exchange rate. Inflation refers to a general increase in prices that leads to a decline in the purchasing power of a nation. When the inflation rate rises above a predetermined level and continues to remain high, it poses a challenge known as an inflationary crisis (Blanchard, 2008; Marc & Ali, 2017; Iqbal, 2018; Marc & Ali, 2018).

2. CAUSES OF INFLATION IN PAKISTAN

The exchange rate refers to the rate at which one country's currency can be converted into another country's currency. It is a crucial factor in the economy of any country, as it significantly impacts the import and export sectors (Sarno & Taylor, 2002; Khan & Ali, 2018). Due to its influence on international trade, many countries strive to maintain stability in their exchange rate policies, as imports and exports are integral components of a country's fiscal policy (Obstfeld & Rogoff, 1996). Policy makers often aim to keep the exchange rate at a specific level to achieve their domestic policy objectives, which are closely linked to the country's gross domestic product (GDP) (Edwards, 1989; Mahmood & Aslam, 2018). Interest is the fee charged by a lender to a borrower as compensation for the use of an asset, typically expressed as a percentage of the principal amount (Brealey et al., 2006; Maurya, 2018). It serves as a form of prepayment for the depreciation or wear and tear on the asset over time. The lender has the option to charge interest through compounding or discounting, depending on their preferred approach. The interest rate is a crucial and widely recognized variable in the economy of a country (Dornbusch et al., 2008; Hussain, 2018). When interest rates are high, companies that have borrowed funds from the public, such as through debentures or shares, face increased interest expenses, reducing their potential profits. Moreover, higher interest rates result in greater expenditure for companies, which may force them to raise prices for their products (Graham & Harvey, 2001). This, in turn, can impact the laws of supply and demand. The Karachi Stock Exchange (KSE), now known as the Pakistan Stock Exchange (PSX), is a limited stock exchange located in the Stock Exchange Building (SEB) on Stock Exchange Road, Karachi, Sindh Province of Pakistan. It was founded on September 18, 1947, and incorporated on March 10, 1949 (Pakistan Stock Exchange, n.d.). When the KSE began its operations, only five companies were listed with a combined paid-up capital of 37 million rupees. The initial index, called the KSE 50 index, was based on the performance of these first fifty companies. However, as the number of listed companies grew, the KSE expanded its index to include 100 companies, introducing the KSE 100 index on November 1, 1991. This broader index provided a more diversified representation of the market compared to the KSE 50 index. To cater to the specific needs of the investor community, the KSE further introduced the KSE 30 index and KMI 30 index, focusing on the performance of the top 30 companies. Currently, there are 805 companies listed on the PSX, with a total market

[a] National College of Business Administration and Economics, Lahore, Pakistan

capitalization worth 2.561 trillion rupees (Pakistan Stock Exchange). The PSX operates in two sessions: the morning session, which runs from 9:30 am to 3:30 pm, and the evening session, which operates from 3:00 pm to 5:00 pm (Pakistan Stock Exchange, n.d.). As Pakistan's largest and one of the oldest stock exchanges in South Asia, it has listings of various Pakistani and overseas enterprises.

3. LITERATURE REVIEW

Menike (2006) analyzed the impact of high-power macroeconomic factors on the stock market of the country. The variables considered were inflation rate, exchange rate, and interest rate, among others. He constructed a multivariate regression model using monthly data gathered from September 1991 to December 2002 to understand the relationship between the independent and dependent variables. Menike used the Colombo Stock Exchange as a proxy for the dependent variable, while inflation rate, interest rate, exchange rate, and money supply rate were used as proxies for the independent variables. His empirical findings were conducted across 34 sectors, and he discovered that 27 out of the 34 sectors exhibited a strong relationship, indicating that over 50% of the stocks demonstrated a significant association. Menike's focus was on the transition of an underdeveloped stock market to an emerging one, and he specifically analyzed the impact of two macroeconomic variables: inflation rate and exchange rate. He found that these variables had a generally negative impact on the stock prices of the Sri Lanka Stock Market. The negative effect of the treasury bill rate suggested that when the interest rate on treasury securities increased, investors tended to move their investments away from stocks out of fear that stock prices would decline. In such situations, investors may resort to short selling stocks to avoid significant losses. On the other hand, Menike concluded that money supply had an insignificant impact on price movements in the stock market, indicating that the Sri Lankan stock market did not effectively hedge against inflation scenarios across various sectors in the Colombo Stock Exchange (CSE). The role of money supply in maintaining and formulating monetary policy is of great significance as it directly influences equity prices during periods of fluctuations.

4. METHODOLOGY

Literature has extensively explored the relationship between stock market prices and macroeconomic variables, revealing significant associations. In the context of Pakistan, changes in systematic variables have been observed to influence stock market prices. Systematic variables refer to those factors that impact the entire economy of a country. In the case of Pakistan, some of the systematic variables affecting the stock price index include interest rate, inflation rate (including its volatility impact on the stock sector), exchange rate, and money supply. To examine the impact of macroeconomic variables on stock market prices, this research employs descriptive statistics and regression methodology. The study utilizes annual data spanning from January 2002 to December 2008.

5. DATA COLLECTION

The data for this study has been collected from secondary sources, specifically from the Karachi Stock Exchange (KSE) website. Annual data from the website has been utilized for analysis. To ensure the validity of the data and the model, two companies have been selected as a proxy for sampling. The selected companies from the KSE database are Shakarganj Mills Ltd. and Ghani Glass Ltd.

6. INDEPENDENT VARIABLES

6.1. INTEREST RATE (IR)

Interest is a form of compensation charged by a lender to a borrower for the use of an asset or borrowed funds. It is typically calculated based on the principal amount of the asset or loan. Interest can be charged using compounding or discounting methods, depending on the preferences of the lender. The interest rate is a crucial variable for the economy of a country. If the interest rate is high, companies that borrow funds from the public through means such as debentures or shares will have to pay more in interest expenses. This can limit the company's profit margins and lead to increased expenditures. In order to cover these costs, the company may be forced to set higher prices for its products, potentially impacting supply and demand dynamics in the market. The interest rate is an important factor to consider in financial planning and economic decision-making, as it can have significant implications for businesses, consumers, and the overall economy.

6.2. INTEREST THROUGH DISCOUNTING

The interest rate can be calculated using the formula: Interest Rate (IR) = Principal (P) * Annual or Partial Interest Rate (I) ^ Number of Years (N). This formula is used for both compounding and non-compounding interest calculations.

6.3. INFLATION RATE

Inflation rate is an important economic indicator that is determined by the State Bank of Pakistan. It reflects the increase in prices and the subsequent decline in the purchasing power of a nation. When inflation rises above a certain predetermined level, it becomes a cause for concern. The Government of Pakistan reports four different price indices: Consumer Price Index (CPI), Wholesale Price Index (WPI), Sensitive Price Index (SPI), and the GDP deflator. Among these, the CPI is the most significant measure of price changes at the retail level. It represents the cost of purchasing a fixed basket of representative goods and services by households. In Pakistan, the CPI covers the retail prices of 374 items in 35 major cities, providing insights into changes in the cost of living in urban areas. In many countries, including Pakistan, the Consumer Price Index (CPI) is utilized by the government as a key indicator for analyzing inflationary trends. The Government of Pakistan places significant emphasis on the CPI as it provides a representative measure of inflation, covering a wide range of 374 products across 71 markets in 35 cities throughout the country. Inflation has become a concern in various parts of the world, including Pakistan. Rising food prices have particularly contributed to inflationary pressures. The State Bank of Pakistan establishes and determines the inflation rate, which serves as a benchmark for assessing the purchasing power of the population. It is considered a crucial performance indicator for the overall economy.

6.4. EXCHANGE RATE

Currency exchange rates represent the value of one country's currency in relation to another country's currency. The exchange rate is influenced by various econometric factors, including inflation, interest rates, and trade value. These factors are consistently applied in determining the exchange rate in different situations. The trade value and balance of trade between two countries play a role in determining

the exchange rate. When a country imports more goods and services from another country than it exports, there is a difference in the value of each country's currency. The country with a higher demand for goods and services from the other country will have a relatively higher currency value. Inflation and interest rates also impact exchange rates. High inflation or higher interest rates in a country can lead to a depreciation in its currency value, as it reduces the relative purchasing power and attractiveness for foreign investors. Overall, a combination of factors, including inflation, interest rates, and trade value, influences currency exchange rates.

6.5. DEPENDENT VARIABLES

Two companies have been selected as samples from the Karachi Stock Exchange (KSE) for the purpose of analysis:

Shakarganj Mills Ltd. is a prominent sugar manufacturer in Pakistan, offering a wide range of products. The company places a strong emphasis on research and technology, focusing on producing crystal white sugar for general consumption, as well as specialized sugars for the food and pharmaceutical industries. Additionally, Shakarganj Mills Ltd. is involved in the production of sugar packets for retail, alternative energy solutions, building materials, and value-added materials for fabrics. Ghani Glass Ltd. is part of the Ghani group, a leading business conglomerate in South Asia, headquartered in Pakistan. The group has diverse interests, including container glass and float glass production, automotive manufacturing and marketing, and mining activities related to silica sand, coal, and rock salt. With over 50 years of experience in local and international markets, particularly in the glass industry, Ghani Glass Ltd. operates modern glass plants in Pakistan for container glass and float glass production. These plants have a combined annual capacity of 300,000 tons.

7. FACTS, FINDINGS AND DISCUSSION

This study aims to examine the relationship between macroeconomic variables and the stock market prices of companies listed on the Karachi Stock Exchange (KSE). Regression analysis using the ANOVA test has been conducted to analyze the data. The regression R-squared values for Shakarganj Mills Ltd. and Ghani Glass Ltd. are 0.944 and 0.993, respectively, indicating a strong relationship and the validity of the data. The significance level of the independent variables is assessed with a confidence level of at least 0.1. The adjusted R-squared value reflects the variations in the dependent variables, such as inflation rate, interest rate, and exchange rate. Total Sum of Squares (TSS) represents the sum of the row values, while Explained Sum of Squares (ESS) represents the residual values, and Residual Sum of Squares (RSS) represents the regression values. The R-squared value indicates the ratio of ESS to TSS, representing the variation in the dependent variables.The standard error of estimate suggests that the predicted values of the dependent variable have a mean error of more than 10%. Analyzing the coefficients for Shakarganj Mills Ltd., it is found that inflation shows a positive relationship, while interest rate and exchange rate exhibit negative relationships, all with statistical significance. For Ghani Glass Ltd., the empirical findings indicate that all independent variables have negative relationships with statistical significance. In conclusion, the study suggests that, on average, inflation, interest rate, and exchange rate have a generally negative impact on the share prices of both companies. For Ghani Glass Ltd., all independent variables show a negative impact on stock prices, while for Shakarganj Mills Ltd., inflation has a positive impact while interest rate and exchange rate have a negative impact on stock prices.

Table 1 presents the model summary of multiple regression analyses conducted for two companies—Shakarganjh Mills Ltd. and Ghani Glass Ltd.—to assess the impact of macroeconomic variables, namely exchange rate, inflation, and interest rate, on company performance. The statistical indicators include the regression coefficient, regression square (R^2), adjusted R-square, and the standard error of the estimate, which collectively describe the strength, explanatory power, and accuracy of the regression models. For Shakarganjh Mills Ltd., the regression coefficient is 0.972, indicating a strong linear relationship between the independent macroeconomic variables and the dependent company performance variable. The R^2 value of 0.944 suggests that approximately 94.4% of the variation in the company's performance can be explained by changes in exchange rate, inflation, and interest rate. However, the adjusted R-square is lower, at 0.777, reflecting some loss in explanatory power after accounting for the number of predictors in the model. The standard error of the estimate is 308,354, indicating the average distance between the observed and predicted values, which in this case is relatively high, possibly due to the scale of financial data used. In the case of Ghani Glass Ltd., the model demonstrates an even stronger fit. The regression coefficient is 0.997, showing an extremely high correlation between the dependent and independent variables. The R^2 value of 0.993 indicates that 99.3% of the variability in performance is explained by the model, while the adjusted R-square is also very high at 0.972, signifying excellent model reliability even after adjusting for the number of predictors. The standard error of the estimate is significantly lower at 60,342.92, suggesting better predictive accuracy and less dispersion around the regression line compared to the Shakarganjh Mills Ltd. model. The results suggest that both companies' performance is strongly influenced by the selected macroeconomic variables. However, the model appears to fit better for Ghani Glass Ltd., given the higher R^2, adjusted R^2, and lower standard error, implying more stable and predictable financial responses to changes in exchange rate, inflation, and interest rate for this firm.

Table 1: Model Summary

Company Name	Regression	Regression Square	Adjusted-R Square	Standard Error Of the Estimate
Shakarganjh Mills Ltd.	.972	.944	.777	3.08354E5
Ghani Glass Ltd.	.997	.993	.972	60342.91504

A). Predictors: (Constant), Exchange, Inflation, Interest.

B). Dependent Variables: Shakarganjh Mills Ltd.

The regression and ANOVA analysis for Shakarganj Mills Ltd. and Ghani Glass Ltd. attempts to measure the impact of macroeconomic variables—namely inflation, interest rates, and exchange rates—on the profitability of these firms. The ANOVA results reveal that for both companies, the F-values of 5.652 and 47.938 are statistically insignificant with p-values of 0.101 and 0.106, respectively. These p-values exceed the conventional threshold of 0.05, indicating that the regression models as a whole are not statistically significant. This implies that, when considered together, the selected macroeconomic indicators do not offer a reliable explanation for the variation in the firms' performance, at least within the given time series and model specification. For Shakarganj Mills Ltd., the constant coefficient stands at 3.94 million, and for Ghani Glass Ltd., it is 2.615 million. Although the constant term for Ghani is statistically significant at the 5% level ($p = 0.048$), the constant for Shakarganj does not achieve statistical significance ($p = 0.160$). This suggests that the baseline level of performance,

independent of the predictors, holds predictive relevance for Ghani Glass Ltd. but not for Shakarganj Mills. The inflation coefficient shows mixed effects across the two firms. For Shakarganj, the positive value of 10,628.41 suggests that rising inflation may be associated with an increase in profitability, although the effect is statistically insignificant with a p-value of 0.843. Conversely, for Ghani Glass, the coefficient is negative at -9005.27, but again lacks significance with a p-value of 0.472. These results are consistent with studies indicating that inflation may not uniformly affect firms and can have sector-specific effects depending on cost structures and pricing power (Asteriou & Hall, 2007; Khan & Ahmad, 2018). The interest rate effect is more negative and pronounced for Ghani Glass, where the coefficient is -136,112.38 and marginally approaches statistical significance with a p-value of 0.071. For Shakarganj, the coefficient is -60,979.82 with a higher p-value of 0.577, suggesting a weaker and insignificant effect. These findings support the theory that rising interest rates can increase borrowing costs and reduce firm profitability, especially in capital-intensive sectors (Fama, 1981). The exchange rate coefficient is notably negative for both companies. In the case of Shakarganj Mills, the coefficient is -35,733.39 and is associated with a relatively large standardized beta of -0.865, indicating a strong inverse relationship. The corresponding t-statistic of -2.861 also highlights a considerable effect, though the p-value of 0.214 remains above the significance threshold. For Ghani Glass Ltd., the exchange rate coefficient is weaker at -4164.193 and statistically insignificant ($p = 0.338$). This may imply that firms more exposed to imported raw materials or international trade are more vulnerable to exchange rate fluctuations, in line with evidence from Bartram, Brown, and Minton (2010), who find that firms engaged in international transactions often exhibit higher sensitivity to currency volatility. The residual statistics further underline the moderate fit of the models. The predicted values and residuals suggest that the models explain only part of the variation in the firms' performance, with standard deviations of residuals indicating some dispersion not accounted for by the predictors. This is particularly evident in Shakarganj's residuals, where the mean and standard deviation suggest moderate errors of prediction. Although some coefficients (particularly interest and exchange rate variables) show potentially meaningful economic relationships, the models do not yield statistically significant findings as a whole. These outcomes suggest the need for model refinement, possibly through the inclusion of firm-specific operational indicators, longer time series data, or more advanced econometric specifications such as vector error correction models or autoregressive distributed lag models. The weak significance levels also reflect the broader macroeconomic instability that can cloud the direct relationship between firm-level performance and national economic indicators.

Table 2: ANOVA Test

Company Name	Sum Of Squares			Difference			Mean Square		Frequency	Significance
	Regression	Residual	Total	Regression	Residual	Total	Regression	Residual		
Shakarganj Mills	1.612E12	9.508E10	1.707E12	3	1	4	5.374E11	9.508E10	5.652	.101*
Ghani Glass Ltd.	5.237E11	3.641E9	5.273E11	3	1	4	1.746E11	3.641E9	47.938	.106[a]

Model	Unstandardized Coefficients Of Shakarganjh & Ghani Glass Ltd.				Standardized Coefficient Of Shakarganj & Ghani		T = time Of Shakarganjh & Ghani		Significant Of Shakarganjh & Ghani	
	B of Shakarganjh	β of Ghani	Std.Error of Shakarganj	Std.Error of Ghani	B		Shakar Ganjh	Ghani	Shakar Ganjh	Ghani
					Shakar Ganjh	Ghani				
Constant	3.940E6	2.615E6	1.010E6	197717.470	-	-	3.90	13.227	.160	.048
Inflation	10628.418	-9005.26	42139.979	8246.532	.066	-.101	.252	-1.092	.843	.472
Interest	-60979.822	-136112	77731.069	15211.487	-.219	-.878	-.784	-8.948	.577	.071
Exchange	-35733.389	--4164.193	12490.676	2444.348	-.865	-.181	-2.861	-1.704	.214	.338

	Minimum		Maximum		Mean		Std.Deviation	
	Shakar Ganjh	Ghani	Shakar Ganjh	Ghani	Shakar Ganjh	Ghani	Shakar Ganjh	Ghani
Predicted Value	1.3049E5	1.9591E4	1.7078E6	9.8658E5	6.1461E5	4.0770E5	6.34863E5	3.61825E5
Residual Value	-1.90368E5	-3.72538E4	2.21738E5	4.33927E4	.00000	.00000	1.54177E5	30171.45752
Std.Predicted	-.757	-1.073	1.722	1.600	.000	.000	1.000	1.000
Std.Residual	-.617	-.617	.719	.719	.000	.000	.500	.500

The descriptive statistics provided in Table 3 offer a foundational overview of the key variables—Inflation, Interest Rate, Exchange Rate, and the profitability figures of Shakarganj Mills Ltd. and Ghani Glass Ltd.—that were used in the regression and ANOVA models. This table helps to assess the distributional characteristics and the reliability of the sample data used in the econometric analysis. Beginning with inflation, the data show a mean of 13.64 with a standard deviation of 1.81, indicating moderate variability in inflation rates over the observed period. The skewness statistic is 2.046 and kurtosis is 4.334, suggesting a right-skewed distribution with heavier tails than a normal distribution. This may imply that some unusually high inflation values influenced the mean, which is critical to note as inflation sensitivity might be underestimated in models using symmetric assumptions (Gujarati & Porter, 2009). The interest rate variable exhibits a lower mean of 13.02 and a standard deviation of 1.05, indicating relatively less volatility compared to inflation. Skewness is slightly negative (-0.153), suggesting a very slight left-tailed distribution, while kurtosis is near-normal at 0.594. The distribution appears relatively symmetric, supporting the use of parametric techniques like regression for this variable without major transformations. The exchange rate shows substantial variation, with a minimum of 49.05 and a maximum of 86.99, yielding a mean of 74.90 and a relatively large standard deviation of 7.07. The skewness value of -1.468 indicates a strongly left-skewed distribution, meaning that lower values were more frequent during the time frame considered.

Table 3: Descriptive Statistics

Description	N	Minimum	Maximum	Mean		Std.Deviation	Skewness		Kurtosis	
				Stat	Std. Error	Stat	Stat	Std. Error	Stat	Std. Error
Inflation	5	10.80	20.78	13.6426	1.81454	4.05743	2.046	.913	4.334	2
Interest	5	9.75	16.11	13.0240	1.04790	2.34317	-.153	.913	.594	2
Exchange	5	49.05	86.99	74.9020	7.07001	15.80901	-1.468	.913	1.710	2
Shakarganj	5	26217	1.74E6	6.1461E5	2.9217E5	6.53316E5	1.766	.913	3.689	2
Ghani	5	2100	9.92E5	4.0770E5	1.6237E5	3.63080E5	1.133	.913	2.355	2

Meanwhile, the kurtosis value of 1.710 shows a slight platykurtic shape, indicating thinner tails compared to the normal distribution. This non-normality may influence model sensitivity and reduce the accuracy of OLS estimates, especially with such a small sample size (n = 5), which limits the applicability of central limit theorem approximations (Wooldridge, 2013). For firm-specific performance, Shakarganj Mills Ltd. has a mean profitability of approximately 614,610 with a high standard deviation of nearly 292,170, indicating considerable dispersion in its performance outcomes. The positive skewness of 1.766 implies a right-tailed distribution, suggesting that the firm experienced a few high-profit years that pulled the mean upward. The kurtosis value of 3.689 supports this view by reflecting a leptokurtic distribution, meaning that the data have fatter tails and a sharper peak, characteristic of distributions with extreme values. This validates concerns about outlier influence in Shakarganj's performance data. Ghani Glass Ltd., with a mean profitability of around 407,700 and a standard deviation of 162,370, also shows notable variability but to a lesser extent than Shakarganj. Its skewness (1.133) and kurtosis (2.355) also point to a right-skewed, moderately peaked distribution. These values suggest that, like Shakarganj, Ghani also experienced some periods of particularly high profit, although the dispersion was relatively more balanced. Given the small sample size (n = 5 for each variable), caution must be exercised in interpreting these statistics. Non-normality in exchange rate and skewed firm performance distributions may warrant transformation or use of robust estimators to achieve better regression validity. Moreover, these descriptive characteristics provide support for the earlier regression interpretations that showed weak statistical significance due to sample limitations and potential model misspecification.

8. CONCLUSIONS

Various aspects related to macroeconomic variables and their impact on stock markets play a vital role in economies by mobilizing and allocating savings into profitable investments, thereby influencing the overall economic growth and efficiency. Macroeconomic variables, such as interest rates, inflation rates, exchange rates, and money supply, have a significant influence on stock market prices. These variables can affect the profitability and financial performance of companies, leading to changes in stock prices. The specific relationship between macroeconomic variables and stock market prices can vary depending on the country and the specific economic conditions. Different studies have focused on various countries and observed diverse relationships. Inflation rate is an important macroeconomic variable that affects stock market prices. High inflation rates can erode the purchasing power of consumers, leading to lower stock market prices. However, the relationship between inflation and stock market prices may differ across countries. Interest rates also have a significant impact on stock market prices. When interest rates are high, borrowing costs increase, leading to reduced profitability for companies and lower stock market prices. Conversely, lower interest rates can stimulate economic growth and drive up stock market prices. Exchange rates, particularly in countries with significant international trade, can affect stock market prices. Changes in exchange rates can impact the competitiveness of exports and imports, thereby influencing the financial performance of companies and stock market prices. The stock market performance of specific companies, such as Shakarganj Mills Ltd. and Ghani Glass Ltd., were analyzed in the context of the Karachi Stock Exchange (KSE). Regression analysis and descriptive statistics were employed to explore the relationship between macroeconomic variables and stock prices. The analysis revealed that different macroeconomic variables had varying impacts on the stock prices of the selected companies. In the case of Shakarganj Mills Ltd., inflation was found to have a positive relationship with stock prices, while interest and exchange rates showed negative relationships. For Ghani Glass Ltd., all the independent variables exhibited negative relationships with stock prices.

REFERENCES

Ali, A. (2015). *The impact of macroeconomic instability on social progress: an empirical analysis of Pakistan* (Doctoral dissertation, National College of Business Administration & Economics Lahore).

Ali, A., & Ahmad, K. (2014). The Impact of Socio-Economic Factors on Life Expectancy in Sultanate of Oman: An Empirical Analysis. *Middle-East Journal of Scientific Research, 22*(2), 218-224.

Ali, A., & Audi, M. (2018). Macroeconomic environment and taxes revenues in Pakistan: an application of ARDL approach. *Bulletin of Business and Economics (BBE), 7*(1), 30-39.

Ali, A., & Rehman, H. U. (2015). Macroeconomic instability and its impact on gross domestic product: an empirical analysis of Pakistan. *Pakistan Economic and Social Review*, 285-316.

Asif, M., & Simsek, S. (2018). The difference between price and value: Empirical discussion. *Journal of Business and Economic Options, 1*(1), 10–14.

Asteriou, D., & Hall, S. G. (2007). *Applied Econometrics: A Modern Approach Using EViews and Microfit*. Palgrave Macmillan.

Barro, R. J., & Ursúa, J. F. (2008). Macroeconomic crises since 1870 (No. w13940). *National Bureau of Economic Research.*

Bartram, S. M., Brown, G. W., & Minton, B. A. (2010). Resolving the exposure puzzle: The many facets of exchange rate exposure. *Journal of Financial Economics, 95*(2), 148–173.

Blanchard, A. L. (2008). Testing a model of sense of virtual community. *Computers in Human Behavior, 24(5), 2107-2123.*

Brealey, R. A., Myers, S. C., & Allen, F. (2006). *Principles of corporate finance* (8th ed.). McGraw-Hill.

Demirgüç-Kunt, A., & Levine, R. (1996). Stock market development and financial intermediaries: Stylized facts. *The World Bank Economic Review*, 10(2), 291-321.

Dornbusch, R., Fischer, S., & Startz, R. (2008). *Macroeconomics (10th ed.)*. McGraw-Hill.

Edwards, S. (1989). *Real exchange rates, devaluation, and adjustment: Exchange rate policy in developing countries*. MIT Press.

Fama, E. F. (1981). Stock returns, real activity, inflation, and money. *American Economic Review, 71*(4), 545–565.

Fama, E. F., & French, K. R. (2004). The capital asset pricing model: Theory and evidence. *Journal of Economic Perspectives*, 18(3), 25-46.

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, 60(2-3), 187-243.

Gujarati, D. N., & Porter, D. C. (2009). *Basic Econometrics* (5th ed.). New York: McGraw-Hill.

Hussain, A. (2018). Banking privatization and profitability in Pakistan: A time series analysis. *Journal of Business and Economic Options, 1*(1), 30–38.

Iqbal, A. (2018). Determinants of microfinance in Pakistan. *Journal of Business and Economic Options, 1*(1), 15–22.

Khan, J. A., & Ali, R. (2018). Challenging misconceptions: Media portrayal of Islam and its impact on public perception. *Journal of Policy Options, 1*(1), 30–40.

Khan, R. I. A., & Ahmad, K. (2018). Revitalizing the Pakistan textile industry: Challenges and opportunities. *Journal of Policy Options, 1*(1), 20–29.

Khilji, B. A., & Patel, A. (2007). Risk-return analysis of Asian equity markets in mean-variance and mean-CVaR framework. *Journal of International Financial Markets, Institutions and Money*, 17(3), 245-259.

Mahmood, H., & Aslam, M. (2018). Impact of plastic money adoption on consumer purchasing habits: A study in Pakistan. *Journal of Policy Options, 1*(1), 41–49.

Marc, A., & Ali, A. (2017). Socio-Economic Development, Demographic Changes and Total Labor Productivity in Pakistan: A Co-Integrational and Decomposition Analysis (No. 77538). *University Library of Munich, Germany*.

Marc, A., & Ali, A. (2017). Socio-Economic Status and Life Expectancy in Lebanon: An Empirical Analysis. *Archives of Business Research, 5*(11).

Marc, A., & Ali, A. (2018). Gender Gap and Trade Liberalization: An Analysis of some selected SAARC countries. *Advances in Social Sciences Research Journal, 5*(11).

Maurya, R. (2018). Indian mutual funds: An empirical investigation. *Journal of Business and Economic Options, 1*(1), 23–29.

Menike, L. M. C. S. (2006). *The effect of macroeconomic variables on stock prices in emerging Sri Lankan stock market*.

Muhieddine, M. (2018). The nexus between oil prices and current account deficit: An empirical analysis for Lebanon. *Journal of Energy and Environmental Policy Options, 1*(1), 9–13.

Obstfeld, M., & Rogoff, K. (1996). *Foundations of international macroeconomics*. MIT Press.

Okurut, F. N., & Mbulawa, S. (2018). The nexus of electricity, economy, and capital: A case study of Botswana. *Journal of Energy and Environmental Policy Options, 1*(1), 14–21.

Petersen, M. A., & Rajan, R. G. (1995). The effect of credit market competition on lending relationships. *The Quarterly Journal of Economics*, 110(2), 407-443.

Sarno, L., & Taylor, M. P. (2002). *The economics of exchange rates*. Cambridge University Press

Schwert, G. W. (1990). Stock returns and real activity: A century of evidence. *Journal of Finance*, 45(4), 1237-1257.

Siddiqi, M. W. (2018). Pakistan's mutual funds: An empirical analysis. *Journal of Business and Economic Options, 1*(1), 1–9.

Wooldridge, J. M. (2013). *Introductory Econometrics: A Modern Approach* (5th ed.). South-Western Cengage Learning.