

CORPORATE GOVERNANCE MECHANISMS AND SHARE PRICE VOLATILITY OF QUOTED FIRMS: INSIGHTS FROM NIGERIA

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Abstract

The study examined how certain corporate governance mechanisms such as audit committee size, ownership concentration; managerial ownership and board Independence engender share price volatility in Nigeria using yearly data for the period 2010-2015. Twenty listed firms were selected as sample size. The study uses both descriptive and inferential statistics to determine the relationship among the variables. The GARCH (1,1) was employed to examine the volatility clustering between some selected corporate governance indicators and how they engender share price volatility among the sampled companies. The findings indicate a positive link in stock price volatility lag and share price volatility while ownership concentration had a strong association with the volatility of share prices. Similarly, the empirical results show that audit committee size was significant and impacted positively on stock price volatility. Additionally, managerial ownership was found to negatively impact on share price volatility and is significant to such a higher level of managerial ownership that induces conditional volatility of stock prices. Premised on these intriguing empirical findings, it was recommended that there is the need for stock market players (such as stock dealers, stockbrokers, institutional investors, among others) to incorporate corporate governance variables into their models for estimating the fair value of stock price returns and evaluating the moderate/or long term performance portfolios of the firm.

Keywords: Corporate governance mechanisms, Audit committee, Ownership concentration, Board independence, Managerial ownership and Share price volatility.

Introduction

Corporate governance is integral to the daily management of organizations. It is the hub upon which the success or failure of companies evolves. For instance, expansion of firm's earnings, cost minimization and shareholders' wealth maximization largely depend on the efficiency of corporate governance mechanisms. Without corporate governance in perspective, the goal of a firm could be defeated. The heightened focus on corporate governance stems from the occurrence of collapsed multinational corporations in developed and developing countries in the past and the need to ensure adequate returns on the investment of resources for owners or shareholders (Samanta & Samanta, 2007). The shareholders make investment, and they expect judicious management, accountability and transparency (Ilaboya & Aggreh, 2013). There is always the tendency on the part of the managers

to run the business sometimes at variance with the goal of the owners which most often times necessitates agency cost. Corporate governance adherence thus ensures this is not so. To effectuate this, many countries through various agencies and regulators put in place and also spell out the content of corporate governance code of best practices that are meant to checkmate what is done and how it is done by managers in a firm in any particular sector. In Nigeria, the Central Bank of Nigeria (CBN) and the Securities and Exchange Commission (SEC) have corporate governance code of best practices that all banks and quoted banks should follow for disclosure, transparency and accountability so as to ensure sanity in the management of the business activities and consequently the maximization of shareholders' wealth.

Thus, Ezazi, Sadeghi, Alipour and Awjadi (2011) posited that the subject of corporate governance plays an important role in determining the fate of a company in respect of the operational viability of such a company. As such, corporate governance is an aspect of fundamental analysis. Fundamental analysis comprises analyzing the economic, industry and company framework. Within the economic, industry and company framework, the attention of researchers have always been drawn towards examining the nexus between economic variables such as exchange rate, inflation rates, interest rate, GDP, amongst others that is related to share price volatility. In developed countries, there is a gradual paradigm shift from the economic variables to company specific fundamentals such as corporate governance mechanisms and how they engender share price volatility. Theoretically, a change in the corporate governance mechanisms should affect the performance or market value of firms just like any macro- economic variable could do to the stock prices. A significant change or adverse occurrence in the corporate governance structure of a firm should send amber signals to the stock market which may have instantaneous reactions on the stock prices of the firm in question. Stock prices immediately adjust to the changes and this adjustment of the prices of share could be favourable or otherwise. Classen (2001) argued that poor corporate governance can increase uncertainty and volatility while weaker corporate governance can limit price discovery in stock markets and thereby increasing stock price volatility.

Further, Osaze (2011) adduced the occurrence of the stock market melt-down or drastic fall and creeping of share prices of quoted firms when a good corporate governance principle was breached by the authorities of the Nigerian stock market. More so, Osamwonyi and Ogbeide (2015) advanced reasons for some deposit money banks found to be in state of insolvency and sharp fall in their share prices in the Nigerian stock market in 2009 due to poor corporate governance mechanisms. Osamwonyi and Ogbeide's report showed that there exists a relationship between corporate governance mechanisms and movement of stock prices in Nigerian quoted firms. Though their analysis did not reveal volatility which is how corporate governance mechanisms could engender share price volatility of the sampled firms. However, they recommended the need for stock market players to incorporate corporate governance mechanisms in their models for estimating the fair value of stock price return. It was also suggested that the use of advanced estimation technique like AutoRegressive Conditional Heteroscedasticity (ARCH) & Generalized AutoRegressive Conditional Heteroscedasticity (GARCH) to analyze the relationship between corporate governance mechanisms and share price volatility can be helpful.

Heaps (2010) observed that many managers and investors of listed companies are sometimes ignorant of the relationship that subsists between corporate governance structures and their seemingly impressive share prices. Consequently, structured corporate governance mechanisms in

any organization in Nigeria will no doubt serve as a veritable tool for influencing investors' confidence and consequently the share price. However, there are no generally established corporate governance variables that determine share price volatility in non-Western countries. This is the gap in the literature that the current study seeks to address. It is, therefore, imperative to report on empirical fronts on realities in developing countries such as Nigeria on how certain corporate governance mechanisms can necessitate share price volatility so as to keep investors and managers informed in taking good investment decisions as well as ensuring that there is adherence to corporate governance code of best practices by firms with a view to maximizing shareholders' wealth.

Literature review

Corporate governance practically implies that the board of directors (or management) should act in the best interest of shareholders and for the purposes of minimizing cost. As such, one of the established aims of corporate governance entrenchment should be to maximize shareholders' wealth and also satisfactorily meet the needs of other myriad of stakeholders of the organization. As noted by Pandey (2008), maximizing a present value to shareholders will be more evident in share price appreciation or changes. In essence, a share price is the price at which a unit of shares is sold and bought on the floor of a recognized stock market. Following this view point, there is no doubt that a well performing company will always have its shares attractive to investors. More so, a firm that fails to perform optimally to investors' expectations will have its share price significantly drop. A gradual fall in the price of shares of a company portends the wealth of the shareholders are being eroded. Thus, the success or failure of a firm largely hinges on the efficient corporate governance structure which can significantly impact on share prices of a firm. A poor corporate governance structure may result in poor performance, particularly market based performance; and consequently necessitating share price volatility. In practice, volatility may be seen as constant changes in the value of an object or investments while stock price volatility represents the variability of share price changes, and it could be perceived as a measure of risk faced by investors (Mugaloglu & Erdag, 2011). Most times, the stock prices in the financial market are characterized by fluctuation which requires an appropriate model to explain these fluctuations in a scientific manner (Morck, Young, & Yu, 2000) that will determine the fluctuation and variations in the prices of quoted stocks and to ascertain how this volatility occurs.

A review of some empirical studies such as Osamwonyi and Ogbeide (2015) in a research where these authors examined the relationship between corporate governance mechanism and movement of stock price in Nigeria for the period 2008 – 2012 from a sample of twenty firms found that changes in ownership concentration and managerial ownership exert significant changes in share price. Furthermore, Mehrpour and Shooshtarian's (2015) study revealed that concentrated ownership and major shareholders have a negative effect on stock price while institutional shareholders have a positive impact on stock price volatility. Additionally, Al-Kassar and Al-Nidawiy (2014) sought to identify the principles of corporate governance that may affect the stock price of companies listed on the stock exchange in a country-specific research discovered that ownership structure has a negative association with share price and volatility. Also, the study of Alzeaideen and Al-Rawash (2014) revealed a positive statistically significant relationship between large number of shareholders and share price volatility. In another context-specific study, Mugaloglu and Erdag (2013) assessed corporate governance, transparency and stock return volatility of firms listed in the Istanbul Stock Exchange and found that volatility in a majority of the shares increased as opposed to expectations. Thus, this study intends to document further insights on this topical issue from the Nigerian perspective.

Methodology

Data: The population of interest consists of all firms listed on the Nigerian Stock Exchange (NSE) between 2010 and 2015 (a total of 198 as at December 2015). A sample size of twenty (20) firms was used in the study made up of firms with needed data for the study for the period under review. The sample was obtained using sample filtering (by removing firms without or with incomplete data) and purposive sampling method. Although, the sample size was small, but consist of one hundred and twenty (120) observations for all the variables of concern used in the study. The study employs secondary sources of data on stock price, audit committee size, ownership concentration, managerial ownership and board independence collected from the NSE official site.

Model specification: This study adapts the model of Mugaloglu and Erdag (2013) where they assessed corporate governance, transparency and stock return volatility of firms listed in the Istanbul Stock Exchange. However, the model for the study utilized the GARCH approach in identifying the effect of corporate governance on share price volatility. These models help to study volatility clustering. Assuming linearity, the first and second conditional moments of price series (given its past behaviours) can be jointly estimated by GARCH (p,q) in order to characterize the dependence of future observations on past values. The GARCH (1,1) modeling process involves two steps. The first step involves specifying the mean equation which relates corporate governance to share prices and the second step is specifying the conditional variance equation which involves modeling the conditional variance of the residuals. The AR (1)-GARCH (1,1) model for stock price volatility can be expressed as follows:

Conditional variance equation

$$s^2_t = a_0 + a_1 \epsilon^2_{t-1} + b_1 s^2_{t-1}; a_0 > 0, a_1 > 0, b_1 > 0 \dots\dots\dots (1)$$

Where

a^2_t : Conditional variance in period t

a_0 : Constant

ϵ^2_{t-1} : ARCH (1) term

s^2_{t-1} : GARCH (1) term

Mean Equation

$$SPV_{it} = Y_0 + Y_1 AUDCM_{it} + Y_2 OWCON_{it} + Y_3 MGS_{it} + Y_4 BIND_{it} + \epsilon_{it}$$

Where;

SPV = Share price volatility

AUDCM = Audit committee size

OWCON = Ownership concentration

MGS = Managerial ownership

BIND = Board independence

0- 1 = slope coefficients

Empirical Analysis

Table 1: Descriptive statistics

	STP	AUDC	OWCON	MGS	BIND
Mean	265.2919	5.787879	53.04162	43.12698	50.95010
Median	145.1100	6.000000	55.49000	19.74000	55.56000
Maximum	2560.400	8.000000	89.19000	293.2500	80.00000
Minimum	211.8000	4.000000	5.870000	1.010000	11.11000
Std. Dev.	354.5514	0.718171	23.20295	64.04698	18.73293
Jarque-Bera	1668.525	53.28702	5.929074	340.9703	6.428604
Probability	0.000000	0.000000	0.051584	0.000000	0.040183

Source: Author's compilation (2017).

Where;

- STP = Share price
- AUDC = Audit committee size
- OWCON = Ownership concentration
- MGS = Managerial ownership
- BIND = Board Independence

The descriptive statistics for the variables reveals that the mean for share price for the sample is 265k; the maximum value is 2560k, the minimum values stood at 211k. The standard deviation is 354; and this is quite large. It suggests that there are significant deviations of STP for the distribution of firms from the sample average. The mean for AUDC is approximately 6 which suggests that on the average firms in the distribution have about six audit committee members. The maximum and minimum values stood at 8 and 4 respectively. The standard deviation 0.71 suggests that clustering of the audit committee size for the distribution of firms around the sample average. The mean for OWCON measured as the ratio of shares held by top five shareholders to total share is 53.041%. The maximum value stood at 89.19%; the minimum values stood at 5.87%, and the standard deviation, 23.2029. The average of managerial share ownership (MGS) is 43.126% with maximum and minimum values of 293.25% and 1.01% % respectively and a standard deviation of 64.046. The mean for BIND is 50.950. The maximum value is 80%, the minimum value stood at 11%, and the standard deviation is 18.733. The Jarque-Bera statistics reveals that the variables are normally distributed and hence the presence of outliers may be unlikely in the series.

Table 2: Correlation Result

	SP	AUDC	OWCON	MGS	BIND
SP	1				
AUDC	0.274359	1			
OWCON	0.145103	0.03446	1		
MGS	-0.176464	-0.4234	-0.37645	1	
BIND	0.07950	-0.2212	-0.0339	0.25195	1

Source: Author's compilation (2017).



Table 2 shows a positive correlation between SP and AUDC ($r=0.274$). A positive nexus between SP and OWCON($r=0.145$) and BIND is positively associated with SP ($r=0.079$) while MGS is negatively related with SP($r=-0.176$). Particularly, the study finds a negative association between AUDC and OWCON ($r=-0.035$), AUDC and MGS ($r=-0.423$), BIND and AUDC ($r=-0.22$). Additionally, there is a negative correlation between OWCON and BIND ($r=-0.0339$).

Table 3: GARCH(1, 1) Result

	Variance equation			
	Coefficient	Std Error	z-Statistic	Prob
	0.03480	0.04926	0.706455	0.3880
	0.56427	0.22246	2.536500	0.0105*
	0.53377	0.12054	4.428156	0.0000*
Mean Equation				
C	3.962501	1.400041	2.830274	0.0028*
AUDC	1.152120	0.533122	2.161081	0.0314*
OWCON	0.163431	0.231431	0.706188	0.4081
MGS	-0.189800	0.105011	-1.807429	0.0577**
BIND	-0.287952	0.123459	-2.332369	0.0143*
SP(-1)	0.001001	0.000345	2.901449	0.0055*
R ² = 0.550112				
Adj R = 0.51012				
D.W = 2.12				

Source: Author's compilation (2017).

Table 3 shows that square residuals are positive and significantly cause volatility in share price of the quoted companies in this study. Similarly, past variances are significant and positively cause stock price volatility in the firms under consideration in the study. The variance equation which is the sum of the coefficients (+) in the case of GARCH is close to 1.0, which is a sign of inertia in the development of the conditional variance. This portends a consistent conditional volatility of returns; a further affirmation that returns volatility is mean reverting irrespective of the time it takes, such that volatility process does return to its mean. The results of the mean equation reveals that the R² value stood at 0.55 which suggests that corporate governance explains about 55% of systematic variations in stock price volatility with an adjusted value of about 0.51.

The mean equation results show that audit committee size has a positive (1.152) and significant ($p=0.0314$) effect on stock price movements. The effect of ownership concentration is positive (0.1645) and not significant ($p=0.4081$) at 5% which implies that higher level of concentrated ownership would likely increase the conditional volatility of stock prices. Managerial ownership was found to negatively (-0.1898) impact on share price volatility and significant ($p=0.0577$) at 10%, hence, higher level of managerial ownership reduces conditional volatility of stock prices. In fact, managerial ownership has been supported as one of the mechanisms to help align the interest of both management and stakeholders. Consequently, in the presence of high managerial ownership, the firm (management) is not affected by uncertainties and situations that may induce stock price volatility; therefore, by reason

of their ownership stake, managerial propensity will be to take actions and decisions that reduce volatility in its stock price.

Board independence also has a negative (-0.289) effect on share price volatility and significant ($p=0.0143$) at 5%, this implies that higher board independence can help reduce the conditional volatility of share prices. The reason is that more independent boards especially those with reputable individuals can send signals to investors about the stability and security of their investment, curtail risky managerial actions that can trigger market uncertainty and help maintain stable earnings by reducing opportunistic tendencies by management.

On the overall, the results support the hypothesis that corporate governance has a significant effect on share price volatility in non-financial companies in Nigeria. The findings are in tandem with Morck, et al (2000); De-Beer, (2009); as well as Gahlot, Datta and Kabil, (2010). Morck, et al (2000) and Gahlot, et al reported that there exists stock price volatility in their work; however, they did not use corporate governance variables. Similarly, Al-Kassar and Al-Nidawiy (2014) discovered that corporate governance - ownership structure has a negative association with share price and volatility. Also, the study of Alzeaideen and Al-Rawash (2014) revealed a positive statistically significant relationship between large number of shareholders and share price volatility. However, these studies used different corporate governance mechanisms from the ones in this study.

Conclusion and Recommendations

The purpose of this paper is to empirically argue that corporate governance indicators could bring about the volatility of share prices in the Nigerian Stock Market. To assess the arguments, we examined how ownership concentration, board independence and managerial ownership impacts significantly on share price volatility. Using the GARCH (1 1) estimations, the study found that conditional volatility of stock prices is quite persistent. The mean equation results show that audit committee size has a positive and significant effect on stock price movements. The effect of ownership concentration though positive, is not significant in stock price volatility in Nigeria. Managerial ownership and board independence were found to negatively impact on share price volatility, thereby causing the volatility of stock prices of quoted companies in the Nigerian Stock Market. Therefore, stock prices in the Nigerian stock market are volatile and corporate governance mechanisms like audit committee size, board independence and managerial ownership contribute significantly to this volatility in share price.

The result from the study thus opens up possible recommendations for investors, fund managers and other stock market players interested in formulating the short and long run expectations regarding stock returns. Principally, the study recommends that based on the empirical evidence provided, there is the need for stock market players to incorporate corporate governance issues in their models with a view to estimating the fair value of stock price return and evaluating the moderate or long term performance of managed portfolios. In particular, market participants should pay attention to companies' board independence and managerial ownership since they can reduce stock price volatility.

Furthermore, an observed limitation in the study is the period under consideration and number of firms used as sample. So, the study recommends that further research in this area should investigate

corporate governance mechanism and stock price and/or stock return volatility using more recent data and a larger sample size.

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