

## **CORPORATE GOVERNANCE MECHANISMS AND FIRM FINANCIAL PERFORMANCE IN NIGERIA**

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### **Abstract**

*Recent global events concerning high-profile corporate failures have put back on the policy agenda and intensified debate on the efficacy of corporate governance mechanisms as a means of increasing firm financial performance. This study is an attempt to address this question using a sample of 93 firms quoted on the Nigerian Stock Exchange for the period 1996-99. While making a case for a board size of ten and for concentrated as opposed to diffused equity ownership, the results argue for the separation of the posts of CEO and Chairman. Moreover, although the results find no evidence to support the idea that boards with higher proportion of outside directors perform better than other firms, there is evidence that firms run by expatriate CEOs tend to achieve higher levels of performance than those run by indigenous CEOs. In the main, the results are consistent with existing literature but there is the need to err on the side of caution in any attempt to generalize the findings as the sample selection was determined by the availability of data rather than by any probability criterion.*

### **Introduction**

Corporate governance is concerned with ways in which all parties interested in the well being of the firm (or stakeholders) attempt to ensure that managers and other insiders take measures (or adopt mechanisms) that safeguard the interests of the stakeholders. Such measures are necessitated by the separation of ownership from management, an increasingly vital feature of the modern firm. A typical firm is characterized by numerous owners having no management function, and managers with no equity interest in the firm.

Shareholders, or owners of equity, are generally large in number, and an average shareholder controls a minute proportion of the shares of the firm. This gives rise

to the tendency for such a shareholder to take no interest in the monitoring of managers, who, left to themselves, may pursue interests different from those of the owners of equity. For example, the managers might take steps to increase the size of the firm and, often, their pay, although that may not necessarily raise the firm's profit, the major concern of the shareholder.

Financial economists have long been concerned with ways to address this problem that arises from the incongruence of the interests of the equity owners and managers, and have made significant research efforts towards resolving it. The literature emanating from such efforts has grown, and much of the econometric evidence has been built upon the theoretical works of Ross (1973), Jensen and Meckling (1976) and Fama (1980). At the initial levels of the development of the theory of agency, especially as it relates to the firm, concern seemed to focus more on the relationship between the management and shareholders than between them and other categories of stakeholders. The stakeholder theory has of late captured the attention of researchers and a survey of literature on this aspect of corporate finance can be found in the works of John and Senbet (1998). According to this theory, the firm can be considered as a nexus of contracts between management on the one hand and employees, shareholders, creditors, government and all other stakeholders on the other. Thus, from the point of view of the stakeholder theory, concern should go beyond the traditional management-shareholder relationship to include all other stakeholders such as mentioned above. The stakeholder theory has undergone some refinements in the work of Jensen (2001), who presents what he terms as "enlightened stakeholder theory". For him, the traditional stakeholder theory encourages managers to be servants of many masters, with no clear guidance whenever tradeoffs (or indeed, conflicts) occur, as they often do. He argues that the absence of any criterion for choice in cases of tradeoffs (or conflicts) tends to give managers some discretionary powers to serve the master of their own choice. As we will see in a subsequent section, Jensen proposes a single criterion - addition to long term value of the firm -for managers to pursue so that the interests of all key stakeholders could be served. This is based on the idea that changes in the long-term value of the firm would be difficult to materialize if the interest of a key stakeholder were not protected.

The empirical works in the area of corporate governance has undergone a remarkable growth, founded mostly upon the basis of management-shareholder conflict and to a lesser but increasing extent on the stakeholder theory. Despite the volume of empirical evidence, there has been no general consensus on how to resolve the problem. The lack of consensus has produced a variety of ideas (or mechanisms) on how to deal with the problem of agency. The mechanisms are divided into four: striking a balance between outside and inside directors/-promotion of insider (i.e. managers and directors) shareholding; keeping the size of the board reasonably low; and encouraging ownership concentration. These mechanisms, detailed in section four of this paper, are summarized at this stage.

As a means for reducing the problem of agency, insider shareholding has received some support especially in the works of Denis and Sarin (1999), DeAngelo and DeAngelo (1985) and McConnell and Servaes (1990). They argue that the larger

the proportion of shares owned by the managers and directors, the more likely it is for them to promote performance of the firm.

Agrawal and Knoeber (1996) propose ownership concentration as a means of addressing the problem. They suggest that the greater the proportion of shares owned by a small number of shareholders, the more likely it is that they would volunteer to monitor the management. The third mechanism - composition of board members - is supported by Weisbach (1988) and Harmalin and Weisbach (1991), who argue that a board maintaining the right balance between inside and outside directors is more likely to enhance performance than one with a disproportionate ratio. Finally, the size of board is often suggested in the literature to serve as a means of resolving the agency problem. Yermack (1996), Monks and Minow (1995) and Lipton and Lorsch (1992) provide some evidence supporting the view that firms with small board size tend to perform better than those with larger ones.

This research is an attempt to examine the extent to which the suggested mechanisms might help reduce the agency problem in a developing stock exchange such as that of Nigeria where there is a yawning gap between theory and evidence. We are aware of no published work in this area on the Nigerian Stock Exchange (NSE). The only unpublished work from Nigeria is a recently completed AERC-supported research by Adenikinju and Ayorinde (2001), who used data on the NSE to examine the relationship between firm performance and two of the four mechanisms listed above - insider ownership and ownership concentration. The authors reported no significant relationship between firm performance on the one hand, and ownership concentration and managerial shareholding on the other. Though helping to shed more light on ways to reduce the agency problem in Nigeria, Adenikinju and Ayorinde (2001) suffers from a weakness of excluding important mechanisms for addressing the agency problem.

By attempting to address an important limitation of Adenikinju and Ayorinde (2001), this study aims to provide additional insights into the relationship between governance mechanisms and firm financial performance. It is hoped that the evidence would serve both as an important quantitative information into the cauldron of policy as well as add to the existing body of empirical literature from a developing stock exchange such as that of Nigeria. The need for a study of this kind is even more important in an environment such as that of Nigeria characterized by growing calls for effective corporate governance, particularly for public limited liability companies. This call is understandable in view of the importance of effective governance at both microeconomic and economy-wide levels. At the level of the firm, it offers the promise of a fair return on capital invested through improved efficiency (Metrick and Ishii, 2002). It also has some implications on the on-going privatization programme that the government of Nigeria is currently undertaking. Grosfeld (2002), citing the works of other scholars indicated that the effectiveness of privatization is greater when corporate governance works well. Moreover, by helping to promote firm performance and the protection of stakeholder interest, corporate governance encourages investment and stock market development, something that recent research has associated with

improved macroeconomic growth (Demirguc-Kunt and Levine, 1996). Further, recent evidence in the work of Klapper and Love (2002) suggests that firm-level corporate governance provisions matter more in countries with weak legal (or regulatory) environments, implying that "firms can partially compensate for ineffective laws and enforcement by establishing good corporate governance and providing credible investor protection" (Abstract).

To achieve the stated objective, this paper is structured into eight sections. Following the introduction, we provide in section two an overview of the regulatory framework, emphasizing its link with the weakness of a stock market saddled with severe problems of low level of liquidity and low trading volumes. Section three is the theoretical framework while section four is the literature review, providing a survey of stylized facts emerging out of the earlier theoretical and empirical studies. Section five enumerates the objectives and hypotheses of the study while section six details the methodology. Section seven presents the results and the last section concludes.

### **Regulatory Framework**

The Nigerian Stock Exchange (NSE), which until 1977 was known as the Lagos Stock Exchange, came into being in 1960, but started operations with less than ten stocks in 1961. At age 42, the exchange now boasts of about 200 stocks, quite a remarkable growth rate considering the number at the initial stage, but well below the figure of over 600 in each of the Malaysian, South African and South Korean exchanges. The discrepancy is even more pronounced with respect -to the market capitalization of the stock exchanges just cited. According to the Standard and Poor's (2000), as at 1999, the market capitalization for Nigerian Stock Exchange stood at US\$2,940 million. This compares with US\$145,445 million for Malaysian, US\$262,478 million for South African, and US\$308,534 million for South Korean exchanges. In relative terms, as at 1999, the market capitalization of the country's stock exchange was equivalent only to 2%, 1.1% and 0.9% of that of Malaysian, South African and South Korean Exchanges respectively. In fact, if account were taken of the fact that the 20 largest stocks on the NSE together account for 73.8% of the market capitalization (Nigerian Stock Exchange, 2001), the very small size of most of the stocks on the NSE would be better appreciated. The small number and value of stocks listed on the exchange is probably a manifestation of severe problems affecting the exchange. Such problems include a serious liquidity problem, low demand for securities and low trading volume. Liquidity of a stock exchange is concerned with the ease of trading in shares on the market. A liquid stock exchange allows for easier access to debt (debenture) and bank loans (through the use of stocks as collaterals). Writing on the Nigerian Stock Exchange, Emenuga (1998) noted that the liquidity of the market averaged just 2%, well below the average for many African bourses, and a very far cry from the average for Taiwan (174.9 per cent) and South Korea (97.8 per cent)! These problems may not be unrelated to the weak regulatory environment in which the market has operated.

Although the stock exchange was established in 1960, a regulatory body, the Securities and Exchange Commission (SEC), came into being almost two decades

later, in 1979. It took another two decades for the Securities and Investment Act (1999) to come into being. -The Act was the first comprehensive legal document providing rules and regulations for the conduct of operators in the exchange. Thus the stock exchange operated for almost two decades without a regulatory organ, and for another two with a regulatory organ weakened by the absence of a comprehensive legal document to assist in the discharge of its regulatory duties. Emenuga (1998) gives an account of some of the shady practices that prevailed in the exchange, and it may not be an overstatement to link at least some of them to a weak regulatory environment.

Previous research has suggested a link between corporate governance and the development of legal/regulatory environment. Klapper and Love (2002), for example, report that firms in countries with weak overall legal systems have on average lower governance rankings. In addition, they find that good governance is positively correlated with market valuation and operating performance, which implies a positive correlation between the effectiveness of the regulatory environment and firm performance. They also observe that in countries with weak laws the degree of flexibility of firms to affect their own governance is likely to be smaller (i.e. the firm is likely to be constrained by the country-level legal provisions). Garcia and Liu (1999) have also attempted to provide a link between the regulatory environment and governance mechanisms. A regulatory environment that encourages mandatory disclosure of reliable information about firms may enhance investor participation. Moreover, regulations that instill investor's confidence in brokers have the capacity to encourage investment and trading in the stock exchange. In a study on the Ukrainian stock exchange Dean and Andreyeva (2001) report that the regulatory environment can in fact have an important consequence on the kind of governance structures that emerge. The authors found that the weak regulatory and legal environment of Ukraine tended to favour concentrated over diffused ownership structures.

### **Theoretical Framework**

The theoretical framework upon which this study is based is the agency theory, which posits that in the presence of information asymmetry the agent (in this case, the directors and managers) is likely to pursue interests that may hurt the principal, or shareholder (Ross (1973), Fama (1980)). At first the theory was applied to the relationship between managers and equity holders with no explicit recognition of other parties interested in the well being of the firm. Subsequent research efforts widened the scope to include not just the equity holders but all other stakeholders including the employees, creditors, government, etc. This approach that attempts to align the interests of managers and all stakeholders has come to be regarded as the stakeholder theory.

The stakeholder theory has been a subject of investigation. John and Sembet (1998) provide a comprehensive review of corporate governance, with a particular focus on the stakeholder theory. The authors note the presence of many parties interested in the well being of the firm and that these parties often have competing interests. For example while equity holders might welcome investments in high yielding but risky projects, such investments might jeopardize the interests of debt holders especially when the firm is teetering on the edge of bankruptcy. The

review also emphasizes the role of non-market mechanisms, citing as an example, the need to determine an optimal size of the board of directors especially in view of the tendency for board size to exhibit a negative correlation with firm performance. Other non-market mechanisms reviewed by John and Senbet include the need to design a committee structure in a way that allows the setting up of specialized committees with different membership on separate critical areas of operations of the firm. Such a structure would allow, for example, the setting up of productivity-oriented committees and monitoring-oriented ones.

In an article extending the stakeholder theory, Jensen (2001) also recognizes the multiplicity of stakeholders. He concurs with John and Senbet that certain actions of management might have conflicting effects on various classes of stakeholders. This implies that the managers have a multiplicity of objective functions to optimize, something that Jensen sees as an important weakness of the stakeholder theory "because it violates the proposition that a single-valued objective is a prerequisite for purposeful or rational behaviour by any organisation" (Jensen, (2001), p.10). In search of a single valued objective function that conforms with rationality, Jensen suggests a refinement of the stakeholder theory - the enlightened stakeholder theory. For him, the enlightened stakeholder theory offers at least two advantages. First, unlike the earlier version with multiple objectives, the modified form of the theory proposes only one objective that managers should pursue: the maximization of long run value of the firm. If the interest of any major stakeholder were not protected the objective of long run value maximization would not be achieved. A second, related, appeal of the enlightened stakeholder theory is that it offers a simple criterion to enable managers decide whether they are protecting the & interests of all stakeholders: invest a dollar of the firm's resources as long as that will increase by at least one dollar the long term value of the firm. There is an important caveat, however - Jensen himself cautions that the criterion may be weakened by the presence of monopoly situation or externalities.

Despite its appeal, the stakeholder theory of the variety proposed by Jensen has not been subjected to much empirical evaluation. At least two factors might have contributed to the gap between theory and evidence. The first, already alluded to, concerns the prevalence of externalities and monopoly situation. The second is the problem of measurement.

Jensen himself offers no clue on how to obtain an accurate measure of the long-term value of the firm, let alons offer an indication of how to assess the possible impact of an investment on that long-term value.

### **Literature Review**

The literature offers two broad types of mechanisms for the alignment of the interests of managers and stakeholders. In the first category are the market-induced mechanisms, while the second category is concerned with the internal corporate governance mechanisms. These are discussed in turn.

### **Market-induced mechanisms**

The free-market view of the problem of agency is founded upon theoretical developments, led by Ross (1973) and Fama (1980) which support the idea that the market has the capacity to enforce discipline so that managers would on their own volition embark on measures that promote firm performance. Such market-induced mechanisms can be grouped into two: those emanating from the managerial labour market and those that can be attributed to the market for corporate takeovers.

The managerial labour market and the market for corporate takeover tend to exert pressures both within and outside the firm in order to achieve the alignment of interests of managers and stakeholders. There are three ways in which the managerial labour market could help achieve this: peer supervision, adequate remuneration to retain good managers, and the market-imposed penalty on the poor-performing ones. Fama (1980) asserts that a firm can be viewed as a team, whose members realize that in order for the team to survive, they must compete with other teams, and that the productivity of each member has a direct effect on the team and its members. Thus, within the firm, each manager has the incentive to monitor the behaviour of other managers, whether her subordinates or superiors. Secondly, Fama (1980) argues that the firm is in the market for new managers and the reward system must be based on performance in order for it to attract good managers or even to retain existing ones. Thirdly, the managerial labour market does in fact penalize managers known to have performed badly in their previous places of assignment. The market for corporate takeover also offers a market-induced mechanism but does so in a slightly broader way - it has the capacity to penalize not just the managers but also the entire board of directors who stand to lose their job (and honour!) in the event of a takeover of the firm.

### **Internal (non-market) Control Mechanisms**

Despite the apparent support received from some quarters by the proponents of the ability of the market to enforce the required discipline, research effort has flourished on the efficacy of non-market mechanisms to achieve the same result. In fact recent spectacular events of corporate failures seem to underscore the need for strengthening internal governance (or non-market) mechanisms in order to protect stakeholder interest. It should be stressed that much ink has indeed been shed on these non-market mechanisms even before the advent of Enron and other high-profile corporate failures. Demsetz and Lehn (1985) provide an explanation for the weakness of the market-induced mechanisms as a means of protecting stakeholder interests. They observe that since shares are commonly held by a large number of persons and corporate bodies, any single shareholder tends to own a small percentage of total equity. If any shareholder undertook to monitor the managers (in a bid to reduce the problem of agency), the individual would have to bear the full costs of such monitoring, but the benefits of doing so - improved firm performance - would spread to other shareholders. Thus, the costs of monitoring are internal, but the benefits are not, tending to spill over to every other shareholder, and leading to a free-rider problem that contributes to the persistence of the agency problem.

Empirical works abound on the mechanisms aimed to help reduce the agency problem. This study focuses on four such mechanisms, namely insider shareholding, board composition, board size and ownership concentration.

### **Insider Shareholding and Firm Value**

The first argument to address the problem of agency concerns the use of insider shareholding. Several researchers have examined the relationship between insider shareholding and firm performance. DeAngelo and DeAngelo (1985) provide a justification why one would expect a positive relationship between insider shareholding and firm performance. They reason that managers or directors hold common stock for its residual cash flow rights, hence providing a source of motivation for them to take performance-improving measures.

The empirical evidence on the relation is mixed. For example, while McConnell and Servaes (1990) find a significant curvilinear relationship between insider ownership and firm performance, Loderer and Martin (1997) find no significant relation. Nor et al (1999) report mixed evidence, showing that within the 0%-5% range of ownership, a one-percentage point increase in ownership tends to be associated with an increase in Tobin's Q by 0.1157. Within the ownership range of 6%-25%, Tobin's Q tends to decrease by 0.5375 following a one percentage point increase in ownership. As ownership increases beyond 25%, that measure of performance seems to rise, albeit at a slower rate of 0.04929 for each one percentage point increase in ownership. The findings of Nor et al's study are contrary to those of Yeboah-Duah (1993).

### **Composition of Board Members**

The composition of board members is also proposed to help reduce the agency problem [Weisbach (1988), Hermalin and Weisbach (1991)]. The hypothesis is that the higher the proportion of outside directors on the board, the better the firm performance. Two reasons are advanced in the literature why this relationship is expected to hold. First, inside directors tend not to challenge their chief executive, probably because they are lower in rank and subordinate to the CEO. The second reason in support of the hypothesis is that outside directors are usually elected on merit in view of their credentials as distinguished members of the business or academic community. Thus, outside directors have a reputation to protect and so are more likely to challenge the CEO in matters affecting the firm. The importance of outside directors is recognised and has helped shape policy even in the United States and the United Kingdom. Bhagat and Black (2001) cite the requirement in the USA by council of institutional investors for outside directors to constitute at least two thirds of a company's directors. A similar recommendation was made by the Cadbury Report in the UK for a minimum of three non-executives on the board of directors.

As a means for helping to reduce the agency problem, the question of board independence has received widespread support in the literature. The empirical evidence - from the work of Weisbach (1988) is in support of a positive correlation between firm performance and the proportion of outside directors on the board. Mehran (1995) provides evidence suggesting the tendency for the

appointment of outside directors to be greeted with significant share price increases, a finding consistent with the hypothesis of positive correlation. This conclusion is also supported in the works of John and Senbet (1998) who in a survey of corporate governance review the evidence of a positive stock-market reaction to the introduction of poison pills, something that is in support of the hypothesis that outside directors tend to increase firm performance. Also in support of the hypothesis is the evidence reported by Pinteris (2002) who used panel data comprising 228 annual observations on Argentine banks and reported results suggesting a positive relationship between the proportion of outside directors on the board and firm performance.

This is not to imply that the literature is unanimous about the direction and significance of the relationship between firm performance and board composition. Indeed, there is a growing body of literature reporting either a lack of a significant relationship or even a negative one. John and Senbet (1998) observe that despite the appeal of board independence, the empirical evidence is rather mixed, with no clear picture emerging. They cited the works of Fosberg (1989), which showed no significant relationship between board composition and firm performance. A similar conclusion can be seen in the works of Hermalin and Weisbach (1991) who report no significant relationship between board composition and firm performance.

The findings of Fosberg (1989) appear to be puzzling, requiring at least two explanations. For one, managers often do get involved in the appointment of outside directors who, as a result, may be unwilling to or incapable of taking a position different from that of the managers themselves. For another, other control mechanisms such as managerial labour markets could have exerted enough pressure on the managers to pursue the objective of protecting the interest of shareholders, leaving no other scope for the outside directors to attempt to protect such interests.

Other researchers also found no evidence to support the hypothesis ((Bhagat and Black (1991, 2001), Hermalin and Weisbach (1991), Yermack (1996)) and Metrick and Ishii (2002)). In a review of literature Metrick and Ishii (2002) showed that despite rising representation of outside directors, CEO turnover seemed not to be sensitive to firm performance between 1971 and 1994. This finding was echoed in the works of Weir and Laing (2001) who studied a sample of 320 UK quoted firms and found that contrary to expectations, firms with high proportion of outside directors tended to perform worse than those with a small proportion of them.

Apart from the size and composition of boards, concern has been raised on the importance of the internal administrative structure of the board itself (John and Senbet, 1998). Reviewing the literature, John and Senbet referred to the work of Klein (1998) and suggested that board members should be assigned to specialized committees such as productivity-oriented committee and monitoring-oriented one. Klein (1998) points to the need for such committees to comprise members having the greatest capacity to achieve results in order for alignment of interests to be

facilitated. This has the implication that while productivity-oriented committee would be expected to have a preponderance of inside directors, the monitoring-oriented committee would most likely be dominated by outside members of the board.

### **Board Size**

The third mechanism proposed to deal with the agency problem is board size. The board of directors is responsible for hiring and firing executives, setting executive compensation, and making major decisions in the life of the firm such as merger decisions. There are arguments in favour of small board size. First, Yermack (1996), in a review of the earlier work of Monks and Minow (1995) argues that large boardrooms tend to be slow in taking decisions, and hence can be an obstacle to change. A second reason for the support for small board size is that directors rarely criticize the policies of top managers and that this problem tends to increase with the number of directors (Yermack, 1996 and Lipton and Lorsch (1992)). Finally, there is the argument that beyond a certain level, board size tends to be less effective because the added monitoring capacity of larger boards may be more than outweighed by increased problems of communication and group decision-making (Lipton and Lorsch, 1992).

The role of board size has been little studied in the literature. Yermack (1995) examines the relation between board size and firm performance, concluding that the smaller the board size the better the performance, and proposing an optimal board size of 10 or fewer. John and Senbet (1998) maintain that the findings of Yermack have important implications, not least because they may call for the need to depend on forces outside the market system in order to determine the size of the board!

### **Block Holdings or ownership concentration**

The fourth element of governance mechanism is ownership concentration, which refers to the proportion of a firm's shares owned by a given number of the largest shareholders. As observed earlier on, in comparison to an average shareholder, an individual or group with large shareholding in a firm is more likely to undertake the monitoring role, despite the tendency for the benefits of such monitoring to spill over to other shareholders. In other words, a high concentration of shares tends to create more pressure on managers to behave in ways that are value-maximizing. In support of this argument, Wruck (1989) suggests that at low levels of ownership concentration, an increase in concentration will be associated with an increase in firm value. However, the author realizes that ownership concentration may have the negative effect of blocking a takeover even when this is necessary for the achievement of a turnaround. Thus, beyond a certain level of concentration, additional concentration may be harmful and huge enough to offset the positive effect of monitoring.

To summarize Wruck's argument, the relationship between ownership concentration and firm performance is expected to be positive up to a point, beyond which a negative relationship would set in. Using daily stock, price data and using abnormal returns as a proxy for firm performance, Wruck (1989) finds

that firm value is positively related with the change in ownership concentration when the level of concentration is high or low. In some middle range, however, the change in firm value is negatively associated with the change in ownership concentration. Shleifer and Vishny (1997) cited another piece of evidence from the works of Gorton and Schmid (1996) who found that the performance of German firms in 1974 was improved by bank block holders; they also reported that their 1985 sample showed improved performance caused by both bank and non-bank block holders.

Research on the relationship between ownership concentration and firm performance seems to produce no coherent picture, however. Renneboog (2000) undertook a study of firms listed on the Brussels Stock Exchange to examine the mechanisms suggested by Agrawal and Knoeber (1996) as helping to reduce the agency problem. The findings suggest a little relation between ownership concentration by institutions and holding companies, and disciplining. They also indicate only a weak association between performance measures and ownership concentration levels except for the return on investment that, show some improvement with high level of ownership, which supports the results reported by Deinsetz and Lehn (1985) . Furthermore, the findings of Renneboog show no evidence to support the efficient monitoring hypothesis as performance cannot be improved by block holders who seem not only to be entrenched but may benefit from perquisites and on the job consumption.

There is substantial evidence that block ownership carries with it private benefits of control. Holderness and Sheehan (1988) find little evidence that high ownership concentration directly affects performance. They find no significant differences in accounting rate of return or Tobin's Q between their sample of majority-owned US firms and paired firms with diffused ownership. Morck, Shleifer and Vishny (1988) show that firm performance as measured by Tobin's Q is nonmonotonic in management ownership concentration. It increases at low levels of concentration and then decreases at moderate levels.

### **Objectives of the Study**

The foregoing review has demonstrated ample scope for conducting research in this area of corporate finance. As mentioned earlier, the main objective of this study is to examine the relationship between corporate governance mechanisms and firm financial performance in Nigeria. The preceding review of literature suggests that this broad objective can be divided into six specific objectives, namely:

- to examine the extent to which insider shareholding may be related to firm financial performance;
- to ascertain the influence of the composition of board members on firm performance;
- to investigate the relationship between board size and firm performance;
- to assess the influence of block holdings or ownership concentration on firm performance;

- to examine whether or not the separation of the posts of CEO and Chairman is of any value in the promotion of firm performance; and
- to examine whether or not the appointment of expatriate CEO has any role to play in the promotion of stakeholder interest,

In line with the above objectives, the hypotheses to be tested in this study are divided into six, as follows:

- there is a positive relationship between insider shareholding and firm performance;
- there is a positive relationship between the proportion of outside directors on the board and the performance of the firm;
- there is a significant relation between firm performance and the size of the board;
- there is a positive relationship between ownership concentration and firm performance;
- firms in which the posts of CEO and Chairman are separated tend to perform better than those with a combined role for the two posts;
- firms with expatriate CEOs tend to perform better than those with indigenous CEOs.

### **Methodology**

The data used for this study were derived from a number of sources: data on directors' shareholding were obtained from the database of City Securities Ltd, a Lagos-based stock broking firm, which provided for each firm used in the sample, a list of directors, number of shares of the firm owned by each director, and the number of outstanding shares. The second set of data was extracted from Nigerian Stock Exchange (2000). This set comprises the value of total assets, value of share capital, and earnings for the year, as measured by profit after tax. Information on board size, and board composition was obtained from Genmax Communications, a Lagos-based firm specialized in the publication of corporate information data. The firm also provided information on the status of CEO, whether Nigerian or expatriate. The annual-report of the Securities and Exchange Commission of Nigeria provided for each firm year-end market capitalisation, and PE ratio. The sample covered the period 1996 through 1999. This period coincides with the computerisation of records and the associated increase in the reliability and availability of % data. In all, 180 companies were listed on the NSE as at the time of data collection, but a total of 93 firms with most of the required information were used for the purpose of this study. The list of companies in the sample is given in Appendix 1.

The extent of director shareholding was calculated by expressing the total number of shares owned by directors of a given firm as a percentage of the outstanding shares of the firm. The higher the percentage, the greater the director shareholding. Data on ownership concentration was not available so a proxy for it had to be calculated. Genmax Communication reported data on the proportion of shares owned by the largest shareholders for each of the firms in the sample. To be useful for our purposes, the data had to be refined as the number of largest shareholders varied across firms, making inter-firm comparison difficult. To overcome this

weakness the proportion of shares owned by the largest shareholders was divided by the number of largest shareholders. This provided us a crude (but so far the best) measure of ownership concentration.

In all, a total of five equations were estimated. Equation (1) specifies four independent variables, namely director shareholding (DIRSHARE), number of directors on the board (BOARDSIZE), the proportion of outside directors sitting on the board (OUTSIDE) and the extent of ownership concentration (CONCENT).

$$\text{FIRMPERFORM}_i = \hat{a}_0 + \hat{a}_1 \text{DIRSHARE}_i + \hat{a}_2 \text{BOARDSIZE}_i + \hat{a}_3 \text{OUTSIDE}_i + \hat{a}_4 \text{CONCENT}_i + \mu_i \quad (1)$$

DIRSHARE was computed by expressing the total director shareholding as a proportion of total value of shares of the firm; OUTSIDE was computed by expressing the number of outside directors as a proportion of board size. The method for the calculation of ownership concentration has been explained earlier.

Four alternative measures of firm performance (the dependent variable in Equation 1) were computed: ROA, ROE, PE ratio and Tobin's Q. ROA (return on assets) was computed by expressing earnings as a percentage of total assets; ROE (return on equity) was obtained by expressing earnings as a percentage of value of equity; data on PE ratio were readily available so no additional computations were needed; the modified form of Tobin's q was calculated by dividing year-end market capitalisation by the value of assets. Estimates of all the parameters (except  $\hat{a}_2$ ) in Equation (1) are expected to be positive.

Equation (1) was therefore estimated eight times, the first four including all the independent variables, and the last four dropping ownership concentration amongst the set of regressors. The results from the eight regressions are reported in Table 1.

Equation (2) was obtained by taking the natural logs of all but one variable (BOARDSIZE) in Equation (1).

$$\text{FIRMPERFORM}_i = \phi_0 + \phi_1 \text{DIRSHARE}_i + \phi_2 \text{BOARDSIZE}_i + \phi_3 \text{OUTSIDE}_i + \phi_4 \text{CONCENT}_i + \mu_i \quad (2)$$

The equation was then estimated eight times and the results presented in Table 2. Equation (3) was obtained by adding the natural logs of total assets to Equation (2) in order to control for firm size.

$$\text{FIRMPERFORM}_i = \ddot{e}_0 + \ddot{e}_1 \text{DIRSHARE}_i + \ddot{e}_2 \text{BOARDSIZE}_i + \ddot{e}_3 \text{OUTSIDE}_i + \ddot{e}_4 \text{CONCENT}_i + \mu_i \quad (3)$$

Equation (3) was also estimated four times, one each for the four measures of firm performance. The results are reported in Table 3.

The relationship between firm performance and certain governance variables has been reported in the literature to exhibit a non linear relation, tending to rise at low levels, achieve a maximum and then decline thereafter. There is also a debate concerning the need to separate the functions of CEO and Chairman. To capture the effects of nonlinearity as well as examine the effects of separation of the roles of CEO and Chairman, Equation (4) was obtained by adding to Equation (3) the squared values of DIRSHARE and BOARDSIZE as well as the status of CEO (CEOSTATUS), which is a dummy variable, taking a value of zero for firms with CEO Chairman, and 1 otherwise.

$$\begin{aligned} \text{FIRMPERFORM}_i = & \bar{a}_0 + \bar{a}_1 \text{OUTSIDE}_i + \bar{a}_2 \text{DIRSHARE}_i + \\ & \bar{a}_3 \text{DIRSHSQUARE} + \\ & \bar{a}_4 \text{BOARDSIZE}_i + \bar{a}_5 \text{CEOSTATUS}_i + \bar{a}_6 \text{BDSIZESQUARE} + \\ & \bar{a}_7 \text{CONCENT} + \bar{a}_8 \text{FIRMSIZE} + \mu_i \end{aligned} \quad (4)$$

Equation (4) was also estimated four times, one each for the four measures of firm performance. The results are reported in Table 4.

The role of foreign CEO has been a subject of debate in the literature. The evidence is by no means settled, as some researchers have reported a positive role for foreign CEO and others see no such role. To examine the debate using Nigerian data, Equation (5) was obtained by adding a dummy variable, CEOFOREIGN, to Equation (4).

$$\begin{aligned} \text{FIRMPERFORM}_i = & a'_0 + a'_1 \text{OUTSIDE}_i + a'_2 \text{DIRSHARE}_i + \\ & a'_3 \text{DIRSHSQUARE} + \\ & a'_4 \text{BOARDSIZE}_i + a'_5 \text{CEOSTATUS}_i + a'_6 \text{BDSIZESQUARE} + \\ & a'_7 \text{CONCENT} + a'_8 \text{FIRMSIZE} + \mu_i \end{aligned} \quad (5)$$

The dummy variable took a value of zero for Nigerian CEOs and 1 otherwise. Equation (5) was then estimated four times, one each for the four measures of firm performance. The results are reported in Table 5.

## Results

We start by examining the effects of internal control mechanisms (director shareholding, board size, ownership concentration and outside directors) on firm performance. The results are presented in Table 1. Column 1 shows the results obtained by regressing the four governance mechanisms on an important measure of firm performance, ROA. Both director shareholding and board size show no significant relationship with return on assets. The ratio of outside directors to board size is significant and negatively signed. The equation was re-estimated, dropping ownership concentration. The results are reported in the second column of the table. None of the variables is significant at conventional levels.

A similar set of results (presented in the third and fourth columns of the table for ROE and the seventh and eighth columns for PE ratio) was obtained when the equation was estimated using ROE or PE ratio as the measure of firm performance. When the equation was estimated using the Tobin-Q as the measure of firm performance, the results differed from those for other measures. Column 5 shows that except for ownership concentration none of the regressors is significant. The parameter estimates are unsteady when ownership concentration was dropped and the model re-estimated (as in Column 6), a remarkable departure in parameters reported in Column 5 was observed. Board size is significantly positively related to firm performance while the ratio of outside directors has the opposite effect.

These results show no discernible pattern and we are inclined to attribute this to a number of loopholes inherent in the specifications. Chief among the weaknesses is the failure to undertake a logarithmic transformation of the data before the application of regression analysis. The exclusion of other variables is another. The results presented in Table 2 were obtained to address the first concern.

As in the results in Table 1, the results in Table 2 show that four alternative measures of firm performance were regressed against a set of four governance variables. In a number of ways, the logarithmic transformation has achieved some remarkable change in the results. For one, the F-statistic is significant in all cases, with a majority of them at the 1 per cent level. Secondly, ownership concentration has a significant positive effect in all but one case, where, in the case of PE ratio, it is found not to be significant. Turning to individual coefficient estimates for each of the regressor-s, a clear pattern is observable. Director shareholding is significantly negatively related to firm performance in 7 out of 8 cases. This compares with outside directors which is not significant in all of the eight cases.

To address the issue of controlling for firm size, we included total assets as a control variable. The literature has advocated the use of total assets as a control variable (see for example Mayers et al (1977), Sanders (1998), and Bhagat and Black (2000). The results presented in Table 3 were obtained with total assets featuring as a control variable. In Column 1, all the 5 variables are significant at the 5 per cent level or better. In particular, director shareholding is negatively related to performance as measured by ROA. Similarly, board size is significant and positively related to firm performance as is ownership concentration. Surprisingly, outside directors exhibit a negative and significant relation. In column 3 it can be seen that director shareholding is significantly negatively related to the Tobin's Q measure of firm performance. Both board size and ownership concentration exhibit a positive relation with firm performance, but outside directors show no significant relation with it. When the PE Ratio was used as a measure of firm performance, the results (in column 4) show significant relation with board size and a negative one with director shareholding.

Extending the model in order to examine the effects of nonlinearity as well as those of board independence, we modified the model in two ways, the first involving quadratic terms for board size and director shareholding, and the second

involving two measures of board independence. The first measure of board independence is a dummy variable, taking a value of 0 for firms having CEO chairman, and 1 otherwise.

The results are presented in Table 4, divided into four columns, one each for alternative measures of firm performance.

A number of observations can be made concerning the results. First, in all cases, the F-statistics is significant at the 1 per cent level, with  $R^2$  varying from 0.11 for PE Ratio to 0.50 for Tobin's Q measure of firm performance. Second, one of the measures of board independence, namely outside directors, is not significant; the other measure, ie CEOSTATUS, is significant in 2 out of 4 cases and in both of those cases the dummy variable has a positive coefficient estimate, suggesting the need for separation of offices of CEO and Chairman. Third, ownership concentration turned out to be significant in three out of four cases. It is striking that in each case the coefficient estimate is positive, implying that firms with concentrated ownership tend to perform better than those with diffused ownership. The results on Tobin's Q, presented in Column 3, require a close examination in view of certain peculiarities. Five out of eight variables are significant at 1 per cent level. In particular, both measures of director shareholding are significant, with the quadratic one having a negative sign. In other words, the relationship between firm performance and board size is positive up to a point. Taking partial derivatives and solving for optimal values gave results suggesting an optimal value of board size of ten. Beyond this level a negative relationship is predicted to set in.

Do firms in Nigeria with expatriate CEOs perform better than other firms? The motivation for this enquiry is informed by the tendency for expatriate managers to bring with them new management practices that promote transparency and recognise and encourage achievement. We took up this question by expanding the model to include a dummy variable, taking a value of 1 for firms with expatriate CEOs, and 0 otherwise. The results are given in Table 5. Looking at the results in the table, a number of observations can be made. We find that in three out of four cases, the coefficient estimate of the Foreign CEO dummy variable is positive and significant at 1 per cent level. This implies that firms with foreign CEOs tend to perform better than those with indigenous CEOs. A closer look at the results also shows that despite the inclusion of an additional variable the results bear a striking similarity with those presented in the earlier table. Most of the coefficient estimates retained their signs and levels of significance. Further, the inclusion of the Foreign CEO dummy tended to improve the overall explanatory power of the models, with  $R^2$  in most cases showing some improvements, as well as retaining its significance.

### **Concluding Remarks**

There has been a renewed interest in the academic circles as well as amongst the policy makers in government and industry to adopt measures to ensure that management take measures to protect the interest of the stakeholders. The events at Enron and other cases of spectacular failures have helped to bring to the

limelight the important role that the strengthening of governance mechanisms could play to bring this about. This study uses data for the period 1996 through 1999 for a sample of 93 firms listed on the Nigerian Stock Exchange to examine the relationship between internal governance mechanisms and firm financial performance. Among the main findings for this study is the support for small as opposed to large boards; the tendency for expatriate CEOs to achieve higher levels of financial performance than other categories of CEOs; the support for concentrated over diffused ownership; and the need to separate the functions of CEO and Chairman.

These results are by no means conclusive for a number of a couple of reasons. First the sample itself was determined by data availability, not by a probability criterion. A second limitation is concerning the method of statistical analysis, which relied on the standard OLS regression rather than on the more robust, quintile regressions even panel data analysis. These limitations should be borne in mind in any attempt to undertake research in this area on the Nigerian Stock Exchange.

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**Appendix 1: List: of Companies used in the sample**

1. Aba Textiles Plc
2. Aboseldehyde Laboratories plc
3. Afprint Nigeria Plc
4. African Petroleum Plc
5. A.G.Leventis (Nigeria) Plc
6. Agip (Nigeria) Plc
7. AIICO Insurance Plc
8. Aluminium Extrusion Industries
9. Alumaco Plc
10. Amicable Assurance Plc
11. Arbico Plc
12. Ashaka Cement Plc
13. Avon Crowncaps & Containers Plc
14. Benue Cement Company Plc
15. BCN Plc
16. BOC Gases Plc
17. Cappa & D'Alberto Plc
18. Carnaucimetalbox Plc
19. Cement Company of Northern Nigeria Plc
20. Chartered Bank Plc
21. Cornerstone Insurance Plc
22. Costain (West Africa) Plc
23. Crusader Insurance Plc
24. Delta Glass Plc
25. Dumez Plc
26. Dunlop Nigeria Plc
27. Ekocorp Plc
28. Eko International Bank Plc
29. Enpee Plc
30. Evans Medical Plc
31. First Aluminium Nigeria Plc
32. First Bank of Nigeria Plc
33. Flour Mills of Nigeria Plc
34. FSB International Bank Plc
35. G. Cappa Plc
36. Golden Guinea Breweries Plc
37. Grommac Industries Plc
38. Guaranty Trust Bank Plc
39. Guinea Insurance plc

40. Guinness Nigeria Plc
41. Hallmark Bank Plc
42. Inland Bank Plc
43. Intra Motors plc
44. John Holt Plc
45. Julius Berger Plc
46. LASAGO Insurance Plc
47. Law Union & Rock Insurance Plc
48. Lever Brothers Nigeria Plc
49. Liberty Bank Plc
50. Lion Bank of Nigeria Plc
51. May & Baker Nigeria Plc
52. Mobil Oil Nigeria Plc
53. Morison Industries Plc
54. NAL Merchant Bank Plc
55. National Oil & Chemical Marketing Company Plc
56. NCR (Nigeria) Plc
57. Neimeth Intl Pharmaceuticals Plc
58. Nem Insurance Plc
59. Nestle Foods Nigerian Plc
60. Niger Insurance Plc
61. Nigerian Bottling Company Plc
62. Nigerian Breweries Pic
63. Nigerian Wire & Cable Plc
64. Nigerian Wire Industries Plc
65. Niyamco Plc
66. Northern Nigeria Flour Mills Plc
67. Paterson Zochonis Industries Plc
68. PharmaDeko Plc
69. Poly Products Nigeria Plc
70. Prestige Assurance Plc
71. P.S.Mandrides Plc
72. Royal Exchange Assurance Plc
73. R.T. Briscoe Nigeria Plc
74. Seven-up Bottling Company Plc
75. SmithklineBeecham Plc
76. Sun Insurance Plc
77. Texaco Nigeria Plc
78. Total Nigeria Plc
79. Towergate Insurance Plc
80. Trans International Bank Plc
81. Tripple Gee & Company Plc
82. UAC of Nigeria Plc
83. Unic Insurance Plc
84. Union Dicon Salt Plc
85. Unipetrol Nigeria Plc
86. United Nigeria Textile Mills Plc
87. Universal Trust Bank Plc

- 88. Van Leer Containers Plc
- 89. Vitafoam Nigeria Plc
- 90. Wema Bank Plc
- 91. West African Portland Cement Plc
- 92. WAPIC Insurance Plc
- 93. WTN Plc

**Appendix 2 : Results**

Table 1:

	Dep Var= ROA		Dep Var= ROE		Dep Var= Tobin-Q		Dep Var= PE Ratio	
	1	2	3	4	5	6	7	8
Director shareholding	-.005968 (-1.232)	-0.0006 (-.768)	-.026374 (-.348)	-.005405 (-.467)	-0.00006 (-1.104)	-0.00001 (-1.062)	-.069 (-1.1)	.003894 (.350)
Board Size	.036345 (.577)	.007489 (.198)	-.562231 (-.571)	-.369755 (-.660)	-0.00003 (-.045)	.003803 (5.700)***	.423 (.497)	-.833323 (-1.455)
Outside Directors	-.097689 (-1.66)*	-.046164 (-1.195)	.947748 (1.029)	.675587 (1.184)	0.00007 (.102)	-.002724 (-3.95)***	.14 (.18)	.701273 (1.214)
Ownership Concentration	.005488 (1.459)	-----	.003870 (.066)	-----	0.00009 (2.054)**	-----	.011 (.215)	-----
R <sup>2</sup>	0.05	0.01	0.01	0.01	0.03	0.12	0.02	0.01
F	2.33*	1.3	0.36	0.68	1.38	11.78***	0.66	0.77

Significant at 10% (\*); 5% (\*\*); 1% (\*\*\*)

Table 2:

Independent Variables	Dep Var= ROA		Dep Var= ROE		Dep Var= Tobin-Q		Dep Var= PE Ratio	
Director shareholding	-.058446 (-1.064)	-.108133 (-2.88)***	-.034103 (-.640)	-.1096 (-2.74)**	-.11989 (-5.07)***	-.288758 (-7.36)***	-.0642 (-2.7)***	-.050811 (-2.687)***
Board Size	.044463 (.713)	-.003449 (-.085)	.202393 (3.35)***	.0206 (.479)	.028863 (.634)	.086970 (2.091)**	.0429 (1.574)	-.021795 (-1.088)
Outside Directors	-.878889 (-1.551)	-.481578 (-1.167)	-.263542 (-.479)	.679811 (1.546)	-.310642 (-.769)	-.372219 (-.879)	-.0756 (-1.296)	.284274 (1.317)
Ownership Concentration	.015664 (2.348)**	-----	.013589 (2.100)**	-----	.0159 (3.32)***	-----	-.0019 (-.678)	
R <sup>2</sup>	0.07	0.03	0.09	0.04	0.25	0.2	0.07	0.04
F	2.10**	3.20**	3.89***	3.69***	12.69***	20.66***	2.86**	3.21**

Significant at 10% (\*); 5% (\*\*); 1% (\*\*\*) .

Table 3 :

	Dep Var= ROA	Dep Var= ROE	Dep Var= Tobin-Q	Dep Var= PB Ratio
Director shareholding	-.115544 (-2.223)	-.030733 (-.562)	-.258685 (-7.414)***	-.072490 (-2.997)**
Board Size	.184279 (2.907)**	.194139 (2.913)**	.163717 (3.767)***	.060589 (2.025)**
Outside Directors	-.760303 (-1.449)	-.270543 (-.490)	-.237647 (-.681)	-.088727 (-.348)
Ownership Concentration	.014893 (2.412)**	.013635 (2.100)**	.014714 (3.546)***	-.002178 (-.760)
Total Assets	-.526620 (-5.324)***	.031088 (.299)	-.487051 (-7.264)***	-.065844 (-1.411)
R <sup>2</sup>	0.21	0.09	0.44	0.09
F	8.44***	3.11***	24.16***	2.70**

Significant at 10% (\*); 5% (\*\*); 1% (\*\*\*) .

Table 4 :

	Dep Var= ROA	Dep Var= ROE	Dep Var= Tobin-Q	Dep Var= PE Ratio
Outside Director	-.166984 (-.248)	.484363 (.692)	-.434273 (-1.017)	-.258913 (-.813)
Director Shareholding	-.116299 (-2.259)**	-.026241 (-.490)	-.241464 (-7.149)***	-.072582 (-2.976)***
Director shareholding sq	-.007812 (-.331)	-.005008 (-.204)	-.002968 (-.195)	-.006714 (-.611)
Board Size	.515857 (1.006)	.597944 (1.121)	1.188012 (3.383)***	-.142838 (-.553)
CEO Status	.824726 (1.692)*	1.040817 (2.052)**	-.105101 (-.341)	-.279897 (-1.271)
Board Size Sq	-.019250 (-.669)	-.023388 (-.781)	-.057693 (-2.949)***	.011829 (.825)
Concentration	.493277 (2.586)***	.528675 (2.664)***	.605746 (4.886)***	-.028144 (-.318)
Total Assets	-.547343 (-5.433)***	.005849 (.056)	-.473662 (-7.151)***	-.058268 (-1.215)
R <sup>2</sup>	0.23	0.13	0.5	0.11
F	5.84***	2.95***	18.26***	2.12***

Significant at 10% (\*); 5% (\*\*); 1% (\*\*\*)

Table 5 :

	Dep Var= ROA	Dep Var= ROE	Dep Var= Tobin-Q	Dep Var= PE Ratio
Outside Director	.670280 (1.020)	1.059945 (1.517)	-.118332 (-.260)	-.329075 (-.984)
Director Shareholding	-.073676 (-1.476)	.027874 (.525)	-.219761 (-6.165)***	-.049454 (-1.920)*
Director shareholding sq	-.004591 (-.208)	-.004109 (-.175)	-.004920 (-.314)	-.014835 (-1.310)
Board Size	-.348373 (-.574)	.132308 (.205)	.935705 (2.175)**	.180188 (.580)
CEO Foreign	1.762857 (6.453)***	1.707217 (5.879)***	.539628 (2.783)***	-.032793 (-.229)
CEO Status	1.531578 (3.319)***	1.633460 (3.330)***	.154363 (.483)	-.300365 (-1.325)
Board Size Sq	.031185 (.925)	.005379 (.150)	-.043851 (-1.828)*	-.007296 (-.421)
Concentration	-.126776 (-.634)	-.104089 (-.490)	.400093 (2.812)***	-.056208 (-.549)
Total Assets	-.477933 (-5.092)***	.090546 (.908)	-.445569 (-6.583)***	-.028208 (-.578)
R <sup>2</sup>	0.39	0.28	0.5	0.07
F	10.52***	6.44***	15.62***	1.13

Significant at 10% (\*); 5% (\*\*); 1% (\*\*\*)