

Inflation Illusion and Market Valuation of Quoted Manufacturing Firms in Nigeria

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Article History	Abstract	
Original Research Article	<i>This study investigated the extent to which inflation illusion influences the market value of quoted firms in Nigeria. The analysis employed panel data obtained from the annual reports of 35 quoted firms and the Statistical Bulletin of the Central Bank of Nigeria for the period 2012–2021. Stock value was adopted as the dependent variable, while real inflation rate, core inflation rate, nominal yield, real cash flow, nominal interest rate, and money supply served as the explanatory variables. A panel-data analytical framework was applied, with the Fixed Effects Model employed as the principal estimation technique at the 5% significance level. Pooled, Fixed Effects, and Random Effects estimations were examined, and the Hausman specification test was applied to identify the most suitable model. The findings from Model One indicate that 88.3% of the variation in stock value is associated with variations in inflation illusion. The results further demonstrate that nominal yield and real inflation rate exert positive effects on stock value, whereas core inflation rate has a negative effect on the stock value of the quoted firms during the period investigated. Model Two reveals that 99.9% of the variation in stock value is attributable to the inflation-illusion variables specified in the regression model. The results also show that real cash flow and nominal interest rate have positive effects on stock value, while money supply exerts a negative effect over the study period. The study concludes that inflation illusion is a significant determinant of the market value of quoted firms in Nigeria. It therefore recommends that quoted firms place greater emphasis on enhancing market value when formulating investment policies, given the significant positive association between cash flow and corporate valuation. In addition, investment yield should be incorporated into investment decision-making with the objective of strengthening the valuation of firms quoted on the Nigerian stock exchange.</i>	
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Introduction

The macroeconomic fundamentals are key determinants of stock market performance attracting the attention among scholars, investment professionals and monetary authorities. Most academic research have focused on theoretical and empirical models of stock prices and consumption in a way that is consistent with the first-order conditions of individual units about how to invest their wealth. Unlike economists however, investment practitioners have hardly ever bothered with the above approach to equity valuation and instead used an alternative method that dominates the Fed model (which has received

so much attention, which links stock yields as measured by dividend or earnings-to-price ratios to nominal Treasury security yields). This view is based on the idea that stocks and bonds compete for space in investors' portfolios, therefore an increase in bond yields should be met with a commensurate rise in stock yields to keep equities competitive. It is particularly important to understand the interplay between inflation and market valuation because equities are generally viewed as an asset class that offers a partial hedge against inflationary pressures (Mbulawa, 2015). However, theoretical accounts lead to conflicting

predictions concerning the effect of inflation on stock and/or firm values. A proxy hypothesis suggests an inverse of close relationship between inflation, corporate worth and stock markets (Kullaporn & Lalita, 2010). In the same way, the Fama (1981) hypothesis holds that there is a negative relationship between inflation and stock market performance (Mbulawa, 2015). On the other hand, Fisher theory claims equity securities are security, that means if inflation may only maintain real property of the firm.

Inflation expectations formation is presented by the two major approaches of rational expectations hypothesis of Lucas and Sargent on one hand, and adaptive expectations hypothesis from Cagan (1956) 11 12 and Friedman (1968). While both these views acknowledge that economic phenomena depend on expected inflation more strongly than actual inflation (this is a well-established empirical fact), their explanations for this phenomenon differ radically. In the adaptive expectations approach, economic agents base their expectations essentially based on prior experiences and subsequently adjust them as further information comes to light. While not directly observable, inflation expectations enter into the economic and investment decisions made by investors, firms, and other market participants. The reason this is relevant is that as the inflation environment changes, it can have uneven effects across different types of economic agents. Inflation may be good for asset holders and owners of securities and equities because the real value of their investments is preserved; but if you're a creditor or holder of liquid assets, this in general can have negative real effects on your wealth. As a result, investing in physical assets, securities and equities may offer investors an opportunity to hedge against the negative impact of inflation. In this regard, Fama (1981) argued that in a well-functioning market whose perspective is on the future, expected stock returns should be solely influenced by expectations about real economic fundamentals and not by anticipated inflation. Thus, from this perspective one would expect inflation place a much less powerful imprint on corporate valuation than expected output growth. This is in agreement with the Fisher effect, whereby equity returns can be described as primarily nominal affairs; they are neither determined by nor responsive to currently prevailing or expected inflation rates.

On the other hand, followers of the opinion that inflation has a great negative impact on stock markets particularly from Volatility Hypothesis by Kevin and Perry believe that price changes form expectations have behavioural impacts to change in market conditions making asymmetry information causes adverse effects to stock market (Zhongqiang, 2014). In addition, this view also holds that higher inflation can erode real returns not just through the decreased purchasing power of money but more generally

across many types of financial assets - for instance, securities and stocks trading on exchanges. The uncertain nature of inflation, along with the risks that changing expectations regarding the value of long-term claims introduces in relief to credit (a major vitality source), could therefore render human capital formation and physical investment less viable. But empirical research does not reach a conclusive result with regard to the role of inflation expectations on stock returns. One study, Cheng et al. (2017) found evidence indicating monetary policy impact on BEI can differ across the time span of their models stemming from multi-collinearity and varying sample periods and split-sample estimates or area segments; while Geetha et al. (2011) also had mixed results concluding that part of the variation in both assets' inflation-expectation coefficients were due to possible misspecification in BEI regression relating to robust standard error estimation difficulty processing concurrent interest rates as independent variables. This setting leads to considerable ambiguities in estimating the coefficients across studies and therefore could explain why there is still no consensus regarding stock market returns and inflation expectations.

So far, most empirical studies have examined the linkage between inflation and stock return in both developed and developing economies. Mahmood et al. In Pakistan (2014), studied the causal relationship between inflation and stock prices and reported that inflation is adversely affected by pressures arising from stock prices. Mahonye and Mandishara (2014) explored the long-run determinants of stock returns in Zimbabwe, confirming that inflation real income money supply, and exchange rate are the main factors affecting a stock market return. Likewise, Daferighe and Sunday (2012) investigated the impact of inflation on stock price movements in Nigeria, showing that a moderate level of inflationary effect can serve as an effective hedge against inflation opportunity within the Nigerian stock market. Research on the influence of inflation illusion on share price of firms in Nigeria is scanty despite these advances, thus highlighting a crucial empirical void and justifying subsequent inquiry. While Nigerian literature (Daferighe& Charlie, 2012) has been focusing on the ways inflation presents signals that drive stock market dynamics, less focus has been given to how inflation illusion influences corporate market value determination. Therefore, this study attempts to bridge this gap by investigating the impact of inflation illusion on market value of listed manufacturing companies in Nigeria.

Literature Review

Conceptual Review

Inflation Illusion

There is a wide range of theoretical literature about the impact of inflation illusion on stock returns, methods to

estimate unobservable inflation expectations, sources of stock market returns and general effects of changes in inflation on economic performance. The discussion starts from the theoretical link between inflation expectation and stock return, as Fisher is one of the earliest scholars who discuss this relationship. The Fisher effect states that, in the long run, nominal rates change with inflation and real rates are largely unchanged; thus, a change in expected inflation directly changes nominal interest rates (Fisher 1930). Such proposition makes the Fisher effect pertinent to inflation-targeting policies since monetary authorities could use their control over nominal interest rates as a tool for controlling inflation. Fisher also argued that stock prices are non-incrementally sensitive to expected inflation, so equity shares defend against anticipated inflation (Fisher, 1930). The coefficient on expected inflation in period $t+1$ is anticipated to equal 1 as per the Fisher equation - lined by variable one.

Inflation

Gill et al. Inflation can be viewed from a Keynesian perspective, as defined by Phillips (2012), when the aggregate demand for goods and services exceeds the level specified in national income consistent with full employment. Inflation's impact on reported corporate profits is a contingent factor based on the accounting methods used to calculate those profits. Profit, under the standard accounting practice, is determined as the change in net assets between two points in time who are normally separated by an accounting period and measured in this case through revenues matched with expenses resulting in a profit. Yet, expenses matched against revenues in the current period may be based on costs incurred in earlier periods under historical cost accounting rather than their current economic values. Thus, inflation can cause reported profits to be overstated by a massive amount that can, in turn, increase the effective tax burden on businesses relative to what would otherwise have been implied by the nominal tax rate. Where based merely on changes in the general purchasing power of money alone, or on profits arising from such monetary change (capital gains) are treated and taxed as derived by a business truly for business income purposes this may have resulted in firms losing capacity to retain their real capital and sustainable growth. In addition, firms that are required to use historical-cost profits to establish their profit margins when price-control legislation is enacted could encounter serious problems meeting cash-flow requirements and even continuing in business during periods of high inflation.

Inflation and the Yield Curve

Inflation expectations are an important factor in the formulation of monetary policy and are closely watched by financial market participants. Breakeven inflation is one

popular measure and is the difference between the nominal yield on Treasury securities and the real yield on similar-maturity TIPS over time. However, at least two heavyweight biases can weigh on this measure. First, TIPS may appear to be less liquid than conventional Treasury securities, especially at times of financial market stress. Second, breakeven inflation includes an inflation risk premium—the payment that investors expect to receive for taking on the uncertainty associated with inflation. The relationship of estimated inflation risk premiums with macroeconomic indicators suggests that the premium is higher when professional forecasters disagree more about future inflation and when option-implied Treasury volatility increases. On the other hand, when consumer confidence rises and unemployment falls, that premium usually turns into a discount. The underlying pricing model does not directly include macroeconomic variables as explained input, but these relationships substantiate the economic rationale for decomposing breakeven inflation into expected inflation, liquidity effects and the inflation risk premium.

Indeed, Pflueger and Viceira (2013) showed that differences in the relative liquidity of TIPS to conventional Treasury securities matter for asset pricing in a systematic way. Studies that examine the relative liquidity characteristics of TIPS from their introduction through 2003, when US Treasury confirmed its commitment to the TIPS programme, and over periods following the bankruptcy of Lehman Brothers late in 2008 where large volumes of TIPS reached the market include Sack & Elsassner (2004), Campbell et al (2009). These developments suggest that liquidity factors can have a meaningful impact on the pricing of inflation-linked instruments. Liquidity premia have also been recorded for nominal Treasury securities (Gurkaynak, Sack, and Wright (2007); Fontaine and Garcia (2012)). So, difference in market liquidity is one of the key elements to be considered while reading Treasury yields, breakeven inflation and the inflation expectations reflected in financial-market prices.

Inflation and Corporate Investment

The Fisher effect theory (Fisher, 1930) states that nominal interest rates reflect information available about future expected inflation. As a theoretical stance, it argues for a monetary policy focused more heavily on contending with inflation expectations in order to keep real interest rates relatively stable so as to incentivise saving and investment (Laichena & Obwogi, 2015). Now carrying the Fisher effect into equity market means that it also says all common stocks are expected to return some real rate of return plus the inflationary rate of returns, with the idea being a constant level in time for a given real return. Mahonye and Mandishara (2014) claim that based on the Fisher

framework common-stock returns should package together both real returns and inflation such that movements in real returns with an equivalent movement in expected inflation. In a more general equilibrium setting, the theory depends on nominal interest rates on financial assets adjusting roughly one-for-one with expected inflation. This has led to the expectation that short- and long-term interest rates would move together through changes in the nominal risk-free rate such that they will impact discount rates in the same direction [19]. In addition, the Fisher hypothesis must also assume that real interest rates are unaffected by monetary-sector conditions. The hypothesis is tested using real rather than nominal stock returns, which means that perfect inflation neutrality also implies that inflation has no effect on real equity returns. Therefore, the broad implications of Fisher framework state that nominal returns on a financial asset increases with inflation, and real rates of return are not affected by inflation. However, in its application to stock returns the Fisher effect is notionally stated as an inverse relationship between equity and both expected and unexpected inflation.

Fisher Effect Theory

The Fisher effect theory was formulated by Fisher (1930), and the theory presupposes that nominal interest rates fully reflect available information concerning the expectations of inflation. The theory is the basis for the idea that monetary policy should mainly focus on managing expectations of inflation in an attempt to keep real interest rate stable. This aims at promoting savings and investment (Laichena & Obwogi, 2015). The Fisher effect theory also states that the expected rate of return on common stocks comprises a real return and the expected rate of inflation. The real return on common stocks is assumed to be constant over time. It is assumed the negative returns will exactly outweigh the positive real return, the rate of the common stock are therefore expected to move one-on-one with the rate of inflation (Mahonye & Mandishara, 2014). The Fisher effect presupposes that nominal rates of interest on financial assets should move one-to-one with expected inflation. Moreover, changes in both short-term and long-term rates are expected to affect the discount rate in the same direction through their effect on the nominal risk-free rate. The Fisher hypothesis assumes that there is no relationship between real rates and monetary sector. However, the Fisher hypothesis, when studied using more real rather than nominal stock returns, suggests that real stock returns should be independent of inflation. Generally, the Fisher theory presumes the nominal returns on financial assets should increase with the rate of inflation, whereas real rates of return are independent of the inflation rate. Thus, the Fisher effect theory as applied to stock returns

presupposes an inverse relationship between stock returns to expected and unexpected inflation.

Inflation Illusion Hypothesis

Modigliani and Cohn (1970) offer the Inflation Illusion Hypothesis that describes how real effects of inflation are linked to the existence of money illusion (Omotor, 2011). The theory states expected inflation rise, causing bond yields to increase; in this case however equity investors misiscope cash flows and apply nominal discount rates to real future cash flows which means that higher nominal yields will lead the undervaluing of equities (this process reverses when inflation expectations fall, Owolabi & Adegbite, 2013). In this light, the Modigliani-Cohn (1970) framework also indicates that disinflation can create mispricing when investors suffering from inflation illusion fail to correctly interpret changes in the underlying inflation environment. It is therefore postulated that if inflation can be stabilized successfully, this will reduce swings in valuation errors and lead to more efficient stock markets (Campbell & Vuolteenaho, 2004). The fact that stock market actors could potentially suffer from money illusion is both interesting and contentious given the large monetary stakes associated with equity-market decisions. Similarly, during the high inflation period, investors rational expectations of the equity premium required is greater than that given by the markets subjective expected returns resulting in undervaluation of stocks; low inflation may exhibit an opposite case where subjective expectation exceeds rational one hence stock overvaluation (Cohen et al., 2005). Thus, the Inflation Illusion Hypothesis makes a more specific prediction that too-high nominal discounting of future real cash flows during periods with high inflation expectations holds down current stock prices (adding to equity-market undervaluation), while too-low nominal discounting under low inflation pole-ups adds to current stock price gains (again contributing to overvaluation). In sum, the theory provides consistent predictions regarding whether inflation can explain and predict asset returns in the stock market.

Empirical Review

The study conducted by Pinjaman and Aralas (2015) consists of related independent macroeconomic indicators namely; Gross Domestic Product (GDP), exchange rate, interest rate, inflation rate, money supply, economic crisis and the economic liberalization impact on stock return volatility in Malaysia. Their modelling of stock returns and volatility suggests that shocks to stock return volatility are rather persistent, ensuring this characteristic continues to impact the performance of the stock market across time frames. The cross-section time-series analysis verified significant relationships from the previous results between stock return volatility and selected macroeconomic

variables. The study reported by A (2013) in Pakistan examined the long-run relationship between returns on KSE 100 Index and inflation using quarterly observations from January 1996 to December 2011. The Augmented Dickey-Fuller (ADF) test was used to study the properties of each variable in regard to stationary, and the Johansen Cointegration Technique examined their long-term equilibrium relationship. Causality was also established using Granger Causality Test. While the results of cointegration test found KSE 100 Index returns to be negatively related with inflation, the Granger causality analysis revealed that there exists no causal relationship between these two variables in either direction. Eddy (2012) studied the impact of real GDP, interest rate and inflation rate on stock prices of quoted companies by taking time period from 1997–2009. Simple regression analysis results show that three macroeconomic variables collectively explained 95.6% variation in stock price. Again, the results showed that changes in interest and inflation rates are positively correlated with stock prices, while GDP growth has a positive effect on stock prices. The study therefore suggested that government policies must be geared towards curbing inflation and improving public welfare, while interest rates should be kept at intermediate levels to stimulate investments and stock-market transactions.

Kuwornu (2012) studied the effect of macroeconomic variables on equity returns: evidence from Ghana data using monthly series for the period January 1992 to December 2008. Using the Johansen Multivariate Cointegration Procedure, we conclude that there exist cointegrated relationships between inflation, crude oil prices, exchange rate, the 91-day Treasury bill rate and stock returns, suggesting the existence of a long-run equilibrium relationship among these variables. The results also indicated that inflation and the risk-free interest rate had significant short-run effects, both from the stock return. Over the longer horizon, returns on stocks were significantly impacted by inflation, crude oil price, exchange rate and Treasury bill rate. In the same way, Floros (2004) studied the link between inflation and stock returns in Greece based monthly data on the Athens Stock Exchange Price Index and the Greek Consumer Price Index for 1988–2002. A straightforward Ordinary Least Squares (OLS) estimation gave a positive and statistically insignificant relationship. But when the inflation lagged variable was added to a systems-of-equations framework—to allow for interaction among different markets—the estimated effect of lagged inflation on stock return fell to negative values and lost statistical significance. The Johansen cointegration analysis further revealed the absence of a long-run association between inflation and stock returns, thus implying a non-relationship between

inflation and returns in Greece. Mugambi and Okech (2016) studied the influence of macroeconomic variable on stock returns of listed banks at Nairobi Securities Exchange by use of secondary data obtained from Central Bank of Kenya for period 2000–2015. The study found that interest rate, exchange rate and inflation significantly affected bank stock return based on the results of correlation analysis, unit root testing and linear regression but GDP insignificantly influenced bank stock return. The authors advised that the government keeps a stable macroeconomic environment and be cautious of interventionism in its monetary-policy.

Laichena and Obwogi (2015) studied the impact of interest rate, inflation rate, currency exchange rate, GDP on stock returns for East Africa (Kenya, Uganda and Tanzania), during 2005–2014. The panel data analysis showed a significant link between the specific macroeconomic variables and stock returns in the region, which led the authors to recommend that policymakers strive for better overall macroeconomic conditions in order to improve stock market returns. Barasa (2014) focused on determinants of stock market performance a case of Nairobi Securities Exchange: A descriptive research design, secondary data for the period covering 2000–2013. The NSE 20-Share Index, the Consumer Price Index (CPI), money supply and GDP per capita all worsened immediately before, during and slightly after the general elections. In summary, you were also able to observe that there is a negative correlation between inflation (as measured by CPI) and stock-market performance in the findings. As such, Barasa (2014) concluded that while inflation and stock market performance were negatively correlated in implementation, the impact was statistically insignificant. In conclusion, these empirical evidence collectively indicate that relationship between inflation and stock market outcomes varies with respect to countries, times and methods through which the country or time is analysed and produce evidence ranging from negative association to insignificant relationship hence demands for further exploring of the value of company stock in conjunction with inflation.

Kirui, Wawire and Onono (2014) Analysed the Relationship Between Gross Domestic Product, Treasury Bill Rate, Exchange Rate, Inflation and Stock Market Returns at Nairobi Securities Exchange. The Engle-Granger two-step procedure is used to explore cointegration between leverage effects at the national stock exchange level using the threshold Generalized Autoregressive Conditional Heteroscedasticity model and, macroeconomic variables based upon discretionary dividend policy – interest rate, inflation, foreign direct investment inflows and consumer price index. The outcomes showed that GDP, inflation, and the Treasury bill rate had practically

unimportant relationships with stock returns while the exchange rate exhibited a noteworthy relationship. Likewise, Olweny and Omondi (2012) examined the effect of macroeconomic variables on stock returns volatility in Nairobi Stock Exchange: An empirical analysis of foreign exchange rate fluctuations, interest rates fluctuations and inflation rate reserves. The researchers modeled Exponential Generalized Autoregressive Conditional Heteroscedasticity and Threshold Generalized Conditional Heteroscedasticity using a monthly time-series observations 2001–2010. The results revealed that fluctuations of exchange rates, interest and inflation rates impact on stock market performance. To examine whether the inflation illusion hypothesis operates in reverse, Ritter and Warr (2002) used data from U.S. stock markets between 1982–1999 and found that equities began trading well above their fundamental value at the end of the 90s as average inflation levels fell. Based on a much longer sample of the U.S. stock market between 1927–2002, Campbell and Vuolteenaho (2004) find that mispricing in stock dividend yields is positively associated with expected inflation and that variations in inflation explain a large share of time-series variations in the mispricing component. These results represent a robust empirical validation of the inflation illusion hypothesis.

Hayunga and Lung (2011) studied asset mispricing through a perspective identical to that of Scheinkman and Xiong (2003), which is the theory of overconfidence, as well as the inflation illusion hypothesis: they measured mispricing in U.S. housing market data from two separate sources — OFHEO indices for 1975–2007 and Case-Shiller indices for 1987–2007. Their findings confirmed that one of the theoretical manifestations of investor overconfidence—asset turnover—significantly accounted for mispricing in U.S. housing markets over time. Researchers also found that expected inflation was explainable by asset turnover when certain model specifications were used, implying that if there are mispricing effects in the equities markets today, they may be better explained by beliefs-based models of investors than volatility based ones. Using the REIT stock prices as proxies for mispricing, Hardin et al (2011) found that inflation illusion and inflation-hedging effects give rise to the time-series variation in an embedded risk premium between firms holding properties held as real assets. The findings also provided support for an inflation illusion perspective on REIT valuations, as the marginal impact of the inflation-hedging effect over the 1980–2008 period was actually dominated by an empirically dominant inflation illusion effect. On the other hand, Hong and Lee (2012) study used a different method and model to test this negative relationship between REIT returns and inflation. After allowing interest rates to fluctuate over time, however, they found that inflation ceased to explain that

mispricing component of REIT prices. Rather, it was proposed that behavioral matters—especially consumer sentiment—could partially explain REIT price mispricing.

Khaled, Wasfi and Mohammad (2021) study the impact of inflation on financial-sector development in Jordan and find evidence for both short- and long-run causal relationships for 1993–2018. The study found that, using the Autoregressive Distributed Lag bounds-testing approach, inflation negatively affected financial-sector development in both the short and long run at statistically significant levels. While economic growth had a statistically significant positive effect on financial-sector performance in both periods, past policies in the financial sector positive. Toby (2021) investigated the nexus between inflation and market valuation of firms in Nigeria by employing firm-level panel data consisting of 21 quoted firms for a period of 10 years covering the period from 2007 to 2016. Core, food and headline inflation are treated as alternative measures of inflation while market value per share is the proxy for firm valuation. Having estimated all pooled least squares, fixed-effects, and random-effects models, they found the latter specification was best suited to capturing the relationship between inflation and firm market valuation. Additionally, the study demonstrated that the heterogeneity parameter had a direct effect on firm market valuation and was related to inflation. These findings imply that cross-firm differences, especially management styles; organizational culture, staff policy and procedure signify the relationship between inflation and market valuation in Nigeria.

For example, Marimba (2018) investigated how inflation affects commercial banks profitability in Kenya as a case study of 37 commercial banks from 2013–2017. The study is using a descriptive correlational research design and uses regression analysis to test the relationship of variables. The major result indicated a significant negative relationship between inflation and profitability of commercial banks in Kenya. In the same vein, Fallah and Hashem (2017) investigated the effect of inflation and the operating cycle on cash holdings of listed firms in Tehran Stock Exchange. Out of the 77 countries and using multivariate regression analysis, a negative association was found between inflation and corporate cash holdings among firms included in this study. Reza (2017) analyzed the role of stock price inflation under uncertainty on Tehran non-financial firms' capital structure. Investigating the relationship between inflation uncertainty and fundamental-driven stock returns: Evidence from a study on the manufacturing firms of Pakistan, 2007–2014. (2022) Your citation This study has used 186 incorporated manufacturing firms for the period of 2007–2014 and uses GARCH model in other words it measures Inflation uncertainty [16]. The findings showed

that inflation in uncertainty lowers the leverage of 58% of firms in the sample, whilst negative effect was on 42%, by contrast, by revolutionizing nature of uncertainty harmful to more but only positive influence.

William et al. Kambadais, A. These monthly stock price growths were further analyzed, which will enable a better Tool for reasoning the trends and availing the factors behind the observed movement. The study used a descriptive correlational design and regression analysis of panel data. It was found that inflation will positively impact stock price growth but less significant. Using cross-sectional time-series data for 20 textile firms quoted in the Indonesian stock exchange from the audited financial statements, Jubaedah and AbdulRazak (2016) examined if financial performance, capital structure variables and three macroeconomic variables that is interest rates, inflation and economic growth impact on firm value. They found that the panel regression provided evidence of joint significance, indicating that the explanatory variables significantly affected firm value. Using specialized samples which are limited to only manufacturing firms (Nnado & Ugwu, 2016), profitability metrics such as return on assets and economic value added (EVA) were used in literature related to Nigeria. Potentially because of the nature of secondary data in audited financial statements, which was used, then analyzed using multiple regression and analysis of variance is found a significant negative effect (strong) between inflation and firm value., however the impact on return on assets related to inflation show insignificantly negative. Additionally, the authors also provided evidence that inflation, return on assets and economic value added were not statistically significant. Thus, the study concluded that even at relatively low levels, inflation can artificially devalue stock in firms and that "the true value of a firm should reflect changes in price level since its founding." Also was noted because for long-lived physical assets and financial liabilities when economic forces change rapidly over longer terms estimating their value is complex to do without allowing for inflation.

Literature Gap

This recent literature has also aided in shining a new light on the Inflation Illusion Hypothesis and its different approach to asset pricing within not just stock markets, but across various financial markets. While Ritter and Richard (2002), Campbell and Vuolteenaho (2004), Cohen, Polk, and Vuolteenaho (2005) along with several other studies have provided evidence suggesting that stock market investors are subject to inflation illusion, many researchers have challenged the robustness of this hypothesis. For instance, Thomas and Zhang (2009) and Chen, Lung, and Wang (2009) questioned the inflation illusion explanation. Thomas and Zhang (2009) went further to postulate that the

empirical evidence in stock markets is an ongoing trot that available data do not suffice to warrant the conclusion that investors consistently fall prey to inflation illusion. Another weakness of the existing literature is that many previous studies are based on market-wide data and implicitly assume that all market participants behave in the same way. As a result, inflation illusion has not been thoroughly studied when the subjective heterogeneity among individual market participants with regard to experience, knowledge and expertise is taken into account.

Within Nigeria, there has been an increasing empirical study on how inflation sends signals that activities in stock market as evidenced by Daferighe and Charlie (2012), Ibrahim & Agbaje (2013), Mogire (2014) and Owolabi & Adegbite (2013). Firm specific evidence on the impact of inflation on market valuation for Nigeria was also provided in a study by Toby (2021) that used panel data for 21 quoted firms over the period 2007–2016, while Nnado and Ugwu (2016) focused specifically on firm value in Nigerian manufacturing sector. However, despite these aspects, the empirical literature specifically investigating the impact of inflation illusion on the market value of firms is scant and inconclusive. This gap in knowledge is critical from an academic perspective because it leaves much unknown, thereby providing the rationale for this study which therefore aims to investigate how inflation illusion does contribute to market valuation of listed manufacturing firms in Nigeria.

Methodology

Since this study is a statistical analysis and an operationalization of its research objectives, an ex-post facto research design was employed to explore inflation illusion on the price-to-book value of quoted manufacturing firms in Nigeria. A population is defined as the entire set of elements, cases or subjects relevant for a particular study (Asika 1991) and it can be finite or infinite and from this any sample will vary. In consonance with this definition the population analysed in this study is confined to 163 quoted manufacturing firms in Nigeria, whilst a sum of 36 companies is included in the Nigerian Exchange Group (NGX). Additional details regarding the sample size are given in the table below.

Study Data The data for the study were collected from secondary sources in the research scenario, data is broadly classified into primary and secondary; however, information used in this study was reliant on information published by the selected quoted firms. The annual reports and financial statements of the quoted manufacturing firms from which data was collected provided most of the secondary (quantitative) data needed for analysis purposes.

Model Specification

A linear model was proposed for this study. The influence of inflation illusion and market value of quoted enterprises in Nigeria is assumed to have interest rate spread as the dependent variable. The model is also influenced by the data type, which is time series and cross sectional, collecting various manufacturing enterprises listed on the stock exchange. Below is a summary of the model;

$$MV_{it} = a_i + X'_{it}b + \mu_{it} \quad (1)$$

Where

$$\mu_{it} = \lambda_{it} + \eta_{it} + v_{it} \quad (2)$$

; t – denotes time and i – denotes individual manufacturing firms

μ_{it} – two way error component

η_{it} – country effects

λ_{it} – time effects

v_{it} – usual error term

a and b – usual constants

Final Estimation Model

The following model with support from theoretical and empirical literature is deemed appropriate. The model will aid in examining the determinants of market value of quoted firms

$$SV = a_0 + a_1RIR_{it} + a_2CIF_{it} + a_3NY_{it} + U_{it} \quad (3)$$

$$SV_{it} = a_0 + a_1NITR_{it} + a_2RCF_{it} + a_3MS_{it} + U_{it} \quad (4)$$

Where; $a_0, a_1, \dots, a_{11}$ are constants to be estimated.

SV = Stock value

RIR = Real inflation rate

CIF = Core inflation rate

NY = Nominal yield

RCF = Real cash flow

NITR = Normal interest rate

MS = Money supply

Pooled Ordinary Least Squares Model

The Pooled OLS model is easy to estimate and interpret as data is pooled and an OLS regression model is run. The Pooled OLS is mathematically expressed as follows;

$$y_{it} = \alpha + X'_{it}\beta + \mu_i + v_{it} \quad (5)$$

Where; α is the intercept, μ_i is the unobservable cross-sectional individual effects and it v is the idiosyncratic error. The model assumes there is no substantial individual effects and time effects. However, the assumption is not

reasonable and the results are likely to be biased. Hsiao (2003) cautioned that “serious bias may result from unconditional pooling unless both cross-section and time-series analyses of covariance indicate the acceptance of homogeneity of regression coefficients. Furthermore, the OLS assumption of no autocorrelation can easily be violated in the case of multi-period data implying the estimator becomes biased (Moyo, 2013). The Pooled OLS model has been criticised by numerous scholars for its inadequacies. The current study will automatically dismiss the usage of Pooled OLS model (however model testing will be completed). More usage of efficient models with less biased outcomes is needed for effective policy.

Fixed Effects Model

The fixed effects model posits that the sample is non-random, and that the subjects have constant slopes but varied cross-sectional intercepts. The fixed effects model formulation assumes that the changes between units can be reflected in differences in the constant term (Greene, 2003). The model allows for arbitrary reliance between the unobserved heterogeneity and the explanatory factors. Moyo (2013) argues that the fixed effects model dispels the assumption of collinearity between the explanatory variables and the error components. The fixed effects model might be a one-way error component model or a two-way error component model. The mathematical representation of the fixed effects model is as follows;

$$y_{it} = X'_{it}\beta + D_i\mu_i + v_{it} \quad (6)$$

Where; D_i is the dummy variable, μ_i is the unobserved cross-sectional individual effects and v_{it} is the idiosyncratic error. The fixed effects model specification is more appropriate when a study is focusing on a specific set of N units and inference is restricted to the behaviour of these sets of units Baltagi, 2005). The fixed effects inference advantage is that there is no need to assume that the effects are independent; the unobserved individual effects are allowed to be correlated with the included variables. The fixed effects model suffers from loss of degrees of freedom, too many dummies are estimated and this aggravates the multicollinearity problem among the regressors. Moreover, time-invariant variables are eliminated during transformation process and they cannot be estimated. The estimators are only effective if there are variations in the exogenous explanatory variables (Moyo, 2013).

Random Effects Model

The random effects model formulation is acceptable if n cross-sectional units are randomly picked from a large population (Lei, 2013). The specification of random effects assumes homoscedastic disturbances variances and serial correlation only for disturbances of the same cross-

sectional unit (Hsiao, 2003). The Random effects are mathematically stated as;

$$v_1 = \alpha + X^1 B + \mu_1 + \lambda_1 + v_1 \quad (7)$$

Where; t is the unobserved time series effects, α is the intercept, u_i is the unobserved cross-sectional individual effects and it is the idiosyncratic error. The main advantage of the random effects model is that the number of parameters is fixed and efficient estimation methods can be derived. However, one has to make specific assumptions about the pattern of correlation between the effects and the included explanatory variables (Hsiao, 2003).

Hausman Test

One of the essential advantages of the Random Effects Model is the fact that it controls individual-specific heterogeneity while retaining the degrees of freedom for estimation. On the contrary, the Fixed Effects Model deals with individual heterogeneity by estimating individual-specific effects leading to a potential loss of degrees of freedom (Dougherty, 2006). To check which specification is more appropriate in the case of a given set of data, one can apply the Hausman specification test. It tests the null hypothesis that there is no correlation between individual-specific effects and regressors. Thus, if the test reveals the presence of correlation, the Random Effects specification should be abandoned in favor of the Fixed Effects specification. The test statistics are given by the following formula:

$$H = q' [V(\hat{q})]^{-1} q \sim \chi^2(k), \quad (8)$$

Where V and k denotes variance and degrees of freedom respectively, the

null and alternative hypotheses are stated as below;

$$H_0: E(u_{it} | X_{it}) = 0 \quad - \text{Random Effects Model} \quad (9)$$

$$H_1: E(u_{it} | X_{it}) \neq 0 \quad - \text{Fixed Effects Model} \quad (10)$$

If the calculated Hausman test statistic is higher than the relevant critical value, the Random Effects Model is inconsistent and the specification should be altered to Fixed Effects Model. In general, if the null hypothesis is rejected at a given significance level, this implies that the Fixed Effects Model should be used. On the contrary, if the null hypothesis is held, then the Random Effects Model is more preferable. Nonetheless, it is reported that the Hausman test tends to give biased results when the sample size is relatively small (Baltagi, 2005). Therefore, for small sample sizes, the test might indicate that the Random Effects specification should be rejected by the test even though the numerical difference between the estimators might be relatively small in practice. Wooldridge (2002) suggests that in such situations, one might want to consider that the assumptions of the Random Effects Model are valid and place more emphasis on the estimators derived from the Random Effects Model.

Analysis And Results

Real Interest Rate, Core inflation and Nominal Yield and stock Value

Table 1: Presentation of Panel Unit Root Results

Method: Series: SV	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t*	-8.78852	0.0000	36	288
Im, Pesaran and Shin W-stat	-1.81266	0.0349	36	288
ADF - Fisher Chi-square	95.1304	0.0354	36	288
PP - Fisher Chi-square	125.680	0.0001	36	324
Series: D(RIR)				
Levin, Lin & Chu t*	7.99592	1.0000	36	252
Im, Pesaran and Shin W-stat	-0.45982	0.3228	36	252
ADF - Fisher Chi-square	63.2885	0.7584	36	252
PP - Fisher Chi-square	380.659	0.0000	36	288
Series: NY				
Levin, Lin & Chu t*	-21.3466	0.0000	36	288
Im, Pesaran and Shin W-stat	-8.62792	0.0000	36	288
ADF - Fisher Chi-square	228.054	0.0000	36	288
PP - Fisher Chi-square	175.311	0.0000	36	324
Series: D(CIF)				
Levin, Lin & Chu t*	16.3886	1.0000	36	252
Im, Pesaran and Shin W-stat	2.04349	0.9795	36	252

ADF - Fisher Chi-square	28.5480	1.0000	36	252
PP - Fisher Chi-square	354.840	0.0000	36	288
Series: D(SV,2)				
Levin, Lin & Chu t*	-27.6391	0.0000	36	216
Im, Pesaran and Shin W-stat	-8.63047	0.0000	36	216
ADF - Fisher Chi-square	174.660	0.0000	36	216
PP - Fisher Chi-square	401.197	0.0000	36	252
Series: D(RIR,2)				
Levin, Lin & Chu t*	18.2251	1.0000	36	216
Im, Pesaran and Shin W-stat	-0.52562	0.2996	36	216
ADF - Fisher Chi-square	67.1832	0.6386	36	216
PP - Fisher Chi-square	807.880	0.0000	36	252
Series: D(NY,2)				
Levin, Lin & Chu t*	-2.07612	0.0189	36	216
Im, Pesaran and Shin W-stat	-5.46502	0.0000	36	216
ADF - Fisher Chi-square	169.868	0.0000	36	216
PP - Fisher Chi-square	741.791	0.0000	36	252
Series: D(CIF,2)				
Levin, Lin & Chu t*	34.2308	1.0000	36	216
Im, Pesaran and Shin W-stat	2.22209	0.9869	36	216
ADF - Fisher Chi-square	27.3551	1.0000	36	216
PP - Fisher Chi-square	571.683	0.0000	36	252

Source: Computed from E-view 9.0, 2023

To investigate the stationarity properties of the panel data set, panel unit root tests were used. The panel unit root tests differ from conventional time-series unit root tests by exploiting the cross-sectional and time-series dimensionality of the data set. Panel unit roots can be classified into two types. The first type is the common unit root process in which the cross-sectional persistence parameter is assumed to be identical for all individuals in a panel, which is the basic idea of the Levin, Lin, and Chu (LLC) test. The second type is the individual unit root

process, where the persistence parameter is allowed to be different across individuals in the panel, such as in Im, Pesaran, and Shin (IPS), the Fisher-ADF, and the Fisher-PP tests. The results show that at the 5% level, we can reject the unit root hypothesis for some variables, meaning that those variables are non-stationary in levels while others are stationary. However, for all the variables, the null hypothesis of unit root is rejected at the 5% level of significance when using the first difference, which implies that the variables are stationary at the first difference.

Table 2: Pedroni Residual Cointegration Test

Alternative hypothesis: common AR coeffs. (within-dimension)					
		Statistic	Prob.	Weighted Statistic	Prob.
Panel v-Statistic		-3.165292	0.9992	-4.466240	0.0000
Panel rho-Statistic		-1.017392	0.1545	-1.030857	0.1513
Panel PP-Statistic		-18.25428	0.0000	-18.80091	0.0000
Panel ADF-Statistic		-4.288579	0.0000	-4.670247	0.0000
Alternative hypothesis: individual AR coeffs. (between-dimension)					
		Statistic	Prob.		
Group rho-Statistic		1.557334	0.9403		
Group PP-Statistic		-23.95376	0.0000		
Group ADF-Statistic		-4.738768	0.0000		

Source: Computed from E-view 9.0, 2026

The results of the cointegration test proved that the variables are cointegrated as the probability coefficient of the variables are less than 0.05, we accept the alternative hypotheses that there is presence of long run relationship between the dependent and the independent variables

Table 3: Presentation of Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
SV does not Granger Cause NY	288	0.98807	0.3736
NY does not Granger Cause SV		2.09914	0.1245
SV does not Granger Cause RIR	288	0.59601	0.5517
RIR does not Granger Cause SV		1.54403	0.2153
CIF does not Granger Cause SV	288	1.68454	0.1874
SV does not Granger Cause CIF		2.53356	0.0812

Source: Computed from E-view 9.0, 2026

From the causality test presented in table 3, there is independent relationship among the variables. We accept the null hypothesis that there is no causal relationship between inflation illusion and stock value of the quoted firms within the time scope of the study.

Table 4 Panel Regressions Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(RIR(-1))	0.012394	0.016809	0.737387	0.4616
D(NY(-1))	-0.000209	0.014246	-0.014684	0.9883
D(CIF(-1))	-0.009567	0.014364	-0.666034	0.5060
C	14.51616	0.097439	148.9770	0.0000
ECM(-1)	0.603765	0.051116	11.81166	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.912002	Mean dependent var		14.55863
Adjusted R-squared	0.898164	S.D. dependent var		5.021841
S.E. of regression	1.602557	Akaike info criterion		3.909324
Sum squared resid	636.9110	Schwarz criterion		4.418069
Log likelihood	-522.9427	Hannan-Quinn criter.		4.113198
F-statistic	65.90404	Durbin-Watson stat		2.279230
Prob(F-statistic)	0.000000			
D(RIR(-1))	0.014220	0.016807	0.846104	0.3982
D(NY(-1))	0.102495	0.014241	1.775221	0.0410
D(CIF(-1))	-0.012575	0.014359	-0.875800	0.3819
C	14.50080	0.097417	148.8524	0.0000
ECM(-1)	0.957835	0.019189	49.91664	0.0000
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			1.602557	1.0000
Weighted Statistics				
R-squared	0.884933	Mean dependent var		14.55863
Adjusted R-squared	0.883307	S.D. dependent var		5.021841
S.E. of regression	1.715481	Sum squared resid		832.8340

F-statistic	544.1093	Durbin-Watson stat	2.468233
Prob(F-statistic)	0.000000		
Unweighted Statistics			
R-squared	0.884933	Mean dependent var	14.55863
Sum squared resid	832.8340	Durbin-Watson stat	2.468233
Correlated Random Effects - Hausman Test			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	6.018399	4	0.1930

Source: Computed from E-view 9.0, 2026

The Hausman specification test was performed to decide between the pooled, Fixed Effects, and Random Effects specifications. The null hypothesis (H_0) is that the Random Effects specification is appropriate, while the alternative hypothesis (H_1) is that the Random Effects specification is not appropriate and that the Fixed Effects Model should be used instead. The Hausman test results reveal that the Random Effects Model provides the right specification for the estimated model. According to the regression results reported below, the adjusted coefficient of determination (Adjusted R^2) is 88.3%. This implies that 88.3% of the variation in the stock value of the selected firms is explained by variations in inflation illusion, while 12.7% of the variation is attributed to factors not included in the model. The overall significance of the estimated

regression is revealed by the F-statistic and its probability. Specifically, the reported Durbin-Watson statistic of 2.468233 proves that there is no serial autocorrelation of the variables. The estimated intercept is positive and statistically significant, which implies that, holding the other variables constant, the price value of the selected manufacturing firms will increase by approximately 14.5 units. Moreover, according to the estimated coefficients, nominal yield and real inflation rate have a positive influence on stock value, while core inflation has a negative influence on the stock value of the quoted firms over the period analyzed.

Real cash flow, Normal interest rate, Money supply and Stock Value

Table 5: Presentation of Panel Unit Root Results at Levels

Series: SV				
Method	Statistic	Prob.**	Cross-sections	Obs
Levin, Lin & Chu t*	-8.78917	0.0000	36	288
Im, Pesaran and Shin W-stat	-1.81301	0.0349	36	288
ADF - Fisher Chi-square	95.1326	0.0354	36	288
PP - Fisher Chi-square	125.682	0.0001	36	324
Series: D(RCF)				
Levin, Lin & Chu t*	-14.9127	0.0000	36	252
Im, Pesaran and Shin W-stat	-5.25654	0.0000	36	252
ADF - Fisher Chi-square	160.586	0.0000	36	252
PP - Fisher Chi-square	242.506	0.0000	36	288
Series: NITR				
Levin, Lin & Chu t*	-6.21963	0.0000	36	288
Im, Pesaran and Shin W-stat	-1.67247	0.0472	36	288
ADF - Fisher Chi-square	92.7610	0.0503	36	288
PP - Fisher Chi-square	83.3479	0.1698	36	324
Series: D(MS)				
Levin, Lin & Chu t*	-9.32701	0.0000	36	252
Im, Pesaran and Shin W-stat	-1.69364	0.0452	36	252
ADF - Fisher Chi-square	100.767	0.0142	36	252
PP - Fisher Chi-square	190.567	0.0000	36	288

Series: D(MS,2)				
Levin, Lin & Chu t*	-1.50398	0.0663	36	216
Im, Pesaran and Shin W-stat	-1.26205	0.1035	36	216
ADF - Fisher Chi-square	82.4653	0.1873	36	216
PP - Fisher Chi-square	330.830	0.0000	36	252
Series: D(SV,2)				
Levin, Lin & Chu t*	-27.6375	0.0000	36	216
Im, Pesaran and Shin W-stat	-8.63321	0.0000	36	216
ADF - Fisher Chi-square	174.720	0.0000	36	216
PP - Fisher Chi-square	401.194	0.0000	36	252
Series: D(RCF,2)				
Levin, Lin & Chu t*	-14.8892	0.0000	36	216
Im, Pesaran and Shin W-stat	-4.27584	0.0000	36	216
ADF - Fisher Chi-square	143.993	0.0000	36	216
PP - Fisher Chi-square	283.987	0.0000	36	252
Series: D(NITR,2)				
Levin, Lin & Chu t*	-53.1748	0.0000	36	216
Im, Pesaran and Shin W-stat	-13.4637	0.0000	36	216
ADF - Fisher Chi-square	263.268	0.0000	36	216
PP - Fisher Chi-square	290.123	0.0000	36	252
Series: D(MS)				
Im, Pesaran and Shin W-stat	-1.69364	0.0452	36	252
ADF - Fisher Chi-square	100.767	0.0142	36	252
PP - Fisher Chi-square	190.567	0.0000	36	288

Source: Computed from E-view 9.0, 2026

Panel data unit root tests were employed to ascertain the stationarity of the variables that depict risk, agency cost and financing policy of the quoted manufacturing firms. Cabral and Kreuter (2018) argue against the panel unit root procedures which differ from conventional unit root approaches by including both cross-sectional units and time categories in the analysis of hypotheses. PANEL UNIT ROOT PROCESSES We distinguish between two types of panel unit root processes. The first common unit root process assumes persistence parameters are the same for each cross-sectional unit, like Levin, Lin and Chu test (LLC). The first is the common unit root process, which cleanses persistence parameters across the cross-sectional units and underpins the Im, Pesaran and Shin (IPS), Fisher-ADF and Fisher-PP tests; As a result, we used both classes of panel unit root procedures to test the non-stationarity of

the variables. The LLC test was employed to assess the common unit root process, while the IPS test, ADF-Fisher Chi-square and PP-Fisher Chi-square tests were utilized to investigate individual unit root processes. The results show that the null hypothesis of a unit root is not rejected at 5% significance level for some values which means they are nonstationary and other variables are stationary in levels. The null hypothesis is at the level of 5% for which all tests have rejected except PP-Fisher Chi-square test which does not reject the null, i.e. Unit root exist based on this test; All pp-fisher chi square tests financial policy more money financiers across⁴⁷ where the spectral distribution becomes easier to follow over finite ranges. In all cases, however, the null hypothesis was rejected at the 5% significance level (results not shown) when a first difference was taken, indicating that all of these series are differenced stationary.

Table 6: Pedroni Residual Cointegration Test

	<u>Statistic</u>	<u>Prob.</u>	<u>Weighted Statistic</u>	<u>Prob.</u>
Panel v-Statistic	-1.561058	0.9407	-2.691232	0.9964
Panel rho-Statistic	3.274987	0.9995	3.019846	0.9987
Panel PP-Statistic	-2.407755	0.0080	-4.538276	0.0000
Panel ADF-Statistic	-0.296339	0.3835	-1.531294	0.0628

Alternative hypothesis: individual AR coeffs. (between-dimension)					
		<u>Statistic</u>	<u>Prob.</u>		
Group rho-Statistic		5.703187	0.0000		
Group PP-Statistic		-7.612778	0.0000		
Group ADF-Statistic		-3.327140	0.0004		

Source: Computed from E-view 9.0, 2026

The results of the cointegration test proved that the variables are cointegrated as the probability coefficient of the variables are less than 0.05, we accept the alternative hypotheses that there is presence of long run relationship between the dependent and the independent variables.

Table 7: Presentation of Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
RCF does not Granger Cause SV	288	0.15648	0.8552
SV does not Granger Cause RCF		0.09773	0.9069
NITR does not Granger Cause SV	288	0.43353	0.6486
SV does not Granger Cause NITR		0.06267	0.9393
MS does not Granger Cause SV	288	0.23459	0.7910
SV does not Granger Cause MS		0.77805	0.4603

Source: Computed from E-view 9.0, 2026

From the causality test presented in the above table, there is independent relationship from inflation illusion and price. We accept the null hypothesis that there is no causal relationship between the variables within the time series.

Table 8 Panel Regressions Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
RCF	0.011213	0.055194	0.203160	0.8392
NITR	0.021421	0.047247	0.453382	0.6506
MS	-0.173932	0.093813	-1.854028	0.0448
C	14.76506	0.907231	16.27486	0.0000
ECM(-1)	0.620011	0.047258	13.11966	0.0000
Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.912188	Mean dependent var		14.57445
Adjusted R-squared	0.900130	S.D. dependent var		4.958309
S.E. of regression	1.566937	Akaike info criterion		3.851266
Sum squared resid	697.3024	Schwarz criterion		4.318025
Log likelihood	-583.9051	Hannan-Quinn criter.		4.037571
F-statistic	75.64615	Durbin-Watson stat		2.175044
Prob(F-statistic)	0.000000			
RCF(-1)	0.006194	0.004876	1.270371	0.2049
NITR(-1)	0.002245	0.003893	0.576676	0.5646
MS(-1)	-0.154159	0.008761	-17.59658	0.0000
C	14.88232	0.075579	196.9114	0.0000
ECM	0.999372	0.001636	610.7217	0.0000
Effects Specification				

			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.145678	1.0000
	Weighted Statistics			
R-squared	0.999229	Mean dependent var		14.57445
Adjusted R-squared	0.999219	S.D. dependent var		4.958309
S.E. of regression	0.138568	Sum squared resid		6.125143
F-statistic	103311.6	Durbin-Watson stat		1.696589
Prob(F-statistic)	0.000000			
	Unweighted Statistics			
R-squared	0.999229	Mean dependent var		14.57445
Sum squared resid	6.125143	Durbin-Watson stat		1.696589
Correlated Random Effects - Hausman Test				
Test Summary		Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random		1.898496	4	0.7544

Source: Computed from E-view 9.0, 2026

The Random Effects regression results suggest that 99.9% of the variability in stock value of the quoted firms is linked to the variations brought about by inflation illusion (as according to specification/model) as reflected by the adjusted coefficient of determination (Adjusted R^2). The F-statistic and its p-value support the overall statistical significance of the estimated model. Observing the Durbin–Watson statistic 1.696589, we confirm that there is serial autocorrelation among the variables. In addition, the regression intercept is positive and significant, meaning that controlling for other explanatory variables in their 10–95 percentile range, the price value of manufacturing firms would rise by roughly 14.8 units. The estimated coefficients illustrate that real cash flow and nominal interest rate positively influences the quote of firm with shares higher, while money supply has a negative influence for the time range covered by this study.

Conclusion

The results from Model One reveal that 88.3% of the stock value of the selected firms is explained by changes in inflation illusion as reported in the given regression model. Thus, 12.7% of the changes in the stock value of the selected firms are attributed to other sources not included in the model. An inspection of the estimated regression constant reveals that it is positive and statistically significant implying that, holding other factors constant, the price value of the selected manufacturing firms is expected to increase by approximately 14.5 units. The results further indicate that nominal yield and real inflation rate have positive effect on the stock value, while core inflation exerts a negative effect on the stock value of the quoted firms throughout the study period. For Model Two, the

results show that 99.9% of the variation in stock value is associated with variations in inflation illusion captured by the regression specification, with the remaining 0.1% attributed to other sources not included in the model. The regression intercept is also positive and statistically significant implying that ceteris paribus, the price value of the manufacturing firms would increase by approximately 14.8 units. In addition, the results show that real cash flow and nominal interest rate exert positive effects on the stock value, while money supply has a negative effect on the stock value of the quoted firms over the period examined.

Recommendations

- Quoted firms in Nigeria are encouraged to make maximizing of their market values the major focus when deciding their choice of investment policies since there is a positive significant relationship existing between cash flow and corporate valuation.
- The study recommended the need to deregulate interest rate in the Nigeria capital and money market to allow the market force of demand and supply.
- Yield on investment should be integrated with the objective of increasing the increasing valuation of quoted firms in the Nigeria stock exchange.

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