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DEFINED BENEFIT PENSION ACCOUNTING AND MARKET VALUE PER SHARE OF QUOTED PHARMACEUTICAL FIRMS IN NIGERIA

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ABSTRACT

The study examineddefined benefit pension accounting and market value per share of quoted pharmaceutical companies in Nigeria. The research design adopted for this study was the ex-post facto design to investigate the relationship between Defined Benefit Pension Accounting and Market Value Per Share of Quoted Pharmaceutical Companies in Nigeria. The data used in this research were secondary data sourced from yearly account reports of these pharmaceutical companies named in Nigeria stock exchange fact books for time period of eleven years ranging from year 2011 to 2021. The sample size was three quoted pharmaceutical firms that have been trading consistently with the said period, while population was all the nine quoted pharmaceutical companies listed on the Nigeria stock exchange group. The Statistical tools used to analyze the data were descriptive Statistics, PPM correlation index, OLS and MRT as contained in SPSS package version were used to analyze the data and test research hypotheses.Secondary data was used to analysis the variables under study andthe study concluded that; there is a significant relationship between benefit service cost and market value per share which suggest that benefit service cost, as a proxy for independent variable (i.e. defined pension accounting) has impact on the market price per share of quoted pharmaceutical firms in Nigeria.Based on the foregoing, his study recommends that organization, especially the quoted pharmaceutical firms in Nigeria, should ensure that they improve their benefit service cost in order to boost their market value per share.

KEYWORDS

Pension Accounting. Market Value of Shares. Stakeholders. Quoted Pharmaceutical Firms.

Introduction

Business and corporate organization prepare and present their financial reports in order to provide their business-owners interest users with substantial and beneficial financial information needed for the purpose of decision-making. The creators of accounting standards emphasize two essential qualitative traits for information to be useful: relevance and reliability (Mbekomize& Popo, 2020). The financial details contained in financial records and reports of companies has impact on stock price of such companies in the capital market.

Quoted firms and corporate entities are expected to adhere to accounting guidelines specified by International Board of Accounting guideline and Standards which aims to establish quality, globally recognized accounting guidelines that serve the purpose of providing valuable financial information for user within and outside a corporate or business organization (Apete, Udeh & Ezekwesili, 2022). Financial statements are crucial for quoted companies to communicate with shareholders and other individual or corporate entities that required financial details and information (Appolos, Grace & Jerry, 2016). These statements should present the financial performance, financial status and possible changes in status of the company's economic events in a manner that is beneficial to different group of users when making financial or financial-related decisions.

To ensure substantial compliance to these accounting guidelines and standards, it is important that financial statements are strictly adhered to a detailed list of principles and processes to ensure faithful representation of the financial reports. The capital markets depend on financial records presented by management of corporate or business entities. These financial statements provide information about profitability, liquidity, efficiency, investment, gearing, and short-term and long-term solvency, which are vital for understanding how capital markets operate. Harmonizing accounting standards across countries is important for improving the speed and comparability of investment and credit decisions, both domestically and internationally (Herbert et al, 2013).

The forces of demand and supply significantly impact on the share price of publicly traded firms and influence expectations of investors. There will always be a market reaction to the share price, as seen by the share price, regardless of the accounting figures that can be used to forecast the market price if these numbers contain any new information. Which is observed to consistently drift in the same direction as the initial information (Bernard & Thomas, 1990).

The goal of investors is to increase their wealth through investment returns. One of the most important elements utilized to evaluate the best investment is stock return. Investors so typically rely on stock returns and risk to make wise investment selections. Information that is required may be internal or external. Numerous research has looked at how share prices fluctuate as well as a few potential contributing elements. Financial prowess and macroeconomic indicators were named by Kehinde (2012) as factors that could affect the share price of quoted firms. Market noise was also listed by Kehinde (2012) as a factor that could affect the share price of mentioned firms, although not being a fundamental one. According to Agarwal (2011), a company's earnings have the greatest impact on how its share price moves on the capital market. Accordingly, listed firms report their results on a quarterly basis. According to Schmist (2011), because we are living in global arena where small push in one area may spread the effect to another, even the slightest war rumors, oil price increases, or interest rate hikes can produce chain reaction in global arena.

The focus of this study is on defined benefit pension plan to explain pension accounting. Since the adoption of IFRS in Nigeria in 2011, business entities are required to recognize, measure and disclose information on defined benefit plan according to the requirement of the standard, IAS 19

Employee Benefits. DB schemes can become a major burden on companies sponsoring them as large liabilities may arise from future pension obligations (and in some cases healthcare obligations) to DB scheme members (Alan, 2012).

One of the distinguishing features of described benefit plans is that the entity is obligated to contribute additional funds to pension plan meeting their set benefits level. As a result, the entity incurs a long-time liability, which needs to be assessed at their current value. Concurrently, the entity makes some continued contributions to pension plan, and these contributions are invested, generating returns over time. Consequently, the entity holds assets within the pension plan, which are supposed to be revealed at suitable value based on IAS 19 (Yehuda, 2009).

The accounting for defined benefit plan is complex and up till now the question of which discount rate should be used in defined pension accounting is contentious. Traditionally, actuarial valuations have been based on long-term average rates of return on pension investments (Martins, 2009). However, this tacitly reflects a funding, not a valuation perspective. Slater and Copeland (2005) holds that future pension payments should be discounted at the company's cost of capital, since pension liabilities are a claim, like any other liabilities, on companies' total assets. However, others argue that companies' own credit risk should be excluded from the valuation of pension liabilities.

Therefore, in this study, the researcher concentrates on defined benefit pension plan to explain pension accounting information. A review of previous studies in Nigeria (such as Innocent, Ibanichuka& Micah, 2020; Olayinka& Paul, 2017; Umoren &Enang, 2015; Omokhudu&Ibadin, 2015; Adaramola&Oyerinde, 2014; Abiodun, 2012; Alan, 2012; Abubakar, 2011; Abubakar, 2010; Oyerinde, 2009; & Edward, 2006), shows that there is a scarcity in the level of studies carried out on defined pension accounting and value relevance of financial information. The reason for this study is that, apart from the contributory pension (CB) plan, some companies have defined benefit (DB) pension plan for their employees and this plan has huge cost relating to pensions that have significant impact on the financial statement. Both contributory and defined benefit plans are the two types of pension in IAS 19. However, the defined benefit scheme can become a major burden on the company sponsoring it as large liabilities may arise from future pension obligations to qualified defined benefit scheme members (Alan, 2012).

The above mentioned is a confirmation that defined benefit plans accounting are complex and expensive. Under the defined benefit plan, the employing entity's obligation is to provide the agreed benefits to both the current and former employees. The actuarial risk (i.e., the risk that benefits will cost more than expected) and investment risk fall, in substance, on the entity. The implication of this is that, if actuarial or investment experience are worse than expected, the entity's obligation may be increased. In defined benefit pension plan, the size of the post-employment benefits is determined in advance and that is why it is called defined benefit plan because the benefits are defined. The entity pays contributions into the plan, and the contributions are invested. The employer ensures that this contribution into the plan is such an amount that is enough to yield enough investment returns to meet the obligation to pay the post-employment benefits. However, if it's apparent that the assets in the fund are insufficient, the entity will be required to make additional contributions into the plan to make up the expected shortfall.

The primary motivation behind this study stems from the limited focus on defined benefit pension plans in previous research on pension accounting and value relevance for financial information. Additionally, there is scarcity of empirical studies specifically concentrating on the pharmaceutical sub-sector within the manufacturing industry.

This study focused on the defined benefit pension accounting which is not common in most research works unlike contributory pension accounting. The proxies for defined benefit pension used in this study are defined benefit pension liabilities and defined benefit service cost. These variables are not common in the previous literatures reviewed. This study will improve on this gap by asking specific research questions to have better insight on the link between the defined benefit pension accounting information and market value per share of quoted pharmaceutical firms in Nigeria.

Research Hypotheses

To make the study operational, the following specific null hypotheses have been tested in this study:

H01: There is no significant impact of defined benefit pension liabilities on the market value per share of listed pharmaceutical firms in Nigeria.

H02: There is no significant impact of defined benefit service cost on the market value per share of listed pharmaceutical firms in Nigeria.

Literature Review

Concept of Pension Accounting

Employee benefits are elements of remuneration given in addition to the various forms of cash pay. Pension is one indispensable form of employees' solid benefits which has positive impact on employee discipline, loyalty and willingness to remain in the service of an employer, commitment to the attainment of job goals and concern for the survival of the Organization (Fapounda, 2013). Pension is simply the amount set aside either by an employer or an employee or both to ensure that at retirement, there is something for employees to fall back on as income (Fapounda, 2013).Pension accounting is a crucial aspect of financial reporting for companies, governed by International Accounting Standard (IAS) 19 – Workers Benefits. Workers benefits, including pensions, are an essential component of remuneration that goes beyond cash payments. Pensions play a significant role in fostering employee discipline, loyalty, commitment, and job satisfaction. They provide employees with financial security and stability during their retirement years, contributing to their overall.

The concept of a pension is relatively straightforward; it involves setting aside a certain amount, contributed by the employer, the employee, or both, to ensure that employees have a source of income after retirement (Fapounda, 2013). In Nigeria, the pension industry has experienced substantial growth, with pension funds reaching N7.5 trillion in December 2017, a significant increase from N6.1 trillion in December 2016 (Odey, 2018). This growth demonstrates the importance of proper accounting for pensions and the significant effect of pension funds on development of Nigeria capital market (Ajibade, Jayeoba, Olajumoke, &Aghahowa, 2018).

To account for pensions, IAS 19 requires entities to accept their liability when any worker provides service in exchange for their future benefits. Additionally, entities must recognize an expense when they utilize services availed by workers (IAS 19). This means that pension costs are accrued during the period when the workers rendered services, ensuring that revenue and expenditures are appropriately matched in the report of profit or loss.

Within the context of pension accounting, the focus of this research is on explained benefit pension plans, which are considered post-employment benefits. Explained benefit plans differ from explained contribution plans, as they involve a promise by business owners to provide specified retirement benefits to workers based on factors such as salary and years of service. The calculation of benefits

in defined benefit plans is often complex and considers various factors, including employees' length of service, salary levels, and actuarial assumptions.

Matching concept, a fundamental principle of accounting, is applied to pension accounting. This concept states that profit is determined by disparity between revenue and relevant expenses within a specific period. Thus, revenues and expenses within a period are matched and reflected in the report of loss and profit for that period. In the case of pension costs, they are accrued during the period when employees render services to ensure alignment with the corresponding revenue generated in that period. The concept of a pension is relatively straightforward; it involves setting aside a certain amount, contributed by the employer, the employee, or both, to ensure that employees have a source of income after retirement (Fapounda, 2013). In Nigeria, the pension industry has experienced substantial growth, with pension funds reaching N7.5 trillion in December 2017, a significant increase from N6.1 trillion in December 2016 (Odey, 2018). This growth demonstrates the importance of proper accounting for pensions and the significant effect of pension funds on development of Nigeria capital market (Ajibade et al, 2018).

Defined Benefit Pension

These plans are post-working plans which are explained contribution benefits (IFRS Book, 2022). Pension accounting encompasses recognition and assessment of pension-related responsibilities and assets in financial reports. For described benefit pension plans, which guarantee specified amount of pension benefit to workers after they are retired, the entity assumes the responsibility of providing the promised benefits. The amount of pension benefit is typically determined based on factors like age, service years and compensation (Yehuda, 2009).

One of the distinguishing features of described benefit plans is that the entity is obligated to contribute additional funds to pension plan meeting their set benefits level. As a result, the entity incurs a long-time liability, which needs to be assessed at their current value. Concurrently, the entity makes some continued contributions to pension plan, and these contributions are invested, generating returns over time. Consequently, the entity holds assets within the pension plan, which are supposed to be revealed at suitable value based on IAS 19 (Yehuda, 2009).

In report of financial status, the entity offsets pension responsibilities against plan assets and reports. If this payment duties are more than their set assets, which is typically the case, plan deficit is noted as liability on their balance sheet. Conversely, when assets are more than this payment obligation, surplus is reported as asset in financial report. Calculating amount of explained benefit plan obligation and pension assets could be complicated, necessitating the involvement of an actuary who specializes in assessing and quantifying these amounts (Yehuda, 2009).

Defined Benefit Pension Liabilities

A defined pension liability is pension responsibility of any firm or entity. (Yehuda, 2009). Martin and Justus (2008) opine that pension liabilities comprise of reserves funds which pension systems set aside to achieve their future responsibility of pension payment. In addition to the various financial obligations, liabilities in pension funds encompass several elements, including pension fund, loans and other monetary duties. These liabilities reflect the commitments and responsibilities of pension funds towards retirees and other parties involved in the pension scheme. Assets, on the other hand, represent the investments made using the premiums paid and other responsibilities.

The term pension liability refers to the amount of money that private companies, cities, states, or federal governments must account for in order to fulfill future pension payments. It represents the difference between the total amount owed to retirees and the actual funds available to make those payments. It's important to note that a pension liability does not indicate the total amount that will be paid in future pensions. In some cases, a company or government may have more funds than necessary to cover future pension obligations, resulting in a pension surplus (Oshodin&Mgbame, 2014). However, a pension liability arises specifically in defined benefit schemes, which are traditional pension plans where both workers and employers contribute a certain amount over time to ensure a guaranteed source of retirement income. It's worth mentioning that in more prevalent retirement plans like defined contribution pensions or 401(k) plans, which are increasingly offered by companies, pension liabilities do not occur. In these plans, companies and workers make financial contributions, but there is no obligation for companies to contribute, and workers have flexibility in participating in the plan, unlike the defined benefit schemes (American Academy of Actuaries, 2004).

Understanding and properly accounting for pension liabilities is crucial for pension funds and entities responsible for pension obligations. It allows for accurate assessment and management of future payment commitments and ensures transparency in financial reporting. By distinguishing between assets and liabilities and considering the specific characteristics of defined benefit schemes, pension funds and organizations can effectively navigate the complex landscape of pension accounting and fulfill their obligations to retirees. Martin and Justus (2008) opine that pension liabilities comprise of reserves funds which pension systems set aside to achieve their future responsibility of pension payment.

Defined Benefit Service Cost

Service costs, also called normal pension costs, are the largest component of a company's annual retirement expenses. It is determined on the basis of actuarial calculations and presents current value of pension benefits received by participants of the scheme in the current period, using the pension benefit formula applicable in the company. Several factors affect the cost of services, including changes in employment levels, pensions and salary adjustments (Nwaiwu and Anurume, 2019).

Actuarial assumptions play a crucial role in measuring defined benefit service cost. These assumptions include financial factors, mortality rates, discount rates, expected salaries and benefits, future salary increases, and medical cost assumptions that account for inflation and specific alteration in costs (IAS 19, 2011). The overall actual assumptions should be unbiased, compatible with each other, and represent better estimation for this factor as concern to determine ultimate cost of post-working benefits (IAS 19, 2011).

Pension expense, which includes service cost, reflects the yearly cost of maintaining pension of plan of any worker. It is calculated by considering service years, interest of cost, supposed return on this asset, amortization before service costs, and effects of losses and benefits (Ohaka&Agundu, 2021). Service costs are noted dully as expenditure in statement of profit or loss of business entity.

In summary, pension service cost is a significant component of a company's pension expense, reflecting present value for their retirement gains earned by participants during current period. It is influenced by various factors and is recognized as expense in financial report. Accurate measurement and disclosure of service cost are essential for transparent reporting of pension obligations and the financial condition of the plan.

Concept of the Market Value of Shares

The market value of share of any firm ultimately reflects its asset value, as noted by Louis, Josef, and Theodore (2021). Investors seek Max. returns with a specific level of risk when making investment decisions, as highlighted by Dahlia (2022). A consistent increase in stock price over time serves as indicator of value of the firm, with higher stock prices signaling greater capital accumulation for the firm (Bratamanggala, 2018). The market value of share for any firm is evaluated by dividing market value of such firm with their shares.

Investors want to grow their gain and return by profiting from their investments. Stock return is among the most crucial factors considered while determining best investment. Investors frequently base their investment decisions on stock returns and risk. Information that is required may be internal or external. Numerous research has looked at how share prices fluctuate as well as a few potential contributing elements. Financial prowess and macroeconomic indicators were named by Kehinde (2012) as factors that could affect the share price of quoted firms. Market noise was also listed by Kehinde (2012) as a factor that could affect the share price of mentioned firms, although not being a fundamental one.

Share price of publicly traded firms is significantly impacted by the expectations of buyers and sellers, which is determined by compelling effect of supply and demand in the market (Menaje, 2012). O'Hara, Lazdowski, Moldovean, and Samuelson (2000) found a correlation between a company's earnings and dividend declarations and market share prices. There will always be a market reaction to the share price, as seen by the share price, regardless of the accounting figures that can be used to forecast the market price if these numbers contain any new information. Which is observed to consistently drift in the same direction as the initial information (Bernard & Thomas, 1990). The goal of investors is to increase their wealth through investment returns. One of the most important elements utilized to evaluate the best investment is stock return. Investors so typically rely on stock returns and risk to make wise investment selections. Information that is required may be internal or external. Numerous research has looked at how share prices fluctuate as well as a few potential contributing elements. Financial prowess and macroeconomic indicators were named by Kehinde (2012) as factors that could affect the share price of quoted firms. Market noise was also listed by Kehinde (2012) as a factor that could affect the share price of mentioned firms, although not being a fundamental one. According to Agarwal (2011), a company's earnings have the greatest impact on how its share price moves on the capital market. Accordingly, listed firms report their results on a quarterly basis. According to Schmist (2011), because we are living in global arena where small push in one area may spread the effect to another, even the slightest war rumors, oil price increases, or interest rate hikes can produce chain reaction in global arena.

Market value-based indicators have drawn much interest in recent years (Thenm, 2000). Since the last twenty years, some accounting, business, and finance scholars, corporate experts and consulting firms have paid close attention to value-based economic value added (EVA), and as a result, they accept limitations of normal and usual performance measures (Sharma & Kuma, 2012). As a result, several academics like Hunt, 1985; Verre, 1986; Dyl, 1989; Jen & Murphy, 1990; Gome & Balkin, 1992) reject normal and usual indicators. Their findings imply that value-based measurements could be used as a guide instead of traditional metrics when making strategic decisions (Panahi, 2014).

A company's net asset value is ultimately reflected in the market value of its shares (Louis, Josef & Theodore, 2021). The maximum return (rate of return) with a specific level of risk is what investors want from their investment (Dahlia, 2022). A consistent stock price that has increased through time

serves as a barometer of the company's value; the higher the stock price, the more capital the company has (Bratamanggala, 2018). The market value per share of a firm is calculated by the market value of a company divided by the total number of outstanding shares.

$$\text{MVPS} = \frac{\text{Total Market Value of the Firm}}{\text{Total Number of Outstanding Shares}}$$

Theoretical Framework

The Stakeholder Theory

The theory was first proposed in 1984 by Edward Freeman and he supposed stakeholder theory maintain that certain person or group of individuals are crucial to continued survival of their firms and businesses. This theory encourages practical, effective ethical and efficient way to managing business and corporate organization, specifically in a very complex and competitive condition. Stakeholders are individuals who are beneficiaries of either positive or negative outcome of actions and decisions of any business or corporate organization.

Who are the parties interested in accounting data? People or organizations that use financial information to guide their decisions are considered stakeholders of accounting information. They consist of management, workers, customers, trade unions, financial analysts, government and regulatory agencies, lenders, creditors, and shareholders. The organization should be a group of stakeholders with the aim of managing needs and interests, according to the primary tenet of the stakeholder theory. The employer and the employees are the two most important stakeholders in pension accounting administration. According to the stakeholder theory, managers of a company must take into account the requirements of all stakeholders, not only shareholders.

Harrison, Freeman, and Monica (2015) raised a significant point regarding the origins of stakeholder theory, highlighting that the majority of its development has taken place in Western countries. They attributed this phenomenon to the dominance of shareholder maximization perspectives prevalent in many Western business theories. The emergence of This theory was seen as crucial to provide balanced viewpoint on the goals and target of any corporate system and how it should be managed.

The development and presentation of financial reports requires the preparers to prioritize the public interest over their personal or selfish interests. This emphasizes the importance of maintaining objectivity and ensuring that the financial information presented is reliable, transparent, and unbiased. By adhering to these principles, the financial statements can effectively serve as a tool for stakeholders to make informed decisions.

It is crucial for developers of financial reports to follow the guidelines set forth by the IFRS and exercise professional judgment in their preparation. This includes applying accounting principles consistently, disclosing all relevant information, and providing correct and suitable perspective and image of the financial status and prowess of the company. By doing so, the preparers demonstrate their commitment to serving the peoples interest and upholding the integrity of financial reporting.

In summary, the development of stakeholder theory has offered a counterbalance to the predominant shareholder maximization perspective in Western business theories. In the realm of financial reporting, the use of IFRS ensures the production of general-purpose financial records that are neutral, complete, and free from error. Preparers of financial statements play a vital role in upholding the public interest and must prioritize objectivity and transparency in their reporting practices. By

adhering to these principles, stakeholders can confidently utilize financial statements to make informed decisions about investments and other matters.

Empirical Review

This section critically reviews empirical literature on this subject matterNumerous research are already carried out in this area with the aim of advancing our understanding of the accuracy and usefulness of accounting information in relation to equity values. The following studies provide valuable insights into this topic.

Omollo, Olweny, Oluoch, and Wamantanda (2021), examined financial theories related to pension fund portfolios and their application to solve ethical problems associated with debt and equity within these portfolios. The study focused on the practices of Kenyan pension fund administrators and their utilization of well-established financial theories as guiding principles and a theoretical framework when making decisions about balancing debt and equity. By addressing specific issues raised by proponents regarding financial theory practices reforms, the study demonstrated how theories can be effectively applied in decision-making processes concerning specific portfolios.

Orbunde, Lambe, and Bako (2020) utilized Ordinary Least Squares (OLS) regression to study the impact of investment of pension fund on capital market performance from 2008 to 2018. They examined relationship between net asset value of pension funds and market capitalization, debt capitalization, and the economy's stock index. The study revealed a large positive effect of net asset value on market and debt capitalization, but a small negative effect on the economy's stock index. The researchers recommended that the Pension Commission (PENCOM) ensure effective control, oversight, and enforcement of the PRA2004 rules, as they play notable part in contributory pension plan contribution to GDP. They also emphasized the importance of managing pension assets in capital market, including government bonds, real estate, and mutual funds, to further enhance the nation's GDP.

Eugenio, Parel, Reyes, Yu, and Cudia (2019) conducted panel regression assessment to examine relative importance of accounting and market valuation information for Asian named non-financial companies from 2000 to 2016, encompassing the period prior, during, and post 2008 global financial meltdown. The study revealed inconsistencies in the importance of Asian company values during this period. The authors suggested that future research should extend beyond Asia to explore these dynamics in other countries.

Examining effect of dividend programs on valuation of Nigeria stock prices, Adesina, Uwuigbe, Uwuigbe, Asiriuwa, and Oriabe (2017) conducted a 10-year analysis from 2006 to 2016, focusing on 22 banks. They found that dividend yield and stock price stability had substantial effect on stock prices, but EPS had stronger influence. The study emphasized the importance for Nigerian companies to consider the dividend policies of other firms to enhance profitability and future performance.

Kigen (2016) investigated the impact of company size on financial performance of pension funds in Kenya using data from 2011 to 2015. The study examined various sub-variables, including premium density, cumulative fund assets, membership, management costs, and investment costs. The findings indicated that administrative costs, investment costs, pension contributions, and fund assets accumulated over time significantly influenced Kenya's pension fund performance. The issue of mismanagement and improper handling of employees' retirement and disability pension

contributions, resulting in inadequate or excessive payments to pension funds, delayed benefits, and post-retirement severance payment problems, has garnered significant attention and criticism from retirees, legislators, professionals, government officials, and researchers (Author, 2015; Robalino, 2005).

Methodology

The research design adopted for this study was ex post facto research design was adopted, to investigate the relationship between defined benefit pension accounting and market value per share of quoted pharmaceutical companies in Nigeria. The justification for use is that the required data is not manipulable, and the data existed before the investigation began. The study population included quoted pharmaceutical companies listed on the Nigerian Stock Exchange (NGX), which as of December 31, 2021, totaled (nine) 9 (NSE Fact Book, 2022/ngxgroup.com). The target population for this study consists of all Nigeria Exchange Group (NGX) listed pharmaceutical companies, but the available population consists of three (3) Nigerian listed pharmaceutical companies. The time period considered in this study is 2011-2021. This period was chosen because in 2011, Nigeria adopted the IFRS) which is the accounting standard that governs pension accounting. Also, the FRCN, which is the body responsible for the national accounting standards in Nigeria, was enacted by the Parliament Act 2011.

The sample for this study includes three pharmaceutical companies listed on the Nigerian Stock Exchange, whose audited annual financial statements contained complete data for all variables tested using targeted sampling techniques. It is worth noting that of the cited pharmaceutical companies in Nigeria, the study (sample size) included those that were in continuous operation during the study period (i.e., 2011 to 2021). This was to eliminate the problem of missing data, which would violate the principle of precision and completeness. Secondary data was used due to the nature of the variables under study. Cross- sectional/time series data were extracted from the annual reports and accounts of the firms for the purpose of assessing the relationship between the variables of the study. Panel data were used in the study in order to detect and measure effect that cannot be simply observed by pure cross section or pure time series data. The data also suited the study dynamics of change and complicated behavioral pattern (Gujarati & Porter, 2009). The study adopted descriptive statistics, Pearson Product Moment Correlation Coefficient and Ordinary Least Square (OLS) multiple regression. Descriptive statistics was used to ascertain the central tendency of each of the variables of the study, Pearson correlation coefficient was used to compute the correlation between the independent variables benefit pension liability (BPL) and benefit service cost (BSC). Dependent variables market value per share (MVPS).

Model Specification

Model I: Market Value Per Share (MVPS) Model

$MVPS = f(BPL, BSC)$ …….....……3.1

This can be written in Ordinary Least Square (OLS) form as:

$MVPS_t = a_o + a_1BPL_t + a_2BSC_t + U_t$…….....3.2

$a_1>0; a_2>0 ; a_3>0$

Where: MVPS = Market Value Per Share

BPL = Benefit Pension Liability as proxy for Pension Accounting

BSC = Benefit Service Cost as proxy for Pension Accounting

t = time period under study

a_o = constant

a_1-a_2 = parameter or coefficient of explanatory variable

u = error term

Data Analysis and Discussion of Findings

This chapter was designed to enable the researcher to present the secondary data collected and computed from the Nigerian Exchange Group (NGX) using expose-facto research design. The results obtained are analysed applying descriptive statistical analysis, bivariate correlation and Ordinary Least Square (OLS) multiple regression method with the help of statistical package for social sciences (SPSS V. 23).

Table1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
BPL	33	.00	8.73	.4868	1.25166	5.938	.254	36.490	.503
BSC	33	-1.71	4.48	.8833	.73673	1.722	.254	7.880	.503
MVPS	33	-.10	.28	.0564	.07223	.779	.254	1.018	.503
Valid N (listwise)	33								

Source: Generated by the researcher from data collected using SPSS.

The result from Table 1 showed the descriptive statistics of the data presented with the variables of benefit pension liability (BPL), benefit service cost (BSC) and market value per share (MVPS). The results indicated that, benefit pension liability (BPL) have a positive growth rate as showed between the Minimum, Maximum Mean and Standard derivation statistical values while benefit service cost (BSC) and market value per share (MVPS) had a negative growth rate. Benefit pension liability (BPL) grow from .00 to 8.73 with Mean value of 0.4868 and standard derivation of 1.25166, benefit service cost (BSC) grow from -1.71 to 4.48 with Mean value of 0.8833 and standard derivation of 0.73673, market value per share (MVPS) grow from -0.10 to 2.48 with Mean value of 0. 0564 and standard derivation of 0.07223. Results also indicate that, all the variables had positive kurtosis implying that, the extent of flatness of the distribution is normal among these variables.

Correlations analysis of the variables

Table 2: Bivariate Analysis of Model One

		BPL	MVPS
BPL	Pearson Correlation	1	.056
	Sig. (2-tailed)		.634
	N	33	33
MVPS	Pearson Correlation	.056	1
	Sig. (2-tailed)	.634	

	N	33	33

Source: Generated by the researcher from data collected using SPSS.

Table 2 showed the result of Pearson Correlation Coefficient of relationship between benefit pension liability (BPL) and market value per share (MVPS). The table above showed a correlation coefficient of r=0.051 which indicated strong positive correlation between benefit pension liability (BPL) and market value per share (MVPS) with P-value of 0.634 > 0.05, implied that, there is a perfect correlation but no statistically significant relationship

Table 3: Bivariate Analysis of Model Two

		BSC	MVPS
BSC	Pearson Correlation	1	.166
	Sig. (2-tailed)		.118
	N	33	33
MVPS	Pearson Correlation	.166	1
	Sig. (2-tailed)	.118	
	N	33	33

Generated by the researcher from data collected using SPSS.

Table 3 showed the result of Pearson Correlation Coefficient of relationship between benefit service cost (BSC) and market value per share (MVPS), earnings per share (EPS) and return on capital employed (ROCE). The table above showed a correlation coefficient of r=0.166 which indicated very weak positive correlation between benefit service cost (BSC) and market value per share (MVPS) with P-value of 0.118 > 0.05, implied that, there is a perfect correlation but no statistically significant relationship.

Regression analysis of the Models

Model 1: Market Value Per Share (MVPS) Model

MVPS= f (BPL, BSC) …….....……..….1

$MVPS_t = a_o + a_1BPL_t + a_2BSC_t + U_t$…….....2

$a_1>0$; $a_2>0$; $a_3>0$

Table 4: Model one Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.239[a]	.057	.024	.07134	.954

a. Predictors: (Constant), BPL, BSC

b. Dependent Variable: MVPS

Source: Generated by the researcher from data collected using SPSS.

The above model summary Table 4 produced a correlation coefficient; R of 0.239 showed that, there is very weak correlation between market value per share (MVPS) and benefit pension liability (BPL) and benefit service cost (BSC). Our R2 stood 0.052 which implies that about 8% variations in the dependent variable (benefit pension liability) is attributed to changes in the independent variables (benefit pension liability and benefit service cost). The standard error is 0.07134, thus measure of variation of the observation made from the actual values of Y around the computed value of Y on the regression line, is close to 0 and far from 1. The Durbin-Watson d = 0.954 which is outside between two critical values of 1.5 <d < 2.5 and therefore we can assume that there is first order linear auto-correlation in the data. Hence the model is of absolute no good fit.

Table 5: Model One ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.027	3	.009	1.742	.165[b]
	Residual	.438	86	.005		
	Total	.464	89			

a. Dependent Variable: MVPS

b. Predictors: (Constant), BPL, BSC

The Table above indicated a regression significant P value of 0.165 < F (1.74) indicating that, the overall model is statistically significant at 0.05 between market value per share (MVPS) and benefit service cost (BSC) of pension accounting of the independent variables and market value per share (MVPS) of quoted pharmaceutical companies in Nigeria.

Table 6: Model one Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.057	.017		3.278	.002
	BPL	-.002	.009	-.030	-.202	.841

BSC	.051	.024	.524	2.171	.033

a. Dependent Variable: MVPS

Table 6 demonstrating coefficient table shows a model constant (a) value of 3.278 and benefit pension liability BPL and benefit service cost BSC (bx) values of -0.002; 0.051; respectively, indicating that, for every one unit increase of the independent (BPL) variable value (-0.002), the dependent variable (MVPS) value will decrease by -0.2%, for every one unit increase of the independent (BSC) variable value (0.051), the dependent variable (MVPS) value will increase by 5%, for every one unit increase of the independent (BPL) variable value (-0.034), the dependent variable (MVPS) value will decrease by -3%. On the other hand, Beta values of 0.30; 0.524; respectively, thus the model produced an estimated equation value of (Y = -0.002; 0.051; + 0.30; 0.524;). T-values produced -0.202 is insignificant at P-value (0.841) which is greater than the chosen alpha of (0.05. Thus, the null hypothesis is accepted (P-value > 0.05. Hence, there is no linear relationship between benefit pension liability and market price per share of quoted pharmaceutical companies in Nigeria.

Conclusion

Based on the findings, the study concluded that; there is a significant relationship between benefit service cost and market value per share which suggest that benefit service cost, as a proxy for independent variable (i.e. defined benefit pension accounting) has impact on the market price per share of quoted pharmaceutical firms in Nigeria.The results indicated that, benefit pension liability (BPL) have a positive growth rate as showed between the Minimum, Maximum Mean and Standard derivation statistical values while benefit service cost (BSC) and market value per share (MVPS) had a negative growth rate.

Recommendations

1. Based on the foregoing findings and conclusion, this study recommends that organization, especially the quoted pharmaceutical firms in Nigeria, should ensure that they improve their benefit service cost in order to boost their market value per share;
2. Investors should consider using defined service costs and defined settlement amount for investment decisions, especially in analyzing the value of a quoted pharmaceutical company in Nigeria.

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