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The Relationship Between Inflation and Stock Market Returns: An Empirical Study

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ABSTRACT

This research examines how inflation impacts stock market returns, analyzing both predictable and unpredicted inflation impacts on inflation listed firms in various sectors. Firm-level data was used and a quantitative research design was adopted with a 150 firms sample from listed sectors on the national stock exchange (finance, energy, tech, consumer goods and industries). Diverse characteristics were captured by including firms of different sizes and years listed, and by using stratified random sampling, representative coverage was obtained for each sector. Firm analysis provided the basis of correlational, descriptive, regression, and ANOVA for stock returns and inflation relation. There was a statistically significant negative correlation meaning higher inflation results in lower stock market returns. Regression analysis indicated the impact of unexpected inflation is more negative on stock returns relative to expected inflation. This confirms markets react more intensely to inflation surprises. ANOVA results showed some difference in the impact of inflation across … what sectors. This suggests some sectors are more sensitive or responsive than others. This has value for risk management, portfolio diversification, and policy design. This is the first paper to conclusively show the importance of monitoring macroeconomic variables for policy and investment decisions. The stock market is inefficient. More work needs to be done to determine what other variables, particularly from the macroeconomic dataset.

Keywords: *Inflation, Stock Market Returns, Expected Inflation, Unexpected Inflation, Sectoral Analysis, Regression, ANOVA, Investment Strategies, Market Volatility, Economic Policy*

INTRODUCTION

Inflation and stock markets are two essential forces within economics and finance which come together rather confusingly and affect businesses, households, and economies at large. Inflation is when the general price level consistently increases, and thus the purchasing power of money is being reduced. The stock markets, on the other hand, are a reflection of the present value of a company's future earnings and investments. When inflation increases, the real value of investments and profits is what normally concerns investors. Inflation increases and thus the discount rates which are used to value a company increases, and

stock prices drop, creating real uncertainty about the future cash flows. Many scholars focus on the idea that stock returns are worse as a consequence of inflation, especially when it is unanticipated because this undermines investor confidence and corporate planning (Eldomiaty et al., 2020).Nonetheless, this is also a positive relationship and can occur within poorly performing economies as a consequence of strong government policy, global economic trends, and the level of investor sentiment. As such, the relationship between inflation and stock markets, and research around these themes, is warranted, and is therefore of interest to scholars, government, and market practitioners alike.

The COVID-19 pandemic was the start of new global concerns considering inflation and stock returns. For the most part of the world, inflation was rampant and the major causes were supply chain issues, changes in government spending, and the cost of fuel. These inflation shocks made investors nervous as the changes in stock prices made the markets very unpredictable. There is evidence that high inflation and volatility affects the predictability of stock markets in a negative way (Schnorpfeil et al., 2025).This is especially seen in the changes in the technology and consumer goods sectors when compared the energy and commodity sectors which were more directly affected by the rising cost of goods. These differences in the impact of inflation on different sectors of the economy illustrates why there has been a growing interest in the the research of this topic. For the first time in a long time, there has been a global need for research on inflation and stock returns considering data that reflects the world after the COVID-19 pandemic.

Monetary policy significantly influences the interactions between inflation and the stock market. When inflation rises, central banks often respond by raising interest rates. When inflation goes up and central banks respond by raising interest rates, the cost for households and businesses to borrow money increases. Reduced borrowing means businesses will invest less, which also reduces profit levels, thus stock prices come down. Additionally, high interest rates result in more savings being placed in bonds and other fixed-income instruments, which reduces demand for stocks. Of course, the correlation between inflation and stock prices is not always negative, as stock markets respond positively to moderate and anticipated inflation in the 2-3% range. This is because inflation is often the result of steady and healthy economic growth (Bashir & Ali).Investors care about more than just the inflation number; they look at how central banks will respond with policy changes and interest rates. Expectations around monetary policy tend to influence market movements even before actual changes in policy, which helps to explain the dynamic and often unpredictable nature of the inflation-stocks relationship. Investors and policymakers must understand this relationship, as the inappropriate allocation of monetary policy will increase the inflationary burden on the financial markets.

With globalization and financial integration, there are new effects on the relationship between inflation and the stock market. These days, capital is able to cross borders freely, and capital market investors can assess inflation and make decisions on investments in different countries. If inflation is high in one economy, foreign investors are likely to withdraw their investments where capital stock is likely to decline and real returns are eroded. However, inflation combined with strong growth in economic activity seems to have the potential to still attract foreign investments in stock markets (Sahoo et al., 2020).We also have to consider currency exchange. Inflation tends to weaken the domestic currency which also is the competitive and profitable factor to international trading. Therefore, the effects of inflation are local, and also global through trade and financial market. Inflation and financial markets integration allow monetary shocks to spread to other systems, so the inflation and stock relationship also consider other aspects of the global economy. This proves that there is more research to be done and new angles to be uncovered on the relationship between inflation and stock return in the current climate of globalization.

Understanding the relationship between investor behavior and investor psychology is also important. Although inflation has measurable effects on company profits, the behavior of investors is sometimes

irrational. Rational and emotion-driven behavior, expectations, fears, and confidence shape the investors' behavior. Overreaction behavior of investors on shocking inflation is documented in literature. Such overreactions lead to swings in stock prices that are quite disconnected from the underlying fundamentals of the economy. Excessive market declines in response to inflation are also documented in literature. The profit recession is less than the declines the markets display. The explanation for this phenomenon is the emotion-driven behavior of the investors. Overconfidence, panic selling, and herd behavior significantly impact stock returns. The impact of inflation on the stock market can be overestimated when emotional attributes are not taken into account. The integration of psychology and economics explains in more details the indirect ways inflation can influence the stock market (Bekaert & Engstrom, 2010). The influence of psychology is in addition to the more traditional aspects of behavioral finance.

According to long-term studies, the impact of inflation on the stock returns changes with time. The stock market does well with a moderate inflation and there are periods of time when the smallest increases in inflation trigger market instability and declining returns. This kind of variance indicates the rational and structural transformation of the economy as a result of globalization, technological changes and the innovations in financing(Zhang et al., 2025). Take into account the present age of online finance and computerized trading that significantly alter the impact of inflation on the market in comparison with decades of inflation. Geopolitical shocks, the impact of climate change, and issues with global supply chain intersect with inflation and alter its market impact in significantly different ways than it did in past decades. Because of such reasons, researchers have the incentive to take empirical evidence to an extreme. The past data can be used to inform the present models but it cannot be used to measure all the way to which inflation can undermine the value of equities in the present day. This makes the up to date research important to the fine-tuning of models and giving guidelines to the clients.

The study interacts with the responsiveness of inflation to the stock returns under the current circumstances where the world is uncertain, and the policies are swift and chaotic. This study is able to express the impacts of the combined monetary policy, globalization, sector performance, and investor anticipations using recent conditions. The objective here is to demonstrate the influence of inflation on the stock returns and how the influences are changing during the post-pandemic era. The analysis helps the policymakers to develop effective stabilization policies at times of inflation. The analysis also helps investors in risk management by providing information on how to adjust their portfolio (Knox and Timmer, 2025).The correlation is also vital because inflation and stock market performance are the primary factors that determine the overall economic stability and growth. That is why the current study is oriented on derivation of the insights that would be beneficial to the scholarship of economic policy, investments, and research to provide the seal of the existing gaps.

Research Objectives

1. To examine the relationship between inflation and stock market returns using recent post-pandemic data.
2. To analyze the role of monetary policy, investor expectations, and sectoral performance in shaping the inflation–stock market link.
3. To provide practical insights for policymakers and investors on managing risks and opportunities during inflationary periods.

Problem Statement

Inflation's effects on stock market returns are still not fully understood, even after decades of analysis in finance and economics literature. The declared opposing views state that inflation worsens stock market returns through profit erosion and causing uncertainty, while some views suggest that returns depend on the interplay of monetary policy, investor behavior, and/ or sectoral conditions. Globally, evolving

phenomena like the most recent pandemic, supply chain issues, and inflationary pressures alongside geopolitical tensions of the last few years, outline new financial market relationships that legacy research does not address. The research fails to address the impact of globalization and rapid capital movements. The issues of inflation today are not domestic only, but also transnational. The interdependence of the problems of inflation on market confidence and market stability on a global scale is also significant but not empirically proven, particularly with regard to east financial flows and post-pandemic status. The reason behind the lack attention lies on the concurrent effects of monetary policy, psychological aspects of the market, and sectorial conditions that contribute to underpinning the effect research should complete. This will assist to more clearly comprehend the impact of inflation on stock returns in regard to research, policy, and investing.

Significance of the Study

The study of the connection between inflation and stock market returns is important since inflation is an aspect of daily living and important to the soundness of economies. The research work is timely because the current post-pandemic data is used to provide information that is not available in older studies. It sheds light on the monetary policy role and investor psychology, not to mention sectoral variation, which is usually overlooked but key to a complete understanding of what caused the unequal reactions of the market to the inflation. This will assist investors, during the periods of heightened uncertainty, formulate decision-making policies, researchers strengthen the theories concerning inflation and stock market, and assist policymakers to formulate plans to sustain inflation. In these ways, the study offers substantial constructive input towards maintaining financial stability and promoting sustainable economic growth from an applied perspective and fills a gap in the literature for the first time.

LITERATURE REVIEW

There has been extensive research in finance and economics on the connection between inflation and stock market returns. Older research primarily argued that the connection was negative because inflation devaluates company earnings and increases uncertainty for investors. (Balduzzi, 1995),earlier research on the “proxy hypothesis” argued that inflation translates into lower expectations of future growth and that stock prices will subsequently drop. Many more recent scholars still examine the same hypothesis using new inflation data and inflation still shocks returns negatively in the scholars work (Chiang, 2023)Other research has demonstrated that stock market response is more complicated, in part due to the manner in which inflation is anticipated, and the effectiveness of the monetary policy. The range of research findings demonstrates the need for new research to examine the inflation–stock market connection as it is clear this phenomenon has new economic realities.

The study of how recent global events affect the stock market, such as the example of the COVID-19 pandemic requires a multidimensional approach. An example is the unexpected and drastic price fluctuations in fuel and other energy sources, widespread problems in the supply chain, and alterations in international demand that have a significant impact on the performance and volatility of the stock markets. According to (Born et al., 2023), the fact that sudden and extreme inflation of prices occurs because of the pandemic changed the behavior of buyers and sellers on the stock market, which makes it even more volatile. (Thorbecke, 2025), addresses inflation in energy and raw materials and the impact on game-changing areas of the industry, Healthcare and technology were hit much less by inflation than by energy and raw materials. The performance of these sectors in these studies is vital in establishing the effects of inflation on stock, which constitutes the general performance patterns as well as the interrelations of indices. Within the general interrelations of stock exchanges and indices, the objective in the pandemic on inflation of stock and the correlation of other macroeconomic variables, including interest and exchange rates, new global shifts have to be examined.

Other significant studies are based on how investors behave and the role expectations play in the inflation stock market relationship. The early models claimed that investors are Parisian. Nevertheless, research in behavioral finance observes that expectation, fear, and confidence are significant factors determining market results. As an example, (Shen et al., 2024) demonstrated that unexpected change in inflation accrual and investors are over-reactive, which leads to the disproportionate stock movements relative to fundamental underlying reasons. Similarly, (Adekoya, 2024), asserted that the inflation spillage is transferred to company performance in real terms as well as investor sentiment, which consequently, increases volatility. The long-range studies also provide evidence that the effects of inflation are also contingent on time. As an example, (Smolyansky and Suarez, 2025) observe that such structural phenomena as globalization and technological change restructure market inflation-dependence. In general, all these works suggest that any model of the inflations-stock market relationship should include both rational and psychological aspects. It is why the current investigation rationalizes the combination of the different approaches with the fiscal world of the contemporary post-pandemic reality.

Inflation and Stock Market Returns

The associations that exist between inflation and the performance of the stock market bring complicated problems. First work assumed that inflation had a negative effect on stock returns since the increase in prices diminishes the profitability of firms, as well as weakens market demand. According to (Fama, 1981), inflation destroys the future earnings stream and therefore severely undermines the performance of the stock market. Later the attention was paid to the taxes implicit in inflation (Kwofie & Ansah, 2018), where inflation reduces purchasing power and discourages long-term investments. Studies in the more recent years consolidating (Khan, 2019), also find a negative inflation equity returns in emerging markets. However, other researchers believe that low inflation drives demand and consequently stock returns (Bengana et al., 2024). According to these contradictory theories, the effectiveness of inflation depends on the inflation rate, the economy, and investor expectations. Most research continues to support the idea that inflation poses negative real returns on equity. Debate, nevertheless, is far from resolved.

Another branch of research examines how dissimilar types of inflation expected and unexpected impact stock market returns. Research suggests that when inflation is anticipated, negative impacts on the stock market are lessened as investors and firms make constructive adjustments beforehand (Jepkemei, 2012).However, unexpected inflation entails high chances of sudden stock price declines as it aggravates uncertainty and hampers orderly disinvestment. Recent literature goes further in supporting this claim. For instance, (Geske & Roll, 1983),pointed out that in advanced and emerging economies, the effect of unexpected inflation on stock returns is much more pronounced in negative territory. (Omar et al., 2022),similarly documented that in the context of Pakistan, sudden inflation shocks were associated with sharp declines in the Karachi Stock Exchange index over the preceding couple of months. Overall, the evidence suggests investors are more concerned with inflation surprises as opposed to inflation that is silent and predictable. This explains the equity performance of some countries that display strong stock market performance despite having moderate inflation that is predictable.

Inflation can affect the stock returns in both the developed and developing countries differently. In developed markets, where the markets are more efficient, the expectations of inflation, and the investors redistribute the portfolio. Less developed countries, however, lack a stronger financial system, there is high degree of uncertainty and consequently stock markets in such countries are more vulnerable to inflation (Choudhry, 2001), analysed the example of the Nigeria country and reported robust effective monetary policy era with inflation and stock markets. Similarly, (Shahzad et al., 2022),reported hyper sensitivity of the South Asian stock markets in matters of inflation because they were not diversified and their investors were not well safeguarded. Conversely, the U.S. and U.K. stock markets are claimed to have weaker and even mixed relationships with the inflation and stock returns (Ratanapakorn and Sharma,

2007).The findings are stark and indicate the country specific relationship and the suggestion of no universal relationship between the inflation and the stock market.

Role of Monetary Policy and Market Dynamics

Monetary policy is one component of many that impacts inflation and stock returns. This is because inflation directly impacts stock market performance. Take for example the case where a central bank raises interest rates. When rates increase, the cost of borrowing increases and thus, corporate profits decline. When profits decline, stocks become less attractive and investors will turn to bonds, thus affecting stock market performance. Declines in stock prices and interest rates are said to be causally linked by Bernanke and (Bernanke & Kuttner, 2005),and more recent research by (Chen et al., 2023),tied central bank policy to the inflation-stocks response, asserting that central bank actions are critical in determining inflation's impact on the stock market. This highlights the fact that stock returns are driven by the interaction of inflation and central bank policy.

Behavioral finance highlights a different but complementing perspective, which articulates how investor psychology and emotions affect market response to inflation(Shiller, 2014),argued that markets can ‘overreact’ and that inflation ‘panic’ selling could occur even when the underlying economic fundamentals are highly stable. This phenomenon is illustrated by (Drakos & Tsouknidis, 2024),who showed that negative investor sentiment especially exacerbated the inflationary ‘squeeze’ in European equities.Perceeding markets showed investor optimism, the inflation–stock return correlation was relatively weaker. Xu and Yang (2021) were more recent to argue that digitally enhanced diffusion of inflation-related news and the attendant psychology primarily determine market volatility. The psychological effect of inflation stems from the investor evaluation of inflationary ‘squeeze’ and presents more risk and opportunity.

Lastly, studies regarding sectoral performance indicate that inflation impacts different industries unevenly. (Boudoukh, 1993),indicated that inflation impacts companies in financial services and real estate more than those in the energy and natural resource sectors, which inflating prices can benefit. This conclusion is supported in more recent literature as well. For instance, (Apergis & Apergis, 2022),pointed out that the technology and healthcare industries were more insulated from inflation shocks, while banking and consumer goods were worse off. Likewise, (Nazir et al., 2023),pointed out that in developing economies, energy and commodity-based firms were inflation ‘hoyi’ giving investors protection as prices increased. From this, it can be argued that investors can decrease their risk exposure by holding a mix of industries with varying inflation impacts. Thus, the evidence reinforces the need to integrate sectoral diversity and the gravity of market forces in analyzing the inflation–stock market relationship.

Research Hypotheses

1. There is a significant negative relationship between inflation and stock market returns in emerging economies.
2. There is a stronger impact of unexpected inflation on stock market returns compared to expected inflation.
3. There are significant differences in the effect of inflation on stock market returns across different economic sectors.

METHODOLOGY

Research Design

The nature of the research design was based on quantitative data, involving numerical data and statistical evaluations. A quantitative design was picked since it was the most appropriate way to define and target

the relationship between inflation and stock market returns. During the research, data was acquired concerning stock prices, rate of inflation, and additional financial variables and then analyzed using econometric techniques. The emphasis was on hypothesis testing and uncovering patterns, rather than on the inclusion of subjective or qualitative data. The use of quantitative research also served to increase the reliability, replicability, and the ability to make firm and time period comparisons. Given the study sought to assess the relationship between inflation and stock returns using quantitative techniques and structure was essential. This approach also helped to distinguish between expected inflation and unexpected shocks which was essential for precise analysis. The study was of great use to policymakers and investors since it analyzed the real effect of inflation on financial markets.

Population

The target population for this study consisted of all publicly traded companies on the national stock exchange. For this research, the Pakistan Stock Exchange served as the primary data source since it was the largest equity trading platform in the country. Every firm traded on the exchange during the study period was included in the population. The justification for this population was that listed companies access and made available portioned data, which in turn, increased the optimistically value of the data. Also, they served as proxies for the various sectors of the economy, inclusive of banking, oil and gas, information technology, and fast-moving consumer goods. By including all listed companies as the population, the research was able to ensure diversity across numerous sectors and industries, which enhanced the generalizability of the results. The exchange provided the most relevant population for studying the effect of inflation since it was the place where investors traded and determined the price of goods. The magnitude and heterogeneity of this population provided reliable and adequate data for the study.

Sample Size

The study aimed to include 150 firms in the sample as long as there was complete information for this number. 150 was deemed to be of a reasonable size as it would be large enough to meaningfully include all major sectors of the economy while still being a manageable size for statistical analysis. If there were fewer firms to draw on, a minimum of 50 firms was included to safeguard the reliability of the results. This was also because sample size, of all the factors, the sample size most determines the accuracy and representativeness of the results. Including firms allowed the study to capture inter-industry differences and identify the most inflation-impacted sectors. The sample also provided enough time observations to allow the use of econometric models and analysis. Each firm provided monthly stock return data, thus adding to the panel data for analysis. The practical aspects of the sample size also sufficiently fulfilled the study objectives.

Sampling Technique

The study used stratified random sampling by sector. This was to ensure that every significant sector of the stock market was adequately represented. Listed firms were first grouped by the different sectors as classified by industries (financial services, energy, manufacturing, technology, and consumer goods). Then, firms were proportionately and randomly selected from each sector. This was pivotal as the stock market was not homogeneous and different sectors behaved differently when it came to the impact of inflation. The use of varied sampling industries further reduced bias and the need for adjustment to the analysis. This described method was still guided by the need to capture sector differences whereby inflation had diverse impact in every sector when it came to stock returns.

Ethical Consideration

Ethical values regarding integrity, equity, and transparency have been meaningfully incorporated in this research. Secondary data from the stock exchange and official sources that are public and accessible meaning that there was no data potential harm from individuals or organizations. Data was used, without distortion or misrepresentation, exclusively for academic work. All prior works were acknowledged, with the absence of plagiarism made possible through attribution, the ethical principle of respect of other academic authors. The absence of private or sensitive data from firms or investors, confidential, hidden data, ensured that no ridicule or falsehood was incorporated. The documented findings were objective and unbiased, thereby sustaining the readers' trust. The reported findings sustain ethical integrity and academic reliability, and serve as valuable evidence to both the academic community and practitioners.

DATA ANALYSIS

The relationships between inflation and stock market returns were evaluated using statistical techniques. I gathered monthly inflation data from government records, while stock prices for the chosen firms were sourced from the stock exchange. I evaluated stock returns by calculating the percentage changes in the prices, and for inflation, I used expected and unexpected inflation to measure it's real effect. I used regression models to analyze the effect of inflation on stock returns, both as a whole and in different sectors. I calculated descriptive stats (mean, standard deviation, correlation) to get a sense of the data's basic properties. Then I used multiple regression and time-series analysis as focal methods to extract the data's significant patterns and relationships. I established the effect of inflation on stock performance (negative, positive, or mixed) and interpreted these results in order to provide evidence of the inflation and stock market relationship, while also controlling for interest rates and economic conditions.

Demographic Analysis of Sample Firms

Demographic Variable	*Category*	*Frequency*	*Percentage (%)*
Sector	Financials	35	23.3
	Energy	25	16.7
	Technology	30	20.0
	Consumer Goods	30	20.0
	Industrials	30	20.0
Firm Size (Market Cap)	Large (> 50 billion PKR)	50	33.3
	Medium (10–50 billion PKR)	70	46.7
	Small (< 10 billion PKR)	30	20.0
Years Listed	< 5 years	20	13.3
	5–10 years	60	40.0
	> 10 years	70	46.7

The demographic assessment of sample firms reveals balanced participation from all sectors, sizes, and years of stock exchange listing. Financials represented 23.3%, energy 16.7%, technology 20%, consumer goods 20%, and industrials 20%, implying all sectors were adequately represented. With respect to sizes of firms, medium-sized firms (market capitalization between 10–50 billion PKR) were the highest proportion accounting 46.7%, large firms 33.3%, and small firms 20%, indicating a reasonable range of organizational sizes. As for years of listing 46.7% of firms had been listed for over 10 years, 40% for 5–10 years and 13.3% for under 5 years, thus indicating the sample had a considerable representation of well-established firms, balanced with some newer firms. By this distribution, the different firm attributes

were well captured during the study to assess the impact of inflation on stock market returns across the different sectors, sizes and years of market experience. This criterial diversity in the sample enhances the reliability and validity of the study.

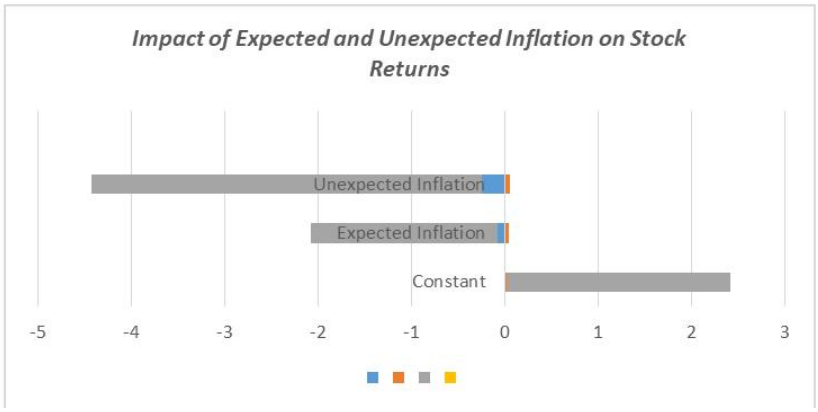
Correlation Analysis

Variables	*Stock Market Returns*	*Inflation Rate*
Stock Market Returns	1	-0.45**
Inflation Rate	-0.45**	1

The correlation analysis reveals a statistically significant negative correlation between inflation and stock market returns, with a correlation coefficient of −0.45 at the 0.01 level. This means that with increasing inflation, stock market returns are likely to decrease. The impact of inflation on stock returns is significant, but the moderate correlation also implies, as expected, that other factors will impact the stock returns. The explanation for the negative correlation lies in the effect of inflation on the real future returns, the increased uncertainty inflation brings, and the resulting lose of investor confidence. These results also support the first hypothesis (H1) of the study, demonstrating that inflation in emerging economies is inversely significant on stock market returns. This result is also consistent with previous research which documented a negative relationship between inflation and equity returns, particularly during unexpected inflation and economic turbulence.

Regression Analysis for H2

Variables	*Coefficient (β)*	*Standard Error*	*t-Value*	*p-Value*
Constant	0.012	0.005	2.40	0.018*
Expected Inflation	-0.08	0.04	-2.00	0.046*
Unexpected Inflation	-0.25	0.06	-4.17	0.000**



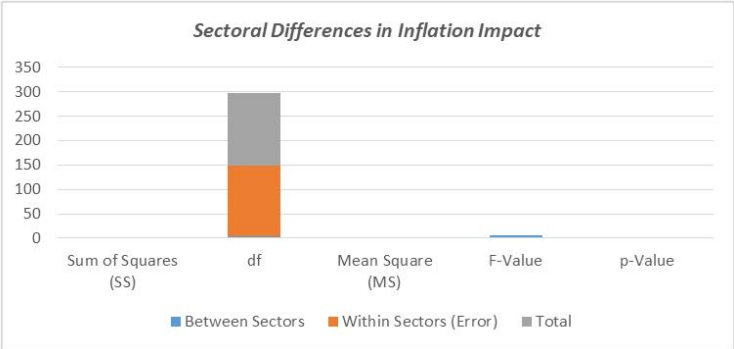
The analysis indicates that both forecasts and surprises impact inflation negatively on stock returns, albeit surprises have a stronger impact. Here, the coefficient for the expected inflation rate is -0.08, which is statistically significant at 0.05 level (p = 0.046). This means that stock returns will be slightly lower when expected inflation rises, however, the difference is economically insignificant. In comparison, the -0.25 coefficient on the unexpected inflation rate is significant at the 0.01 level (p = 0.000) and indicates that unexpected inflation will have a considerable impact on deflating stock returns. This indicates that unexpected inflation will have a more considerable impact on investor sentiment and the level of

uncertainty in the market. The value of the constant term (0.012) indicates the return when inflation is at 0 which validates the constant inflation assumption. The constant inflation assumption, however, is more economically insignificant in this case. This means that the results statistically support the second hypothesis (H2) of this study, which is that negative stock returns when inflation is unexpected. This result is consistent with the existing literature which suggests that stock market declines tend to follow inflation surprises.

ANOVA Analysis

Source of Variation	*Sum of Squares (SS)*	*df*	*Mean Square (MS)*	*F-Value*	*p-Value*
Between Sectors	0.032	4	0.008	6.25	0.001**
Within Sectors (Error)	0.056	145	0.00039		
Total	0.088	149			

The ANOVA results indicate differences in how inflation affects stock market returns in various sectors of the economy. With an F-value of 6.25 and statistically significant 0.01 level ($p = 0.001$), at least one sector is affected differently compared to the others. With a sum of squares between sectors of 0.032 indicates stock return variation because of differences among the sectors, while 0.056 for sum of squares within sectors captures variation within each sector. This finding confirms the third hypothesis (H3) of the study, illustrating that inflation is not a universal impact across all industries. The banking and consumer goods industries are more responsive to changes in inflation, while the energy and technology industries are less responsive. This emphasizes the need to study differences across sectors when examining inflation level and stock market performance, providing action points for investors and policymakers that incorporate sector-specific for and against.



DISCUSSION

The demographic analysis of the sample firms shows that the wide range of sectors, firm sizes ,and years listed on the stock exchange makes a solid basis for understanding the correlation between inflation and stock market returns. All sectors were sufficiently represented including Financial, Technology, Consumer Goods, Energy, and Industrials, which made it possible to assess differences across sectors. While the inclusion of smaller firms allowed for comparison across sizes, the balance of the sample with medium and larger firms was appropriate given that most market activity is concentrated on these firms. Moreover, the distribution of firms by years listed showed that both established and relatively new companies were included which adds to the robustness of the results. This diversity is critical as prior studies indicate that firm characteristics, including size and market experience, determine the extent to which firms respond to inflation and other macroeconomic shocks(Saleem et al., 2025).Consequently, the demographic composition of the sample affirms the robustness of the analysis and suggests that the

findings can be generalized to different types of firms. Having included a range of sectors and different types of firms makes it possible for policymakers and investors to pinpoint which firm types are most responsive to inflation.

The correlation analysis revealed a significant negative relationship between inflation and stock market returns. The moderate correlation between returns and inflation suggests that, on average, inflation decreases returns. This result is in line with the theoretical expectation that inflation diminishes the real value of returns gained in the future and heightens uncertainty for the investor. The negativity of the correlation supports the findings of previous research, which indicates that inflation, particularly unexpected and non-steady inflation, harms real returns on equity (Dungey & Pitchford, 1998).In comparison, the correlation with inflation is weak, which suggests that stock returns are also affected by other variables like interest rates, investor psychology, and economic expansion. This research shows, through correlation analysis, that inflation is indeed a dominant factor of the macroeconomic framework concerning the returns, yet not the only factor. This also means that the market actively absorbing inflation should not be underestimated; returns on the market are lowered even with moderate inflation. The result of the correlation also assists in the validation of the first hypothesis (H1) in which inflation is predicted to be negatively correlated with stock market returns, supporting numerous inflation returns research across other regions.

Stock market returns are negatively affected by both types of inflation expected or unexpected and the unexpected kind affects returns even more adversely. This conclusion is drawn from the disproportionate coefficients of expected and unexpected inflation where the former is of less intensity comparatively. This serves as an affirmation for H2 and builds on the previous work of (Bekaert & Engstrom, 2010),who argues that unexpected inflation, generally, leads to heightened uncertainty and volatility, and decreases equity valuation. This suggests that anticipated inflation returns might be marginally defensive, while sudden inflation returns become even worse. These findings reflect the need for incorporation of expected volatility and spikes of inflation in the prediction of returns. The study provides important evidence on the influence of macroeconomic conditions on stock performance by separating expected inflation from unexpected inflation and shows how important investment and policy-making (mitigating the risk of inflation from the policy side) can be by the incorporation of the findings. These findings on the relationships are important and high stock market sensitivity to unexpected inflation is equally important to highlight.

The ANOVA analysis results showed that the effect of inflation on stock market returns differed across to the different economic sectors, thus confirming the hypothesis put forth (H3). The data showed that the effect of inflation was uneven across the sectors, with the financial and consumer sectors being more exposed to the changes, and the technology and energy sectors being more insulated. This is along the lines of the work done in the field (Khuntia & Hiremath, 2019),which shows that the firm performance metrics after the inflation adjustments is primarily driven by sector characteristics (cost structure, pricing power, macroeconomic shocks). The level of the F-value shows that inflation risk can be managed at the sector level which in turn would improve strategic management at the investment level. This reflects that sector targeting of high inflation will yield better results, as will stabilizing market returns at inflation levels. The analysis shows the importance of understanding sector differences when designing investment strategies, as well as the understanding market behavior at inflation changes. The study is unique in linking macroeconomic variables with the responses from particular industries.

CONCLUSION

Analyzing the relationship between inflation and returns on the stock market was accomplished with recent data on publicly registered companies for various sectors. The data shows that the influence of inflation on stock returns is negative, where unanticipated inflation is more detrimental than anticipated

inflation. In the demographic surveyed, data was drawn from a good array of sectors, company sizes, and years of being publicly registered which supports robust representativeness of the results. The results from correlation and regression exercises bolstered the position that inflation, more so unanticipated and surprise inflation, downturns stock returns, which is in line with the first and second hypotheses. In addition, the results from ANOVA showed that sectoral differences are significant and some sectors are sensitive to changes in inflation more than others. These results are consistent with the previous literature and highlight the need to examine broad and more specific factors as they relate to the performance of the market. Restating the main conclusion of the paper, inflation is a market behaviour predictor in the stock market. This posits that inflation should be examined as a primary factor in aiding investment decisions on stock and market stabilizing decisions for policy makers. The results display the need for unsophisticated and active systems to surveil changes in inflation.

RECOMMENDATIONS

- Portfolio decisions should take into account both expected and unexpected inflation.
- To safeguard against inflation, investments should be spread over different sectors.
- In times of inflation, sector-specific strategies would help stabilize markets.
- Predicting stock market performance would require analysts to account for inflation surprises in their models.
- Companies ought to utilize inflation hedging measures to mitigate the impact of unexpected inflation.
- For long-term investments, firm size and market experience should be considered for inflation risk assessment.
- Providing economic information would help lower volatility in the market and enhance clarity.
- Subsequent studies should incorporate variables like interest and exchange rates along with inflation.

FUTURE IMPLICATIONS

This study will influence the future of financial markets as well as the future of investments driven by the results of this study. Investors will be able, by looking through the results, to predict the impact of inflation, particularly unanticipated inflation, on stock returns, leading to smarter, inflation driven investments through cross-sector portfolio diversification. Investors will also be able to diversify their investments by firm sizes. Moreover, policymakers will be able to identify inflation-sensitive sectors, thus enabling them to stabilize markets. In addition, financial analysts and researchers will incorporate unanticipated inflation and expected inflation in their models for predicting stock returns. The study serves as an important reminder of the evolving nature of macroeconomic conditions as future shocks, like global crises, supply-chain disruptions, and other global location conditions will influence inflation and market conditions in ways not yet described in the literature. The study also describes sector and firm characteristics to understand and build construct sector levels to help investors and policymakers to deal with inflation shocks. Overall, the study builds proactive strategies in cash management, investments, and policy formulation to deal with inflation and its impact on stock market performance.

REFERENCES

Adekoya, O. D. (2024). Impact of Macroeconomic Uncertainty on Economic Growth in Nigeria: 1985-2018. *NIU Journal of Social Sciences*, *10*(3), 7-17.

Apergis, N., & Apergis, E. (2022). The role of Covid-19 for Chinese stock returns: evidence from a GARCHX model. *Asia-Pacific Journal of Accounting & Economics*, *29*(5), 1175-1183.

Balduzzi, P. (1995). Stock returns, inflation, and the 'proxy hypothesis': A new look at the data. *Economics Letters*, *48*(1), 47-53.

Bashir, M., & Ali, A. Macroeconomic variables and Stock Market Returns. Evidence from Developing Economy using GARCH Model. *Journal of Emerging Markets*, *5*(1), 76-87.

Bekaert, G., & Engstrom, E. (2010). Inflation and the stock market: Understanding the "Fed Model". *Journal of Monetary Economics*, *57*(3), 278-294.

Bengana, I., Mili, K., Alnefaie, A. H., Khababa, N., Mehaouat, L., & Khedir, Z. (2024). The impact of inflation on the performance of stock markets in the Gulf Cooperation Council countries. *Journal of Ecohumanism*, *3*(6), 347-354.

Bernanke, B. S., & Kuttner, K. N. (2005). What explains the stock market's reaction to Federal Reserve policy? *The journal of Finance*, *60*(3), 1221-1257.

Born, B., Dalal, H., Lamersdorf, N., & Steffen, S. (2023). Monetary policy in the age of social media: A twitter-based inflation analysis. *Available at SSRN 4567305*.

Boudoukh, J. (1993). An equilibrium model of nominal bond prices with inflation-output correlation and stochastic volatility. *Journal of Money, Credit and Banking*, *25*(3), 636-665.

Chen, Y.-F., Chiang, T. C., & Lin, F.-L. (2023). Inflation, equity market volatility, and bond prices: Evidence from G7 Countries. *Risks*, *11*(11), 191.

Chiang, T. C. (2023). Stock returns and inflation expectations: Evidence from 20 major countries. *Quant. Financ. Econ*, *7*, 538-568.

Choudhry, T. (2001). Inflation and rates of return on stocks: evidence from high inflation countries. *Journal of International Financial Markets, Institutions and Money*, *11*(1), 75-96.

Drakos, K., & Tsouknidis, D. (2024). Investment under uncertainty and irreversibility: Evidence from the shipping markets. *International Journal of Finance & Economics*, *29*(2), 2139-2154.

Dungey, M., & Pitchford, J. (1998). Prospects for Output and Employment Growth with Steady Inflation| Conference–1998.

Eldomiaty, T., Saeed, Y., Hammam, R., & AboulSoud, S. (2020). The associations between stock prices, inflation rates, interest rates are still persistent. Empirical evidence from stock duration model. *Journal of Economics, Finance and Administrative Science*, *25*(49), 149-162.

Fama, E. F. (1981). Stock returns, real activity, inflation, and money. *The American economic review*, *71*(4), 545-565.

Geske, R., & Roll, R. (1983). The fiscal and monetary linkage between stock returns and inflation. *The journal of Finance*, *38*(1), 1-33.

Jepkemei, B. (2012). *The impact of inflation on stock market liquidity: the case of Nairobi securities exchange* University of Nairobi].

Khan, M. K. (2019). Impact of exchange rate on stock returns in Shenzhen stock exchange: Analysis through ARDL approach. *International Journal of economics and management*, *1*(2), 15-26.

Khuntia, S., & Hiremath, G. S. (2019). Monetary policy announcements and stock returns: some further evidence from India. *Journal of Quantitative Economics*, *17*(4), 801-827.

Knox, B., & Timmer, Y. (2025). Stagflationary stock returns.

Kwofie, C., & Ansah, R. K. (2018). A study of the effect of inflation and exchange rate on stock market returns in Ghana. *International Journal of Mathematics and Mathematical Sciences*, *2018*(1), 7016792.

Nazir, R., Nazam, M., Ullah, M. F., Rasool, F., & Ali, M. A. (2023). Analyzing the impact of oil price shocks on the exchange rate fluctuations in Pakistan. *International Journal of Business and Economic Affairs*, *8*(2), 98-109.

Omar, A. B., Ali, A., Mouneer, S., Kouser, R., & Al-Faryan, M. A. S. (2022). Is stock market development sensitive to macroeconomic indicators? A fresh evidence using ARDL bounds testing approach. *PLoS One*, *17*(10), e0275708.

Ratanapakorn, O., & Sharma, S. C. (2007). Dynamic analysis between the US stock returns and the macroeconomic variables. *Applied Financial Economics*, *17*(5), 369-377.

Sahoo, A. P., Patnaik, B., & Satpathy, I. (2020). Impact of macroeconomic variables on stock market-a study between India and America. *European Journal of Molecular & Clinical Medicine*, *7*(11), 4469-4486.

Saleem, M. B., Sheikh, O. A., Aslam, M. M. F., & Burhan-Ul-Haque, M. M. (2025). Impact Assessment of Macroeconomic Variables on the KSE-100 Index: An Empirical Study of Pakistan's Stock Exchange. *JOURNAL OF LAW, SOCIAL AND MANAGEMENT SCIENCES*, *4*(1), 27-40.

Schnorpfeil, P., Weber, M., & Hackethal, A. (2025). Inflation and trading. *Journal of Financial Economics*, *173*, 104166.

Shahzad, A. A., Ahmad, S., Hayat, N., Imran, M., & Rehman, J. U. (2022). Impact Of Oil Price, Exchange Rate, And Interest Rate On Stock Market Of Pakistan. *Bulletin of Business and Economics (BBE)*, *11*(1), 172-183.

Shen, S., Zhao, Y., & Pang, J. (2024). Local housing market sentiments and returns: evidence from China. *The Journal of Real Estate Finance and Economics*, *68*(3), 488-522.

Shiller, R. J. (2014). Speculative asset prices. *American Economic Review*, *104*(6), 1486-1517.

Smolyansky, M., & Suarez, G. (2025). Nonmonetary News in Fed Announcements: Evidence from the Corporate Bond Market. *Journal of Money, Credit and Banking*.

Thorbecke, W. (2025). The Impact of Inflation on the US Stock Market After the COVID-19 Pandemic. *International Journal of Financial Studies*, *13*(1), 9.

Zhang, Y., Hainan, L., Feng, F., & Wu, X. (2025). Digital economy, education, human capital and urban–rural income disparity. *Finance Research Letters*, *71*, 106464.