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Determinants of Stock Price Movements in Nigeria: Evidence from Monetary Variables

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Abstract

Most studies conducted on the determinants of stock price movements in Nigeria have been done on theoretical basis with no quantitative empirical evidence to support their postulations. Consequently, this study examined the macroeconomic determinants of stock price movements in Nigeria using detailed econometric framework in order to provide the foundation for evidence-based policies. Both the long-run and short run dynamic relationships between the stock price movement and the macroeconomic variables were analyzed with time series data that spanned from 1985 to 2010 using the Engle-Granger two-step cointegration test. We established that there is no cointegration between the variables, indicating the absence of long run relationship. Results of the regression indicate that the monetary policy variables (real exchange rate, real interest rate and money supply) as well as political instability are not the determinants of stock price movements in Nigeria; however, inflation was found to be a major determinant of stock price movements. The study recommends that the monetary authorities (that is the Central Bank of Nigeria, CBN) and policy makers should pay attention to changes in money supply and inflation in view of their sensitivity to stock price movements in Nigeria.

Key words: Stock Price Movement; Monetary Policy Variables; Cointegration; Inflation, CBN; Nigeria

1. Introduction

The stock market has become an essential market playing a vital role in economic prosperity by fostering capital formation and sustaining economic growth in most economies across the world. Stock markets are more than a place to trade securities; they operate as facilitator between savers and users of capital by means of pooling of funds, sharing risk, and transferring wealth. Stock markets are essential for economic growth as they ensure the flow of resources to the most productive investment opportunities (Udegbunam and Eriki, 2001). Guglielmo et al. (2004) argue that the primary benefit of a stock market is that it constitutes a liquid trading and price determining mechanism for a diverse range of financial instruments. This allows risk spreading by capital raisers and investors and matching of the maturity preferences of capital raisers (generally long-term) and investors (short-term). This in turn stimulates investment and lowers the cost of capital, contributing to the economic growth of a nation in the long term.

It is worth noting that stock price all over the world including Nigeria is characterized by upward and downward movements. Meristem Research of August 2008 describes the Nigerian stock market as a secular market driven by forces that could be in place for many years, causing the price of a particular investment or asset class to rise or fall over a long period of time. While on the one hand, in a secular bear market, weak sentiment causes selling pressure over an extended period of time. On the other hand, in a secular bull market, strong investor sentiment drives prices higher, as there are more net buyers than sellers. Trading volumes (number of shares) in the stock market constantly fluctuated strongly as stock prices change in stock markets on a daily basis. In Nigeria, just like in many other countries of the world, the question of what determines stock price movements (upward and downward) is seen to provoke diverse answers from different circles. The known efficient market theory believe that stock prices reflect everything that is known about a company and hence can be predicted based on fundamental analysis, while proponents of technical analysis attempt at forecasting future security prices based on historical data.

The factors driving stock price movements have become issue of concern to both researchers in academics and professional portfolio managers. While few researchers have approached the determinants of stock price movements from the micro perspective, few others approached it from macro perspective. Incidentally, few studies in Nigeria have attempted to provide empirical evidence of the determinants of stock price movements (for instance Udegbunam and Eriki, 2001), while few others have done that at theoretical level (for example Meristem Research, 2008). While the study by Udegbunam and Eriki (2001) is lagging behind in time especially in the face of the recent global financial crisis, Meristem Research (2008) only provides a theoretical exposition that lacks quantitative empirical evidence. Again, at the different countries level, studies conducted on the determinants of stock price movements showed divergent outcomes, even though it seems that some determinants commonly appeared for all stock markets. However, it is difficult to generalize the results due to the various conditions that surround each stock market environment. This is because each market has its own rules and regulations, country peculiarities, type of investors, and other factors that provide the basis of its uniqueness.

Consequently, this study provides quantitative evidence on the factors that determine the stock price movements in Nigeria. The policy relevance of this study cannot be over stressed since Nigeria has increasingly become an investment destination for most foreign financial investors as a result of the recent financial sector reforms. Therefore, studying the determinants of Nigerian stock price movement is very germane for financial investment decision so that the country-specific factors influencing the upward and downward movements of stock prices can be identified. Herein lies the purpose and significance of this study.

2. Brief Review of the Related Literature

Following Rational Expectation Theory (RET), the price of a stock or bond depends partly on what prospective buyers and sellers believe it will be in the future. Rational Expectation theory is a building block for the 'random walk' or efficient markets' theory of securities prices. A sequence of observations on daily stock price is said to follow a random walk if the current value gives the best possible prediction of future values. The Efficient Markets theory of stock prices uses the concept of rational expectations to reach the conclusion that investors buy stocks they expect to have a higher-than-average return and sell those they expect to have lower returns. When they do so, they bid up the prices of stocks expected to have higher-than-average returns and drive down the prices of those expected to have lower-than-average returns. The prices of the stocks adjust until the expected returns adjusted for risk are equal for all stocks. Equalization of expected returns means that investors' forecasts become built into or reflected in the prices of stocks. More precisely, it means that stock prices change so that after an adjustment to reflect information like dividends, bonuses, the time value of money, and differential risks, they equal the market's best forecast of the future price. Therefore, the only factors that can change stock price are random factors that could not be known in advance (Sergeant and Wallace, 1975).

The Efficient Market Hypothesis posits that the most direct influence on a stock's price is a change in the fundamentals of the business. According to them, if revenues and profits are continuously increasing, one can expect the share price to rise as investors bid to buy into the increasing fortunes of the company. On the other hand, if the profit is flat or declining with no change in sight, investors begin to abandon the stock and the price will fall. The theory however argues that changes in the underlying business have a direct impact on the share price. Smart investors spot a subtle change before they become price-movers and take the appropriate action. Another factor which the theory identified is what is referred to as sector changes; the theory maintains that changes in the stock's sector can have positive or negative effects on its price. Some sectors or industries are cyclical in nature and that should be expected to affect the stock price (Mukherjee and Naka, 1995; Maysami and Koh, 2000).

Mukherjee and Naka (1995) argue that market forces such as demand and supply affect stock price movements. Any change in demand and supply, both of which can change at different rates causes fluctuation in share prices. If demand for a stock rises, its price tends to rise. An increase in supply depresses the stock price. Demand and supply are however related to other factors. Investment returns or company profitability is another potential factor. This factor is however dependent on profitability as there is no company that can pay good investment returns in terms of dividends and/or bonus issues to its share holders without a solid profitability report. However no company is by law compelled to declare dividends. It is only when such company makes profit that it can declare dividend and/or bonus issues. An impressive investment returns will attract more investors to the company; in other words, if returns on investment are attractive, there will be high demand for its stock and the price moves up. The reverse is the case when a company's investment returns is unattractive. Ordinarily, if a company is performing well in the area of profitability, investors will be interested to invest in such company and this will influence the share price of the company. On the other hand, a poor profitability will not attract investors as they will not like to put their monies at risk. In essence, impressive profitability of a company leads to increase in demand of the company's shares and subsequently increase in its share price (Meristem Research Report, 2008).

Apart from specific company characteristics, other external factors such as government rules and regulations, inflation, exchange rate, money supply, growth in gross domestic product and other economic conditions, investor behavior, market conditions, competition, uncontrolled natural or environmental circumstances directly affecting the production of the company, behavior of market participants, strikes, and so on, could be very important influencing factors in determining stock price movements.

Inflation and interest rate are key external factors identified as determinants of stock price movement. Maysami and Koh (2000) using cash flow valuation model maintains that an increase in expected inflation rate is likely to lead to economic tightening policies that would have negative effect upon stock prices. A rise in the rate of inflation increases the nominal risk free rate and raises the discount rate. DeFina (1991) however argues that the cash flows does not rise at the same rate as inflation, and the rise in discount rate leads to lower stock prices. A