CORPORATE GOVERNANCE MECHANISMS AND CAPITAL STRUCTURE OF LISTED FOODS AND BEVERAGES FIRMS IN NIGIRIA

BY

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(M. Sc/Admin/14310/2010-2011)

BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTERS OF SCIENCE (M. Sc) DEGREE IN ACCOUNTING AND FINANCE

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DECLARATION

I declare that this M. Sc. Thesis entitled "Corporate Governance Mechanisms and Capital Structure of Listed Foods and Beverages Firms in Nigeria" has been carried out by me in the department of accounting. The information derived from the literature has been duly acknowledged in the text and a list of references provided. No part of this thesis was previously presented for another degree or diploma at this or any other institution.

_____ _____

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CERTIFICATION

This Thesis entitled " Corporate Governance Mechanisms and Capital Structure of Listed Foods and Beverages Firms in Nigeria" by Usman Dinde AUDU meets the regulations governing the award of the degree of Master of Science in Accounting and Finance of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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DEDICATION

I hereby dedicate this M. Sc. work to the Almighty God, the author and finisher of my faith and the reason of my existence to whom I give all the glory. To my beloved parents, Mr and Mrs Audu Dinde Gelengu for their support, encouragement and understanding.

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ABSTRACT

The study examines corporate governance mechanisms on capital structure of listed food and beverages in Nigeria. The sole objective is to explore the impact of corporate governance mechanisms on capital structure for a period of ten years, from 2004 to 2013. The study employed secondary data from the annual reports and the Nigeria Stock Exchange (NSE) fact books within the period of the study. Generalized Least Square Regression Technique for data analysis was employed to investigate relationship that exists between capital structure and various independent variables in the model. The study reveals that ownership concentration and board composition of the explanatory variables are statistically and significantly influencing the explained variable proxied by debt to total capital and debt total asset. On the other hand, institutional ownership of our explanatory variables is not significantly influencing the capital structure. Ownership concentration, board composition and firm size have significant impact on debt to total capital at 1% level, while institutional ownership has insignificant impact on the leverage. It is concluded that corporate governance mechanisms are good variables that impact on capital structure. The study therefore, recommends among others that the management of listed food and beverages firms in Nigeria should recognize and include the corporate governance mechanisms when embarking on external financing decision to enable them to arrive at an optimum financing decision.

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CHAPTER ONE
INTRODUCTION

1.1 Background to the study

Sound corporate governance principles are the foundation upon which the trust of investors and lenders is built. Basically, the fundamental perception and understanding of the field of corporate governance originated from the fact that there are potential problems associated with separation of ownership and control. This is inherent in the modern corporate form of organization with a set of institutional and market mechanisms that induce self-interested managers (controllers) to maximize the value of the residual cash-flow of the firm on behalf of its shareholders (the owners).This conflict within the firms leads to distortion in corporate policy choices and lower corporate performance.

The knowledge of how firm is being financed has succeeded in attracting a good deal of public interest because it is a tool for socio-economic development and efficient practice in the administration of business entities. This has led to reduction in the incidence of corporate failures, poor internal control system, poor corporate structure, indiscipline both on the part of management and workers. Poorly governed corporations may not only pose a risk to themselves, they could indeed negatively impact the capital market. For instance, the poor governance of a firm would pose a threat to the economy. Irrespective of how sound macroeconomic policies are, if entities are not well governed, the macro-economic objectives may not be attained.

A survey by the Nigerian Securities and Exchange Commission (2007) showed that corporate governance was at a rudimentary stage in Nigeria, as only about 40% of quoted companies and recognized codes of corporate governance are in place. (Amao & Amaechi 2008, Olusa 2007). Poor corporate governance may be identified as one of the major factors in virtually all known

instances of firm's distress in the country. Awoyemi (2009) also opined that financial scandals around the world and the recent collapse of major corporate institutions in the USA, South East Asia, Europe and Nigeria such as Adelphia, Enron, World Com and recently XL Holidays have shaken investors' faith in the capital market and the efficacy of existing corporate governance practices in promoting transparency and accountability.

Corporate governance is the broad term that has to do with the manner in which right and responsibility are shared amongst owners and managers of a given institution (Awoyemi 2009). In essence, the exact structure of the corporate governance of any given institutions will determine what right, responsibility and privileges that are extended to each of the corporate stakeholders and to what degree each stakeholder may enjoy or exercise his/her right.

Separation of ownership and control in firms is common in the modern day business environment as more firms are listed on stock exchanges as public firms. However, this separation creates serious tension between the owner of a firm and the managers. Managers who are in power may have the motivation to transfer wealth in terms of bonus or other benefits at the expense of the owners to get dividend (Watts & Zimmerman,1986). Also, Managers are positioned to opportunistically manage capital structure decision to maximize their utility at the expense of stakeholders. Managerial self-interests in the firm may entice managers to prefer and opt for equity rather than debt. Because creation of debt reduces the agency costs of free cash flow by reducing the amount available to managers since they are bound to repay the interest payments. If they spend the free cash on more risky action, the probability that the repayment schedule will be met decreases.

In case of default, debt holders may take the firm to bankruptcy court and get a claim over its assets. Managers would lose their decision rights and possibly their employment in the firm. This threat prevents managers from undertaking more risky actions as they aim to utilize assets efficiently, thereby increasing firm value. The control role of debt lies in decreasing the amount of free cash flow available to managers by making them disgorging it to investors (Jensen, 1986). Thus, Shareholders may incur costs to monitor the management from such unethical behaviour. The sources of a firm's financing are of paramount importance to both the managers of firms and providers of funds. This is because if a wrong mix of finance is employed, the performance and survival of the business enterprise may be seriously affected.

Consequently, there is need for monitoring mechanisms which should be able to serve as active monitors that management may not be able to adjust debt to their own interests as freely as if such investors do not exist. These mechanisms will improve the alignment of management and shareholders' interests and mitigate any opportunistic behavior, resulting from such conflict of interests.

Thus, corporate governance mechanisms provide the basis for a stable and productive business environment which protects the interests of internal and external stakeholders. This has become an important and well debated issue in recent years. Therefore, good corporate governance practices may have significant influence on the strategic decisions of a company, e.g. external financing that are taken at board level. This makes corporate governance variables like, ownership concentration, institutional investors and board composition to have direct impact on capital structure decisions of corporate firms.

The intention of managers is to maintain viability in the firm thus reducing the level of debt since increased debt leads to high bankruptcy cost. Managers pursue their own interest to reduce the debt level in capital structure at the expense of the shareholders. Also, the presence of institutional investors in a company helps it to raise long term finance at an advantageous cost. In the first place, these institutional investors act as a source of long term debt as they are willing to provide debt to a company over whose board they enjoy an influence. Secondly, these institutional investors serve as an effective monitoring device over the company's strategic decisions. They bring down the company's agency costs and also reduce managerial opportunism. This gives confidence to general public and other lenders – resulting in favorable terms of borrowing by the company. Institutional investors are large investors such as, insurance companies, banks and investment companies (Boush 1998). The presence of non-executive directors means those directors that have no executive post in firm; thus, their supervisory performance highly helps to reduce the conflict between shareholders and firms' directors. Also, their presence on the company's board gives signal to the market that company is being monitored efficiently so lenders consider it credit worthy. In turn, this makes it easier for the company to raise long term fund through debt financing.

According to modern corporate finance theories, agency cost is one of the determinants of capital structure whereas corporate governance is structured to alleviate agency issues; hence corporate governance and capital structure are linked through their association with agency costs. In this last decade, corporate governance serves as one of the main element in improving economic efficiency, growth and enhanced investors' confidence. Also, it provides a proper incentive for the board and management to pursue objectives that are in the interest of the company and its

shareholder and to enhance effective monitoring. The availability of an effective corporate governance system with Individual Corporation and across an economy assists in providing a degree of confidence that is necessary for proper functioning of the market economy. For this reason the cost of capital is reduced and firms are encouraged to use resources more efficiently, thereby underpinning growth.

Given the fact that corporate governance and capital structure are paramount to the overall success of a firm, this study therefore examines the impact of corporate governance mechanisms on capital structure of foods and beverages firms in Nigeria. The study on the impact of corporate governance mechanisms on capital structure of foods and beverage firms in Nigeria is an important research area that needs to be explored. This study is relevant in the Nigerian context given the important role the private organizations are expected to play as the engine of growth. It is expected that the findings of this study will have important policy implications for foods and beverages firms in Nigeria.

this study, therefore, examines the relationship between corporate governance and capital structure and whether or not institutional investors, ownership concentration, board composition and firm size form part of important mechanisms in determining capital structure of listed foods and beverages firms in Nigeria.

1.2 Statement of the Problem

Agency problems arise as a result of the relationships between shareholders and managers and are based on conflicts of interest within the firms. This problem is concerned with the design of institutions that bring management taking into account the welfare of shareholders in their actions. This inability has a direct relationship with the need for efficient corporate governance strategy in Nigeria for sustainable development.

In addition, Lack of effective control of corporate firms in Nigeria has worked to the detriment of shareholders and creates a class of stakeholders who have lost interest in the system (Quadri 2012). The act of financing decision in Nigerians' firms has consistently failed to be accountable to the stakeholders and has no deep-rooted mechanism such as ownership concentration, institutional investors and board composition that can be used to maintain a balance among major players of corporate governance. Thus, corporate Governance indicates the process of supervision and control on firm's management in order to make sure if the performance of managers is in accordance with the interests of shareholders.

In spite of numerous researches on corporate governance, agency problem still exists in Nigerian firms to date (Ahmadpour 2012). This may affect the firms financing decisions thereby reducing their performance. The most important elements of this system consist of shareholders and the manner of their ownership, institutional investors and the members of the board. The management runs the firms through its day to day operations and setting its business strategy. In the structure-conduct-performance, management perceptions of the market structure and firm's strengths and weakness jointly determine its choice of debt.

Effective corporate governance in Nigerians firms reduces control rights that shareholders and creditors confer on managers and increase the probability that managers invest in positive net present value projects. Jensen & Meckling (1976) opined that the relationship of the board and management should be characterized by transparency and fairness to shareholders.

An extensive review of literature reveals that the empirical works (Beger & Dipatti 2003; Chaganti & Damanpour, 1991 & Hassan 2009) mostly focused on the impact of corporate governance on firm's performance or examines the influence of ownership structure on firm value. However, relationship between corporate governance and capital structure has not been extensively explored. Only few studies investigated the said relationship such as Brailsford Oliver & Pua (2002); Hussainy. & Aljifri (2010); Wen, Rwegasira & Bilderbeek (2002). Some studies (Wen 2002 & Abor 2007) discuss the influence of corporate governance on capital structure decisions of firms for developed and emerging markets. Otnet (2006) stated that corporate governance as an important issue nowadays due to different financial crises in Asia, Europe and America.

Although, some studies show that corporate governance has a positive impact on capital structure. While some studies concluded that there is positive significant relationship between corporate governance and capital structure (Weill 2003, Rehman et al 2010, Saad 2010, Berger and Diatti 2003) others concluded a negative significant relationship (Abor & Biekpe 2007, Hussaini & Aljifri 2009, Wen, Rwegasira & Bilderbeek 2002), a fact that makes them too generic. The studies are of mixed result. There is a clear gap in the empirical research on the impact of corporate governance on capital structure of Nigerians firms. The researcher also

observes that the aforementioned studies focus on banks, insurance or manufacturing firms but none of the studies concentrates on food and beverages firms in Nigeria.

The managers and users of financing decision may be confused about the proper choice of capital structure decision, and end up making wrong choice of debt and equity financing. In view of the inconclusive nature of the findings above, we hereby intend to find out: What is the actual relationship between corporate governance mechanisms and capital structure? To what extend is the relationship between corporate governance mechanisms and capital structure? And what is the direction of the impact of corporate governance mechanisms on capital structure decision?

1.3 Objectives of the Study

The main objective of the study is to examine the impact of Corporate Governance mechanisms on Capital Structure of listed Food and Beverage firms in Nigeria. Specific objectives of the study are to:

i. examine the effect of institutional ownership on capital structure of listed food and beverages firms in Nigeria.

ii. determine the effect of ownership concentration on capital structure of listed food and beverages firms in Nigeria.

iii. evaluate the effect of board composition on capital structure of listed food and beverages firms in Nigeria.

1.4 Hypotheses of the Study

The following null hypotheses are formulated for this study

H_{O1} Institutional ownership has no significant impact on capital structure of listed food and beverages firms in Nigeria

H_{O2} Ownership concentration has no significant impact on capital structure of listed food and beverages firms in Nigeria

H_{O3} Board composition has no significant impact on capital structure of listed food and beverages firms in Nigeria.

1.5 Scope of the Study

This study examines the impact of Corporate Governance on Capital Structure of listed Food and Beverages firms in Nigeria for a period of ten (10) years, from 2004 - 2013. This is due to the fact that, in 2003 a new code of corporate governance for public companies was issued, and the code was harmonized in 2008 (effective in November, 2011). The depending variables are debt to total capital and debt to total asset and the independent variables include institutional investors, ownership concentration and board composition.

1.6 Significance of the study

The purpose of the study is to examine the impact of corporate governance mechanisms on capital structure of listed food and beverages firms in Nigeria. The study would be of great importance in the following ways.

The regulatory authority (SEC) will benefit from the result of the study. It will enable them examine the effectiveness of their monitoring instruments as well as review and upgrade them where appropriate.

Similarly, other stakeholders like government, employee and creditors will also benefit from the findings of the study by allowing them to make informed decisions about policies, employments and ratings respectively.

The outcome of the research can assist the shareholders of listed food and beverages firms in Nigeria to know whether or not the corporate governance made impact on the capital structure of their investments in firms so as to guide them in taking relevant decision.

The study will also be of great benefit to corporate financial managers who are faced with the challenges of making decisions on an optimal mix of debt and equity that will maximize wealth of shareholders and minimize cost.

The findings will add value to the existing literatures on corporate governance and capital structure and serve as reference for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This section review literatures on corporate governance and capital structure. The review covers conceptual issue on corporate governance and capital structure respectively, relationship between corporate governance and capital structure and relationship between variables under study. Conceptual framework, empirical evidence and theory relevant to the study are also examined.

2.2 Concept of Corporate Governance

There is no universally held or single definition of corporate governance and also no particular definition that all countries agree upon. As a result, corporate governance can be defined and practiced in different way globally depending upon the relative power of owners, managers and provider of capital (Craig, 2005). This is as a result of difference in economic, legal, political and cultural view.

The concept of corporate governance is built around the relationship between owners and management of the company. To acquire new capital from market, this relationship has to be built on trust and continuity. The objective of owners is to have return on their investment and management is responsible for operating the company. It is the management who is managing owner's capital and in some ways is responsible for return. Bodaghi et al (2010) was with the view that corporate governance concerns with the issue, on how the supply of finance to corporations assure themselves of getting a return on their investment.

Denis (2001) posited that the fundamental perception and understanding of the field of corporate governance originated from the fact that there are potential problems associated with separation of ownership and control which was inherent in the modern corporate form of organization. Therefore corporate governance can be view as a structure with a set of institutional and market mechanisms that induce self-interested managers (controllers) to maximize the value of the residual cash-flow of the firm on behalf of its shareholders (the owners).

In the same vein, corporate governance aims to explain the way corporations are governed. In order to understand and enhance performance of a firm, it is necessary to take a comprehensive account of the interests and preferences of all stakeholders in the firm. It is frequently quoted that a firm is a 'nexus of contracts' and it may be stated that the most important among those contracts is the bond between the investors and the managers of the firm. Other groups which have stake in the operations of a firm include regulatory bodies, suppliers of credit and raw material, buyers of firm products, competing firms in the industry, and society at large. Economic theory states that all of them are rational economic agents who interact with one another on the bases of legal and financial incentive jobs to other firms. Baker, Ruback & Wurgler (2004) agreed that investors believe that managers rationally respond to factors like better compensation contracts, labor market takeover pressure from market for corporate control and other corporate governance tools (shareholder activism, board oversight, third party monitoring).

Cadbury (2000) defined corporate governance as the balance between economic and social goals and between individual and communal goals so as to encourage the efficient use of resources and

equally to require accountability for the stewardship of those resources. The aim is to align as nearly as possible the interests of individuals, corporations and society. In line with this, Bodaghi et al (2010) defined corporate governance as philosophy and mechanism that entails processes and structure which facilitate the creation of shareholder value through management of the corporate affairs in such a way that ensures the protection of the individual and collective interest of all the stakeholders. Also, Malaysian High Level Finance Committee (1999) defines corporate governance as the process and structure used to direct and manage the business affairs of the company towards enhancing business prosperity and corporate accountability with the ultimate objective of realizing long-term shareholder value while taking into account the interest of other stakeholders. In a study carried out by Cornelius (2005), he defined corporate governance in its broadest sense that the stewardship responsibility of corporate directors is to provide oversight for the goals and strategies of a company and foster their implementation. According to him, corporate governance may thus be perceived as the set of interlocking rules by which corporations, shareholders and management govern their behavior.

In Nigeria, Sanda, Mikailu & Tukur (2005) tried to describe corporate governance as the ways in which all parties interested in the wellbeing of the firm attempt to ensure that managers and others insiders take necessary measures to safeguard the interest of all stakeholders. However, Hamid (2008) observed the major weakness of the definition as; it only identifies the function of corporate governance with the management alone without incorporating the board, which is the major player in corporate governance.

What is clear from the above definitions is that in directing and controlling the affairs of a company, the board has to ensure that it takes due care of the interests of the various stakeholders of the company. The typical arrangements and processes that constitute a corporate governance system such as board composition and functioning and risk management and auditing are all merely, the means to ensure that the corporation acts in a manner that is fair, accountable, responsible and transparent to all stakeholders.

According to Mouari, Jari & Aliahmadi (2012), some major mechanisms of corporate governance can refer to institutional investors, ownership concentration and the non-executive of directors. This is referred to individual firm attributes and the factors that allow companies to maintain sound governance practices. Such factors may include a corporation's ownership structure, its relationships with stakeholders, financial transparency and information disclosure practices as well as the configuration of its managing boards.

Corporate governance provides the basis for stable and productive business environment which protects the interests of internal and external stakeholders. This therefore has become an important and well debated issue in recent years. Demirag, Sudarsanam, & Wright, (2000) stated that there is a need of an accountable system which controls scandals regarding shareholders and management in corporate world. The Cadbury Report in the U.K. provides influential role to corporate governance and as Mintz (2005) describes, corporate governance plays an important role in constructing business ethics.

Proponents of shareholder wealth maximization' model assume that managers engage in principal- agent' relationship that work on behalf of investors and take care of their interests by exerting honest work effort. The premise is that after-tax-profits of a firm are shared in a way that investors get best return (dividends and capital gain) on their investments and managers get competitive pays such that they have no incentive to steal money from the firm, nor can they increase their monetary rewards by switching job to other firms.

In conclusion, corporate governance is considered as having significant implications for the growth prospects of an economy. This is because proper corporate governance practices reduce risk for investors, attract investment capital and improve performance of companies. For instance, Rezaee (2009) confirmed that In Sri Lanka, effective corporate governance is considered as ensuring corporate accountability, enhancing the reliability and quality of public financial information thereby enhancing the integrity and efficiency of capital markets, which in turn will improve investor confidence. We therefore define corporate governance as an indication of the process of supervision and control on firm's management in order to make sure whether the performance of the managers is in accordance with the interest of the shareholders.

2.3 Concept of Capital Structure

In corporate finance, capital structure can be defined as the way a firm finances its investments through some combination of equity, debtor hybrid securities (Rose 2007). Firms' investments can be financed by increasing either creditors or owners claims. Creditors' claims increase when firms raise fund through issuing debt while owners' claims increase by issuing equity shares. The proportionate relationship between debt and equity in firm's capital is referred to as capital

structure (Pandey, 2004). According to Abor (2008), capital structure is the mix of debt and equity a firm uses to finance its operations. In line with this, the use of fixed charges sources of funds along side equity in capital structure is termed as financial leverage (Pandey 2004). Rajan and Zingales (1995) applied four alternatives definitions of leverage.

The first and broadest definition of leverage ratio is the ratio of total (non-equity) liabilities to total assets denoted by as LVLTA. This can be viewed as a proxy of what is left for shareholder in case of liquidation. However, this measure does not provide good indication of whether the firm is at risk of default in the near future. In addition, since total liabilities also include items like account payables which are used for transaction purposes rather than for financing, it is likely to overstate the amount of leverage. In addition, provision and reserves such as pension liabilities, potentially affected this measure of leverage.

A second definition of leverage is the ratio of debt to net asset which is total assets less accounts payable and other current liabilities unaffected by non-interest and bearing debt and working capital management. However, it is influenced by factors that has nothing to do with financing; for example, assets held against pension liabilities may decrease this measure of leverage.

A third definition of leverage is the ratio of debt (both short term and long term) to total assets denoted as LVDTA. This measure of leverage covers debt in narrow sense. (i.e., interest bearing debt) and excludes provisions.

The fourth definition of leverage is the ratio of total debt to total capital which is defined as the total debt plus equity denoted as LVDC. This measure of leverage looks at the capital employed

and thus best represents effect of past financing decision. It is most directly relates to the agency problems associated with debt as suggested by Jensen and Meckling (1976) and Myers (2001). The fourth definition provides the basis for adopting the definition of leverage in this study.

In evaluating capital structure decisions, it is important to differentiate between internal and external source of funds. Bodie and Merton (2000) stated that internal financing occurs from the operations of the firm, such as retained earnings, while external financing arises whenever the firm's managers raise funds from outside investors or lenders. Hence, when the firm earns profits and uses the amount to invest in a new plant, it is called internal financing, and, on the other hand, if a firm issues stocks to purchase a new plant and equipment, it is called external financing. The process for external financing are usually time consuming and more complicated than internal financing. It is mainly because the investors or lenders need to be convinced that the investment project will generate adequate future cash to substantiate the expenditure.

According to Brigham and Daves (2004), all firms need operating capital to perform its business. Hence, to acquire that operating capital, they usually have to increase the funds by the combination of debt and equity. Accordingly, the trick for each investment is to find the best mix of both. If a company has too much debt, it may overextend its ability to service the debt and can be vulnerable to business downturns and changes in interest rates, and thus would be viewed to be financially risky. On the other hand, too much equity dilutes ownership interest, exposes the company to outside control, and usually indicates that the business is not effectively using its cash to obtain business assets. This may be discouraging to investors, because it means less profits being distributed to them.

Firms establish target capital structure that consider optimal for business. Even though actual levels of debt and equity may fluctuate over time, firms usually attempt to keep their financing mix close to their target. Daves et al. (2004) was with the opinion that managers should choose the capital structure that maximizes shareholders' wealth. The fundamental approach is to consider a trial capital structure, based on the market values of debt and equity, then estimate the value of the shareholders under this capital structure.

Four important theories are used to explain the capital structure decisions. These are based on asymmetric information; tax benefits associated with debt use, bankruptcy cost and agency cost. The first is rooted in the pecking order framework, while the other three are described in terms of the static trade-off choice. These theories are discussed in turn.

The concept of optimal capital structure is expressed by Myers (1984) and Myers and Majluf (1984) based on the notion of asymmetric information. The existence of information asymmetries between the firm and likely finance providers causes the relative costs of finance to vary among different sources of finance. For example, an internal source of finance where the funds provider is the firm will have more information about the firm than new equity holders, thus these new equity holders will expect a higher rate of return on their investments. This means it will cost the firm more to issue fresh equity shares than to use internal funds. Similarly, this argument could be provided between internal finance and new debt-holders.

The conclusion drawn from the asymmetric information theories is that there is a certain pecking order or hierarchy of firm preferences with respect to the financing of their investments (Myers and Majluf, 1984). This "pecking order" theory suggests that firms will initially rely on

internally generated funds, i.e., undistributed earnings. Where there is no existence of information asymmetry they will then turn to debt if additional funds are needed, and finally they will issue equity to cover any remaining capital requirements. The order of preferences reflects the relative costs of various financing options. Clearly, firms would prefer internal sources to costly external finance (Myers and Majluf, 1984). Thus, according to the pecking order hypothesis, firms that are profitable and therefore generate high earnings are expected to use less debt capital than those that do not generate high earnings.

Capital structure of the firm can also be explained in terms of the tax benefits associated with the use of debt. Green, Murinde and Suppakitjarak (2002) observed that tax policy has an important effect on the capital structure decisions of firms. Corporate taxes allow firms to deduct interest on debt in computing taxable profits. This suggests that tax advantages derived from debt would lead firms to be completely financed through debt. This benefit is created, as the interest payments associated with debt are tax deductible, while payments associated with equity, such as dividends, are not tax deductible. Therefore, this tax effect encourages debt use by the firm, as more debt increases the after tax proceeds to the owners (Modigliani and Miller, 1963; Miller, 1977).

It is important to note that while there is corporate tax advantage resulting from the deductibility of interest payment on debt; investors receive these interest payments as income. The interest income received by the investors is also taxable on their personal account, and the personal income tax effect is negative. Miller (1977) and Myers (2001) argued that as the supply of debt from all corporations expands, investors with higher and higher tax brackets have to be enticed to

hold corporate debt and to receive more of their income in the form of interest rather than capital gains. Interest rates rise as more and more debt is issued, so corporations face rising costs of debt relative to their costs of equity. The tax benefits arising from the issue of more corporate debt may be offset by a high tax on interest income. It is the trade-off that ultimately determines the net effect of taxes on debt usage (Miller, 1977; Myers, 2001).

Bankruptcy costs are the costs incurred when the perceived probability that the firm will default on financing is greater than zero. The potential costs of bankruptcy may be both direct and indirect. Examples of direct bankruptcy costs are the legal and administrative costs in the bankruptcy process. Haugen and Senbet (1978) argued bankruptcy costs must be trivial or nonexistent if one assumes that capital market prices are competitively determined by rational investors. Examples of indirect bankruptcy costs are the loss in profits incurred by the firm as a result of the unwillingness of stakeholders to do business with them. Customer dependency on a firm's goods and services and the high probability of bankruptcy affect the solvency of firms (Titman, 1984). If a business is perceived to be close to bankruptcy, customers may be less willing to buy its goods and services because of the risk that the firm may not be able to meet its warranty obligations. Also, employees might be less inclined to work for the business or suppliers less likely to extend trade credit. These behaviours by the stakeholders effectively reduce the value of the firm. Therefore, firms that have high distress cost would have incentives to decrease outside financing so as to lower these costs. Warner (1977) maintained that such bankruptcy costs increase with debt, thus reducing the value of the firm. According to Modigliani and Miller (1963), it is optimal for a firm to be financed by debt in order to benefit from the tax deductibility of debt. The value of the firm can be increased by the use of debt since

interest payments can be deducted from taxable corporate income. But increase in debt results in an increased in probability of bankruptcy. Hence, the optimal capital structure represents a level of leverage that balances bankruptcy costs and benefits of debt finance. The greater the probability of bankruptcy a firm faces as the result of increases in the cost of debt, the less debt they use in the issuance of new capital (Pettit and Singer, 1985).

According to Jensen & Meckling (1976), the use of debt in the capital structure of the firm also leads to agency costs. Agency costs arise as a result of the relationships between shareholders and managers, and those between debt-holders and shareholders. The relationships can be characterized as principal-agent relationships. While the firm's management is the agent, both the debt-holders and the shareholders are the principals. The agent may choose not to maximize the principals' wealth. Harris & Raviv, (1990) concluded that the conflict between shareholders and managers arises because managers hold less than 100% of the residual claim. They do not capture the entire gain from their profit enhancing activities but they do bear the entire cost of these activities. Separation of ownership and control may result in managers exerting insufficient work, indulging in perquisites, and choosing inputs and outputs that suit their own preferences. Managers may invest in projects that reduce the value of the firm but enhance their control over its resources. For instance, it may be optimal for the investors to liquidate the firm. Managers may choose to continue operations to enhance their position. Harris & Raviv (1990) confirmed managers have an incentive to continue a firm's current operations even if shareholders prefer liquidation.

In Chittenden et al. (1996), the conflict between debt-holders (creditors) and shareholders is due to moral hazard. Agency theory suggests that information asymmetry and moral hazard will be greater for smaller firms. Conflicts between shareholders and creditors may arise because they have different claims on the firm. Equity contracts do not require firms to pay fixed returns to investors but offer a residual claim on a firm's cash flow. However, debt contracts typically offer holders a fixed claim over a borrowing firm's cash flow. When a firm finances a project through debt, the creditors charge an interest rate that they believe is adequate compensation for the risk they bear. Because their claim is fixed, creditors are concerned about the extent to which firms invest in excessively risky projects. For example, after raising funds from debt-holders, the firm may shift investment from a lower-risk to a higher-risk project.

According to Jensen & Meckling (1976), the conflict between debt-holders and equity-holders arises because debt contract gives equity-holders an incentive to invest optimally. More specifically, in the event of an investment yielding large returns, equity-holders receive the majority of the benefits. However, in the case of the investment failing, because of limited liability, debt-holders bear the majority of the consequences. In other words, if the project is successful, the creditors will be paid a fixed amount and the firm's shareholders will benefit from its improved profitability. If the project fails, the firm will default on its debt, and shareholders will invoke their limited liability status. In addition to the asset substitution problem between shareholders and creditors, shareholders may choose not to invest in profitable projects (under invest) if they believe they would have to share the returns with creditors.

The agency costs of debt can be resolved by the entire structure of the financial claim.

Barnea et al. (1980) argued that the agency problems associated with information asymmetry, managerial (stockholder) risk incentives and forgone growth opportunities can be resolved by means of the maturity structure and call provision of the debt. For example, shortening the maturity structure of the debt and the ability to call the bond before the expiration date can help reduce the agency costs of underinvestment and risk shifting. Barnea et al. (1980) also demonstrated that both features of the corporate debt serve as identical purposes in solving agency problems. We therefore define capital structure as the mix of debt and equity a firm uses to finance its operations. Firms usually use a mix of debt and equity in order to minimize the cost of capital and maximize owners' wealth

2.4 Empirical studies on Corporate Governance and Capital Structure

It is a widely-accepted view that corporate governance could play a vital role in the choice of capital that maximizes shareholders' wealth. Antoniou et al. (2008) conducted a study to investigate how firms operating in capital market-oriented economies (the U.K. & the U.S.) and determine their capital structure, using multi-variance analysis. They found that capital structure of a firm is heavily influenced by the corporate governance practices and exposure to capital markets.

Guo, Ding & Sun (2010) investigated the effect of ownership structure on leverage levels. They used 365 companies from 1997 to 2009. Panel multiple regression was used for data analysis. Their research findings confirmed negative effect of ownership on leverage. Also, further investigation showed that change in the company leverage, positively associated with level of ownership concentration.

Rehman *et al.* (2010) investigated the relationship between corporate governance and capital structure of randomly selected 19 banks of Pakistan from 2005-2006. Panel multiple regression for analysis was used. They found a positive relationship between board size and capital structure. However, Based on our study of corporate governance and capital structure 10 firms are selected out of 16 listed food and beverages firms in Nigeria from 2004-2013, to investigate the relationship between corporate governance and capital structure of listed food and beverages firms in Nigeria.

Saad (2010) used a sample of 126 Malaysian publically listed companies from four industries (i) consumer products, (ii) industrial products, (iii) trading/services, and (iv) plantations for the period from 1998 to 2006, through multiple regression analysis. The results show a positive relationship between board size and capital structure and a negative relationship between duality and capital structure. Also, Berger & Diatti (2003) tested the corporate governance theory and predicted that leverage affects agency cost and thereby influence firm performance, and they revealed that the data on US banking was consistent with the theory.

Abor & Biekpe (2007) examined the relationship between corporate governance and capital structure of Ghanaian Small and Medium Enterprises using multivariate regression analysis. The results provided evidence about negative relationship between corporate governance and capital structure decisions. Our study used a panel multiple regression technique of data analysis in testing and examining the hypothesis under study.

Otnet (2006) conducted a study on the relationship between corporate governance and capital structure using Jordanian companies' data while assuming ownership structure as a proxy of corporate governance. The work indicates that the agency cost arises due to internal and external set of mechanism and ownership structure has positive and negative impact on the capital structure. Firstly, a negative relation between ownership structure and capital structure is due to short term financing. Secondly, a positive relationship between ownership structure and capital structure is due to sustainability in financing and enforcement of block holders to avail the opportunity of high debt.

However, in this study on corporate governance and capital structure of listed food and beverages firms in Nigeria, corporate governance variables include ownership concentration, institutional investors and board composition while capital structure is proxied by total debt to total capital employed and total debt to total asset.

Also, Wen *et al*. (2002) found the relationship between corporate governance and capital structure by analyzing the data of Chinese listed companies. The study revealed that, due to strict rules and regulations, managers of the Chinese firm do not employ debt to keep the risk of default at low level. In addition, three reasons for employing low debt are; the small numbers of directors in the firms, the large numbers of outside directors in the board of directors and the attractive tenure, salary, and bonus of the CEO.

Hussainy and AlJifri (2009) examined the relationship between the corporate governance mechanisms and corporate capital structure. They divided these mechanisms into two types of

internal and external mechanisms. The Sample consisted of 71 companies, using multiple regressions. The results of this study indicated that institutional investors on debt to equity ratio have a negative impact. Also, they found that there are positive relationships between the dividend policy and debt to equity ratio. Other findings showed that the company size has positive relationship with debt to equity ratio.

Classical corporate finance theories argued that increase in leverage reduce managerial agency cost and strengthen corporate governance, because debt is being used by investors to generate information to assessed major operating decision. Jesen and Meckling (1976), Harris and Ravis (1991) and Harvey et.al (2004) opined that leverage is positively correlated with firm value when investment opportunities are scarce and debt reduces the problem of overinvestment. In addition, a study conducted by Kaplan (1989) revealed that a higher financial leverage associated with leverage buyout have a positive impact on corporate performance. Myers (1977) posited that agency cost was as a result of conflicts of interest shareholders-debt-holders and suggested that a higher leverage was correlated with a lower corporate performance.

According to Abor (2007) in his study on how corporate governance affects capital structure by taking a sample of 22 firms listed on the Ghana Stock Exchange (GSE) during the six-year period (1998-2003) was found that there is a significantly negative relationship between board size and capital structure and opposite finding on the association between CEO duality and leverage where it implies that larger boards adopt low debt policy and CEO as the board chairman tend to employ high proportion of debt.

Another study conducted by Wen.Y, Rwegasira, K. & Bilderbeek, J. (2002) on corporate governance and capital structure decisions of the Chinese listed firms found that managers tend to pursue lower financial leverage when they face strong corporate governance from the board. However, their finding only shows a significant value of board composition and CEO tenure and insignificant results for board size and fixed CEO compensation.

Bodaghi and Ahmadpour (2010) collected data from 50 Iranian firms listed at Tehran Stock Exchange to test the relationship between corporate governance and capital structure. They found a negative relationship between board size and debt to equity ratio. They found that CEO duality does not significantly influence corporate financing behavior.

Suto (2003) described the relationship between corporate governance and capital structure before and after the financial crises, using the agency cost approach. The study analyzes the time series and cross-sectional data obtaining from KLSE, by using different proxy variables for capital structure and corporate governance. The result showed that the commitment in banks for lending and borrowing causes to increase the debt ratio. On the other hand, increase in ownership does not affect corporate management. Further, the study investigates the foreign ownership reduces the agency cost, as well, high debt ratio attracts excessive investments.

Abor (2007) discussed the influence of corporate governance on the capital structure decisions of firms for developed and emerging markets in Chinese listed firms and Ghana Stock Exchange respectively. Hussainey (2006) examined the association between internal and external mechanisms of corporate governance and capital structure in UAE. Kuma, (2006) Studied the

relations between ownership concentration and capital structure in India. Khan (2005) examined the globalization and similarities in corporate governance with cross country analysis while Caspedes (2008) carried out study on the relationship between ownership concentration and capital structure factor in Latin America. Hassan (2009) investigated the effect of corporate governance monitoring mechanisms on capital structure and firm value in Australia.

Berger and Di Patti (2003) tested the corporate governance theory that predicted that leverage affects agency cost and thereby influence firm performance, and they revealed that the data on US banking was consistent with the theory. Moreover, a study carried out by La bruslerie and Latrous (2007) revealed that the relationship between ownership structure and leverage varies according to the level of controlling shareholders' equity ownership. They found that debt in term of leverage was used by controlling shareholders to protect themselves from unnecessary takeovers.

2.4. 1 Ownership Concentration and Capital Structure

Ownership concentration controls the agency cost between the shareholders and managers by creating incentive for and monitoring capacity of the block holder. Heinrich (2002) opined that changing the risk sensitivity of the investor, ownership concentration internalizes monitoring and controls free rider problem. According to La Porta et al., (1998), concentrated ownership could be induced by reasons like substantial legal and financial benefits of control, dominant shareholders' capacity to monitor the managers better, and to counteract the poor legal protection available to small investors. Bolton, Becht and Roell (2005) argued that partial ownership concentration and firm control by few large investors solve the collective action problem of the shareholders. As the stake of shareholders in the firm increases so does the incentive to engage

more in firm affairs, consequently shareholders become more watchfulness of management activities and try to protect their cash flow right.

Salma (2002) assessed the impact of ownership concentration and capital structure adjustment. The study is on capital structure dynamics of a panel of 766 firms from five Western Europe using multiple panel regression analysis. In measuring ownership concentration, a large block holder was used. The findings of the study show that transaction costs and the agency costs inherent to ownership concentration is a significant determinant of capital structure dynamics

Sarmitha & Burnnel (2006) study the impact of ownership concentration on capital structure from the south east Asia. They examine the effect of ownership structure on both capital structure and firm value. In measuring ownership concentration they used block holder and on the other hand they used earning variability to measure leverage. Their findings fail to produce any conclusive evidence on the relationship between ownership concentration, capital structure and firm value.

Driffield et al., (2007) found that higher ownership concentration has a positive impact on capital structure and firm value. In the case of lower ownership concentration, the relationship depends upon the strictness of managerial decision making which enforce to bring change in the capital structure. Caspedes (2008) examined the relationship between ownership concentration and capital structure factors in seven countries of Latin America from 1996 to 2005, using multiple regression technique. The results showed the positive relationship between ownership concentration and leverage. Also they gain positive relationship between leverage and corporate growth.

Driffield & Mohambare (2007) did research in order to find the relationship between ownership concentration and capital structure in Indonesia, Malaysia and Thailand. The result of this study confirmed that there is significantly positive relationship between leverage and ownership concentration. Thus, they proved that the ownership concentration may be an effective supervisory mechanism.

Hassan (2009) investigated the effect of corporate governance monitoring mechanisms, ownership concentration on capital structure and firm value. He used the data from nonfinancial corporate accepted in Australia Stock Exchange from 1993 to 2008. The results showed that there is significant relationship between ownership concentration with firm value, ownership concentration with leverage and leverage with firm value.

Grossman & Hart (1986) and Anderson et al. (2003) confirmed that firms with a high ownership concentration structure have higher leverage level than firms with dispersed ownership. Nam et al. (2003) found the opposite outcome. Brailsford et al. (2002) opined that the impact of ownership on leverage is nonlinear, varying across the level of managerial share ownership. They argued that ownership structure as a crucial determinant in corporate governance which is closely associated with cost of debt and equity financing. Lundstrum (2009) found a negative relationship between managerial share ownership and the magnitude of leverage change before issuance. Therefore, there seem to exist links between ownership concentration and firms' external financing decisions.

With regard to market timing theory, firms' choice of debt or equity is also highly associated with current stock market conditions. If the stock market is hot, firms will consider equity issue as a first choice; if not, they might favour debt financing. However, no previous study has linked the impact of ownership concentration on external financing policy with market timing theory to check whether this impact changes with different stock market conditions in the context of large shareholders' behavior and agency theory.

Shleifer & Vishny (1986, 1997) found that according to the efficient monitoring hypothesis, large external shareholders have strong incentives to monitor and discipline management in order to mitigate agency cost. Grossman & Hart (1986) further indicated that shareholders with large stakes can gain internal benefit from their monitoring. Large shareholders are usually risk averse so that they may avoid undertaking investment with high risk premier, resulting in the under-investment problem (Demsetz & Lehn, 1985). This study tends to examine the impact of corporate governance on capital structure of listed food and beverages firms in Nigeria.

In contrast, Jensen & Meckling (1976) were with the view that diversified shareholders are more interested in undertaking risky projects with high expected return at the expense of bondholders' wealth. This is because diversified shareholders can obtain the excess returns if the investment is successful, while creditors bear the cost of failure. As a result, creditors demand higher debt cost. Furthermore, according to Grossman et al (1980), dispersed ownership may weaken the monitoring mechanism, due to the free rider problem. This study therefore measures ownership concentration by use of herfindahl index (the sum of the square of the fraction of share held by each individual shareholding).

Morck, Shleifer , Vishny, (1988) & Holderness, (2003) concluded that the divergence between voting right and cash flow right means that controlling shareholders tend to consume the corporate resources, while the minority shareholders cannot share the advantages. Furthermore, larger shareholders potentially expropriate minority investors in the firms with high concentrated ownership (La Porta et al., 1999; Denis & McConnel, 2003). Johnson et al. (2000) put forward the term "tunneling" to describe how controlling shareholders extract private benefit from firms' assets and resources. This study will evaluate the effect of the presence of ownership concentration on corporate governance of listed food and beverages firms in Nigeria.

In terms of debt financing, most prior evidence shows that firms with high ownership concentration have higher leverage levels (Grossman & Hart, 1986; Anderson et al., 2003). Controlling shareholders prefer debt to equity financing since they tend to maintain their level of voting control for a given level of equity. Moreover, a higher level of debt can reduce the risk of the firm becoming a takeover target. However, shareholders in firms with dispersed ownership are willing to diversify their risk to invest in different firms and in risky projects, so that they may expropriate the creditors' interest (Jensen & Meckling, 1976). As a result, debt holders will demand higher interest on debt to compensate their potential loss, and thus the cost of debt financing increases.

With regard to the negative impact of ownership concentration on firms' leverage, the explanation is built on the theory that the controlling shareholders wish to reduce the control risk exposure; hence they are more averse to the risk of financial distress and bankruptcy that follows high debt level (Mishra & McConaughy, 1999). However, some scholars argued that ownership

concentration is an exogenous variable, which does not influence firm performance and leverage (Chaganti & Damanpour, 1991; Anderson & Reeb, 2003).

2.4.2 Institutional Ownership and Capital Structure

Jensen (1986) opined that institutional investors can reduce the agency costs by monitoring the corporate performance and by ensuring the shareholders' interests. In addition Lev (1988) argued that the institutional investors are well informed compared with individual investors. This type of investors has easy access to different sources of information. The relationship between institutional investors and corporate capital structure decisions play a significant role in the choice of capital structure. The close monitoring of institutional investors may force managers to take decisions in the interests of shareholders. Their ability to pursue self-interests may reduce. As a result, managers may be hindered from employing lower levels of debt to protect their employment risk.

Lakshmi (2009:2) was with the view that close monitoring of institutional investors may force managers to take decisions in the interests of shareholders and their ability to purse self-interests may diminish. As a result, managers may be prevented from employing lower levels of debt to protect their employment risk". Also, Shleifer & Vishny (1986) showed that institutional investors successfully monitor the performance of the management team. Based on this 'active monitoring hypothesis, institutional investors can reduce the scope of managerial opportunism by closely monitoring them. Because of their fiduciary position, institutional investors are compelled to monitor the mangers. Their huge stake in the firm provides the economics for doing so. Shome and Singh (1995) produced evidence that supports the active monitoring hypothesis.

Pound (1988) challenged the active monitoring hypothesis. He puts forth the argument that large external shareholders may be passive voters. They may collude with insiders against the interests of dispersed shareholders. In line with this argument, McConnell & Servaes (1996) presented the 'passive voters hypothesis by relating the large shareholders and firm value. If this happens to be the behavior of institutional investors, then institutional shareholding and debt level may be negatively related to each other. Crutchleyl (1999) provided evidence that the association between institutional investors and the debt-to-equity ratio is positive and statistically significant.

The empirical literature also shows that institutional shareholding and firm debt level are related. Jensen, Jahera & Raymond (1999) opined that institutional ownership may be related to capital structure. They found that institutional ownership is simultaneously determined with leverage.

2.4.3 Board composition and Capital Structure

Pfeffer & Salancick (1978) found out that non-executive director plays a pivotal role in enhancing the capability of a company to get recognition from external stake holders. They found that higher level of representation of non-executive directors on board leads to higher gearing levels. Jensen (1986) & Berger (1997) posited that companies with higher gearing levels rather have relatively more non-executive directors whereas companies with lower representation of non-executive directors experience lower leverage.

Abor and Biekpe (2007) provided evidence about the presence of positive relationship among gearing levels and CEO duality, board skills and board composition on Ghanaian SMEs that have more outside directors and a diversified set of skills at board. The result showed higher

level of gearing. Also, Shijun (2007) examined the relationship between board composition and firm's performance. The sample included 1252 firms during the years 1996 to 2006. In the research, he used the return of assets (ROA) and that of shares as criteria for measuring performance and also the variables board size and proportion of outside directors for measuring board composition. The results showed that there is a positive relationship between board size and proportion of outside directors with the performance of firm.

High proportion of outside directors is believed to be associated with high leverage position. Pfeffer & Salancick, (1978) Observed that external directors enhance the ability of a firm to protect itself against the external environment, reduce uncertainty, or co-opt resources that increase the firm's ability to raise funds or increase its status and recognition

On the other hand, Wen (2002) provided evidence about the existence of significantly negative relationship between gearing level and representation of non-executive directors on the board. The reason is that non-executive directors monitor the managers more efficiently and effectively so managers are forced to seek lower gearing levels for achieving superior results. Similarly companies with higher representation of non-executive directors are bound to follow low financial leverage with a high market value of equity.

2.4.4 Firm Size and Capital Structure

According to (Castanias, 1983; Titman & Wessels, 1988; Wald, 1999), larger firms are more diversified and hence have lower variance of earnings, making them able to tolerate high debt ratios. Castanians (1983), opined that smaller firms, may find it relatively more costly to resolve information asymmetries with lenders, thus, they may present lower debt ratios. Lenders to larger

firms are more likely to get repaid than lenders to smaller firms, thereby reducing the agency costs associated with debt. Therefore, larger firms will have higher debt.

Another explanation for smaller firms having lower debt ratios is where the relative bankruptcy costs are inverse function of firm size (Titman & Wessels, 1988). It is generally believed that there are economies of scale in bankruptcy costs where larger firms face lower unit costs of bankruptcy than smaller firms. Cosh & Hughes (1994) found that if the fixed portion of default costs tends to be large, then marginal default cost per dollar of debt may be lower and increase more slowly for larger firms. Facts about larger firms may be taken as evidence that these firms are less risky. Therefore, larger firms may have an advantage over smaller firms in accessing credit markets and can borrow under better conditions that may help them have a more dilute ownership, and thus have less control over individual managers.

Empirical evidence on the relationship between size and capital structure supports a positive relationship. Several works showed a positive relationship between firm size and leverage (see Barclay & Smith, 1996; Friend and Lang, 1988; Barton et al., 1989; MacKie-Mason, 1990; Kim et al., 1998; Al-Sakran, 2001, Hovakimian et al., 2004).Their results suggest that smaller firms are more likely to use equity finance, while larger firms are more likely to issue debt rather than stock. Rajan & Zingales (1995) found that large firms are generally well-established and have good performance track record, enabling them to issue equity at fair prices. In turn, this reduces their reliance on debt and therefore there exists negative relationship between size and leverage of the firm.

In a Ghanaian study, Aryeetey et al. (1994) found that smaller enterprises have greater problems with credit than larger firms. Their results showed that the success rate for larger firms applying for bank loans was higher than that of smaller firms. In study of six African countries, Bigsten et al. (2000) also showed that about 64% of micro firms, 42% of small firms and 21% of medium firms appear constrained, while this is only 10% for the larger firms. Cassar and Holmes (2003), Esperanca et al. (2003), and Hall et al. (2004) found a positive association between firm size and long-term debt ratio.

Some studies also support a negative relationship between firm size and short-term debt ratio (Chittenden et al., 1996; Michaelas et al. 1999). According to Timan & Wessel (1988), small firms seem to use more short term finance than their larger counterparts because smaller firms have higher transaction costs when they issue long term debt or equity. They further add that such behavior may cause a 'small firm risk effect', by borrowing more short term. These types of firms will be more sensitive to temporary economic downturns than larger, longer-geared firms.

2.4.5 Board Size and Capital Structure

The board of directors is highest body of a company that is responsible for managing the firm and its operation. It plays vital role in strategic decisions regarding financial mix. Pfeffer and Salancick (1978), found a significant relationship between board size and capital structure. The evidence regarding direction of relationship between board size and capital structure is mixed. Studies by Berger (1997) showed that firms with larger board of directors generally have low gearing levels. He argued that larger boards exert pressure on managers to follow lower gearing levels and enhance firm performance. Also, a positive and statistically significant relation is found in Jensen (1986). This positive sign indicates that firms with larger board size are more

likely to use more debt to finance their activities than equity. Wen (2002) found positive relationship between board size and capital structure. He argued that large boards follow a policy of higher levels of gearing to enhance firm value especially when these are entrenched due to greater monitoring by regulatory authorities.

Some evidences indicate that larger board may find difficulty in arriving at a consensus in decision which can ultimately affect the quality of corporate governance and will translate into higher financial leverage levels. Jensen (1986) stated that companies with high gearing level rather have larger boards. Anderson (2004) was with the view that the cost of debt is generally lower for larger boards because lenders think that these companies are being monitored more effectively by a diversified portfolio of experts. So debt financing becomes a cost effective choice.

Other researchers found no statistically significant relationship between board size and debt- to-equity ratio. (Wiwattanantang, 9991; Wen et al.;2009; Al-Najjar and hussainy, 2009). According to them, larger board may find it difficult to reach an agreement in decisions which can ultimately affect corporate governance quality of a particular firm (i.e. increasing agency costs).

However, Abor & biegpe (2007) examined the relationship between corporate governance and capital structure decisions of Ghanaian Small and Medium Enterprises by using multivariate regression analysis. The results provide evidence about negative relationship between board size and leverage ratios and SMEs with larger boards generally have low level of gearing. However, it should not be eliminated that having a large board size is a benefit to capital structure as a

result of enhancing the ability of the firm to establish external links with the environment, securing more rare resources and bringing more exceptional qualified counsel (Dalton & Daily,1999)

2.5 Corporate Governance in Nigeria

A few academic and corporate researches conducted on corporate governance in Nigeria have identified institutional, legal and capacity development as the central point to the development of corporate governance in Nigeria. Anglo- American system of corporate governance, which the common law practices in the US and the UK, is adopted in Nigeria. In Anglo-American system, the executive and independent non-executive board members are elected by the shareholders and board members place higher premium on the shareholders to encourage flow of investments.

Quari (2011) confirmed that the ongoing global financial crisis that started in late 2007 and the recent corporate scandals that led to the demise of corporate giants like Arthur Andersen, Enron, WorldCom, has brought out the importance of effective corporate governance the world over. Short comings in the senior management team of corporations and the carefree attitude of boards of directors in Nigeria to ensure adequate review of the systems for compliance with laws and regulations, coupled with inadequate systems to review and approve material changes in accounting principles, continue to put corporate governance in the forefront as panacea for turnaround.

These corporate scandals culminated the introduction of Sarbanes Oxley in the US which further brought into the political and corporate limelight the inevitability of efficient corporate

governance in providing strategic direction not only to the management but also, to ensure transparency, controls and accountability to protect business interests, the interest of the shareholders and the stakeholders. In respect of the ongoing global economic problems, current researches in corporate governance have clearly pointed out the positive correlation between efficiency in corporate governance best practice and sustainable economic growth and development (OECD, 2008).

Prior to the ongoing global financial meltdown, the experience of the Asian Tigers financial crisis in the 1990s signaled a clarion call to reform corporate governance as the solution for successful turnaround. According to McGee, R. W. & Sanjoy Bose, (2009), The ongoing practice in the less developed countries in Africa, Middle East, Asia, Eastern Europe to embrace privatization of government enterprises, most especially Russia's regretful massive privatization without the appropriate systems in place, are wakeup calls to the underdeveloped, developing and developed countries alike to invest in infrastructure necessary to sustain efficiency in corporate governance best practice.

Mallin (2010) opined that the major important issue is that regardless of the level of economic advancement of the western world, the fundamentals and the pragmatic common-sense principles of corporate governance remain relevant. The point is that the collapse of one of the major players in corporate governance i.e. when the agent is not acting in the best interest of the principal by taking inappropriate risks, because the board is not providing the oversight to minimize agency problems, the result is huge agency cost. In the ongoing global context,

governments around the world are compelled to pay the agency cost (monitoring and disciplining) with the bail-out payments which further plunged the global economy into deficit. According to Moran (2010), the 1999 change in government in Nigeria ushered in a new democratic administration with a policy to attract new and sustainable foreign investments which necessitated the need for reform in all ramifications. This resulted in an established commission to review the existence, adequacy and relevance of corporate governance in Nigeria relative to the international best practices in response to the New International Economic Order (NIEO). Oyebode (2009) confirmed therefore, that the Nigerian Code of Corporate Governance Practices was developed in 2003 based on unitary board structure (as in UK and USA) with emphasis on the identified triple constraints: the role of board of directors and management, shareholders rights and privileges, and the audit committee.

In Nigeria, around the period of 1997 insider's trading, massive and prevalent frauds, mandatory retirement of CEOs of banks, due to corrupt practices and inefficient rubber-stamped board, have combined to signal the absence of or failure of existing corporate governance structure. The Company and Allied Matters Act (CAMA, 1990) was primarily enacted to regulate and balance the relationship among the board, shareholders and the management including other stakeholders, have failed woefully due to inadequate enforcement capacity.

The corporate governance regulatory institutions in Nigeria such as the Security and Exchange Commission (SEC), Central Bank of Nigeria (CBN), Corporate Affairs Commission (CAC) and the Nigerian Deposit Insurance Corporation (NDIC), are staffed with self-interested executives who easily and readily collaborate with companies' senior executives to compromise the

shareholders' interests. Board members are picked from the pool of high-profiled retired senior military officers and civil servants without expertise in basic finance and business operations (Okpara, 2000).

These set of never-do-well saboteurs sit on top the over populated board of directors (average 40-50 members) with the sole purpose to perpetuate corrupt practices particularly fixing the remunerations of senior executives which compromise corporate governance etiquette and decorum. According to Oyejide (2001), Nigerian's institutional investors are discouraged and not included in governance, and it is not uncommon to bribe some shareholders to rally support for the board and the management at annual general meetings (AGM), while the meetings even take place at remote locations in an attempt to keep away most shareholders.

The adoption of corporate governance principles in Nigeria will be a giant step toward creating safeguards against corruption and mismanagement, promote transparency in economic life and attracting more domestic and foreign investment. Yakasai (2001) provided some evidence of the evolution of corporate governance in Nigeria within the banking sector. Nmechiele & Nwauche (2004) examined the corporate governance climate in Nigeria and critically inquire into the external and internal standard that guides Nigeria companies in the way they are governed. Ogbechie & Koufopoulos (2007) evaluate corporate governance issues in public quoted companies in Nigeria. The findings of the study showed that Nigeria public companies have embraced the principles of good corporate governance but at different stages of adoption of various issues that contribute to good corporate governance. Okeke (2007) presents a

comprehensive review of corporate governance development in Nigeria, Thus expanding the literature on corporate governance in developing countries.

Nonetheless, given the dismay picture of corporate governance in Nigeria, it is clear that the inefficiency of corporate governance best practice is not limited to Nigeria alone. The failure of companies in the developed countries such as Arthur Andersen, Enron, WorldCom, the problems with Fannie Mae, Citi Group, in the United States, Parmalat in Italy and Satyam in Indian, are clear indications for reform in international best practices in corporate governance.

2.6 Right of shareholders of food and beverages firms

Oluyemi (2005) posited that shareholder is presenting a major role in the provision of corporate governance. Small or diffused shareholders exert corporate governance by directly voting on critical issues such as mergers, liquidation and some fundamental changes in the business strategy. They also indirectly elect the boards of directors to represent their interests and oversee the myriad of managerial decisions. Incentive contracts are common mechanism for aligning the interest of managers with those of shareholders. Then the board of directors may negotiate managerial compensation with believe that it will yield a particular results.

Also, large ownership in food and beverages firms is another mechanism which will disallow the managers from deviating too much from the interest of the owners. Large shareholders have incentives to obtain information and monitoring managers, and they can also elect their representative to the board of director and check managerial control of the board. They can also be more effective in exercising their voting rights than an ownership structure which is

dominated by small and uniformed investors. Consequently, large shareholders can be more effective in the negotiation of managerial incentive contract that align owner and manager interests than poorly informed small shareholders whose representative the board of director can be manipulated by the management. However, DeAngelo & DeAnglo (1995) revealed that large ownership brings some corporate governance problems. This occurs when the large investors exploit business relation with other firm they own which will profit them at the expense of the firm. Moreover, with larger shareholders, private benefits of control can be maximized at the expense of smaller shareholders.

Organization Economic Corporation and Development (OECD, 2004) specified the following as the basic shareholder rights this including the right to secure method of ownership registration, convey or transfer share, obtained relevant and material information on the corporation on a timely and regular basis. Then participate and vote in general shareholder meeting, elect and removed members of the board, and share in the profit of the corporation. In addition, shareholders should have the right to participate in and to be sufficiently informed on decision concerning fundamental corporation changes. For example are amendments to status or articles of incorporation, the authorization of additional share and extraordinary transactions, including the transfer of all or substantially all assets that in effect result in the sale of the company. Moreover, capital structures and arrangements that enable certain shareholders to obtain a degree of control disproportionate to their equity ownership should be disclosed, and the exercise of ownership rights by shareholders, including institutional investors, should be facilitated.

Shleifer & Vishiny (1997) revealed that in more extreme situation large shareholders have outright control of the firm and their management with fifty-one or more per cent ownership. As a result, they address the agency problem in the sense that they have general interest in profit maximization and have enough over the assets of the firm so that their interest are respected. In addition, because large shareholders control by exercise their voting rights, their power is based on the degree of legal protection of their votes. Majority ownership only works if the voting mechanism works, and majority ownership dictate the decision of the company and in which they need the enforcement by courts.

Holderness and Sheehan (1988) found that many shareholders have over fifty-one percent in the public firm. Black & Coffee (1994) claimed that there is dispersed ownership by diversified shareholders in UK. However, Gompers et al. (2003) posited that shareholders right vary across firms by using the indices of twenty-four governance rules and constructing a Governance Index to proxy for the level of shareholder right of about 1500 large companies. The result showed that firm with stronger shareholders rights have increase in firm value, more profits, higher sales growth, lower capital expenditure, and involvement in less corporate acquisition.

Hart (1995) found that small shareholders have little incentive to oversee the management or attached through a proxy fight. Adeoye (2010) argued that where a large shareholder having less than 100 percent shares of the company, agency problems may be reduced, but it cannot be removed. The large shareholder will underperform in monitoring and intervention activities because he did not receive 100 percent of the gains, the large shareholder may use his voting

power to improve his position at the expense of other shareholders. Then the large shareholder may easily become part of management, such as running the company by himself.

Another problem with the large shareholder is that where the large shareholder is an institution, the shareholders of the institution will hire a manager to act on their behalf. This will definitely introduce a new principal-agent problem. This clearly shows that managers of the institution will do a good job to monitor, as against to pursing his own goal which involves the extraction of some private benefit from managers of the company who are meant to monitored. Lipton and Lorsch (1992) explained that shareholders should focus their attention on the financial and strategic performance of the company and they should not use the corporate governance system to pursue social and political ends. This revealed that such activity only increased the tension between shareholders, managers and directors, diverting the latter two groups from focusing the way they will improve the performance of the company.

Payne, et al. (1996) posited that legally, institutions that are acting as fiduciaries should take the interest of beneficiaries as important. Also fiduciary agents are firm trustees which are not to consider self-interest or interest of the third parties on decision making that affect asset value (shareholder voting). Moreover, management may work to established themselves firmly at the expense of outsider shareholders and may force the institutional investors to vote in support of their proposals.

OECD (2004) revealed that corporate governance should ensure an equitable treatment of all shareholders, including minority and foreign shareholders. All shareholders should have the opportunity to obtained effective redress for violation of their rights. The confidence of minority shareholders is enhanced when the legal system provides mechanism for minority shareholders

to bring lawsuits when they have a reasonable point to believe that their rights have been violated. The provision of such enforcement mechanisms is a main responsibility of legislators and regulators.

Furthermore, Shleifer & Vishiny (1997) posited that a substantial minority shareholder has the incentive to obtain information and monitor the management, thereby avoiding the traditional free rider problem. They have enough voting control to put pressure on the management in some situations, or have power to force the management out through a proxy fight or takeover. However, large minority shareholders are more complicated since they have to make alliance with other investors in order to exercise control. The power of the managers to interfere in this alliance is highly enhanced, and the courts have the power to protect their rights. As a result the large minority shareholding may be relevant only in countries with relatively powerful legal systems, while in countries with weak legal system are more likely to have outrights majority ownership.

Oluyemi (2005) found that minority shareholders may exert corporate governance directly through their voting rights and indirectly by the board of directors electing them. There are some factors that can prevent minority shareholder from effectively exerting corporate control. This occurs as a consequence of large information asymmetries between managers and minority shareholders, as managers have enormous direction over the flow of information. The minority shareholders frequently lack the expertise to monitor managers accompanied by each of the shareholder's small stake which can induce a free rider problem. This indicates that each shareholder relies on others to undertake the costly process of monitoring managers, which implies that there is too little to be monitoring.

The agency theory argued better that corporate governance gives higher stock price and improves long-term performance, this is as a result of managers are better supervised and agency cost is reduce. Gompers, et al. (2003) shows that firms with sound corporate governance practice have higher valuations, higher profit, higher sales growth, lower capital expenditure. Brown and Caylor (2004) revealed that better governance are relatively more profitable, more valuable and pay-out more cash to their shareholder. Based on the above evidence, an examination of corporate governance variables are responsible for having impact on capital structure and hence firm performance.

2.7 Theoretical Framework

There are several theories that explain the relationship between corporate governance and capital structure in the literature of accounting and finance. There are four theories that are related to the study namely stewardship theory, stakeholders theory, theory of firm and agency theory. (Ross, 1978; Fama 1980; Chang, 1999; and Hamilton & Kashlak, 1999). However for the purpose of this study agency theory will be preferred. These four theories however can be used to explain the impact of corporate governance on capital structure.

According to stewardship theory, managers are good stewards of the company assets. Managers do not misappropriate corporate resources because they have a range of non-financial motives, such as the intrinsic satisfaction of successful performance and the need for achievement and recognition. This in essence will make them appreciate their fiduciary duty towards the owners of the companies (1998; Chang, 1999; Hamilton & Kashlak, 1999; & O'Donnel, 2000). This theory therefore requires the directors of a company to be accountable to owners for their

stewardship over the company's resources, subject to the report from an independent auditor to the accounts show a true and fair view.

The stakeholder theory holds that companies are accountable for their stewardship over the resources entrusted to them by a coalition of various stakeholders which include stakeholders, employees. Suppliers, bank regulatory authorities, relevant government agencies, pressure group, debenture holders and members of the general public Jensen & Meckling, 1976; Chang, 1999; and O'Donnell, 2000). Responsibility of directors is therefore to a numerous groups and individuals. In a nut shell, the stakeholder's theory is concerned with resolving problems that may occur in the relationship between two major groups the stakeholders and managers (directors).

The theory of the firm recognizes that for production to take place with a view to creating utility, four factors have to be involved. These factors are namely land, labour, capital and entrepreneur. The entrepreneur (the board of directors in this case) is thus recognized as the most important of these factors, since it is in its hand that corporate governance as we know it today is vested (Donaldson & Davis, 1991). This theory shows the importance of the board in the creation of utilities thus enabling all other factors of production to earn their rewards.

The Agency theory sees the directors as the agents of the shareholders and therefore the need for them to act in their best interest. Under this relationship, the agent may not always act in the best interest of the principal. An agent problem, therefore, arises from the separation of ownership (principal) and control (agent) in the organization. Agency theory believes that managers

(agents) may pursue opportunistic behavior which may be in conflict with the goal of the owners (principal) and hence destroy shareholders' wealth. Advocates of the agency approach see the board of directors as "an economic institution that helps to solve the agency problems inherent in managing any organization" (Hermalin & Weisbash 2000). In other words, the board of directors is one of the internal control mechanisms designed to address the conflicts of interest between managers and shareholders. And bring their interests into congruence (Walsh & Seward, 1990).Within this context, a board of directors is the guardian of shareholders' fund and fulfills the critical tasks of firing and compensating the CEO (top management) and to ratify and monitor important decisions (Fama & Jensen 1983b).

From the theories reviewed, it is believed that the theory which best explains the study is the agency theory of corporate governance, which sees the board of directors as agents, due to its logical argument of interest, empirical appeal as evidenced by the wealth of research and scholars of corporate governance and capital structure and patterns for Nigeria's companies have captured the key postulations of this theory. This substantially serves as the basis for the adoption.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This section of the study explains the methodology adopted for the study by considering the methods and techniques in achieving the research objectives. The section presents and discusses the research design of the population of the study, sample size and sampling technique. In addition, it presents method and sources of data collection, technique of data analysis and variables definition and measurement. Finally, model specification and summary of the chapter are presented.

3.2 Research Design

This study adopts correlation research design. The aim is to investigate the relationship between the variables and to observe the impact on the dependent variable, so as to establish the causal relationship or otherwise among the variables. The choice of correlation research design is informed by its effectiveness in assessing the relationships among the theoretically related variables. As such the design is considered adequate and appropriate for determining the impact of corporate governance mechanisms on capital structure of quoted food and beverages firms in Nigeria.

3.3 Population of the Study

The population of this study consists of all Food and Beverages companies listed on the floor of Nigerian Stock Exchange market as at December 31st 2013. The study covers a period of ten years that is between 2004-2013. The choice of this period is due to the fact that code of corporate governance for public companies was first issued in 2003 and later became harmonized to include those of banks and insurance companies in November, 2011. The 16

companies of food and beverages firms quoted on the Nigerian stock exchange constitute the population of the study.

3.4 Sample Size and Sampling Technique

In drawing the sample size, effort had been made to ensure that adequate attention has been paid in determining the sample size for the study, and taking into account the nature of the population, the type of sampling design adopted, the sample size of the study is derived by using simple criteria that constituted (10) companies. The sample of the study is (10) listed food and beverages companies that are quoted on the Nigerian stock exchange during the period 2004-2013. The criterion was the companies that are listed and their data are available in the annual report and Fact Book. We employed a two-point-filter to eliminate the companies that failed to meet our criteria set. The filters are: The Company that made available the annual report of ten years to Nigerian stock exchange and Fact Book. The company must be listed on the Nigerian Stock Exchange before the period of the study that is 2004-2013. The data filter is to ensure that the annual accounts of the companies under study are available and accessible. For this reason, the number of the companies reduced to ten (10) excluding six (6) companies.

3.5 Sources and method of Data Collection

The method used for data collection in this study is the secondary source. The data were extracted from the annual report and accounts of the sampled companies and Nigerian Stock Exchange (NSE) Fact Book. This is because the estimation of the model adopted for the study requires the use of pooled cross-section and time series data in the form of market and financial information. For the purpose of analysis, pool data was extracted from the financial statements in each of the years covered by the study and the annual reports and account of the sampled quoted

food and beverages firms in Nigeria. The data collected for the study are: total debt (short term and long term debt), equity, total asset, shareholding, total unit of shares of each company, institutional investors' shares, numbers of directors and non-executive directors of each firm of quoted food and beverages firms in Nigeria.

3.6 Technique of Data Analysis

In this research, panel multiple regression technique of data analysis was used in testing and examining the hypotheses of the study. The technique helps in assessing the impact of corporate governance mechanisms on capital structure of listed food and beverages firms in Nigeria which involves the data collected from secondary source.

It is necessary to look out for fixed and random effects of the model estimates. Hausman test was used in deciding between fixed and random effects estimate of the coefficient. This test is considered necessary, especially in a situation where estimates differ widely between the two models. Shapiro-Wllk Test was used as a technique to test for normality test, Breuch Pagan/Cook-Weisberg technique was used to test for heteroscedasticity, tolerance value and Variance Inflation Factor (VIF) was used to test for collinearity to ensure the robustness of the results and establish the reliability of the model.

The analysis was conducted using Statistics/Data Analysis Software (STATA 10.0). This data analysis was used because the researcher is interested in estimating both the FEM and REM which cannot be conducted using Ordinary Least Square (OLS). Since, OLS camouflaged

heterogeneity of the nuisance parameters. Cross-section seemingly unrelated Regression (Cross-section SUR) was selected in the weight estimate. The method was chosen in order to correct for both cross- section heteroskedascity and contemporaneous correlation.

3.7 Model Specification

To examine the firms' capital structure, this study uses the following multiple regression: equations.

CS =*f*(,*INSOWNS, OWNSCONT ,BCOM, FSIZE,)*

$D/E = TD_1t / TC_1t$

$D/A = TD_1t / TA_1t$

CS=Capital Structure

D/E= Debt divided by Equity

D/A= Debt divided by Asset

TD= Total Debt of firm i for year t

TC= Total capital of firm i for year t

TA= Total asset of firm i for year t

The two set of models are designed to test the hypotheses formulated for this study as presented below. The first model is the functional model from which the second model (the GLS) was derived.

Model 1: Debt to Total Capital (DTC)

$DTC_1t = \alpha + \beta_1 INSOWNS_1t + \beta_2 OWNSCONT_1t + \beta_3 BCOM_1t + \beta_4 FSIZE_1t + \varepsilon_{it}$ i

Model 2: Debt To Total Asset (DTA)

$DTA_1t = \alpha + \beta_1 INSOWNS_1t + \beta_2 OWNSCONT_1t + \beta_3 BCOM_1t + \beta_4 FSIZE_1t + \varepsilon_{it} \ldots\ldots\ldots\ldots ii$

Where:

α = is the intercept

$\beta_1 - \beta_3$= are the various slope coefficients

ε_i = error term.

DTC= Debt to Total

DTA =Debt to Total

INSTOWNS = Institutional Ownership

OWNSCONT= Ownership Concentration

BCOM=Board Composition

FSIZE = Natural log of total assets (is used as control variable)

Ownership Concentration Variable (Cespedes J. et al 2008).

$$H = \sum_{1=i}^{N} S^2 i$$

Where:

$S^2 i$= is the square percentage ownership of large shareholders.

n = is the number of total large shareholders in the firms.

H = high level of herf-indahl represents high ownership concentration

3.8 Variables Definition and Measurement

Variables	Definition	Measurement
DTC	**Debt to total capital ratio**	Total financial debt divided by total capital (total debt divided by sum of debt plus equity) of firm i in time t
DTA	**Debt total asset ratio**	Total debt divided by total asset of firm i in time t
INSOWN	**Institutional ownership**	Proportion of share owned by institutional investors to total number of shares
OWNSCONT	**Ownership concentration**	Herf-indhal index: the sum of square of the fraction of share held by each individual shareholding
BCOM	**Board composition**	Numbers of non-executive directors divided by total number of directors
FSIZE	**Firm size**	Natural logarithm of total assets

Source: compiled by the author based on Literature

3.9 Summary

This section reviewed the research design adopted for the study. The population of the study consists of sixteen food and beverages firms in Nigeria. The chapter also highlights the study period covering ten years that is between 2004-2013. The choice of this population and this period is due to the fact that, in 2003 a new code of corporate governance for public companies was issued, and the code was modified in 2008 (effective 2011). It further highlights the sample size and the sampling technique adopted for the study The sample size was derived by using

simple criteria which constitute ten (10) firms that are quoted before the period of the study that is 2003, the second criteria are the firms that are quoted and their data are available in the Annual Report and Fact Book. The study employed two-point-filter as the sampling technique which eliminate firms considered not to be suitable for the study, the filters are: the firms that made Annual Report available to Nigerian Stock Exchange and Fact Book for the period under study as well as the firm must be listed on the Nigerian stock exchange before the period of the study. Hausman specification was used in deciding between fixed and random effects estimates of the coefficient for the study. Data normality test, heteroscedasticity test and collinearity test was conducted to ensure the robustness of the results. The analysis of the study was conducted using Statistical /Data Analysis Software (STATA 10.0).

CHAPTER FOUR
DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

The chapter presents the descriptive and inferential statistics of the data collected for the study. The chapter begins with the discussion of the descriptive statistics of the data collected, and then the inferential statistics of the study. The interpretation of the regression results and test of hypotheses of the study are also analyzed. The chapter ends with the discussions of the major findings of study and the policy implications of the findings.

4.2 Descriptive Statistics

The section presents the descriptive statistics of all the variables used in the study. The table below shows the descriptive statistics of both the dependent and independent variables where minimum, maximum, mean, standard deviation, kurtosis and skewnesss are reported.

Table 4.1: Descriptive Statistics

VARIABLES	Min.	Max.	Mean	SD	Skewness	Kurtosis	
Dtc	0.0000	0.6819	0.0345	0.0784	6.5299	50.7812	100
Dta	0.0065	0.5705	0.0441	0.0709	4.6354	31.9736	100
Insowns	0.0498	0.8842	0.6728	0.1713	-1.6764	6.0905	100
Ownconst	0.2865	0.8779	0.5871	0.1355	0.1039	2.6421	100
Bcomp	0.3333	0.8333	0.6732	0.0852	-0.9003	4.4211	100
Fsize	20.3733	29.4695	25.9453	2.5839	-0.6045	2.2228	100

Source: STATA OUTPUT (Appendix C)

Table 4.1 indicates that the sampled listed food and beverages firms have an average debt to capital ratio (DTC) of 0.0345 with standard deviation of 0.0784, and minimum and maximum

values of 0.0000 and 0.6819 respectively. The standard deviation signifies that the deviation from the mean value from both sides is wide, implying that the data is dispersed from the mean. The coefficient of Skewness 6.5299 indicates that the data is positively skewed, that is, most of the data are on the right side of the normal curve, and thus does not meet the symmetrical distribution assumption. The value of kurtosis of 50.7812 on the other hand, suggests that the data does not follow the normal curve as requires by the Gausian distribution assumption. Table 4.1 also shows that the sampled food and beverages firms have an average total debt to assets ratio (DTA) of 0.0441 with standard deviation of 0.0709, and the minimum and maximum value of 0.0065 and 0.5705 respectively. The standard deviation suggests that the data is widely dispersed from the mean because the standard deviation is high compared to the mean. Moreover, the kurtosis value of 4.6354 shows that the data is not normal, on the other hand, the coefficient of Skewness 31.9736 implies that the data is positively skewed, and thus, the symmetrical distribution assumption is not been met.

Similarly, Table 4.1 shows that the average institutional ownership (INSOWNS) in the sample food and beverages firms during the period of the study is 67.28%, from the mean value of 0.6728 with standard deviation of 0.1713. This implies that the data deviate from the mean from both side by 17.13%, the standard deviation suggests that the data is widely dispersed, because the standard deviation is high. The minimum and maximum INSOWNS are 4.98% and 88.42% respectively. The coefficient of Skewness of -1.6764 implies that the data is negatively skewed, and therefore does not conform to the symmetrical distribution requirement of normal data. Similarly, the coefficient of Kurtosis of 6.0905 also supports that the variable does not meet the Gausian distribution criterion of the normal data. The descriptive statistics from table 4.1 also indicates that the average ownership concentration (OWNCONST) during the period is 58.71%,

from the mean value of 0.5871 with standard deviation of 0.1355. This implies that the data deviate from the mean from both side by 13.55%, the standard deviation suggests that the data is widely dispersed away from the mean value. The minimum and maximum OWNCONST are 28.65% and 87.79% respectively. The coefficient of Skewness of 0.1039 implies that the data is positively skewed, and therefore does not conform to the symmetrical distribution requirement of normal data. Similarly, the coefficient of Kurtosis of 2.6421 also supports that the variable does not meet the Gausian distribution criterion of the normal data.

Moreover, Table 4.1 shows that the average composition of non-executive directors (BCOMP) of the sampled food and beverages firms in Nigeria is 67.32%, from the mean value of 0.6732 with standard deviation of 0.0852. This implies that the data is dispersed from the mean value by 8.52%; the coefficient of Skewness -0.9003 implies that the data is negatively skewed, and thus does not conform to the symmetrical distribution requirement of normal data. Similarly, the coefficient of Kurtosis 4.4211 also indicates that the variable does not meet the Gausian distribution assumption of normal data. The average natural log of the firm size is 25.9453 with standard deviation of 2.5839 and the minimum and maximum values of 20.3733 and 29.4695 respectively. The skewness of -0.6045 indicates that the data is negatively skewed, while the coefficient of kurtusis of 2.2228 also suggests that the data does not flow the normal distribution.

Following some evidences from the descriptive statistics about the normality distribution of the data, the study employs Shapiro Wilk test for normal data to find statistical evidence as to whether the data of the variables of the study follow the normal curve or not. The results of the test are presented in table 4.2 as follows

Table 4.2: Normal Data Test

Variables	W	V	Z	Prob-Z	Obs
Dtc	0.3309	55.240	8.899	0.0000	100
Dta	0.5151	40.036	8.185	0.0000	100
Insowns	0.8424	13.009	5.692	0.0000	100
Ownconst	0.9834	1.367	0.694	0.2438	100
Bcomp	0.9559	3.646	2.869	0.0021	100
Fsize	0.9196	6.631	4.197	0.0000	100

Source: STATA OUTPUT (Appendix C)

Table 4.2 indicates that the data from DTC, DTA, INSOWNS, BCOMP and FSIZE are not normally distributed because the P-values are significant at 1% level of significance (p-values of 0.0000), while the data from OWNCONS which is not significant at all levels of significance (p-value of 0.2438) follow the normal distribution. Therefore, the null hypothesis (that, the data is normally distributed) is rejected for DTC, DTA, INSOWNS, BCOMP and FSIZE while not rejected for the OWCONS. This may lead to some biasness when OLS regression is used in the analysis.

The study on the other hand checks the problem of unit root in the data, due to the stationarity requirement of regression technique, and to ensure data reliability and avoid those factors that could bias our results. Hadri Langrange Multiplier (LM) test for unit root is applied to ascertain whether the data of the variables is stationary or not, the results of the tests is presented in table 4.3

Table 4.3: Unit Root Test

Variables	No. of Panels	No. of Periods	Z-Statistic	P-Values
Dtc	10	10	-0.4596	0.6771
Dta	10	10	3.0701	0.0011
Insowns	10	10	2.2118	0.0135
Ownconst	10	10	0.8349	0.2019
Bcomp	10	10	0.2281	0.4098
Fsize	10	10	13.3168	0.0000

Source: STATA OUTPUT (Appendix C)

Table 4.3 shows the Unit root results; Hadri LM test for panel data has the null hypothesis that all the panels are (trend) stationery. The results show that DTC, OWNCONS and BCOMP variables have no unit root (that is, they are stationery) from the p-values of 0.6771, 0.2019 and 0.4098 respectively. The table on the other hand indicates that the other variables (DTA, INSOWNS and FSIZE) have unit root (non-stationery) as shown by the p-values of 0.0011, 0.0135 and 0.0000 respectively which implies statistical significance, and hence rejecting the null hypothesis that the variable is stationery.

Therefore, following analysis of the descriptive statistics and normality of the data, the inferential statistics of the data collected from which the hypotheses of the study are tested are presented and interpreted in the following section.

4.3 Correlation Results

In this section, the summary of the Pearson Correlation Coefficients of the variables of the study are presented in Table 4.4 as follows;

Table 4.4: Correlation Matrix

Variables	Dtc	Dta	Insowns	Ownconst	Fsize	Bcomp
Dtc	1.0000					
Dta	0.2643	1.0000				
	(0.0079)					
Insowns	-0.0788	-0.0932	1.0000			
	(0.4358)	(0.3562)				
Ownconst	0.0419	0.1267	0.1098	1.0000		
	(0.6788)	(0.2090)	(0.2769)			
Fsize	0.1091	-0.5055	0.1258	0.0737	1.0000	
	(0.2799)	(0.0000)	(0.2123)	(0.4663)		
Bcomp	-0.3004	-0.3228	0.0895	0.0026	0.1431	1.0000
	(0.0024)	(0.0011)	(0.3760)	(0.9792)	(0.1555)	

P-Values in Parentheses
Source: STATA OUTPUT (Appendix C)

Table 4.3 indicates that there is a negative association between the institutional ownership (INSOWNS) and total debt to capital ratio (DTC) of the listed food and beverages firms in Nigeria, from the correlation coefficient of -0.0788 which is not statistically significant at all levels of significance (p-value of 0.4358). The result also shows a negative relationship between INSOWNS and DTA, from the correlation coefficient of -0.0932 which is also not statistically significant at all levels of significance (p-value of 0.3562). This result implies that the higher the institutional ownership the lower the monitoring and the higher the expropriation of the shareholders fund if ownership is concentrated in the hand of few shareholders of listed food and beverages firms in Nigeria. The Table also shows that there is a positive correlation between the

ownership concentration (OWNCONST) and total debt to capital ratio (DTC) of the listed food and beverages firms in Nigeria, from the correlation coefficient of 0.0419 which is not statistically significant at all levels of significance (p-value of 0.6788). The result on the other hand shows a positive relationship between OWNCONST and DTA, from the correlation coefficient of 0.1267 which is also not statistically significant at all levels of significance (p-value of 0.2090). This result implies that the ratio of debt in the capital structure of food and beverages firms increase as the concentration of ownership increases, but it is not statistically significant.

Moreover, Table 4.3 shows that there is a negative association between the composition of non-executive directors (BCOMP) and total debt to capital ratio (DTC) of the listed food and beverages firms in Nigeria, from the correlation coefficient of -0.3004 which is statistically significant at 1% level of significance (p-value of 0.0024). The result also shows a negative relationship between BCOMP and DTA, from the correlation coefficient of -0.3228 which is also statistically significant at 1% level of significance (p-value of 0.0011). This result implies that the ratio of debt in the capital structure of food and beverages firms decrease as the composition of non-executive directors' increases. The result also shows a positive relationship between the size of the firms (FSIZE) and DTC, from the correlation coefficient of 0.1091, which is not statistically significant at all levels of significance (P-value of 0.2799); on the contrary, the table shows a significant negative relationship between FSIZE and DTA, from the correlation coefficient of -0.5055 which is statistically significant at 1% level of significance (p-value of 0.0000).

Therefore, following the analysis of the relationships among the variables of the study, the regression results are presented, interpreted and discussed in the following sections.

4.4 Regression Results

This section presents and discuses the regression results of the study's models. The section begins with the analysis of model one result as presented in table 4.5. Having determined the distribution and the degree of the relationship among the variables, the summary of the Generalized least squares (GLS) multiple regression model estimates is presented below. However, in order to determine the estimate that best fitted the model, Random Effects Model (REM) and Fixed Effect Model (FEM) were estimated. Then the study employed Hausman test to decide which of them is more efficient. The full results are shown in Appendix C. The results reveal substantial differences between REM and FEM, thereby casting doubt on the results of the pooled regression. In order to see if the REM is more appropriate or not, Hausman test was conducted.

Hausman test is the test used to decide between FEM and REM, and based on the result shown, FEM is rejected in favour of REM. According to Gujirati and Porter (2009) the Random Effect Model (REM), is view as one in which researchers make unconditional inferences with respect to much larger population.

Table 4.5 Summary of GLS estimators Random Effects Regression Results and Robustness Test

Model One

$DTC_1t = \alpha + \beta_1 INSOWNSit + \beta_2 OWNSCONTit + \beta_3 BCOMit + \beta_4 FSIZE_1t + \varepsilon_{it} \ldots\ldots\ldots\ldots i$

Variables	**Coeffients**	**Statistics**	**P-Values**
Inowns	-0.0072		0.838
Ownconst	0.0887		0.045
Bcomp	-0.2108		0.000
Fsize	-0.133		0.003
Constant	0.4834		0.000
R^2 Within		0.2014	
R^2 Between		0.7414	
R^2 Overall		0.3466	
Wald Chi2		47.25	0.0000
Hettest: Chi2		0.70	0.4024
Mean VIF		1.03	
RE Test: Chi2		4.73	0.0148

Source: STATA OUTPUT (Appendix C)

Table 4.5 presents the regression results of the models of the study. The table from model one shows an absence of Heteroskedasticity in the result as indicated by the Breuch Pagan/Cook-Weisberg test for heteroskedasticity Chi2 of 0.70 with p-value of 0.4024. The table also indicates the absence of the perfect multicolinearity among the explanatory variables, as shown by the mean VIF of 1.03. However, the Breusch and Pagan Lagrangian Multiplier Test for Random

Effects indicates a significant statistical variance in the panel, from the Chi2 of 4.73 with p-value of 0.0148, which implies that random effect regression model is the most appropriate model for model one

The table on the other hand indicates that the Corporate governance in model one explains 34.66% of the total variations in the dependent variable (total debt to total capital ratio) of the listed food and beverages firms in Nigeria, from the overall coefficient of determination (Overall R^2 value of 0.3466). The table also shows that the model is fit from the Wald Chi2 of 47.25 which is statistically significant at 1% level of significance (P-value of 0.0000).

4.5 Hypotheses Testing for Model One

In this section of the chapter, the study tests the hypotheses formulated for the study and presents the coefficients of the variables of the study from which the hypotheses are tested. The summary of the regression result is represented in table 4.4 while the detailed result is attached in the appendix C

Table 4.4 the result of the regression reveals that, institutional ownership (INSOWNS) has impacted on the total debt to total capital ratio (DTC) of the sampled food and beverages firms in Nigeria, from the coefficient of -0.0072, which is not statistically significant at all levels of significance (p-value of 0.838). This implies that the higher the institutional ownership the lower the monitoring and the higher the expropriation of the shareholders fund if ownership is concentrated in the hand of few shareholders.

The Table also shows that, ownership concentration (OWNCONST) has a significant positive impact on the total debt to total capital ratio (DTC) of the sampled food and beverages firms in Nigeria, from the coefficient of 0.0887, which is statistically significant at 5% level of

significance (p-value of 0.045). This indicates that ownership concentration is found to be one of the important variables for explaining leverage of listed food and beverages firms in Nigeria. It confirmed that firms with a high ownership concentration structure have higher leverage level than firms with dispersed ownership.

Moreover, Table 4.5 shows that the composition of non-executive directors (BCOMP) has a significant negative impact on the total debt to total capital ratio (DTC) of the sampled food and beverages firms in Nigeria, from the coefficient of -0.2108, which is statistically significant at 1% level of significance (p-value of 0.003). The result shows that non-executive director plays a pivotal role in enhancing the capability of a company to get recognition from external stake holders of listed food and beverages firms in Nigeria.

Model Two

$DTA_1t = \alpha + \beta_1 INSOWNSit + \beta_2 OWNSCONTit + \beta_3 BCOMit + \beta_4 FSIZE_1t + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots ii$

Variables	Coefficients	Statistics	P-Values
Inowns	-1.9825		0.759
Ownconst	18.5634		0.015
Bcomp	-52.346		0.000
Fsize	-0.0039		0.917
Constant	29.5352		0.000
R^2 Within		0.2212	
R^2 Between		0.2434	
R^2 Overall		0.2181	
Wald Chi2		26.50	0.0000
Hettest: Chi2		0.29	0.5893
Mean VIF		1.03	
RE Test: Chi2		4.50	0.0169

Source: STATA OUTPUT (Appendix C)

Similarly, the table from model two shows an absence of Heteroskedasticity in the result, as indicated by the Breuch Pagan/Cook-Weisberg test for heteroskedasticity Chi2 of 0.29 with p-value of 0.5893. The table also indicates the absence of the perfect multicolinearity among the explanatory variables, as shown by the mean VIF of 1.03. However, the Breusch and Pagan Lagrangian Multiplier Test for Random Effects also indicates a significant statistical variance in the panel, from the Chi2 of 4.50 with p-value of 0.0169, implying that random effect regression model is the most appropriate model for model two.

Also, the table with respect to model two indicates that the independent variables in the model explained 21.81% of the total variations in the dependent variable (total debt to total assets ratio) of the listed food and beverages firms in Nigeria, from the overall coefficient of determination (Overall R^2 value of 0.2181). The table also shows that the model is fit from the Wald Chi2 of 26.50 which is statistically significant at 1% level of significance (P-value of 0.0000). Therefore, the study tests the hypotheses formulated in the following section.

4.6 Hypotheses Testing for Model Two

Table 4.4 in model two indicates that institutional ownership (INSOWNS) has a negative impact on the total debt to total assets ratio (DTA) of the sampled food and beverages firms in Nigeria, from the coefficient of -1.9825, which is not statistically significant at all levels of significance (p-value of 0.759). Although, this results suggests that as institutional ownership increases debt components of capital structure decreases, the results are not statistically significant at all levels of significance. In view of this, the study failed to reject the null hypothesis which states that, institutional ownership has no significant impact on the capital structure of listed food and beverages firms in Nigeria. It also shows that institutional investors are mere passive voters they may collude with insiders against the interests of dispersed shareholders. This finding therefore is inconsistent with Lakshmi (2009:2) which provides that close monitoring of institutional investors may force managers to take decisions in the interests of shareholders and their ability to pursue self-interests may diminish. And contradict the findings of Shleifer and Vishny (1986), Crutchleyl (1999), Jensen, Jahera and Raymond (1999).

Also, the Table in model two indicates that, OWNCONST has a significant positive impact on the total debt to total assets ratio (DTA) of the sampled food and beverages firms in Nigeria,

from the coefficient of 18.5634, which is statistically significant at 5% level of significance (p-value of 0.0.015). This result suggests that as the concentration of ownership increases debt components of capital structure also increases, the results are statistically significant. Based on this, the study reject the null hypothesis which states that, ownership concentration has no significant impact on the capital structure of listed food and beverages firms in Nigeria. This findings is consistent with (Jie li and Ji (2000, Driffield Mohembyr (2007), Caspedes (2008), Hassan (2009). Which indicates that firm with a high ownership concentration structure have higher leverage level than firms with dispersed ownership. The empirical evidence also shows that the hypothesis of agency theory performs well in explaining the ownership concentration of the firms under study.

Furthermore, based on the result the Table indicates that, BCOMP has a significant negative impact on the total debt to total assets ratio (DTA) of the sampled food and beverages firms in Nigeria, from the coefficient of -52.346, which is statistically significant at 1% level of significance (p-value of 0.000). This result suggests that as the composition of non-executive directors increases the debt components of capital structure decreases, the results are statistically significant. Based on this, the study rejects the null hypothesis which states that, non-executive directors has no significant impact on the capital structure of listed food and beverages firms in Nigeria. The result is also in consonant with stewardship theory which advocates that directors of a company to be accountable to owners for their stewardship over the company's resources. This is consistent with Wen (2002) which provides that non-executive directors monitor the managers efficiently and effectively so that managers are forced to seek lower gearing level for achieving

superior results. It also indicates that companies with higher representation of non-executive directors are bound to follow low financial leverage with a higher market value of equity.

Moreover, the results from the table indicates that firm size has a negative impact on the total debt to total asset ratio (DTA) of the sampled food and beverages firms in Nigeria, from the coefficient of -0.0133, which is statistically significant at 1% level of significance (p-value of 0.000). On the other hand, the Table indicates that, FSIZE has a negative impact on the total debt to total assets ratio (DTA) of the sampled food and beverages firms in Nigeria, from the coefficient of -0.0039, which is not statistically significant at all levels of significance (p-value of 0.917). Many scholars suggested that size should have a significant impact on capital structure, our contrary results are mixed. This may be as a result of less diversification of listed food and beverages firms and higher variance of earnings making them unable to tolerate high debt ratio. This finding is in line with the study of Chittenden *et al.* (1996), Michaelas *et al.* (1999) while the study of Barclay and Smith, (1996), Friend and Lang, (1988) Barton *et al.* (1989), Kim *et al.* (1998) and Hovakimian *et al.* (2004) shows a contrary view, as they reported a significant positive relationship between size and leverage.

4.7 Discussion of findings

From the results presented, the following findings have been made; It was revealed that institutional ownership fail to show a significant impact on the capital structure of listed food and beverages firms in Nigeria, and this is attributed to institutional shareholders acting as transient trader and aligning their interest to that of managements which prevented them from playing their monitoring and protecting other shareholders in listed food and beverages firms in Nigeria. This finding is consistent with Lakshmi (2009). And contradict that of Shleifer and Vishny (1986), Crutchleyl (1999), Jensen, Jahera and Raymond (1999) who reported that the association between institutional investors and capital structure is positive and statistically significant.

Ownership concentration has positive significant impact on the capital structure of listed food and beverages firms in Nigeria. This may be as a result of the largest shareholders of the company closely monitoring the activities of the firms to ensure that they do not expropriate the shareholders fund. The finding is in consistent with that of Driffield et al (2007), Caspedes (2008), Hassan (2009), Grooman and Hart (1986), Anderson et al (2003), and contradicts the finding of Mishra and McConaughy (1999), Chaganti and Damanpour (1991), Anderson and Reeb (2003).

Also, the study found that Board composition of listed food and beverages firms in Nigeria plays a pivotal role in enhancing the capability of a company to get recognition from external stake holders by monitoring the managers more efficiently so that managers are forced to seek for lower gearing levels for achieving the best results. This finding is consistent with that of

Pfeffer and Salancick (1978), Wen (2002) but contradicts the findings of Jensen (1986), Berger (1997), Abor and Biekpe (2007).

The firm size of listed food and beverages firms in Nigeria are more diversified and hence have lower variance of earnings, making them able to tolerate high debt ratio. This finding is consistent with the findings of Castanias (1983), Titman and Wessels (1988), Wald (1999), Chttenden et al (1996), Michaelas et al (1999).

4.8 Policy implications of the findings

On the basis of the findings of this study, the following conclusions and policy implications are drawn: the findings, in respect to each of the hypotheses considered in the work, have policy implications for regulatory bodies. From the area of regulatory authorities especially the SEC, these findings should aid in monitoring the activities of the firms which will eventually reduce the problems associated with Agency problems between the shareholder and management. The results of the study have thrown more light on the explanatory variables that have important effect in explaining the explained variable capital structure of listed food and beverages firms in Nigeria.

The result indicates that the institutional investors fail to show positive impact of corporate governance on the capital structure of the firm. The implication of this finding is that the presence of the institutional ownership has decreased the monitoring effect of the managers and therefore leave other shareholders' fund unprotected from been expropriated by the managers.

The outcome of the analysis also indicates that corporate monitoring by the institutional investors do not enhance the performance of the company.

However, the findings of the study also indicate a positive significant effect between ownership concentration and capital structure. This implies that the larger shareholders should keep on investing more in the firms. This would enhance the performance of the company. This shows that the higher the concentration of the ownership in the hand of the few shareholders the better the monitoring of the companies' share and the management from expropriating the shareholders' fund.

Moreover, board composition of listed food and beverages firms in Nigeria should enhance the capability of a company to gain recognition from external stake holders by monitoring the managers more efficiently so that managers will be left with no option than to seek for lower gearing levels for achieving the superior results.

CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

The main objective of this study is to empirically examine the impact of corporate governance mechanisms on capital structure of listed food and beverages firms in Nigeria. Other subsidiary objectives are to examine the effect of institutional ownership on capital structure of listed food and beverages firms in Nigeria; to determine the effect of ownership concentration on capital structure of listed food and beverages firms in Nigeria and to evaluate the effect of board composition on capital structure of listed food and beverages firms in Nigeria.

Chapter one discussed the general background and statement problem that led to stating three objectives and formulating three hypotheses with the scope covering 10 years 2004 to 2013 using a sample of 10 listed food and beverages firms in Nigeria.

In chapter two, a review of conceptual, theoretical and empirical literature on corporate governance mechanisms and capital structure and studies that linked between the two variables were carried out. The review of the extant of the literature indicated that the literature was inconclusive on the nature and the extent of the relationship between the independent and dependent variables of the study. The theories on corporate governance mechanisms and capital structure were elaborated with emphasis on agency theory.

Chapter three set out the procedures ranging from research design adopted, the population of the study, sample size and sampling technique adopted, source and method of data collection adopted, technique of data analysis and as well as model specification.

Chapter four started with descriptive statistics which is immediately followed by normal data test and then unit root test. Correlation matrix which described the relationship between explanatory variables and explained variable were presented, Regression results and hypotheses of the study were tested, Generalized Least Square Estimators were adopted. The analysis was conducted using Statistics/Data Analysis Software (STATA 10.0). The result indicated that the institutional investors fail to show positive impact of corporate governance on the capital structure of listed food and beverages firms in Nigeria. The study also indicated a positive significant effect between ownership concentration and capital structure. This implies that the larger shareholders should keep on investing more in the firms. The study indicated that, board composition has a significant negative impact on the capital structure of listed food and beverages firms in Nigeria. The results showed that firm size has a negative impact on the capital structure of food and beverages firms in Nigeria.

5.2 Conclusions

In line with the findings of the study, it is concluded as follows;

First, the study has provided both empirical and statistical evidence on the utility of six explanatory variables that constitute corporate governance mechanisms: institutional ownership, ownership concentration, board composition and firm size in explaining and predicting the position of capital structure of listed food and beverages firms.

Second, the presence of the institutional ownership has decreased the monitoring effect of the managers and therefore leave other shareholders' fund unprotected from been expropriated by the managers of listed food and beverages firms in Nigeria.

Third, larger shareholders should keep on investing more in the firm. This would enhance the performance of the company. This shows that the higher the concentration of the ownership in the hand of the few shareholders the better the monitoring of the companies' share and the management from expropriating the shareholders' fund of listed food and beverages firms in Nigeria.

Fourth, board composition of listed food and beverages firms in Nigeria should enhance the capability of a company to gain recognition from external stake holders by monitoring the managers more efficiently so that managers will be left with no option than to seek for lower gearing levels for achieving the superior results.

Five, corporate governance has significantly impacted on capital structure when performing a global test; however, there is a need for the regulatory authority to monitor the activities of institutional ownership in order to prevent them from negatively impacted on capital structure of listed food and beverages firms in Nigeria.

5.3 Recommendations

Based on the findings from this study, the following recommendations are considered necessary for development of listed food and beverages firms in Nigeria.

(1) For the corporate governance mechanisms to impact positively on capital structure of food and beverages firms in Nigeria SEC should address the problem of institutional investors from being a transient trader so that the interest of the shareholders would not be aligned with that of managers for the institutional investors to monitor the managers and discourage them from expropriating the shareholders' wealth.

(2) There is a need for ownership concentration of the firms to be concentrated in the hand of the shareholders so as to control the expropriation of shareholders' fund by the management since most of the large shareholders some time serve as a board of directors or chief executive officers of listed food and beverages firms in Nigeria.

(3) Independent directors of listed food and beverages firms in Nigeria should enhance the capability for the company to gain recognition from external stake holders by monitoring the managers more efficiently so that managers will be left with no option than to seek for lower gearing levels for achieving the superior results.

(4) Lenders and potential investors should be more interested or pay more attention to older firms because of their reputation built over the years in the industry as well as considering their tendency towards enhanced capital structure.

5.4 Suggestion for further research

There are identified areas for further research as suggested subsequently. One of such areas includes impact of corporate governance mechanisms of listed food and beverages firms of the Nigerian economy requires more research effort, especially areas that are not covered in this study. Therefore, the same research can be replicated using the whole listed food and beverages firms in Nigeria.

There is the need to conduct this same research using a different source of data, employing similarly or different corporate governance and capital structure proxies, and using similar or different scales of measuring variables and techniques for data analysis.

Also, similar studies can be conducted that will investigate the relationship between corporate governance and capital structure of the firms under study using different tool of analysis, so as to see how corporate governance mechanisms can be used to improve leverage of the firms in other sectors of the Nigerian economy.

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Appendix C

No	Name of the company	Date listed
1	7 Up Bottling Co Plc	1986
2	Northern Nigerian flour mill	1978
3	Big Treat plc	2007
4	Cadbury Nigeria Plc	1976
5	Ferdinand	1992
6	Flour Mill of Nigeria Plc	1979
7	Foremost Dairies	1979
8	Honeywell	2009
9	Mul-Trex Integrated Foods plc	2010
10	National Salt Co(Nig) Plc	1992
11	Nestle Nigeria Plc	1979
12	Nigeria Bottling Company Plc	1973
13	PS Mandrides & Co Plc	1979
14	Tantalizer	2008
15	Union Dicon Salt Plc	1993
16	UTC Nigeria PLC	1972

Source: Annual reports and account of the companies.

Appendix B

Ferdinand Oil Mills Plc and Foremost dairies Plc whose data are not available. While, Big Treat Integrated Food Plc, Tantalizer, Honeywell and Multi-TRex Integrated Foods Plc are listed in 2007, 2008, 2009 and 2010 respectively and are therefore filtered from the sample size of the population of food and beverages firms in Nigeria.

Appendix C

```
. xtset id year, yearly
       panel variable:  id (strongly balanced)
        time variable:  year, 2004 to 2013
                delta:  1 year


. su dtc dta insowns ownconst fsize bcomp, detail

                            dtc
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .0000392        .000037
 5%     .0050823       .0000413
10%     .0066436        .000346       Obs                 100
25%     .0100084       .0046353       Sum of Wgt.         100

50%      .015536                      Mean           .0345278
                        Largest       Std. Dev.       .078356
75%     .0306241       .1212528
90%      .063352       .1478629       Variance       .0061397
95%     .1156239        .362737       Skewness       6.529909
99%     .5223252       .6819134       Kurtosis       50.78124

                            dta
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .0065572       .0065219
 5%     .0078096       .0065925
10%     .0083469        .006777       Obs                 100
25%     .0104291       .0076334       Sum of Wgt.         100

50%     .0175989                      Mean           .0440971
                        Largest       Std. Dev.      .0709405
75%     .0514757       .1842548
90%     .1273973       .1862444       Variance       .0050325
95%     .1675891         .20789       Skewness       4.635441
99%     .3891912       .5704923       Kurtosis       31.97364

                          insowns
-------------------------------------------------------------
      Percentiles      Smallest
 1%     .0660421       .0497501
 5%       .30304        .082334
10%     .4727845       .0935009       Obs                 100
25%     .6230036       .2048424       Sum of Wgt.         100

50%     .7236451                      Mean           .6727779
                        Largest       Std. Dev.      .1713468
75%     .7808007       .8721653
90%     .8331281       .8724893       Variance       .0293597
95%     .8638901       .8795892       Skewness      -1.676446
99%     .8818769       .8841645       Kurtosis       6.090541
```

ownconst

	Percentiles	Smallest		
1%	.2967	.28649		
5%	.35307	.30691		
10%	.412715	.33762	Obs	100
25%	.50951	.34614	Sum of Wgt.	100
50%	.5767825		Mean	.5870675
		Largest	Std. Dev.	.1354569
75%	.65874	.85288		
90%	.771255	.85865	Variance	.0183486
95%	.84558	.864086	Skewness	.1038558
99%	.8710255	.877965	Kurtosis	2.64209

fsize

	Percentiles	Smallest		
1%	20.39661	20.37327		
5%	20.92147	20.41995		
10%	22.02962	20.45592	Obs	100
25%	24.12099	20.6003	Sum of Wgt.	100
50%	26.47928		Mean	25.94529
		Largest	Std. Dev.	2.583923
75%	28.07376	29.19345		
90%	28.77629	29.25382	Variance	6.676656
95%	29.13265	29.33959	Skewness	-.6045494
99%	29.40455	29.46951	Kurtosis	2.222781

bcomp

	Percentiles	Smallest		
1%	.4166667	.3333333		
5%	.5	.5		
10%	.5555556	.5	Obs	100
25%	.625	.5	Sum of Wgt.	100
50%	.6923077		Mean	.6732235
		Largest	Std. Dev.	.0851757
75%	.7272727	.8		
90%	.7735043	.8	Variance	.0072549
95%	.781746	.8181818	Skewness	-.9003007
99%	.8257576	.8333333	Kurtosis	4.421094

.

```
. swilk dtc dta insowns ownconst bcomp fsize

                    Shapiro-Wilk W test for normal data

    Variable |     Obs       W           V         z       Prob>z
-------------+--------------------------------------------------
         dtc |     100    0.33094     55.240     8.899     0.00000
         dta |     100    0.51509     40.036     8.185     0.00000
     insowns |     100    0.84244     13.009     5.692     0.00000
    ownconst |     100    0.98344      1.367     0.694     0.24375
       bcomp |     100    0.95585      3.646     2.869     0.00206
       fsize |     100    0.91969      6.631     4.197     0.00001


. xtunitroot hadri dtc

Hadri LM test for dtc
---------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                     -0.4596        0.6771
------------------------------------------------------------------------------


. xtunitroot hadri dta

Hadri LM test for dta
---------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                      3.0701        0.0011
------------------------------------------------------------------------------


. xtunitroot hadri insowns

Hadri LM test for insowns
-------------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                      2.2118        0.0135
------------------------------------------------------------------------------
```

```
. xtunitroot hadri ownconst

Hadri LM test for ownconst
--------------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                     0.8349        0.2019
------------------------------------------------------------------------------
```

```
. xtunitroot hadri fsize

Hadri LM test for fsize
-----------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                    13.3168        0.0000
------------------------------------------------------------------------------
```

```
. xtunitroot hadri bcomp

Hadri LM test for bcomp
-----------------------

Ho: All panels are stationary                Number of panels  =     10
Ha: Some panels contain unit roots           Number of periods =     10

Time trend:         Not included             Asymptotics: T, N -> Infinity
Heteroskedasticity: Not robust                                sequentially
LR variance:        (not used)
------------------------------------------------------------------------------
                     Statistic      p-value
------------------------------------------------------------------------------
 z                     0.2281        0.4098
------------------------------------------------------------------------------
```

```
. pwcorr dtc dta insowns ownconst fsize bcomp, star (0.05) sig
```

	dtc	dta	insowns	ownconst	fsize	bcomp
dtc	1.0000					
dta	0.2643*	1.0000				
	0.0079					
insowns	-0.0788	-0.0932	1.0000			
	0.4358	0.3562				
ownconst	0.0419	0.1267	0.1098	1.0000		
	0.6788	0.2090	0.2769			
fsize	0.1091	-0.5055*	0.1258	0.0737	1.0000	
	0.2799	0.0000	0.2123	0.4663		
bcomp	-0.3004*	-0.3228*	0.0895	0.0026	0.1431	1.0000
	0.0024	0.0011	0.3760	0.9792	0.1555	

```
. reg dta insowns ownconst fsize bcomp
```

Source	SS	df	MS		
Model	.172767671	4	.043191918	Number of obs	= 100
Residual	.325454646	95	.003425838	F(4, 95)	= 12.61
				Prob > F	= 0.0000
				R-squared	= 0.3468
				Adj R-squared	= 0.3193
Total	.498222316	99	.005032549	Root MSE	= .05853

dta	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
insowns	-.0118886	.0348818	-0.34	0.734	-.0811378	.0573606
ownconst	.086815	.0437776	1.98	0.050	-.0000945	.1737245
fsize	-.0131231	.00232	-5.66	0.000	-.017729	-.0085172
bcomp	-.2101404	.069976	-3.00	0.003	-.3490604	-.0712204
_cons	.4830835	.0747107	6.47	0.000	.3347641	.6314029

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of dta

         chi2(1)      =     0.70
         Prob > chi2  =   0.4024
```

```
. vif
```

Variable	VIF	1/VIF
fsize	1.04	0.962901
insowns	1.03	0.968683
bcomp	1.03	0.974094
ownconst	1.02	0.984070
Mean VIF	1.03	

```
. xtreg dta insowns ownconst fsize bcomp, fe

Fixed-effects (within) regression               Number of obs      =       100
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.2295                         Obs per group: min =        10
       between = 0.6904                                        avg =      10.0
       overall = 0.3224                                        max =        10

                                                F(4,86)            =      6.40
corr(u_i, Xb)  = -0.7652                        Prob > F           =    0.0001

------------------------------------------------------------------------------
         dta |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     insowns |   .0453428   .0390504     1.16   0.249    -.0322867    .1229724
    ownconst |   .1193096    .050252     2.37   0.020     .0194119    .2192073
       fsize |  -.0251676   .0078504    -3.21   0.002    -.0407737   -.0095615
       bcomp |  -.1963577   .0799977    -2.45   0.016    -.3553879   -.0373276
       _cons |   .7287217   .2034327     3.58   0.001     .3243109    1.133133
-------------+----------------------------------------------------------------
     sigma_u |  .04036368
     sigma_e |  .05673246
         rho |  .33607557   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(9, 86) =     1.68                 Prob > F = 0.1062

. est store fixed


. xtreg dta insowns ownconst fsize bcomp, re

Random-effects GLS regression                   Number of obs      =       100
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.2014                         Obs per group: min =        10
       between = 0.7414                                        avg =      10.0
       overall = 0.3466                                        max =        10

                                                Wald chi2(4)       =     47.25
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         dta |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     insowns |  -.0072011   .0351167    -0.21   0.838    -.0760285    .0616264
    ownconst |   .0887455   .0441809     2.01   0.045     .0021525    .1753386
       fsize |  -.0132857   .0024515    -5.42   0.000    -.0180905   -.0084808
       bcomp |  -.2107761   .0706664    -2.98   0.003    -.3492798   -.0722724
       _cons |   .4834418   .0778385     6.21   0.000     .3308811    .6360025
-------------+----------------------------------------------------------------
     sigma_u |  .00689933
     sigma_e |  .05673246
         rho |  .01457385   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store random
```

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
insowns	.0453428	-.0072011	.0525439	.0170806
ownconst	.1193096	.0887455	.0305641	.0239439
fsize	-.0251676	-.0132857	-.0118819	.0074578
bcomp	-.1963577	-.2107761	.0144184	.0374952

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 11.00
Prob>chi2 = 0.0266

```
. xttest0
```

Breusch and Pagan Lagrangian multiplier test for random effects

dta[id,t] = Xb + u[id] + e[id,t]

Estimated results:

	Var	sd = sqrt(Var)
dta	11.49255	3.390067
e	1.591524	1.261556
u	.3868526	.6219748

Test: Var(u) = 0
chibar2(01) = 4.73
Prob > chibar2 = 0.0148

```
. reg dtc insowns ownconst bcomp fsize
```

Source	SS	df	MS
Model	2797.19027	4	699.297569
Residual	10026.8483	95	105.545772
Total	12824.0386	99	129.535743

Number of obs = 100
F(4, 95) = 6.63
Prob > F = 0.0001
R-squared = 0.2181
Adj R-squared = 0.1852
Root MSE = 10.274

dtc	Coef.	Std. Err.	t	P>|t|	[95% Conf.	Interval]
insowns	-1.982517	6.449736	-0.31	0.759	-14.78686	10.82183
ownconst	18.56336	7.614717	2.44	0.017	3.44624	33.68049
bcomp	-52.32459	12.38716	-4.22	0.000	-76.9162	-27.73297
fsize	.0039991	.0382788	0.10	0.917	-.071994	.0799922
_cons	29.53515	9.737068	3.03	0.003	10.20463	48.86568

```
. hettest

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of dtc

         chi2(1)      =     0.29
         Prob > chi2  =   0.5893

. xtreg dtc insowns ownconst bcomp fsize, fe

Fixed-effects (within) regression               Number of obs      =       100
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.2324                         Obs per group: min =        10
       between = 0.0643                                        avg =      10.0
       overall = 0.2009                                        max =        10

                                                F(4,86)            =      6.51
corr(u_i, Xb)  = -0.2206                        Prob > F           =    0.0001

------------------------------------------------------------------------------
         dtc |      Coef.   Std. Err.      t    P>|t|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     insowns |    5.692254   7.691232     0.74   0.461    -9.597409    20.98192
    ownconst |    23.44903   8.961317     2.62   0.010     5.634524    41.26354
       bcomp |   -54.36597   14.67412    -3.70   0.000    -83.53716   -25.19478
       fsize |   -.0236662   .0660006    -0.36   0.721     -.154871    .1075386
       _cons |    23.19932   12.82067     1.81   0.074    -2.287318    48.68596
-------------+----------------------------------------------------------------
     sigma_u |   3.6084922
     sigma_e |   10.305025
         rho |   .10922487   (fraction of variance due to u_i)
------------------------------------------------------------------------------
F test that all u_i=0:     F(9, 86) =     0.94                 Prob > F = 0.4989

. est store fixed
```

```
. xtreg dtc insowns ownconst bcomp fsize, re

Random-effects GLS regression                   Number of obs      =       100
Group variable: id                              Number of groups   =        10

R-sq:  within  = 0.2212                         Obs per group: min =        10
       between = 0.2434                                        avg =      10.0
       overall = 0.2181                                        max =        10

                                                Wald chi2(4)       =     26.50
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0000

------------------------------------------------------------------------------
         dtc |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
     insowns |  -1.982517   6.449736    -0.31   0.759    -14.62377    10.65873
    ownconst |   18.56336   7.614717     2.44   0.015     3.638794    33.48793
       bcomp |  -52.32459   12.38716    -4.22   0.000    -76.60296   -28.04621
       fsize |   .0039991   .0382788     0.10   0.917    -.0710261    .0790242
       _cons |   29.53515   9.737068     3.03   0.002     10.45085    48.61946
-------------+----------------------------------------------------------------
     sigma_u |          0
     sigma_e |  10.305025
         rho |          0   (fraction of variance due to u_i)
------------------------------------------------------------------------------

. est store random
```

```
. hausman fixed random
```

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
insowns	5.692254	-1.982517	7.674771	4.189983
ownconst	23.44903	18.56336	4.885668	4.724541
bcomp	-54.36597	-52.32459	-2.041385	7.866911
fsize	-.0236662	.0039991	-.0276653	.0537662

```
                b = consistent under Ho and Ha; obtained from xtreg
     B = inconsistent under Ha, efficient under Ho; obtained from xtreg

  Test:  Ho:  difference in coefficients not systematic

              chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                      =        4.58
            Prob>chi2 =      0.3329

. xttest0

Breusch and Pagan Lagrangian multiplier test for random effects

        dtc[id,t] = Xb + u[id] + e[id,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+------------------------------
                     dtc |    .6997229       .8364944
                       e |    134.5639       11.60017
                       u |    3.379197       1.838259

        Test:   Var(u) = 0
                             chibar2(01) =     4.50
                          Prob > chibar2 =   0.0169
```

year	id	dtc	dta	insowns	ownconst	fsize	bcomp
2004	1	0.023719	0.013011	0.766653	0.599952	26.73241	0.777778
2005	1	0.014408	0.011251	0.758005	0.877965	26.95389	0.7
2006	1	0.016977	0.010184	0.764183	0.85288	27.32314	0.6
2007	1	0.017702	0.010947	0.767904	0.864086	27.4312	0.727273
2008	1	0.0196	0.010851	0.773804	0.8425	27.75716	0.7
2009	1	0.017477	0.008804	0.776218	0.84866	27.99136	0.7
2010	1	0.023766	0.010133	0.787563	0.85865	28.25833	0.6
2011	1	0.01924	0.010674	0.859256	0.49671	28.35656	0.636364
2012	1	0.030994	0.014044	0.791917	0.63448	28.44371	0.7
2013	1	0.039777	0.012619	0.74659	0.758026	28.6256	0.8
2004	2	0.007036	0.021547	0.463864	0.41796	26.35263	0.769231
2005	2	0.010696	0.019551	0.575769	0.51211	26.97094	0.714286
2006	2	0.017328	0.025986	0.495019	0.33762	27.25728	0.769231
2007	2	0.116381	0.016656	0.50022	0.7884	28.05496	0.666667
2008	2	0.681913	0.013676	0.50022	0.54731	28.22419	0.5
2009	2	0.094586	0.022123	0.50022	0.28649	27.78728	0.75
2010	2	0.015558	0.020019	0.684881	0.6231	27.65314	0.7
2011	2	0.011087	0.010147	0.749998	0.565292	28.02851	0.714286
2012	2	0.008758	0.01068	0.749998	0.58964	27.98826	0.625
2013	2	0.008284	0.012194	0.749993	0.585431	28.02255	0.555556
2004	3	0.033444	0.019899	0.644609	0.5283	27.40454	0.692308
2005	3	0.0335	0.019925	0.634133	0.42825	27.50846	0.75
2006	3	0.018447	0.015933	0.719372	0.533776	27.85168	0.666667
2007	3	0.018002	0.015963	0.717078	0.730141	28.07225	0.666667
2008	3	0.02133	0.022838	0.598957	0.6131	28.20587	0.75
2009	3	0.028531	0.033366	0.746434	0.577245	28.26071	0.692308
2010	3	0.036218	0.036448	0.753945	0.637006	28.45184	0.769231
2011	3	0.020046	0.027291	0.756883	0.58325	28.58619	0.8
2012	3	0.018148	0.029059	0.800589	0.704126	28.59689	0.733333
2013	3	0.011559	0.019389	0.826339	0.72472	29.19345	0.642857
2004	4	0.064548	0.046473	0.622994	0.55672	26.12549	0.625
2005	4	0.067275	0.028654	0.623013	0.562327	26.7324	0.727273
2006	4	0.062156	0.01732	0.458377	0.7615	27.16743	0.7
2007	4	0.019732	0.016843	0.623013	0.38126	27.33688	0.777778
2008	4	0.024077	0.014241	0.623013	0.453038	27.684	0.7
2009	4	0.022287	0.014407	0.623013	0.53028	27.9654	0.666667
2010	4	0.031968	0.021616	0.623013	0.535953	28.07526	0.636364
2011	4	0.031336	0.011404	0.634022	0.58541	29.03823	0.6
2012	4	0.022753	0.009682	0.632999	0.52844	29.33959	0.75
2013	4	0.016024	0.008713	0.634799	0.57066	29.46951	0.625
2004	5	0.000037	0.021516	0.445386	0.73121	22.71728	0.571429
2005	5	4.13E-05	0.017291	0.497644	0.46319	22.72504	0.5

2006	5	0.060997	0.20789	0.646251	0.56121	24.42769	0.555556
2007	5	0.362737	0.570492	0.719912	0.78752	24.27249	0.333333
2008	5	0.007534	0.017878	0.04975	0.49131	25.70909	0.5
2009	5	0.009251	0.018042	0.621929	0.40747	26.01821	0.666667
2010	5	0.007608	0.011902	0.764039	0.41954	26.41375	0.777778
2011	5	0.005156	0.009807	0.764039	0.53611	26.28584	0.666667
2012	5	0.007363	0.01262	0.635853	0.65242	26.5448	0.555556
2013	5	0.006252	0.011004	0.801965	0.60563	26.64664	0.666667
2004	6	0.009714	0.007633	0.872489	0.43619	28.36685	0.5
2005	6	0.011952	0.008214	0.712815	0.36131	28.44938	0.625
2006	6	0.015105	0.008969	0.727378	0.54333	28.66537	0.777778
2007	6	0.014479	0.008467	0.734902	0.55355	28.75979	0.727273
2008	6	0.121253	0.007852	0.738201	0.557949	28.7928	0.727273
2009	6	0.015515	0.008453	0.751717	0.56396	28.90055	0.666667
2010	6	0.012272	0.00824	0.505007	0.46211	29.12055	0.6
2011	6	0.012066	0.009232	0.733953	0.61216	29.0991	0.7
2012	6	0.011789	0.009734	0.872165	0.73216	29.14475	0.545455
2013	6	0.012158	0.009504	0.860355	0.73214	29.25382	0.727273
2004	7	0.114867	0.014406	0.588024	0.54615	25.79223	0.571429
2005	7	0.147863	0.013331	0.814012	0.64894	25.60851	0.714286
2006	7	0.030548	0.013756	0.780801	0.35561	24.52637	0.7
2007	7	0.009992	0.007767	0.780801	0.35053	25.205	0.666667
2008	7	0.010025	0.006593	0.802938	0.65523	25.97755	0.714286
2009	7	0.009839	0.006522	0.756765	0.65538	26.04114	0.714286
2010	7	0.009523	0.006777	0.716611	0.53875	26.02395	0.571429
2011	7	0.012105	0.00795	0.481706	0.42567	26.04011	0.625
2012	7	0.011253	0.009889	0.666766	0.7321	26.05496	0.75
2013	7	0.012252	0.007977	0.686115	0.5671	26.0409	0.666667
2004	8	0.000346	0.008683	0.696008	0.34614	20.45592	0.5
2005	8	0.009174	0.052356	0.293566	0.56133	21.51137	0.666667
2006	8	0.005324	0.058775	0.796849	0.43912	21.40918	0.777778
2007	8	0.004635	0.060345	0.71532	0.7331	21.27984	0.555556
2008	8	0.005011	0.076112	0.797952	0.62111	21.1525	0.6
2009	8	0.005154	0.103767	0.805121	0.60219	20.99474	0.666667
2010	8	0.005306	0.125741	0.736141	0.493211	20.84821	0.666667
2011	8	0.007869	0.13192	0.758532	0.52371	20.6003	0.555556
2012	8	0.00766	0.16276	0.846743	0.69291	20.41995	0.571429
2013	8	0.008466	0.160928	0.867425	0.610219	20.37327	0.714286
2004	9	0.09029	0.028419	0.758009	0.40113	24.96647	0.666667
2005	9	0.052857	0.023929	0.813976	0.50691	24.26176	0.75
2006	9	0.027627	0.032083	0.312514	0.57632	24.00617	0.692308
2007	9	0.02078	0.050596	0.648328	0.30691	23.64606	0.642857
2008	9	0.015083	0.080073	0.350612	0.65355	23.21465	0.636364

2009	9	0.011913	0.129054	0.619201	0.59321	22.7766	0.615385
2010	9	0.011314	0.159032	0.712195	0.46735	22.62629	0.666667
2011	9	0.010675	0.172418	0.082334	0.7321	22.57727	0.692308
2012	9	0.010948	0.184255	0.667469	0.45321	22.54788	0.666667
2013	9	0.010813	0.186244	0.093501	0.63527	22.57191	0.75
2004	10	0.010936	0.057994	0.813627	0.5931	23.14623	0.75
2005	10	0.012764	0.060061	0.884165	0.63136	23.42766	0.75
2006	10	0.014843	0.049433	0.587205	0.73612	23.87142	0.833333
2007	10	0.042548	0.037197	0.833268	0.67399	24.13278	0.818182
2008	10	0.026729	0.052618	0.846393	0.83865	24.15424	0.666667
2009	10	0.030316	0.072094	0.832989	0.64532	24.0557	0.727273
2010	10	0.030701	0.072878	0.879589	0.56131	24.1092	0.692308
2011	10	0.031276	0.072514	0.609092	0.78101	24.14692	0.769231
2012	10	0.03147	0.076778	0.204842	0.6621	24.16566	0.714286
2013	10	0.031749	0.076383	0.825674	0.5361	24.17546	0.785714