The Impact of Inflation on Stock Return and Investment Risk: Evidence from the Egyptian Stock Exchange

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Abstract

Purpose: The study's objective is to assess the dynamic impact of inflation (INFLATION) shocks on Egyptian Exchange 30 Index (EGX30) returns and volatility (risk).

Method: Specifically, the study uses January 2015 until October 2025, and reports on a total of 130 monthly observations. For EGX30 returns a simple percentage change method is used and for inflation represents the monthly percentage change in the borrower Consumer Price Index (CPI). The investigator used two econometric methods, with the Vector Autoregression (VAR) model in combination with the Generalized Impulse Response Function (IRF) to assess the dynamic short to medium term impact of inflation on EGX30 returns, as well as testing the direct impact of inflation on market volatility (risk) using the Generalized Autoregressive Conditional Heteroskedasticity GARCH (1,1) model.

Results: The empirical evidence provides three significant conclusions. First, the IRF evidence suggest that inflation shocks show a positive and statistically significant impact on EGX30 returns in the medium-run (around Month 5 is the peak impact), indicating that Egyptian stocks can offer a partial hedge against inflation in the medium-run. Second, the GARCH mean equation provided evidence that the overall long-run impact of inflation on average return is negative and statistically significant, supporting the Proxy Hypothesis. Third, and importantly, inflation shocks had no statistically significant direct impact on market volatility (risk). Instead, the relatively high persistence of market volatility is influenced primarily by internal market dynamics (e.g., ARCH and GARCH effects).

Originality / relevance: The study contributes to understanding how inflation dynamics interact with stock market performance in Egypt, highlighting both the hedging potential of equities in the medium run and the persistence of volatility driven by internal market forces.

Keywords: Inflation, Stock Returns, EGX30 Index, Volatility, VAR Model, GARCH Model.

JEL Classification : E31, C58, E44.

L'impact de l'inflation sur le rendement des actions et le risque d'investissement : Preuves par la Bourse égyptienne

Résumé

Objectif : L'objectif de cette étude est d'évaluer l'impact dynamique des chocs d'inflation (INFLATION) sur les rendements et la volatilité (risque) de l'indice Egyptian Exchange 30 (EGX30).

Méthode : L'étude couvre la période de janvier 2015 à octobre 2025, avec un total de 130 observations mensuelles. Les rendements de l'EGX30 sont calculés à partir du pourcentage de variation mensuel, tandis que l'inflation est mesurée par la variation mensuelle en pourcentage de l'indice des prix à la consommation (CPI). Le chercheur a utilisé deux méthodes économétriques : le modèle de vecteur autorégressif (VAR) combiné à la fonction de réponse impulsionnelle généralisée (IRF) pour évaluer l'effet dynamique à court et moyen terme de l'inflation sur les rendements de l'EGX30, ainsi que le modèle GARCH (1,1) (Generalized Autoregressive Conditional Heteroskedasticity) pour tester l'impact direct de l'inflation sur la volatilité du marché (risque).

Résultats : Les résultats empiriques conduisent à trois conclusions principales. Premièrement, les preuves issues de l'IRF suggèrent que les chocs d'inflation ont un impact positif et statistiquement significatif sur les rendements de l'EGX30 à moyen terme (le pic d'impact se situant autour du cinquième mois), indiquant que les actions égyptiennes peuvent offrir une couverture partielle contre l'inflation à moyen terme. Deuxièmement, l'équation moyenne du modèle GARCH montre que l'effet global de l'inflation sur le rendement moyen à long terme est négatif et statistiquement significatif, soutenant ainsi l'hypothèse de substitution (Proxy Hypothesis). Troisièmement, et surtout, les chocs d'inflation n'ont pas d'impact direct significatif sur la volatilité du marché (risque). La persistance relativement élevée de la volatilité est principalement influencée par les dynamiques internes du marché (effets ARCH et GARCH).

Originalité / pertinence : L'étude contribue à une meilleure compréhension des interactions entre la dynamique de l'inflation et la performance du marché boursier en Égypte, en mettant en évidence à la fois le potentiel de couverture des actions à moyen terme et la persistance de la volatilité déterminée par les forces internes du marché.

Mots-clés : Inflation, Rendements boursiers, Indice EGX30, Volatilité, Modèle VAR, Modèle GARCH.

JEL Classification : E31, C58, E44.

1. Introduction

The connection between inflation and equity market returns is one of the most essential, and ceaselessly debated financial and macroeconomic topics, and remains a key dilemma for investors and policy makers around the world. Inflation, often referred to as "taxation without legislation," provides a significant source of macroeconomic risk in that it erodes purchasing power of the capital and creates uncertainty regarding asset valuation. For the average investor, the inflation dilemma consists of two issues, both return and risk: on one hand, the theoretical debate surrounding the Fisher Hypothesis (hinting at economist Irving Fisher's theory from 1930) which argues that if stocks serve as a hedge against inflation via firms' pricing power, there will be a positive correlation; while the Proxy/Money Illusion Hypotheses (forwarded by Fama, 1981) suggest a negative correlation based on their assertion that high inflation is a proxy for poor real economic activity or an increase in the "needed" discount rate. However, outside of discussing the mean return, the practical question remains to the extent that unexpectedly high inflation functions to increase market volatility, and thus, increase overall investment risk.

Research spanning decades hoping to empirically disentangle this nexus has provided extremely ambiguous evidence, often context-specific and not confirming a consistent, universal conclusion across outlets. Though some studies evidenced the positive hedging ability, the great bulk of the contemporary literature offers credible empirical evidence of a strong negative/inverse relationship consistent with the Proxy Hypothesis. Negative evidence has been consistently supported in wide-ranging contexts, including those in developed economies by Chiang (2023), as well as in emerging economies such as Sudan by Omer and Ahmed (2020). This inconsistently equivocal empirical literature draws attention to the fact that in many cases, the effect is often non-linear, time-varying and related to the characteristics of the market and any policy responses – for instances see Liu & Serletis (2022) in studies about EM7 countries and Phiri (2017). This constant variability underscores the need for market-specific analysis based on advanced dynamic models. The case of the EGX30 Index and the general situation of the Egyptian market stands out as a strong case, having previously experienced significant macroeconomic shocks, including a float of the currency and severe acute inflation shocks in the 2015-2025 period, warranting, as a case study, greater precise analysis of risk-return environments under these shocks.

Motivated by the conflicting global literature and the unique economic conditions of the Egyptian market, the central problem addressed by this study is to precisely determine the dynamic impact of unexpected inflation shocks on EGX30 returns and to quantify its direct influence on market volatility during the 2015-2025 period. To achieve this, the paper seeks three specific objectives: first, to evaluate the dynamic effect of inflation shocks on EGX30 returns using the Generalized Impulse Response Function (IRF) within a Vector Autoregressive (VAR) framework; second, to assess the hedging efficacy of Egyptian stocks against inflation across different time horizons; and third, to test the direct contemporaneous impact of inflation on market volatility (risk) using a Generalized Autoregressive Conditional Heteroskedasticity (GARCH(1,1)) model. Consequently, this study makes a significant contribution to the financial macroeconomics literature, particularly concerning emerging markets. It provides the first comprehensive empirical evidence on the dynamic inflation-stock return nexus in Egypt (EGX30) over a critical decade (2015-2025) characterized by acute instability. Furthermore, it uniquely employs the combination of VAR-IRF and GARCH (1,1) to clearly separate the mean and variance effects, offering novel policy insights derived from the temporal asymmetry of the hedging role and the empirical evidence that market volatility is primarily endogenous. The remainder of this paper will be completed as: Chapter Two provides a comprehensive Literature Review. Chapter Three details the Data and Methodology employed in the analysis. Chapter Four presents the Empirical

Results and compares them with prior findings. Finally, Chapter Five concludes the study and offers policy recommendations.

2. Literature Review

The relationship between inflation and stock market performance is one of the most fundamental areas of research in financial macroeconomics, as inflation is universally recognized as a chief macroeconomic risk, often described as "taxation without legislation," that unleashes economic instability and anxiety (Gleason, 2018; Kruger & Meyer, 2021). The constant pursuit for investments that mitigate these devastating effects highlights the importance of this debate (Bozkurt & Kaderli, 2024; Mugambi & Okech, 2016). The Fisher (1930) hypothesis, which holds that nominal returns and inflation have a long-term positive relationship, forms the theoretical foundation. This suggests that stocks could be used as a hedge in times of high inflation (Mbulawa, 2015; Zhang, 2021). The ability of businesses collectively to successfully raise prices in line with inflation is a major factor in this hedge's effectiveness, and this is typically inconsistent across highly regulated economic sectors (Asayesh and Gharavi, 2015). However, the opposing view, often supporting the Proxy Hypothesis (Fama, 1981), indicates even a modest rise in inflation expectations can prompt fear in the market of serious monetary policy counteraction, increasing the interest rate, slowing economic growth, and causing lower expected dividends (Incekara et al., 2012). This fear reduces stock prices and results in a negative relationship that is often observed in existing literature (Iorember et al., 2017).

Empirical evidence attempting to settle this theoretical dispute has been highly inconclusive and varies significantly across different markets. A substantial body of work supports the notion of stocks as an inflation hedge. For instance, Shahbaz, Islam, and Rehman (2016) found a positive relationship in both the short-run and long-run in Pakistan, while Tiwari et al. (2015) also discovered a favorable association for CPI-based inflation in Pakistan. Similarly, Boamah (2017) examined a long-run positive relationship for the G7 and BRICS economies, and Isnandari and Chalid (2017) determined that stocks acted as a hedge against inflation for eight emerging Asian countries. These studies lend support to the Fisher hypothesis, suggesting a capability for firms to adjust prices effectively.

In stark contrast, many other studies totally reject the hedging capability of stocks. Chiang (2023) discovered a negative relationship between real stock returns and inflation in twelve advanced economies. Omer and Ahmed (2020) identified significant negative relationships between inflation and stock returns in Sudan, both in the short run and long run, a finding corroborated by Ayinuola (2023) in Nigeria. Even studies conducted in advanced markets including the US (Austin and Dutt, 2016) and the UK (Tiwari et al., 2019) have shown weak or lack of evidence for stocks being a hedge against inflation. This discrepancy is further complicated by specific economic events, as Jelilov et al. (2020) documented that the COVID-19 pandemic interrupted the ordinary seen positive relationship in Nigeria, while Maulida and Yulianto (2023) found that there was not consistent evidence of a significant effect during the period of the pandemic in Indonesia. These results generally support the Proxy Hypothesis, where inflation signals adverse future cash flows or higher discount rates.

The differences in findings have led research in recent years to consider complexity, non-linear relationships, and asymmetry. Research utilizing advanced approaches has documented considerable variation in the impacts of inflation and inflation uncertainty across different economies—a kind of complexity illustrated by Liu and Serletis (2022) within studies involving G7 and EM7 economies. Furthermore, it has been established that the relationship is asymmetric and time varying: Alqaralleh (2020) and Sia, Leong, and Puah (2023) found that positive and negative inflation shocks influenced stock returns differentially across G7 and Indonesian markets. The results of Phiri (2017) that supplied proof of a nonlinear negative cointegrating relationship in South Africa further emphasise the need to move beyond simple linear models. Beyond time variation, there is now sufficient evidence that the hedging capabilities of stocks are also sector specific: Rooyen and Jones (2019) observed that the

hedging ability of inflation appears to be sector specific among JSE listed stocks, and Chiang and Chen (2023) found that US sectoral returns (with the exception of the energy sector) were negatively correlated with inflation. This vast, often contradictory, array of empirical evidence sufficiently justifies the study's focus on the specific dynamics of the Egyptian market using sophisticated VAR and GARCH models to more accurately identify the dynamic response of returns response and the direct impact on market volatility.

3. Data and Methodology

3.1 Data

This study utilizes monthly time series data from January 2015 to October 2025, providing a total sample of 130 monthly data points. The data was mostly derived from official market and economic publications in Egypt. The analysis rests on two key variables, both being stationarity at level (I(0)) following a set of preliminary diagnostic tests. It is acknowledged that the relatively small sample size of 130 monthly observations may present a minor limitation; however, it is deemed sufficient for estimating the conditional variance and variance equations for the study period.

Egyptian Exchange 30 Index Returns (EGX30)

The EGX30 Index is the principal index for measuring the overall performance of the Egyptian Stock Exchange (EGX). The EGX30 includes the stocks of the 30 largest and most actively traded companies (based on liquidity and free-float market capitalization) on the EGX. We chose to use the EGX30 Index for this study instead of other indices (such as EGX70 or EGX100) because the large-cap firms that comprise the EGX30 have more pricing power and greater operational flexibility, which are both necessary in testing the Fisher Hypothesis. Additionally, because of EGX30's relatively high liquidity compared to smaller-cap indices, the market prices of the EGX30 will reflect macroeconomic shocks, such as inflation, quicker and more accurately than those of smaller-cap indices, which tend to have stale prices or low trading volumes.

To transform the monthly index values into a stationary time series, the Index Returns variable was calculated using the simple return (percentage change) method:

$$EGX30_t = (P_t - P_{t-1}) / P_{t-1}$$

where P_t denotes the closing value of the EGX30 index at the end of month t. The ADF unit root test confirmed the stationarity of the EGX30 returns series at level (I(0)).

Inflation Rate (INFLATION)

This variable measures the monthly inflation rate, typically computed based on the monthly percentage change in the Consumer Price Index (CPI). It is included in the model to capture the influence of external, macroeconomic shocks, specifically in relation to the purchasing power of capital and the required rate of return in the Egyptian investment environment. The Consumer Price Index (CPI) was selected as the primary proxy for inflation because it is the official benchmark used by the Central Bank of Egypt (CBE) for inflation targeting. Moreover, CPI directly reflects changes in consumer purchasing power and production costs, which are the main channels through which inflation impacts corporate earnings and stock valuations in the long run. This series was also confirmed to be stationary at level (I(0)).

3.2 Methodology

The current research uses a two-stage quantitative design to assess the inflation-stock market relationship. The first stage uses a VAR framework to evaluate the dynamic relationship and short-run causality of inflation and stock returns. The second stage applies the GARCH framework to examine the effect of inflation directly on market volatility (risk).

2.1. Vector Autoregression (VAR) Model

The VAR model is applied since it treats all variables as endogenous, which allows for contemporaneous analysis of their mutual dependence without posing potentially constraining causal processes. As the EGX30 returns and the INFLATION rate both are stationary at level (I(0)), the VAR model of order (P) is expressed as:

$$y_t = C + \sum_{i=1}^{p} A_i y_{t-1} + u_t$$

Where:

- y_t is the vector of endogenous variables, y_t= [EGX30t, $INFLATION_t$].
- A_i are the 2×2 matrices of coefficients.
- C is the vector of constants.
- $u_t$is the vector of error terms (white noise).

Based on the AIC and FPE information criteria, the optimal lag order was determined to be p=4 (VAR(4)). Model stability was confirmed as all Inverse Roots of the AR Characteristic Polynomial lie inside the unit circle. Further diagnostic checks confirmed the model's robustness, with the absence of significant autocorrelation in the residuals (Lagrange Multiplier Test) and residual normality tests supporting the VAR specification

Dynamic Analysis: Impulse Response and Variance Decomposition

To analyze the dynamic outcomes generated by the VAR(4) model, the following two tools were used:

- **Generalized Impulse Response Function (IRF):** The Generalized IRF was used to plot the time-path response of EGX30 returns to an unanticipated one-standard-deviation shock in INFLATION across a ten-month period. The Generalized approach was selected for plotting IRF because the IRF results will not be determined by the ordering of the variables in the system and that it is a robust estimate of the dynamic impact.

- **Variance Decomposition:** Variance Decomposition: This approach measures the percent share of shocks in INFLATION to the forecast error variance in EGX30 returns over time (up to month ten) to measure the relative contribution of price inflation as an external force on market returns.

2.2. Generalized Autoregressive Conditional Heteroskedasticity (GARCH (1,1)) Model

To study the assumed relationship between inflation and market volatility (or risk), GARCH (1,1) was estimated. Nonlinear models would give different insights than GARCH (1,1); however, GARCH (1,1) was utilized here because of its effectiveness and simplicity to model volatility clustering with a sample size of 130 observations. In Emerging Markets, GARCH (1,1) is the best available way of modeling and retaining a measure of investment risk over shocks due to inflation. Furthermore, it is the best option

available to account for the persistence of shocks within that asset class and therefore is favored over nonlinear models, which typically have many more parameters, leading to an increased chance of over-parameterization. INFLATION is explicitly included as both an explanatory variable in the mean and a factor in the variance equations.

Mean Equation: The conditional mean of the EGX30 return (R_t) is modeled as follows:

$$R_t = \mu + \gamma_1 INFLATION_t + \varepsilon_t$$

Where γ_1 is the coefficient which isolates the effect of INFLATION on expected return and ε_t is the error term.

Variance Equation (GARCH(1,1)): The conditional variance (ht), representing market volatility or risk, is modeled as:

$$h_t = w + \alpha\varepsilon_{t-1}^2 + \beta h_{t-1} + \gamma_2 INFLATION_t$$

In this context, h_t refers to the conditional volatility of EGX30 returns. The coefficient γ_2 represents the main parameter for testing whether INFLATION has a direct relationship and significant effect on volatility in the returns

The coefficients α and β represent the ARCH effect (the effect of past shocks) and GARCH effect (the persistence of past volatility), respectively.

4. Empirical Results

This segment provides the empirical results from the econometric analysis, outlining the dynamic effect of the inflation rate (INFLATION) on stock returns (EGX30) as well as the concurrent market volatility (risk) in Egypt for the period January 2015 to October 2025.

1. Pre-estimation Diagnostics

1.1. Stationarity and Lag Selection

The Augmented Dickey-Fuller (ADF) unit root test was applied to ensure the stationarity of the monthly time series, a prerequisite for the Vector Autoregression (VAR) analysis.

Table 1: Panel Unit Root Test Results (ADF - Choi Z-stat)

Series	Test Statistic	Prob.	Conclusion
EGX30	-10.1266	0.0000	Stationary at Level I(0)
INFLATION	-10.1266	0.0000	Stationary at Level I(0)

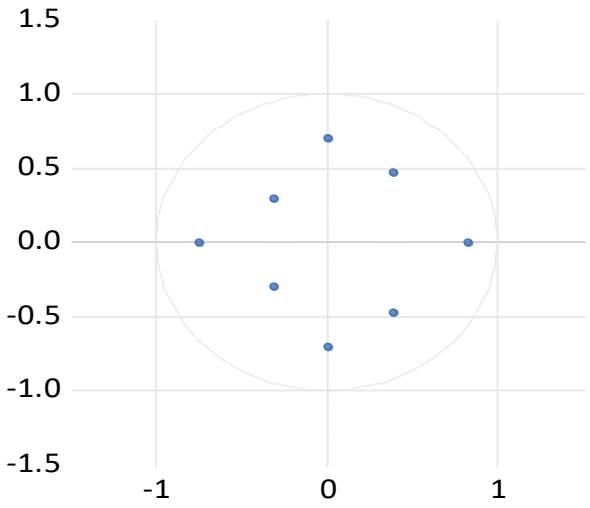
Table 1 shows that the low probability values (0.0000) for both series confirm that EGX30 returns and INFLATION are stationary at their levels, allowing the estimation of a VAR model. Based on the AIC and FPE criteria, the optimal lag length was selected as VAR (4).

This finding proves that there is neither a long-run structural break nor unit root which would limit the dynamic analysis and supports use of the VAR framework to investigate the short-to-medium term interactions between inflation and market return.

1.2. VAR Stability Check

The stability of the estimated VAR (4) model is confirmed by examining the Inverse Roots of the AR Characteristic Polynomial.

Figure 1. Inverse Roots of AR Characteristic Polynomial



As depicted in Figure 1, all inverse roots lie strictly within the unit circle. This satisfies the VAR stability condition, validating the subsequent dynamic analyses (IRF and Variance Decomposition).

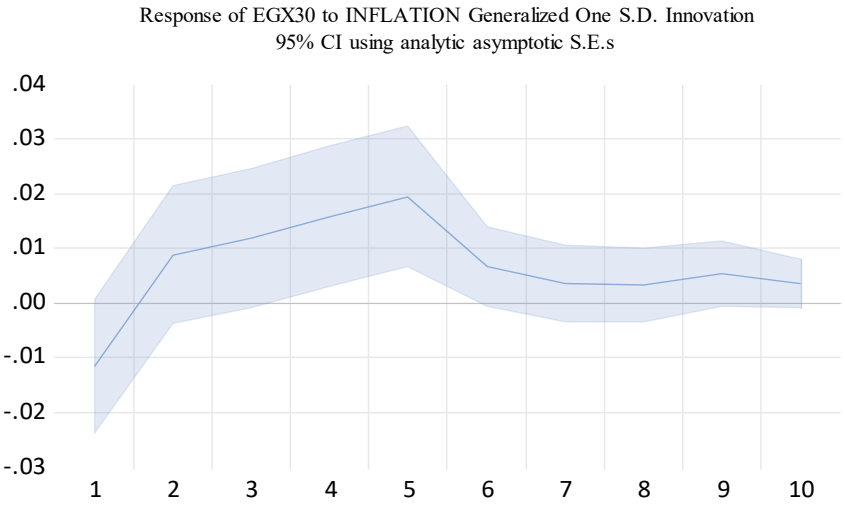
2. VAR Analysis: Inflation and Stock Returns

The dynamic relationship between INFLATION and EGX30 returns is investigated through the Generalized Impulse Response Function (IRF) and Variance Decomposition.

2.1. Impulse Response Function (IRF)

The IRF measures the dynamic response of EGX30 returns to an unexpected one-standard-deviation shock in INFLATION over 10 periods (months).

Figure 2. Generalized Impulse Response of EGX30 to an INFLATION Shock



The impact of an inflation shock shown in Figure 2 is highly time-sensitive:

- At first (Month 1–2), the impact is negligible.
- Then, the response turns positive and statistically significant in the medium-run (Months 3–6) with a maximum effect between Month 4, and Month 5 which means the Egyptian stock market operates as a partial hedge against inflation in the medium run, which is consistent with the Fisher Hypothesis and the view that firms have the pricing power to adjust their revenues with higher prices (Asayesh and Gharavi, 2015); this corresponds with Shahbaz et al. (2016) for Pakistan and robustly contrasts studies that find significant negative effect on the correlation, such as Omer and Ahmed (2020) in Sudan and Chiang (2023) in advanced economies.

2.2. Variance Decomposition

The Variance Decomposition quantifies the contribution of INFLATION to the forecast error variance of EGX30.

Table 2: Variance Decomposition of EGX30 (Generalized Factors)

Period (Months)	S.E.	Variance Explained by EGX30 (%)	Variance Explained by INFLATION (%)
1	0.070520	100.0000	0.000000
5	0.077296	85.60174	14.39826
10	0.078173	83.97557	16.02443

The findings verify that INFLATION is a prominent external factor. The contribution of INFLATION to the variance of EGX30 keeps increasing and eventually reaches 16.02% in the long run. This considerable explanatory power demonstrates that although market-specific factors are the primary triggers, inflation is still a vital macroeconomic variable for the Egyptian stock market as observed

across several developing economies (Ayaydın & Dağlı, 2012). This high long-run explanatory power suggests that policymakers and portfolio managers cannot disregard inflation as a secondary factor, as it fundamentally dictates over 16% of the long-term uncertainty in the EGX30 return forecast.

3. GARCH Analysis: Inflation and Investment Risk (Volatility)

A GARCH (1,1) model was estimated to analyze the influence of inflation on EGX30 volatility σ_t^2.

Table 3: GARCH (1,1) Estimation Results

Equation/Variable	Coefficient	z-Statistic	Prob.	Interpretation
Mean Equation (Return)				
C	0.021697	3.539584	0.0004	Significant Positive
INFLATION	−0.697873	−1.962228	0.0497	Significant Negative
Variance Equation (Risk)				
RESID (−1)2 (α)	0.461330	4.144495	0.0000	ARCH Effect (Volatility Clustering)
GARCH (−1) (β)	0.603472	7.606076	0.0000	GARCH Effect (Volatility Persistence)
INFLATION (γ)	0.034239	1.610226	0.1073	Not Significant

Discussion of Mean Equation (Return):

The INFLATION coefficient in the mean equation has a negative coefficient that is statistically significant (Prob. 0.0497). This indicates that a persistent increase in inflation leads to a significant decrease in stock returns, lending support to the "Proxy Hypothesis" (Fama, 1981), where inflation can be viewed as a proxy for lower real economic activity. This finding aligns with Omer and Ahmed (2020) for Sudan and suggests a broad belief that high inflation leads to an increased required discount rate that leads to a decrease in the present values of future cash flows (Incekara et al., 2012). The development of these long-run negative effects and the positive hedging effect (IRF) that these are in the medium run illustrates that there is a complex and time-varying relationship between inflation and the return nexus that has been documented by Liu & Serletis (2022) in EM7 nations. This result provides a crucial warning for long-term investors in Egypt: the market cannot be relied upon as a mechanism for preserving the real value of wealth against sustained inflationary pressure.

Discussion of Variance Equation (Risk):

1. Volatility Clustering: The importance of both α (ARCH) and β (GARCH) coefficients indicates strong evidence of volatility clustering in EGX30. The sum α + β = 1.064802 (greater than 1), suggesting that volatility shocks are persistent or even permanent.

2. Influence of Inflation on Risk: The key insight with respect to risk is that the coefficient of inflation (γ) in the Variance Equation is not statistically significant (Prob. 0.1073). This implies that although inflation is crucial to the level of returns, it does not matter much to the uncertainty (risk) in the Egyptian stock market. This finding supports studies such as Maulida and Yulianto (2023) in Indonesia during the COVID-19 pandemic, where inflation was insignificant for stock returns and Gavriilidis and Kgari (2016) featured in Botswana. It implies that the high persistence of the market in volatility is primarily being driven by internal market factors rather than any exogenous inflationary impact.

This lack of a direct link implies that volatility management and risk forecasting for the EGX30 should prioritize analyzing market-internal dynamics (such as past volatility and structural breaks) rather than incorporating inflation shocks into the short-run risk model.

5. Conclusion

This study aimed to assess the dynamic impact of inflation (INFLATION) on the returns and volatility (risk) of the Egyptian Exchange 30 Index (EGX30) using monthly data spanning January 2015 to October 2025. Employing a dual econometric methodology, which included the Vector Autoregression (VAR) model for dynamic analysis and the Generalized Autoregressive Conditional Heteroskedasticity (GARCH(1,1)) model for risk assessment, the findings reveal a complex, time-dependent relationship. Specifically, the empirical analysis yielded three critical results: an IRF-driven positive and statistically significant effect on returns in the medium term; a significant negative long-run impact on the average return; and most notably, an insignificant direct impact of inflation on market volatility.

The results validate that the inflation-stock market relation is non-linear and depends on the length of time. The positive medium-term effect indicates that the EGX30 functions as a partial and temporary hedge against inflation shocks that are unexpected, which partially supports the Fisher Hypothesis because it suggests the firms have enough pricing power to mitigate increased costs over the next few months. This finding on the short-term contrasts with the work of Omer and Ahmed (2020) in Sudan, which found a significant negative effect. The long-term statistically significant negative effect on the average return suggests strong support for the Proxy Hypothesis Fama (1981) that sustained inflation increases required discount rates and the value of equity returns in real terms. Again, this negative long-term finding is consistent with that of Chiang (2023) in advanced economies and with the general complexity observed Liu & Serletis (2022) in EM7 countries. More important, that inflation does not impact market volatility (risk) implied that the excessive volatility clustering and the persistence is the market is clearly endogenous because volatility clustering and persistence in the Egyptian market is increasingly driven by internal market self-induced shocks (ARCH/GARCH effects) and not the external macroeconomic stress, which is consistent with Phiri (2017) that market-specific influences are the majority effects in the price manipulations and are additional evidence that intraday volatility clustering in emerging markets is a function of internal dynamics (with other external constructs) and not solely the influence of macroeconomic effects.

The study yields a number of specific policy implications. To begin with, the government and the Central Bank must commit to credible inflation targeting, not only to ensure price stability today, but to assure a predictable investment climate in the future. In this regard, the Central Bank should also act to clarify better forward guidance regarding its inflation targeting policy with the aim of anchoring expectations and mitigating the adverse long-term drag on stock returns. Furthermore, since market volatility is largely driven by internal factors, the government should push for structural reforms to boost EGX30 efficiency. This involves mandating quicker and more comprehensive corporate disclosure to fight information asymmetry and strengthening regulatory oversight to curb destabilizing speculative trading fueled by internal market shocks. For the EGX administration, to mitigate shocks from domestic sources and prevent high persistence of volatility clustering, it believes that given the strong predominance of domestic factors influencing volatility, greater transparency in the marketplace, improved regulatory supervision, and enhanced enforcement are necessary. To reduce internal dynamics in market risk, a more stable and predictable trading and regulatory environment is called for. The results show a very complicated hedging proposition for an investor or portfolio manager: stocks are a hedging instrument in the short term, and intermediate term against inflation shocks, but one should not count on the EGX30 to preserve real returns over the long term. Dynamic rebalances portfolios, particularly in the aftermath of pronounced inflationary periods, allow for the maximum short-term hedging benefits while reducing the longer-term adverse effects. In addition, risk management practices should focus primarily on the internal market dynamics, e.g., using GARCH

predictions, rather than inflation because inflation is not the source of volatility. As a future research agenda, we suggest using advanced asymmetric volatility models (e.g., EGARCH or TARCH) to assess whether positive and negative inflation shocks affect risk and returns differently, as well as examining a sectoral approach within the EGX30 to identify any industries where inflation hedging benefits are the most pronounced and sustainable.

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