The impact of inflation and interest rates on global stock markets: The moderating role of consumer confidence across five continents

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Abstract

This study examines the impact of inflation and interest rates on global stock market index performance, with the moderating role of the Consumer Confidence Index (CCI) across five countries representing different continents: the United States, the United Kingdom, China, South Africa, and Australia. These countries were selected for their distinct economic policies and significant contributions to the global economy. Using the Moderated Regression Analysis (MRA) method and 2,400 monthly data observations spanning 2014 to 2023, sourced from official institutions such as central banks and financial agencies, this research provides key insights. The findings reveal that inflation positively influences index performance in the United States, the United Kingdom, and Australia, while it negatively impacts performance in China. Interest rates predominantly have a negative effect on index performance, except in the United Kingdom and China, where the effect is statistically insignificant. The moderation effect of the CCI varies by country, highlighting the role of unique economic contexts in shaping the relationship between inflation, interest rates, and stock market indices. This study offers valuable implications for policymakers in managing inflation and bolstering consumer confidence and provides strategic insights for investors navigating global economic dynamics.

Keywords: *Consumer confidence index, Global stock market performance, Inflation, Interest rates*

JEL Classification: H83, I23, I24, M15, M54

INTRODUCTION

Over the past decade, global stock markets have exhibited significant volatility, particularly in countries at the core of the world economy, such as the United States, the United Kingdom, China, South Africa, and Australia. Stock market indices in these countries often serve as benchmarks for evaluating global economic performance, influenced by factors such as inflation rates, interest rates, and consumer confidence indices (Akin & Akin, 2024). Between 2014 and 2023, the movements of stock indices in these nations reflected rapid economic changes, including financial crises,

geopolitical uncertainties, the US-China trade war, and the COVID-19 pandemic (Su et al., 2024). This research explores the impact of inflation and interest rates on stock market performance, as well as the moderating role of the CCI in countries with diverse economic contexts. It offers valuable insights for policymakers and investors navigating the complexities of evolving global economic dynamics.

The selection of the United States, the United Kingdom, China, South Africa, and Australia as focal points of this study is based on their representation of the five major continents, each exhibiting unique stock market characteristics. These countries differ in terms of economic policies, political stability, and the development of their stock indices, making them valuable for examining global market dynamics (Caporale et al., 2022). The United States, as a global economic hub, wields a significant influence on international stock markets. At the same time, the United Kingdom functions as an economic gateway to continental Europe, presenting distinct dynamics. China, with its rapidly expanding stock market, lies at the heart of Asia's economic growth (Yan & Shi, 2024). Additionally, South Africa and Australia, while less dominant, provide distinct perspectives on emerging and developed stock markets, respectively (Ho, 2019).

The inclusion of these countries facilitates a comprehensive understanding of stock markets across continents with varying economic conditions. Conversely, nations such as Japan and Germany were excluded due to their market characteristics, which are heavily influenced by specific domestic factors. For example, Japan has faced prolonged deflation, while Germany's economic policies are deeply integrated with the Eurozone, limiting the impact of its domestic monetary policy (De Moll & Inaba, 2023; Devine et al., 2024).

This research investigates the relationship between inflation, interest rates, and the CCI in moderating stock market performance. Controlled inflation can positively influence stock index performance, as it reflects strong economic growth. Conversely, rising interest rates often negatively impact stock indices by increasing borrowing costs, which reduce corporate profitability and shift investments toward safer assets, such as bonds. The CCI serves as a moderating variable in this relationship.

Studies by Eldomiaty et al. (2020) and Al-Nassar & Bhatti (2019) suggest that controlled inflation can stimulate short-term consumption, as consumers prefer to purchase goods immediately rather than delay purchases due to expected price increases. Otieno et al. (2019) further support this conclusion, noting that under conditions of moderate inflation, the real value of corporate debt decreases. This reduction in debt burden benefits highly leveraged companies, potentially increasing their share value and positively influencing index performance. However, findings by Elgammal et al. (2020) and Madadpour & Asgari (2019) indicate that high inflation reduces consumer purchasing power due to increased prices, leading to declines in corporate revenues and profits. This, in turn, can depress stock prices and index performance.

Research by Moizz & Akhtar (2024) and Moussa & Delhoumi (2022) highlights that rising interest rates increase the financial burden on companies, potentially lowering profitability and hindering planned expansion strategies. Additionally, future profit projections may decline, resulting in reduced stock valuations (Tursoy, 2019; Rahman & Serletis, 2023). However, Mehar (2023) and Hilton (2021) argue that a moderate increase in interest rates can signal strong economic fundamentals. If higher interest rates are perceived as a response to robust economic growth and controlled inflation, their impact on stock index performance may not necessarily be negative (Caporale et al., 2023; Phuc Canh, 2018).

Lieb & Schuffels (2022) assert that controlled inflation combined with a high CCI can serve as a strong indicator of a healthy economy characterized by consumer optimism and increased spending (Elmassah et al., 2023). Nevertheless, some considerations must be acknowledged. Breitenlechner et al. (2024) and Cevik (2024) caution that even when the CCI is high, concerns may arise if inflation exceeds acceptable levels, prompting fears of aggressive interest rate hikes by central banks.

Research by Mynaříková & Pošta (2023) and Malovaná et al. (2021) suggests that consumer optimism may partially offset the negative effects of higher interest rates, thereby supporting stock valuations and overall index performance. However, this hypothesis is not without opposition. Belhoula et al. (2024) argue that even with high consumer confidence, significant increases in interest rates could still depress stock valuations, particularly in interest rate-sensitive sectors such as utilities and real estate.

A notable gap in the existing literature is the lack of studies examining the combined influence of inflation, interest rates, and the CCI on global stock market performance. For instance, Adeosun et al. (2023) explored the relationship between inflation and economic uncertainty in developed economies such as the United States and the United Kingdom. Still, they excluded stock indices and CCI as variables of analysis. Similarly, Anderl & Caporale (2023) focused on economic uncertainty with an emphasis on monetary policy without directly addressing its connection to stock market performance.

This study's uniqueness lies in its approach of analyzing five countries across five continents, integrating the Consumer Confidence Index as a moderating variable in the relationship between inflation, interest rates, and stock market performance. It contributes novel insights to the existing body of knowledge and provides practical value for global investors and policymakers by elucidating factors that influence stock market performance in diverse regions. The study aims to identify and analyze the interactions among inflation, interest rates, and CCI on stock index performance in these five countries, offering actionable recommendations for global economic decision-makers.

The concept of signal theory, introduced by Spence (1973), provides a valuable framework for understanding the exchange of information between entities. According to Spence, entities with access to critical information communicate key messages to recipients through signals, prompting recipients to modify their behavior based on their interpretation of these signals. This theory emphasizes the role of signals as communication links between parties, where signalers aim to convey actionable information, and recipients adapt their actions accordingly. In the context of capital markets, entities such as governments, financial institutions, and corporations act as signalers, while investors and consumers function as signal receivers. Changes in central bank monetary policy—such as fluctuations in inflation and interest rates—serve as signals to investors regarding economic conditions, subsequently influencing investment decisions (Yasar et al., 2020).

Inflation and interest rates are critical determinants of global stock market trends. As inflation rises, central banks typically increase interest rates to stabilize prices (Moizz & Akhtar, 2024). This signals to investors that economic growth may be slowing, often prompting a shift of assets from equities to safer instruments such as bonds (Cabral et al., 2020). In the United States, United Kingdom, China, South Africa, and Australia, central banks adjust interest rates and inflation policies periodically in response to economic changes, which directly affect stock market dynamics across these regions.

In the United States, monetary policy from 2014 to 2023 significantly impacted global stock markets, particularly in the aftermath of the COVID-19 pandemic (Gupta & Dubey, 2024). The United Kingdom faced unique challenges influencing its stock markets and inflation levels (Yilmazkuday, 2022). In China, distinct monetary policies also generated critical signals for global stock markets. Meanwhile, in South Africa and Australia, interest rate policies were closely linked to global commodity prices and international trade, shaping market dynamics in these regions.

The CCI plays a crucial role in moderating the effects of inflation and interest rates on stock index performance. In the United States and the United Kingdom, consumer confidence has been influenced by economic crises and political uncertainties, which shape market reactions to monetary policies (Rahman & Serletis, 2023). In China, CCI fluctuations are often tied to developments in the technology and real estate sectors. For South Africa and Australia, political conditions and the performance of commodity markets significantly influence how CCI moderates the relationship between monetary policy and stock index performance.

METHODS

This study employs a quantitative approach with a hypothesis-testing methodology to analyze the relationship between inflation, interest rates, and the CCI on stock market performance. This approach ensures objective and measurable testing using macroeconomic data, providing a broad and consistent view of the relationships between variables across countries.

Population and sample

The population for this study consists of five countries representing five major continents: the United States (American continent), the United Kingdom (European continent), China (Asian continent), South Africa (African continent), and Australia (Australian continent). These countries were selected based on the availability of comprehensive monthly data from 2014 to 2023. The dataset comprises 2,400 observations, with all relevant data for the 2014–2023 period included in the analysis. The use of a saturated sample ensures that the study incorporates all available data, avoiding random sampling and thereby providing a complete and comprehensive dataset.

The chosen time frame reflects significant economic events such as the global financial crisis, the US-China trade war, and the COVID-19 pandemic, which are pivotal for understanding long-term trends and macroeconomic factors. Seasonal adjustments were not applied, as seasonal fluctuations were deemed to have minimal impact on the analysis.

Variables, conceptual framework, and hypotheses development

The dependent variable in this study is the stock market index for each country: S&P 500 (United States), FTSE 100 (United Kingdom), SSE Composite Index (China), FTSE/JSE Top 40 (South Africa), ASX 200 (Australia). The independent variables are inflation and interest rates, while the moderating variable is the CCI.

The conceptual framework is elaborated below to explore the theoretical underpinnings further and formulate testable hypotheses.

Inflation on index performance

Rising inflation can signal higher economic growth expectations to investors (Hilton, 2021). According to signaling theory, macroeconomic indicators such as inflation rates convey information that market participants interpret as reflections of

changes in economic fundamentals. An increase in inflation is often perceived as a result of heightened demand for goods and services, which can drive up prices. This, in turn, suggests that companies may experience higher revenues and profits (Guzel et al., 2021).

Investors frequently view inflation as a positive signal, encouraging stock price increases and improving capital market index performance. This perspective is supported by the findings of Al-Nassar & Bhatti (2019), Eldomiaty et al. (2020), and Otieno et al. (2019), which conclude that higher inflation rates can positively influence stock index performance.

Based on this reasoning, the following hypothesis is proposed: Inflation has a significant positive effect on index performance **(H1)**

Interest rates to index performance

Economic variables such as interest rates provide critical information or signals that market participants interpret when making investment decisions. An increase in interest rates raises borrowing costs for companies, thereby reducing their profit margins and limiting their capacity to invest in expansion and innovation. Furthermore, higher interest rates incentivize investors to shift their funds from the capital market to safer financial instruments, such as bonds, which offer higher returns with lower risk (Mehar, 2022). This reallocation of funds reduces demand for stocks, subsequently depressing stock index performance.

Interest rates are also closely linked to financial stability, as fluctuations in interest rates can influence exchange rates and stock prices (Somanathan et al., 2021). Previous studies, including those by Moizz and Akhtar (2024), Moussa & Delhoumi (2022), Rahman & Serletis (2023), and Tursoy (2019), consistently demonstrate that interest rates have a negative impact on stock index performance.

Based on this understanding, the following hypothesis is proposed: Interest rates have a significant negative effect on index performance **(H2)**

Relationship between inflation, CCI, and index performance

Signaling theory provides the primary framework for understanding the interaction between inflation and index performance. The CCI, which measures consumer perceptions of current economic conditions and future expectations, serves as a critical indicator of consumer sentiment. This sentiment influences household spending behavior and broader macroeconomic decisions (Fernandez-Perez et al., 2024).

In this study, the CCI is positioned as a moderating variable that can affect the strength or direction of the relationship between inflation and index performance. The CCI amplifies the positive signals sent by inflation to market participants, thereby improving index performance. While inflation is generally expected to have a positive impact on index performance, the degree of this influence depends on the level of CCI.

Previous studies, such as those by Çetin (2018) and Kandır and Yücel (2019), have demonstrated a positive relationship between CCI and stock indices, indicating that higher consumer confidence correlates with improved index performance. Additionally, research by Curtin (2019), Elmassah et al. (2023), Ghosh (2022), and Lieb & Schuffels (2022) has shown that CCI is closely tied to inflation. High inflation expectations can reduce consumer confidence, alter market behavior, and dampen the positive effects of inflation on the stock market.

Based on these insights, the following hypothesis is proposed: CCI moderates the positive effect of inflation on index performance **(H3)**

Relationship between interest rates, CCI, and index performance

Market participants and investors often rely on economic signals, such as the CCI, to anticipate stock market movements and guide investment decisions. It is hypothesized that the CCI moderates the negative effect of interest rates on index performance. The underlying assumption is that when the CCI increases, it can mitigate the adverse impact of rising interest rates on the capital market. The CCI serves as a critical indicator for governments and businesses, reflecting consumer sentiment toward economic conditions and influencing short-term economic policy decisions. Its fluctuations often represent public reactions to fiscal or monetary policies implemented by a country (Malovaná et al., 2021).

A high CCI typically signals confidence in stable economic conditions, which can encourage investors to maintain or even increase investments in the stock market despite pressures from rising interest rates. Previous studies by Gauthier & Wooldridge (2018) and Kandır & Yücel (2019) support the positive relationship between CCI and index performance, showing that higher consumer confidence tends to drive increased stock demand and improved index performance.

Conversely, research by Belhoula et al. (2024) highlights a negative relationship between CCI and interest rates. Rising interest rates often lead to a decline in consumer confidence, as higher borrowing costs reduce disposable income and consumption. These dynamics suggest that CCI plays a crucial role in moderating the relationship between interest rates and stock market performance.

Based on this reasoning, the following hypothesis is proposed: CCI moderates the negative effect of interest rates on index performance **(H4)**

Data collection and analysis

The data collected include inflation rates, interest rates, stock market indices, and consumer confidence indices. These secondary data were sourced from official government websites, central banks, and financial institutions in each country. Data collection was performed using the documentation method.

Descriptive statistics were employed to summarize the characteristics of the variables. Hypothesis testing was conducted using the Moderated Regression Analysis (MRA) method to examine the effects of inflation and interest rates on stock market indices and the moderating role of CCI.

The selection of the appropriate regression model involved the following tests:

1. Chow Test – To determine whether to use the Pooled Ordinary Least Squares (Pooled OLS) model or the Fixed Effects model.
2. Hausman Test – To select between the Fixed Effects and Random Effects models.
3. Lagrange Multiplier (LM) Test – To compare the Random Effects model with the Pooled OLS model.

A panel data analysis approach was utilized to address potential multicollinearity. This method accommodates the combination of cross-sectional and time-series data, enabling the modeling of complex relationships among variables and reducing the likelihood of multicollinearity. By leveraging panel data, the analysis achieves greater precision in hypothesis testing and ensures the validity of the results (Hsiao, 2007).

The following regression equations represent the relationships among the dependent, independent, and moderating variables:

$$Y=\alpha+\beta_1X_1+\beta_2X_2$$

$$Y=\alpha+\beta_1X_1+\beta_2X_2+\beta_3(X_1\cdot Z)+\beta_4(X_2\cdot Z)$$

Where:
X_1: Inflation
X_2: Interest Rate
Y: Stock Market Performance Index
Z: Consumer Confidence Index (CCI)
α: Alpha Regression Coefficient
β: Beta Regression Coefficient

In the Moderated Regression Analysis, interaction terms such as X1·Z (Inflation × CCI) capture the combined effect of two variables on stock market performance. For example, the impact of inflation on stock market performance depends on the level of consumer confidence. These interaction terms are critical for identifying how macroeconomic factors interact under varying consumer sentiment conditions.

RESULTS AND DISCUSSIONS

Descriptive statistics

Table 1 provides descriptive statistics for the four economic variables analyzed for each country. The dataset comprises 120 observations for each variable, collected from official sources, including the central banks (Federal Reserve, Bank of England, People's Bank of China, South African Reserve Bank, and Reserve Bank of Australia) and Trading Economics for the period 2014–2023.

Table 1. Descriptive statistics

Variable	N	Min	Max	Mean	Std. Dev.
Inflationi[1]	120	-0.002	0.091	0.027	0.023
Interest Rate[1]	120	0.002	0.055	0.014	0.0157
CCI[1]	120	78.100	136.000	107.828	15.097
S&P 500[1]	120	1178.590	4769.830	3008.942	915.345
Inflationi[2]	120	-0.001	0.111	0.029	0.030
Interest Rate[2]	120	0.001	0.053	0.010	0.014
CCI[2]	120	-49.000	7.000	-14.034	13.553
FTSE 100[2]	120	5577.270	7876.280	6993.309	532.126
Inflationi[3]	120	-0.005	0.054	0.018	0.011
Interest Rate[3]	120	0.036	0.058	0.043	0.006
CCI[3]	120	85.500	127.000	110.051	12.686
SSE Index[3]	120	2026.360	4611.740	3105.251	435.722
Inflationi[4]	120	0.020	0.078	0.052	0.012
Interest Rate[4]	120	0.035	0.086	0.060	0.014
CCI[4]	120	-11.000	8.666	-2.625	3.821
FTSE/JSE[4]	120	40586.73	73634.07	52872.09	8975.631
Inflationi[5]	120	-0.001	0.026	0.009	0.006
Interest Rate[5]	120	0.001	0.044	0.016	0.011
CCI[5]	120	75.600	118.800	96.657	8.727
ASX 200[5]	120	4880.900	7590.800	6198.578	751.7086

[1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

Table 1 highlights variations across countries in terms of inflation, interest rates, consumer confidence indices, and stock market indices. Inflation generally exhibits low averages and small variations, although the distribution appears slightly skewed to the right, indicating occasional higher extreme values. Interest rates are similarly low with minor variations, except in certain cases where the data distribution is more asymmetric. The CCI varies significantly, with the United States and China displaying higher mean values compared to the United Kingdom and South Africa, which show lower averages

and greater variability.

Stock market indices demonstrate considerable variation, with South Africa displaying the highest mean and standard deviation among the five countries. These statistics underscore the diverse economic contexts of the analyzed nations, providing a foundation for understanding how the interactions between inflation, interest rates, and CCI influence stock market performance.

Figure 1 illustrates the statistical movement of the United States economy from 2014 to 2023. The S&P 500 performance index generally exhibited an upward trend despite experiencing a sharp decline in early 2020 due to the COVID-19 pandemic. Following this downturn, the index recovered and reached new highs. Inflation in the United States began to rise significantly in late 2020, peaking in mid-2022, driven by global supply chain disruptions and increasing energy prices. In response to high inflation, the US Federal Reserve implemented aggressive policy rate hikes, resulting in higher borrowing costs and affecting overall economic activity.

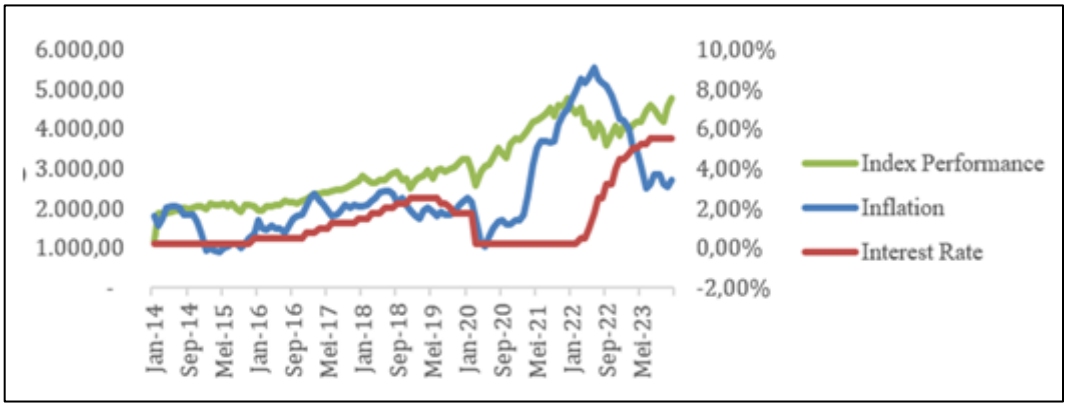

Figure 1. Trends in stock market performance, inflation, and interest rates in the United States (2014–2023)

Building on the trends observed in the United States, Figure 2 shifts focus to the United Kingdom, illustrating its fluctuating economic trajectory from 2014 to 2023. Similar to the United States, the FTSE 100 index declined sharply in 2020 due to the COVID-19 pandemic. However, the index displayed a gradual recovery in subsequent years. Inflation in the UK rose significantly in 2021, leading to interest rate increases as policymakers sought to manage inflationary pressures while maintaining economic stability.

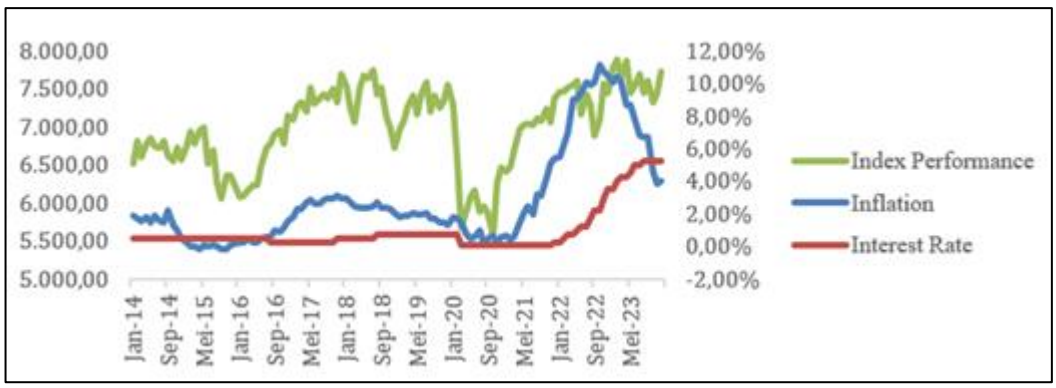

Figure 2. Trends in stock market performance, inflation, and interest rates in the United Kingdom (2014–2023)

Expanding the analysis to Asia, Figure 3 highlights the economic trends in China. Unlike the relatively consistent recovery observed in the United States and the UK, the SSE Composite Index displayed more pronounced volatility. The index peaked in 2015 but experienced sharp declines in subsequent years before showing signs of recovery post-2020. Inflation in China also exhibited significant variability, particularly during the 2020 pandemic, while interest rates remained relatively stable throughout the observed period.

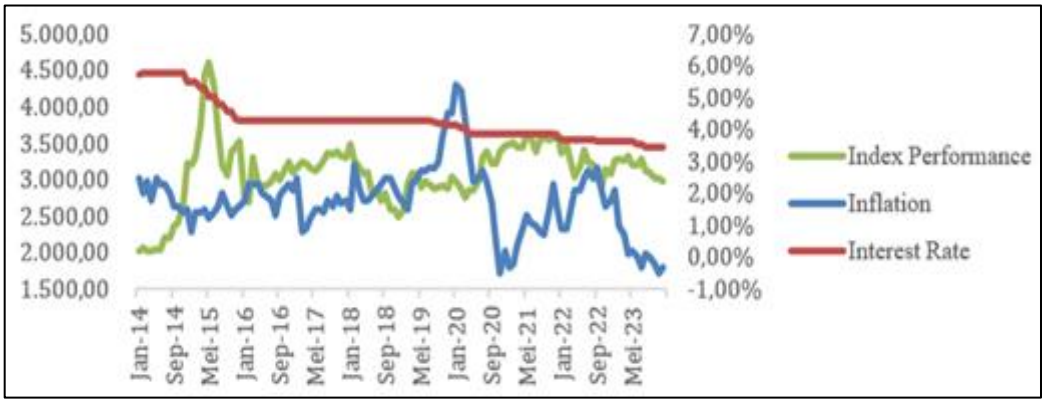

Figure 3. Trends in stock market performance, inflation, and interest rates in the United States (2014–2023)

Turning to the African continent, Figure 4 examines economic trends in South Africa from 2014 to 2023. The FTSE/JSE Top 40 index displayed steady growth over the period, with some fluctuations. Inflation and interest rates in South Africa fluctuated considerably, with monetary policy actively employed to control inflation. This interdependence between monetary policy and stock market performance is a distinguishing feature of South Africa's economic dynamics.

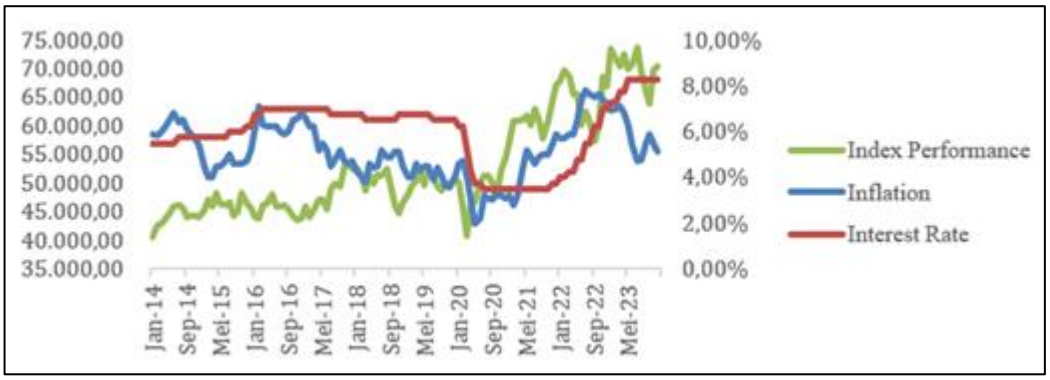

Figure 4. Trends in stock market performance, inflation, and interest rates in South Africa (2014–2023)

Finally, Figure 5 explores economic trends in Australia during the same period. The ASX 200 index experienced a sharp decline in 2020 due to the COVID-19 pandemic but demonstrated a strong recovery in subsequent years. Inflation in Australia remained low initially but gradually increased over time, prompting policymakers to raise interest rates as a measure to stabilize the economy, reflecting similar trends observed in other advanced economies.

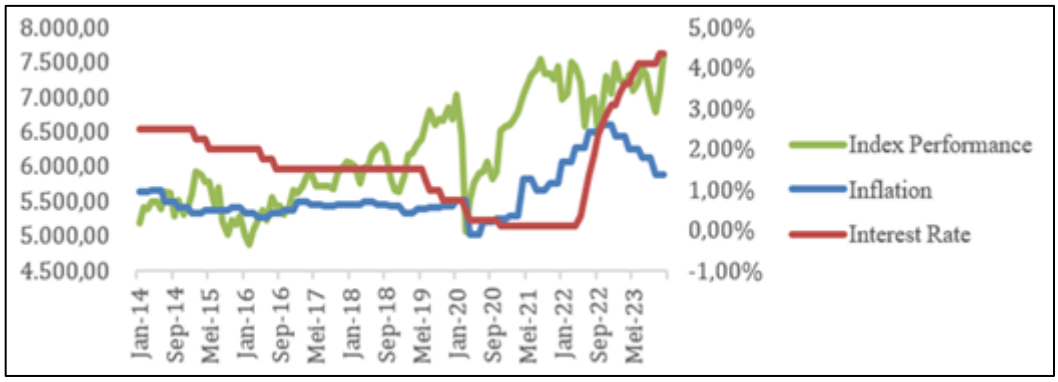

Figure 5. Trends in stock market performance, inflation, and interest rates in Australia (2014–2023)

Model selection

To determine the most appropriate model between the Fixed Effect Model (FEM) and the Pooled Model, a Chow Test was conducted. This test evaluates whether the panel data exhibits significant fixed effects. If the results indicate that fixed effects are significant, the FEM is deemed more appropriate than the Pooled Model. Table 2 presents the Chow Test results for the five countries analyzed.

Table 2. Chow Test

Effects Test	Statistic	d.f.	Prob
Cross-section F[1]	91.797548	(9.107)	0.0000
Cross-section Chi-square[1]	259.892047	9	0.0000
Cross-section F[2]	16.907431	(9.107)	0.0000
Cross-section Chi-square[2]	106.157199	9	0.0000
Cross-section F[3]	18.144171	(9.107)	0.0000
Cross-section Chi-square[3]	111.203341	9	0.0000
Cross-section F[4]	129.573066	(9.107)	0.0000
Cross-section Chi-square[4]	297.171187	9	0.0000
Cross-section F[5]	32.656818	(9.107)	0.0000
Cross-section Chi-square[5]	158.509383	9	0.0000

[1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

Based on Table 2, both the Cross-Section F and Chi-Square probability values for all countries are smaller than the significance level (α=0.05). This leads to the rejection of the null hypothesis, confirming that the Fixed Effect Model (FEM) is more appropriate than the Pooled Model.

Following the Chow Test, the next step involved the Hausman Test, which compares the Fixed Effect Model (FEM) with the Random Effect Model (REM) to determine the most suitable model. The results are presented in Table 3 and are considered significant at a 1% confidence level.

Table 3. Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob
Cross-section random[1]	13.531271	3	0.0036
Cross-section random[2]	4.459353	3	0.2159
Cross-section random[3]	4.632106	3	0.2008
Cross-section random[4]	4.292914	3	0.2127
Cross-section random[5]	4.791115	3	0.1877

[1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

For the United States, the probability value (p-value = 0.0036) is significant at the 1% confidence level, indicating that the Fixed Effect Model (FEM) is more appropriate than the Random Effect Model (REM). For the United Kingdom, China, South Africa, and Australia, the p-values exceed the 0.05 threshold, suggesting that the Random Effect Model (REM) is more suitable for these four countries. This demonstrates differences in model preferences between the United States and the other countries analyzed.

As a final step, a Lagrange Multiplier (LM) Test was conducted to determine whether the Random Effect Model (REM) is preferable to the Pooled Model. This test examines the presence of random effects in the panel data for the four countries where the REM was deemed more appropriate. Table 4 presents the results of the Lagrange Multiplier Test.

Table 4. Lagrange Multiplier Test

	Test hypothesis		
	Cross-section	Time	Both
Breusch-Pagan[1]	163.7980	2.652766	166.4508
	(0.0000)	(0.1034)	(0.0000)
Breusch-Pagan[2]	174.3013	4.380043	176.6813
	(0.0000)	(0.0364)	(0.0000)
Breusch-Pagan[3]	429.4792	5.165070	434.6443
	(0.0000)	(0.0230)	(0.0000)
Breusch-Pagan[4]	268.9218	3.157649	272.0795
	(0.0000)	(0.0756)	(0.0000)

[1]: English, [2]: China, [3]: South Africa, [4]: Australia

The Lagrange Multiplier Test results indicate that for all countries, the Breusch-Pagan statistic for "Cross-section" and "Both" is significant (p-value < 0.05), confirming the presence of random effects. This supports the suitability of the Random Effect Model over the Pooled Model for these countries.

Multiple linear regression

The Random Effect Model examining the influence of inflation and interest rates on stock market index performance in the five analyzed countries is presented in Table 5. The influence of inflation and interest rates on index performance varies across the five countries. In the United States, inflation has a significant positive effect on index performance (p-value 0.0307), while interest rates have a significant negative effect (p-value 0.0150). In the United Kingdom, inflation has a significant positive effect on the index (p-value 0.0004), but interest rates do not significantly affect index performance (p-value 0.6909), indicating no relationship. In China, inflation has a significant negative effect on the index (p-value 0.0156), while interest rates have no significant effect (p-value 0.8469). In South Africa, inflation does not significantly affect index performance (p-value 0.3937), while interest rates have a significant negative effect (p-value 0.0121). In Australia, inflation significantly positively affects the index (p-value 0.0001), while interest rates have a significant negative effect (p-value 0.0031). These results demonstrate variations in how inflation and interest rates affect index performance across countries.

Table 5. Multiple linear regression results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C[1]	2988.129	94.37679	31.66169	0.0000
Inflation[1]	5452.067	2489.589	2.189947	0.0307
Interest Rate[1]	-8995.222	3638.264	-2.472394	0.0150
C[2]	6788.967	141.6844	47.91612	0.0000
Inflation[2]	7770.531	2118.636	3.667705	0.0004
Interest Rate[2]	-2240.824	5621.209	-0.398637	0.6909
C[3]	3330.542	519.8664	6.406535	0.0000
Inflation[3]	-7168.274	2920.038	-2.454856	0.0156
Interest Rate[3]	-2308.105	11927.87	-0.193505	0.8469
C[4]	62107.40	4206.590	14.76431	0.0000
Inflatio[4]	-33781.30	39456.48	-0.856166	0.3937
Interest Rate[4]	-125650.5	49312.62	-2.548039	0.0121
C[5]	6096.246	192.5027	31.66837	0.0000
Inflation[5]	45077.16	10912.73	4.130696	0.0001
Interest Rate[5]	-18345.06	6071.857	-3.021326	0.0031

a. Dependent Variable: Index Performance (Y)
Notes: Index Performance refers to the stock market performance of the countries analyzed, as measured using each country's main stock market index during the study period.
b. [1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

Table 6 provides the R^2 values for the regression models across the five countries, highlighting how well inflation and interest rates explain variations in index performance.

Table 6. Coefficient of determination (Multiple linear regression)

Model	R Square	Adjusted R Square	Std. Error Regression
1	0.953	0.948	208.1706
2	0.105	0.089	273.4659
3	0.049	0.033	254.3494
4	0.083	0.067	2515.316
5	0.145	0.131	281.2109

a. Predictors: (Constant), Inflation, Interest Rate
b. [1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

For the United States, the R^2 value is 0.953, indicating that inflation and interest rates explain a substantial proportion of the variation in index performance. In contrast, countries like the United Kingdom ($R^2 = 0.105$) and China ($R^2 = 0.049$) show much lower R^2 values, suggesting that other factors beyond inflation and interest rates have a greater influence on index performance in these countries.

Moderation regression

A moderation regression analysis was conducted to evaluate whether the CCI moderates the effects of inflation and interest rates on index performance. Based on Table 7, the moderation effect of the CCI varies across countries. In the United States, the CCI positively moderates the effect of inflation on index performance (p-value 0.0047) and negatively moderates the effect of interest rates (p-value 0.0240). In the United Kingdom, the CCI positively moderates the effect of inflation (p-value 0.0001) but does not moderate the effect of interest rates (p-value 0.2986). In China, the CCI negatively moderates the effect of inflation on index performance (p-value 0.0202) but

does not significantly moderate the effect of interest rates (p-value 0.0611). In South Africa, the CCI does not moderate the effects of either inflation (p-value 0.1974) or interest rates (p-value 0.6726). In Australia, the CCI positively moderates the effect of inflation (p-value 0.0146) and negatively moderates the effect of interest rates (p-value 0.0005).

Table 7. Results of moderation regression analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C[1]	2949.780	87.36684	33.76316	0.0000
Inflation[1]	6425.764	2515.234	2.554738	0.0120
Interest Rate[1]	-10255.622	3654.471	-2.806230	0.0059
Inflation*CCI[1]	59.43522	20.57612	2.888553	0.0047
Interest Rate*CCI[1]	-74.27074	32.43116	-2.290104	0.0240
C[2]	6566.391	100.5027	65.33546	0.0000
Inflation[2]	7654.334	2024.072	3.781651	0.0002
Interest Rate[2]	2421.867	5710.267	0.424125	0.6722
Inflation*CCI[2]	476.4861	115.9099	4.110833	0.0001
Interest Rate*CCI[2]	-410.5587	393.1867	-1.044183	0.2986
C[3]	2563.658	367.5303	6.975364	0.0000
Inflation[3]	-7166.456	2918.373	-2.455634	0.0155
Interest Rate[3]	-5421.854	12018.12	-0.451140	0.6527
Inflation*CCI[3]	-57.50507	24.42912	-2.353956	0.0202
Interest Rate*CCI[3]	138.9062	73.45185	-1.891120	0.0611
C[4]	63536.88	3781.408	16.80244	0.0000
Inflation[4]	-72166.66	37190.02	-1.940484	0.0547
Interest Rate[4]	-141918.1	45341.89	-3.129956	0.0022
Inflation*CCI[4]	9318.913	7049.606	1.296372	0.1974
Interest Rate*CCI[4]	-2371.730	5598.896	-0.423607	0.6726
C[5]	63536.88	3781.408	16.80244	0.0000
Inflation[5]	33735.74	10748.56	3.138629	0.0021
Interest Rate[5]	-11089.29	6223.292	-1.781901	0.0773
Inflation*CCI[5]	1404.342	566.2624	2.480019	0.0146
Interest Rate*CCI[5]	-1606.879	451.4437	-3.559422	0.0005

a. Dependent Variable: Index Performance (Y)
Notes: Index Performance refers to the stock market performance of the countries analyzed, as measured using each country's main stock market index during the study period.
b. [1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

Table 8 summarizes the R^2 values of the moderation regression models, showing an improved explanatory ability in most cases.

Table 8. Coefficient of determination (Moderation regression)

Model	R Square	Adjusted R Square	Std. Error Regression
1	0.957	0.950	202.9581
2	0.308	0.284	261.0839
3	0.067	0.051	249.3281
4	0.118	0.088	2522.565
5	0.272	0.247	282.3594

*a. Predictors: (Constant), Inflation, Interest Rate, Inflation*CCI, Interest Rate*CCI*
b. [1]: United States of America, [2]: English, [3]: China, [4]: South Africa, [5]: Australia

In the United States, the inclusion of the CCI interaction terms increases the R^2

value to 0.957, demonstrating a better model compared to regression without moderation. In the United Kingdom (R^2 = 0.308) and China (R^2 = 0.067), the moderation effect of the CCI remains limited, suggesting that other factors may play a more prominent role in these countries. These findings emphasize the context-specific nature of the CCI's moderating role and its varying impact across different countries.

Discussion

The impact of inflation on index performance

The effects of inflation on stock index performance in five countries representing five continents during the period 2014–2023 show varying results. In the United States, inflation has a positive influence on the market index. This suggests that the market perceives rising inflation as a sign of economic recovery or growth. According to signal theory, controlled inflation can be interpreted as a signal of increased economic activity, reflecting a healthy and expanding economy. Investors, in turn, view this as an opportunity for higher profits, prompting increased capital investment in the stock market.

A similar positive effect of inflation on stock market performance is observed in the United Kingdom and Australia, where inflation is regarded as a supportive factor for stock market growth. Rising inflation in these countries is likely associated with expectations of heightened economic activity and growing demand for goods and services. This bolsters investor confidence in the prospects of companies listed on the capital market (Sivitanides, 2018). These findings are consistent with research conducted by Eldomiaty et al. (2020), Al-Nassar & Bhatti (2019), and Otieno et al. (2019), which all conclude that inflation positively impacts index performance. Moreover, expansionary monetary policies implemented by central banks following the global financial crisis—such as low interest rates and quantitative easing programs—further reinforced market optimism toward inflation, as noted by Cloyne et al. (2023).

In contrast, the performance of stock indices in China is negatively affected by inflation. High inflation in this context leads to reduced purchasing power and increased production costs, which compress corporate profit margins. Consequently, the Chinese market views inflation as a sign of economic instability, with the potential to hinder overall economic growth. As a result, investors may withdraw funds from the capital market, reducing the performance of stock indices (Lunde & Torkar, 2020).

Meanwhile, in South Africa, inflation does not have a significant effect on index performance. This finding suggests that the country’s stock market is influenced by other factors beyond inflation. These factors likely include unstable political conditions and the volatility of global commodity prices, particularly gold and platinum, which play a crucial role in South Africa's economy (Buthelezi, 2024).

The impact of interest rates on index performance

The study's findings reveal that interest rates are a significant factor influencing stock market performance in five representative countries across five continents. However, their impacts vary depending on the specific economic conditions of each country. Increases in interest rates are often interpreted as a signal that central banks are implementing tighter monetary policies to control inflation (Montes & Díaz, 2023). Such increases send signals to the market about reduced liquidity, thereby discouraging investment in riskier assets like stocks.

In the United States, the analysis shows that stock index performance is negatively affected by rising interest rates. Higher interest rates lead to increased

borrowing costs for businesses, which, in turn, reduce profitability and limit opportunities for corporate investment. This reduction in profitability decreases the attractiveness of stocks compared to lower-risk financial instruments such as bonds. Similarly, in South Africa and Australia, rising interest rates have a negative effect on index performance. Higher borrowing costs limit business expansion and reduce profit margins, further weakening investor confidence in the stock market. These findings align with prior research by Moizz & Akhtar (2024), Moussa & Delhoumi (2022), Rahman & Serletis (2023), and Tursoy (2019), all of which confirm that interest rates exert a negative influence on index performance.

However, the study also highlights that interest rates do not significantly impact stock index performance in all countries. In the United Kingdom, no statistically significant relationship between interest rates and stock indices was identified. This suggests that the UK stock market is more resilient to changes in interest rates or that other factors mitigate their effects. Heald & Hodges (2020) note that the UK's stock market dynamics may be influenced by broader structural or external factors that offset the impact of monetary policy changes.

A similar observation applies to China, where interest rates show no significant effect on stock index performance. This lack of a direct correlation may be attributed to the government's strict regulation of financial markets and its use of monetary policy to ensure stability (Zhang et al., 2020). The regulated nature of China's markets could buffer the effects of interest rate fluctuations, reducing their direct impact on stock index movements.

The CCI moderates the effect of inflation on index performance.

The Consumer Confidence Index (CCI) moderates the impact of inflation on stock index performance in various ways, depending on the economic conditions of each country. In the United States, the United Kingdom, and Australia, the relationship between inflation and stock index performance is positively moderated by the CCI. This indicates that high consumer confidence amplifies the positive effects of inflation on the stock market. High levels of CCI signal that consumers are optimistic about economic prospects and are willing to maintain spending patterns despite rising inflation. This optimism fosters positive expectations regarding company profitability, which in turn enhances stock index performance (Cho & Kim, 2020).

In contrast, in China, the CCI negatively moderates the relationship between inflation and stock index performance. This suggests that when consumer confidence is low, inflation has a detrimental impact on the capital market. Low consumer confidence reflects concerns about declining purchasing power due to inflation, signaling consumer pessimism about the broader economic outlook. This negativity exacerbates the adverse effects of inflation on the stock market, as investors become more hesitant to allocate funds to the capital market, anticipating reduced corporate earnings from weakened consumer demand.

The divergence in the moderating effect of the CCI—positive in the United States, the United Kingdom, and Australia, but negative in China—can be attributed to differences in economic optimism and consumer risk perception. In Western countries, consumer confidence tends to align with expectations of economic growth, even in the face of rising inflation. Conversely, in China, uncertainties related to government policies and inflation's impact on purchasing power create heightened consumer pessimism, amplifying inflation's negative effects on the stock market (Mariotti, 2024).

In South Africa, the CCI does not significantly moderate the effect of inflation on

stock index performance. This suggests that consumer confidence in South Africa does not provide a strong enough signal to influence the relationship between inflation and the capital market. Investors in South Africa appear to focus more on other factors, such as political stability and commodity prices, making changes in consumer confidence and inflation less impactful on overall stock market performance.

The CCI moderates the effect of interest rates on index performance.

The CCI plays a role in moderating the effect of interest rates on stock index performance, although the impact varies across countries. In the United States and Australia, CCI negatively moderates the relationship between interest rates and stock index performance. An increase in interest rates signals tighter monetary policy, which reduces consumer purchasing power and increases borrowing costs. Even when consumers are optimistic, higher interest rates can still exert downward pressure on corporate spending and profitability, ultimately affecting stock market index performance (Ruman, 2022). The monetary tightening policies in the United States and Australia, coupled with consumer optimism, suggest that while there is hope for economic growth, concerns about reduced purchasing power remain a significant constraint (Breitenlechner et al., 2024).

In the United Kingdom, the impact of interest rates on stock index performance is not significantly moderated by CCI. This indicates that consumer confidence in the UK is not strong enough to alter the relationship between interest rates and stock market index performance. Despite clear signals from rising interest rates, consumer optimism or pessimism does not substantially influence investor responses to these changes. A similar situation occurs in China and South Africa, where CCI does not significantly moderate the effect of interest rates on stock index performance. In China, consumer confidence neither amplifies nor mitigates the impact of interest rate changes on index performance. This may be due to the influence of other factors, such as government policies, which have a more substantial effect on investor behavior. In South Africa, the weak moderating effect of CCI on interest rates reflects the limited ability of consumer confidence to signal changes in the economy in response to monetary policy adjustments.

The contrast between the negative moderating effect of CCI in the United States and Australia, compared to the absence of moderation in the United Kingdom, China, and South Africa, can be attributed to differences in monetary policy environments and market dynamics. In the United States and Australia, tighter monetary policies tend to trigger greater concerns about purchasing power despite overall consumer optimism (Caporale et al., 2022). In the United Kingdom, China, and South Africa, the limited impact of interest rates on market expectations, or the greater reliance on other factors such as fiscal policy and political stability, diminishes the role of CCI in moderating the relationship between interest rates and stock market performance (Malovaná et al., 2021).

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study concludes that inflation and interest rates have diverse impacts on global stock market performance in five countries representing five continents during the period 2014–2023. Inflation positively influences stock market performance in the United States, the United Kingdom, and Australia, suggesting that markets in these

countries view inflation as a signal of economic recovery or growth. Conversely, in China, inflation negatively impacts stock index performance, indicating heightened sensitivity to uncontrolled inflation. In South Africa, inflation does not have a significant effect on stock markets, implying that other factors, such as political stability or commodity prices, may have a more substantial influence.

Interest rates, on the other hand, generally have a negative impact on stock index performance in most countries, particularly in the United States, South Africa, and Australia. Rising interest rates increase borrowing costs, reduce corporate profitability, and make stocks less attractive compared to other financial instruments. However, in the United Kingdom and China, interest rates do not show a significant effect on stock market performance, suggesting that other structural or contextual factors may play a larger role.

The moderation by the CCI further highlights the complexity of the relationship between inflation, interest rates, and stock market performance. High consumer confidence amplifies the positive impact of inflation on stock markets in countries such as the United States, the United Kingdom, and Australia. However, in China and South Africa, CCI does not significantly moderate the relationship, indicating that consumer confidence plays a less prominent role in these countries. This demonstrates that local economic conditions and monetary policies heavily influence the dynamics of inflation, interest rates, and stock market performance.

This research contributes novel insights by incorporating CCI as a moderating variable, offering a more nuanced understanding of the macroeconomic factors influencing stock markets. The study highlights that the inclusion of CCI enriches the analysis of how macroeconomic variables interact with stock market performance. It also underscores the importance of considering localized factors in global economic research, as the economic and policy environments of individual countries significantly affect the dynamics of inflation and interest rates on stock markets.

Theoretically, this study extends the literature by examining the moderating role of CCI, which has been largely underexplored. It provides evidence that while CCI is a critical factor in some countries, its influence is context-specific and varies by country. Practically, the findings highlight the importance of tailoring economic policies to local characteristics. For example, the United States must focus on controlling inflation and calibrating interest rates to ensure sustainable economic growth. The United Kingdom should balance inflation management with consumer sentiment to maintain stock market stability. China needs to prioritize inflation control to safeguard purchasing power and promote domestic economic stability. South Africa should emphasize political stability and global commodity prices while maintaining a balanced monetary policy. Australia must focus on managing inflation and fostering consumer confidence to sustain stock market performance while navigating global uncertainties through prudent fiscal policies and strategic investments.

For global investors, these findings underscore the importance of portfolio diversification and the need to adapt investment strategies based on monetary policy changes and local macroeconomic conditions. By accounting for varying levels of CCI, investors can better navigate market risks and optimize returns.

Recommendations

This study acknowledges several limitations. First, it focuses on only five countries representing five continents, limiting the generalizability of the findings to other nations or regions. Second, the study covers the period from 2014 to 2023, which

may not fully capture the long-term dynamics of stock markets and related economic variables. Expanding the timeframe or including post-2023 data could offer deeper insights. Third, the use of monthly data introduces the potential for biases caused by seasonal fluctuations or short-term phenomena, which may not reflect long-term trends accurately. Future research could benefit from using annual or more granular data to mitigate such biases.

Additionally, the relatively low R-squared values in some countries suggest that other factors not included in the model may play a more significant role in influencing stock market performance. Future studies should explore the inclusion of control variables, such as political risk, exchange rates, or global market trends, to enhance the rigor and explanatory power of the model.

Future research should address these limitations by expanding the geographical scope to include more countries across different regions, thereby gaining a more comprehensive understanding of the impact of inflation, interest rates, and CCI on stock market performance. Extending the period of analysis beyond 2023 may also provide valuable insights into the long-term dynamics of these variables.

From a practical perspective, policymakers should strike a balance between controlling inflation and enhancing consumer confidence to support stable stock market growth. Investment strategies that account for varying levels of CCI can help investors adapt to dynamic market conditions, providing more effective guidance for investment decisions based on prevailing consumer sentiment. These measures can improve the alignment of monetary and fiscal policies with market dynamics while optimizing investor returns and minimizing risk.

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