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Moderating Role of Leverage on the Relationship Between Business Models and Value Relevance of Accounting Information

*Michael T. Sinebe¹

Edirin Jeroh²

&

Frank O. Ebiaghan³

^{1,2&3} Department of Accounting, Delta State University, Abraka

*Corresponding Author: michael sinebe@gmail.com; mtsinebe@delsu.edu.ng

ABSTRACT

This study examines the moderating role of leverage on the relationship between business models and the value relevance of accounting information in Nigerian firms. Using a sample of 70 firms listed on the Nigerian Exchange Group, the study employs regression analysis to assess the impact of various leverage metrics (Debt-to-Equity Ratio, Debt-to-Total Assets, and Long-Term Debt-to-Equity Ratio) on the relationship between business models and stock performance, with market capitalization as a control variable. The findings reveal that business models alone do not significantly impact stock performance. However, their interaction with leverage variables provides deeper insights. Specifically, the study finds that Long-Term Debt-to-Equity Ratio has a strong negative effect on share price, indicating that excessive reliance on long-term debt signals financial distress, leading to lower investor confidence. Conversely, market capitalization exhibits a significant positive relationship with stock performance, suggesting that larger firms are perceived as more stable and less risky. Additionally, the interaction between business models and Debt-to-Equity Ratio positively influences stock performance, highlighting the importance of an effective business model in leveraging capital structure efficiently. However, the interaction between business models and Long-Term Debt-to-Equity Ratio (-0.2928, p-value = 0.000) negatively impacts stock performance, further reinforcing the risks associated with excessive long-term debt, regardless of business model effectiveness. The study recommends that firms manage their financial structures carefully, particularly reducing long-term debt while optimizing their business models for market adaptation and operational efficiency. Policymakers should create an enabling environment for firms to scale operations by offering financial incentives, improving regulatory frameworks, and enhancing access to capital markets.

Keywords:

Value Relevance, Accounting Information, Market Capitalization, Business Models, Share Price.

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1.0 Introduction

The value relevance of accounting information remains a critical area of inquiry in financial reporting, particularly in countries where information asymmetry and corporate governance structures influence market efficiency. Value relevance refers to the ability of accounting numbers to explain stock price variations, reflecting the extent to which investors rely on financial statements in their valuation decisions (Amedu, Iliemena&Umaigba, 2019; Acciarini, Cappa, Boccardelli& Oriani, 2023). While prior studies have examined the direct impact of financial indicators such as profitability, liquidity, and market capitalization on value relevance (Bustos & Pomares-Quimbaya, 2020), limited attention has been given to the role of business models and leverage play as influencing factors in this relationship.

Business models encapsulate how firms create, deliver, and capture value, shaping their financial performance and investor perceptions (Teece, 2018; Ibrahim & Isiaka, 2020). The effectiveness of a firm's business model can significantly impact the interpretation and relevance of accounting information, as it determines revenue streams, cost structures, and capital allocation strategies (Oryina& Suleiman, 2020). However, financial leverage—measured through Debt-to-Equity Ratio (DER), Debt-to-Total Assets (DTA), and Long-Term Debt-to-Equity (LTDE)—can alter the dynamics between business models and value relevance. High leverage may signal financial risk, thereby affecting investor confidence in reported earnings and book values (Ebiaghan, 2017; Odhiambo, Koske & Limo, 2022). Conversely, firms with sustainable business models and optimal leverage structures may enhance the informativeness of financial reports, reinforcing their credibility in the capital markets (Macgregor & Ibanichuka, 2021; Ugbooduma&Ebiaghen, 2023). The Nigerian business environment, characterized by regulatory changes and evolving corporate governance practices, presents a unique context to explore these dynamics. Given the important role of market conditions in shaping these interactions, this study incorporates market capitalization as a control variable.

1.2 Statement of the Problem

Accounting information's relevance in investment decisions is crucial in financial markets, as it determines stock prices and firm valuation. However, the reliability and value relevance of accounting information are increasingly challenged by corporate financial structures, particularly leverage and evolving business models. In Nigeria, where financial transparency and corporate governance practices vary significantly, the relationship between business models, leverage, and value relevance remains underexplored. Existing studies have largely focused on the direct impact of accounting numbers on share price, but often fail to account for the moderating role of leverage and how different business models influence investor perception and interpretation of accounting information. Research on the interaction of business models with leverage and their collective effect on the value relevance of accounting information remains limited, particularly in Nigeria. Firms with a balanced leverage structure (optimal DER, DTA, and LTDE ratios) tend to exhibit higher value relevance of earnings and book values than firms with extreme levels of financial leverage. This study aims to investigate the moderating effect of leverage on the relationship between business models and the value relevance of accounting information, addressing gaps in the literature by exploring how DER, DTA, and LTDE interact with financial reporting quality in Nigerian firms. Specifically, the study aims to:

- i. Investigate the effect of financial leverage on business models and value share price in Nigerian firms.

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- ii. Examine the effect of business model on the share price information in Nigerian firms.
- iii. Determine the moderating effect of financial leverage on the relationship between business model and share price information in Nigerian firms.

2.0 Literature Review

2.1. Value Relevance of Accounting Information

The value relevance of accounting information refers to the extent to which financial statement data influence share prices and investor decision-making (Baboukardos & Rimmel, 2016; Bhatia & Mulenga, 2019). The ability of accounting information to explain share price variations is crucial in assessing its usefulness for investors and other stakeholders. Prior studies suggest that value relevance is influenced by firm characteristics, regulatory environments, and corporate governance structures (Hasanuddin, Darman, Taufan, Salim, Muslim, & Putra, 2021; Onyinye & Ebiaghan, 2023; Sinebe & Jeroh, 2023; Khaldi, & Hamama, 2024).

2.2.1 Business Models and Financial Reporting

Business models define how firms create, deliver, and capture value, impacting financial performance and accounting information disclosure (Teece, 2018). Abuaja and Ukpong, (2022) argue that firms with innovative business models often experience differences in value relevance due to variations in accounting treatment and financial reporting standards. Studies have also shown that traditional business models focusing on tangible assets may exhibit higher value relevance than digital or service-based models, where intangible assets dominate (Jeroh, 2020; Hafiz, Bagudo & Abubakar, 2022). However, excessive debt may also introduce financial distress risks, reducing the credibility of reported earnings (Otiedhe & Jeroh, 2022; Inrawan, Sembiring & Loist, 2025).

2.2.2 Debt-to-Equity Ratio (DER) and Value Relevance of Accounting Information

The Debt-to-Equity Ratio (DER) is a key financial leverage metric that measures a firm's total debt relative to its shareholders' equity. It indicates the extent to which a company relies on debt financing compared to equity financing. In Alzubi and Bani-Hani, (2021) and Salsabila, Putri and Mohammad, (2023) opinion, firms with higher DER may experience lower value relevance of earnings and book values due to increased financial risk, which leads to earnings volatility and reduced investor confidence. Conversely, Nukala and Prasada Rao (2021) found that in some cases, a moderate level of DER enhances value relevance by signaling growth potential and efficient capital allocation. The Nigerian market, characterized by relatively high-interest rates and limited access to equity financing, presents a unique setting where the impact of DER on value relevance remains underexplored.

2.2.3 Debt-to-Total Assets Ratio (DTA) and Value Relevance of Accounting Information

The Debt-to-Total Assets Ratio (DTA) measures the proportion of a firm's total assets financed through debt. It is a critical indicator of financial leverage and solvency risk. Studies examining the relationship between DTA and value relevance indicate that firms with high DTA may experience lower value relevance of earnings due to higher default risk and reduced transparency (Jeroh, 2012; Salim, 2023; Rabberti & Hariyanto, 2024). However, firms with an optimal level of debt financing may still maintain high value relevance if their leverage structure supports profitability and growth (Salsabila, et al. 2023). In the Nigerian

context, Srivastava and Muharam, (2022) noted that firms with high DTA ratios often face increased borrowing costs, which negatively impact earnings predictability and, subsequently, the value relevance of accounting information.

2.2.4 Long-Term Debt-to-Equity Ratio (LTDE) and Value Relevance of Accounting Information

The Long-Term Debt-to-Equity Ratio (LTDE) assesses a company's reliance on long-term debt relative to its equity base and ability to sustain operations through extended financing arrangements. Abubakar and Abubakar, (2015) and Yanto, Christy and Cakranegara, (2021) suggested that firms with higher LTDE ratios often experience reduced value relevance due to long-term obligations that increase financial uncertainty. In contrast, Ibrahim and Yaya, (2020) argued that firms with stable and well-structured long-term debt financing may enhance the value relevance of financial reports by demonstrating financial sustainability and lower short-term liquidity risks. In Nigeria, Khaldi et al. (2024) found that firms with high LTDE ratios often struggle with capital market efficiency, making it difficult for investors to rely on accounting figures for valuation.

2.3 Concept of Market Capitalization

Market capitalization (MCAP) represents the total market value of a company's outstanding shares of stock. It is calculated by multiplying the company's current share price by its total number of outstanding shares. The value relevance of accounting information refers to the extent to which financial reports influence market valuation and investor decisions (Salsabila, et al. 2023; Sinebe, 2024). Prior studies suggest that market capitalization moderates the impact of financial disclosures on firm valuation, as larger firms tend to have more transparent reporting standards, reducing information asymmetry (Ogieh&Jeroh, 2022). In studies examining the relationship between corporate characteristics and firm performance, market capitalization is often included as a control variable due to its influence on financial performance, risk exposure, and investor behavior.

2.4 Conceptual Framework

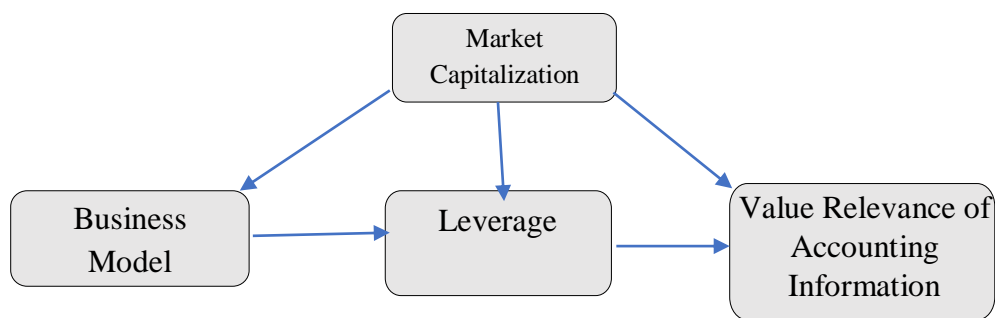


Figure 2.1: Author's Conceptual Design, 2025.

2.5 Theoretical Review

This study uses Institutional Theory, developed by Meyer and Rowan (1977), to examine how firms are shaped by their institutional environment. The theory suggests that firms adopt formal structures and practices to gain legitimacy, rather than purely to enhance efficiency. The study focuses on how firms align with institutional expectations regarding financial reporting, transparency, and investor confidence. The theory suggests that firms may adopt certain leverage levels not because they optimize capital structure but because they conform to prevailing financial norms within their industry (Forster, Lyons, Caldwell, Davies & Sharifi, 2025). In Nigeria, where financial markets are characterized by regulatory changes and macroeconomic volatility, firms' leverage choices may be shaped by institutional forces rather than purely by financial optimization. Business models and market capitalization moderate this relationship, providing insight into how firms navigate financial reporting within an evolving institutional landscape.

2.6. Empirical Reviews

The study by Abubakar et al. (2015) examined the impact of intangible assets and brands on the quality of accounting information. It found that reporting intangible assets in financial statements of Nigerian high-technology enterprises could enhance information quality. The lack of intangible assets on balance sheets could lead to a decline in accounting information quality. The research recommends broadening IAS 38 to include brand assets.

Innocent, Ibanichuka and Micah, (2020) studied the impact of accounting information on stock prices of Nigerian listed corporations. They analysed financial statements from 23 manufacturing businesses from 2008-2017, focusing on assets turnover rate, book value per share, and debt equity ratio. The research found that accounting information explained 78% of the variance in market value. The study recommends management strategies to increase book value per share and avoid negative factors.

The study by Khaldi et al. (2024) examined the relevance of accounting information in the financial market and its impact on economic situations. It used Ohlson's pricing model to analyze 36 Tunisian enterprises from 2008-2021. Results showed that book value and profits are sufficient for assessing stock prices in unpredictable economic climates, with profits having greater importance.

Moro-Visconti (2025) explores how entrepreneurs convert visionary ideas into practical business plans that align with strategic objectives and mitigate financial risks. A business plan is not just a financial prediction but a comprehensive tool that translates new ideas into quantifiable targets, enabling businesses to navigate competitive markets, ensure sustainable growth, and use tools like Excel for economic predictions and big data for strategic insights.

Study Gap

Despite existing studies on leverage and financial reporting, research primarily focused on the direct impact of leverage on firm value, neglecting its potential role in shaping the interpretation and usefulness of financial information. This gap necessitates further empirical investigation to provide a more acceptable understanding of how the combination of leverage and business models in a single equation influence the value relevance of accounting information in firms.

3.0 RESEARCH METHODOLOGY

3.1 Research Design

This study used the *expost-facto* design, which allows for investigating sample units over a set length of time. The population of this study was made up of secondary data from seventy (70) firms between 2015-2024. The study used the judgemental sampling technique. This is done by grouping of the firms based on their exchange sectors, such as Services, Natural Resources, Construction and Real Estate, Oil and Gas, Agriculture, Conglomerate, Consumer goods, Health Care, ICT and Industrial goods. On this basis, since all the sectors have an average of 7 firms in its sector, 7 firms were selected to form a sample of seventy (70) firms, thus representing all the ten (10) exchange sectors in Nigeria.

Hypotheses of the study

- i. *H₀₁: financial leverage does not have significant effect on share price.*
- ii. *H₀₂: Business model does not have significant effect on share price.*
- iii. *H₀₃: Financial leverage does not significantly moderate the relationship between business model and share price*

3.2 Model Specifications

The model for this study is stated in econometrics terms below as;

$$\begin{aligned}
 \text{Model I} \quad SP &= f(\text{LEV}, \text{MCAP}) \\
 SP &= f(\text{DER}, \text{DTA}, \text{LTDE}, \text{MCAP}) \\
 SP_{it} &= \alpha_0 + \beta_1 \text{DER}_{it} + \beta_2 \text{DTA} + \beta_3 \text{LTDE}_{it} + \beta_4 \text{MCAP}_{it} + \varepsilon_t \quad \text{eq.1}
 \end{aligned}$$

$$\begin{aligned}
 \text{Model II} \quad SP &= f(\text{BUSINESS MODEL}, \text{MCAP}) \\
 SP &= f(\text{BM}, \text{MCAP}) \\
 SP_{it} &= \alpha_0 + \beta_1 \text{BM} + \beta_2 \text{MCAP}_{it} + \varepsilon_t \\
 &\text{eq.2}
 \end{aligned}$$

$$\begin{aligned}
 \text{Model III} \quad SP &= f[(\text{LEV} \times \text{BM}), \text{MCAP}] \\
 SP &= f[(\text{DER} \times \text{BM}), (\text{DTA} \times \text{BM}), (\text{LTDE} \times \text{BM}), \text{MCAP}] \\
 SP_{it} &= \alpha_0 + \beta_1 \text{DER} \times \text{BM}_{it} + \beta_2 \text{DTA} \times \text{BM}_{it} + \beta_3 \text{LTDE} \times \text{BM}_{it} + \beta_4 \text{MCAP}_{it} + \varepsilon_t \\
 &\text{eq.3}
 \end{aligned}$$

Where;

SP = Share price = measured as the price as at the closing date of March_ June_ September and December of a stock

DER = Debt-to-equity ratio = measured as total liabilities divided by total equity

DTA = Debt-to-Asset ratio = Measured by dividing a company's total debt by its total assets

LDTE = Long-term-debt ratio = measured as earnings before interest and taxes divided by sales (%)

BM = Business Model = classification of the type of service the firms engage in while deriving profit from such activities.

MCAP = Market Capitalisation = measured as natural log of the number of ordinary shares multiply by closing year share price

f = Stochastic error term capturing other unexplanatory variables

ε_t = error term

i = firm identifier (70 firms)

t = time variable (10 Years)

α_0 is the intercept of the regression.

β_1 and β_2 are the co-efficient of the regression equation.

The Apriori expectation: β_1 and β_2 is less or greater 0.

4.0 ANALYSIS AND DISCUSSION OF RESULTS

4.1 Descriptive Statistics Analysis and Discussion

Table 1: Summary of Descriptive

VARIABLES	OBS	MEAN	STD. DEV	MIN	MAX
SP	700	6.994529	70.93195	-72.27	1319.48
BM	700	20.3	11.14651	1	41
DER	700	1.9066	19.45705	-343.17	202.9
DTA	700	67.44553	41.95055	3.55	395.45
LTDE	700	.8790571	6.396992	-107.1	99.69
MCAP	700	6.713698	1.081583	3.95424	9.64038

From the Table 1, Share Price (SP) has 6.99, 70.93, -72.27 and 1319.48 for the Mean, Standard Deviation, Minimum and Maximum respectively. The high standard deviation indicates significant fluctuations in market valuation while the negative minimum value could indicate stock price depreciation or potential data entry errors. Debt-to-Equity Ratio (DER) has 1.91, 19.46, -343.17, 202.9. The negative minimum value suggests that some firms have negative equity, which may indicate financial distress while the high standard deviation suggests extreme leverage variability. Furthermore, Debt-to-Total Assets (DTA) has 67.45, 41.95, 3.55 and 395.45 for the Mean, Standard Deviation, Minimum and Maximum respectively. The mean DTA ratio suggests that firms, on average, rely significantly on debt financing. Long-Term Debt-to-Equity Ratio (LTDE) has 0.88, 6.40, -107.1 and 99.69. The presence of negative values suggests some firms have negative equity, while the high maximum value indicates extreme debt financing reliance in some firms. Lastly, Market Capitalization (MCAP) has 6.71, 1.08, 3.95 and 9.64. The relatively low variability suggests that most firms are within a similar range of market capitalization.

4.2 Normality Test Analysis and Discussion

Table 2: Shapiro-Wilk W test for normal data

VARIABLES	OBS	W	V	Z	PROB>Z
SP	700	0.49506	230.260	13.270	0.00000
BM	700	0.96124	17.673	7.007	0.00000
DER	700	0.17692	375.335	14.462	0.00000
DTA	700	0.70003	136.792	12.000	0.00000
LTDE	700	0.20608	362.037	14.374	0.00000
MCAP	700	0.97615	10.876	5.822	0.00000

The Shapiro-Wilk W test in Table 2 is used to assess whether the dataset follows a normal distribution. If the p-value is less than 0.05, we reject the null hypothesis, indicating that the data is not normally distributed. From Table 2, all variables have p-values of 0.00000, meaning that none of them follow a normal distribution. To address the skewness and extreme values, we would conduct a non-parametric test to mitigate the impact of outliers.

4.3 Correlation Analysis and Discussion

Table 3: Summary of Spearman Correlation Matrix

	SP	BM	DER	DTA	LTDE	MCAP
SP	1.0000					
BM	0.0046 0.9025	1.0000				
DER	-0.0149 0.6936	-0.1534*	1.0000			
DTA	-0.0640 0.0909	-0.1230*	0.6239*	1.0000		
LTDE	0.0189 0.6179	-0.0915*	0.6942*	0.3477*	1.0000	
MCAP	0.1560* 0.0000	0.2019*	0.0930*	-0.1216*	0.1607*	1.0000

From the Spearman rank correlation in Table 3, the SP shows a positive correlation with market capitalization MCAP ($\rho = 0.1560$, $p = 0.0000$) suggesting that firms with higher market capitalization tend to have slightly higher stock prices. BM Correlation show a positive correlation with MCAP ($\rho = 0.2019$, $p = 0.0000$), which suggests that larger firms tend to have more viable business model than others. DER shows a positive correlation with LTDE ($\rho = 0.6942$, $p = 0.0000$) indicating that firms with high overall debt levels also rely heavily on long-term debt. MCAP shows a positive correlation with SP ($\rho = 0.1560$, $p = 0.0000$) which suggests that firms with higher market capitalization tend to have higher stock prices. In summary, MCAP suggests that larger firms exhibit stronger governance practices and rely on long-term debt, while the negative correlation with DTA indicates that larger firms might have more diversified capital structures and are less dependent on debt financing. Also, Debt Ratios DER, DTA and LTDE are highly correlated, reinforcing that firms with high debt loads tend to rely heavily on long-term obligations.

4.4 Result for Variance Inflation Factor (VIF) Test

Table 4: VIF Test Result

VARIABLE	VIF	1/VIF
DER	2.07	0.483422
LTDE	2.07	0.484247
MCAP	1.07	0.930431
BM	1.05	0.953409
DTA	1.03	0.969700
Mean VIF	1.46	

The Variance Inflation Factor (VIF) test in Table 4 is used to detect multicollinearity among independent variables in a regression model. From the Table 4, der and LTDE both have VIF = 2.07, indicating a moderate correlation while MCAP, BM, and DTA all have VIF values close to 1, suggesting minimal multicollinearity. The Mean VIF is 1.46, which is well below the threshold of 5, confirming that multicollinearity is not a significant issue in this model.

4.5 Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Table 5: Diagnostic Tests fitted values of SP

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Decision rule	If p-value is statistically significant, then reject Ho and accept HA
Result	chi2(1) = 1469.85; Prob>chi2= 0.0000

The Breusch-Pagan / Cook-Weisberg test is used to check for heteroskedasticity in a regression model. From the results in Table 5, the $\text{Chi}^2(1) = 1469.85$, $\text{Prob} > \text{Chi}^2 = 0.0000$ indicating severe heteroskedasticity in the model. Since the variance of residuals is not constant across the independent variables, we would conduct further diagnostics tests which may help improve model accuracy.

4.6 Levin-Lin-Chu Unit Root Test Analysis

Table 6: Diagnostic Tests Results for all the variables

Variable	Statistics	p-value	Remarks
SP	Unadjusted t	-	1(0)*
	30.9361	0.0000	
	Adjusted t*	-	
	22.2194		
BM	Unadjusted t	-	1(0)*
	Adjusted t*	-	
DER	Unadjusted t	-	1(0)*
	46.8802	0.0000	
	Adjusted t*	-	
	45.4955		
DTA	Unadjusted t	-	1(0)*
	24.6485	0.0000	
	Adjusted t*	-	
	20.9654		
LTDE	Unadjusted t	-	1(0)*
	22.2128	0.0000	
	Adjusted t*	-	
	13.0014		
MCAP	Unadjusted t	-	1(0)*
	28.7366	0.0000	
	Adjusted t*	-	
	26.1772		

The Levin-Lin-Chu (LLC) Unit Root Test is used to determine whether a time series variable is stationary or contains a unit root (non-stationary). From Table 6 all variables (SP, BM, DER, DTA, LTDE, MCAP) have p-values = 0.0000 (< 0.05), meaning we reject the null hypothesis for all variables. This indicates that all variables are stationary at level I(0) and do not require differencing.

4.7 Hypotheses Testing I

Table 7: Summary of SP, DER, DTA, LTDE, and MCAP linear regression analysis

SP	COEF.	STD. ERR.	z	P> z
DER	-.1325026	.2243364	-0.59	0.555
DTA	.017513	.0565872	0.31	0.757
LTDA	-5.079022	1.206909	-4.21	0.000
MCAP	7.563363	3.670989	2.06	0.039
_CONS	-39.57128	20.91044	-1.89	0.058
N				700
R-squared				0.2474
Wald chi2(5)				29.13
Prob > chi2				0.0000

Discussion of result of hypotheses I

Table 7 regression analysis aims to explore the relationship between SP and several independent variables (DER, DTA, LTDE and MCAP). DER with a negative coefficient of (-0.1325) not statistically significant ($p = 0.555$) with SP. DTA with a coefficient (0.0175) shows a positive but not statistically significant ($p = 0.757$) relationship between with SP meaning that debt financing in the sample might not be a key factor in stock performance (Nukala, et al. 2021). LTDE with a coefficient (-5.0790) and a p -value = 0.000 indicates a strong negative relationship between LTDE and SP. This suggests that excessive reliance on long-term debt might signal financial distress or risk, which investors may react to negatively (Ngatno, Apriatni&Youlianto 2021). While Market Capitalization (MCAP) has a coefficient 7.5634, and a statistically significant $p = 0.039$ value. This suggests that larger firms tend to have better share price valuation and are likely seen as more stable and less risky by investors, which translates to higher stock performance (Jihadi, Vilantika, Hashemi, Arifin, Bachtiar &Sholichah, 2021; Bustani, Kurniaty&Widyanti, 2021).

4.8 Hypotheses Testing II

Table 8: Summary of SP, BM and MCAP linear regression analysis

SP	COEF.	STD. ERR.	z	P> z
BM	.1403551	.1942393	0.72	0.470
MCAP	7.154726	4.217512	1.70	0.090
_CONS	-43.88935	24.64155	-1.78	0.075
N				700
R-squared				0.0134
Wald chi2(5)				4.36
Prob > chi2				0.1132

Discussion of result of hypotheses II

This regression model in Table 8 investigates the relationship between Share price (SP) and business model (BM), alongside market capitalization (MCAP). From the information in Table 8, Business Model (BM) with a coefficient of 0.1404 and a p -value of 0.470, BM has a not statistically significant positive relationship with SP. This suggests that while there may be some relationship between the business model and share price, it does not sufficiently explain the relationship between BM and SP and not strong enough to be considered a reliable predictor as other factors such as operational efficiency, market conditions, or

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industry-specific factors may play a more substantial role Market Capitalization (MCAP) with a coefficient of 7.1547 (Huy, Nhan, Bich, Hong, Chung & Huy, 2021; Chowdhury, Dhar & Stasi, 2022).

4.9 Hypotheses Testing III

Table 9: Summary of SP, (BMxDER), (BMxDTA), (BMxLTDE) and MCAP linear regression

SP	COEF.	STD. ERR.	z	P> z
BM x DER	.0129614	.0055215	2.35	0.019
BM x DTA	.0017272	.0014695	1.18	0.240
BM x LTDA	-.2928167	.0411107	-7.12	0.000
MCAP	8.0784	3.719305	2.17	0.030
_CONS	-45.76771	21.15671	-2.16	0.031
N				700
R-squared				0.3494
Wald chi2(5)				62.20
Prob > chi2				0.0000

Discussion of result of hypotheses III

The regression model in Table 9 explores how the interaction between the business model (BM) and DER, DTA, and LTDA—affects share price (SP), while also considering market capitalization (MCAP). The interaction Between Business Model and Debt-to-Equity Ratio (BM x DER) shows a positive and statistically significant relationship with SP (0.01296, $p = 0.019$) suggesting that firms with higher debt-to-equity ratios benefit from an effective business model, leading to improved share price performance while also allowing the firms to leverage their capital structure effectively as investors may perceive well-structured debt as a growth driver when paired with an efficient business strategy (Salsabila, et al. 2023; Lestari, 2023; Utama, Purmono, Malini, Mustarudin & Wendy, 2023; Sinebe, 2023). The interaction Between Business Model and Debt-to-Total-Assets Ratio (BM x DTA) shows a positive but not statistically significant relationship with SP (0.00173, $p = 0.240$) which indicates that the business model does not have a significant effect on how total debt influences stock performance (Sulaiman & Khalid, 2024; Rabberti, et al. 2024; Abideen, Pyeman, Sundram, Tseng & Sorooshian, 2021). This could possibly result from the fact that total debt-to-assets ratio captures broader liabilities, which may dilute the impact of an effective business model while other governance mechanisms (e.g., risk management, operational efficiency) may play a larger role than the business model in managing total debt. The interaction Between Business Model and Long-Term Debt-to-Equity Ratio (BM x LTDA) displays a negative and highly significant relationship (-0.2928, $p = 0.000$) with SP which indicates that when long-term debt increases, even a strong business model struggles to maintain stock performance as excessive long-term debt may reduce financial flexibility, making firms more vulnerable to economic downturns (Salsabila et al.2023; Utama et al.2023; Odhiambo, et al. 2022). Furthermore, investors may view high long-term debt as a risk, regardless of the business model while frequent restructuring of long-term debt may signal financial distress, reducing investor confidence.

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The findings indicate that while business models alone do not significantly impact share price performance. Specifically, the study revealed that Long-term debt-to-equity ratio (LTDE) has a strong negative impact on share price, indicating that excessive reliance on long-term debt may signal financial distress, thereby reducing investor confidence. Also, Market capitalization (MCAP) consistently shows a significant positive relationship with share price performance, suggesting that larger firms with established market presence are perceived as more stable and less risky by investors. Furthermore the interaction between business models and debt-to-equity ratio (BM x DER) positively influences share price performance, suggesting that firms with an effective business model can better leverage their capital structure to enhance market valuation and the interaction between business models and long-term debt-to-equity ratio (BM x LTDE) negatively affects stock performance, emphasizing the risks associated with excessive long-term debt even when a strong business model is in place.

5.2 Recommendations

- i. Firms should focus on Debt Management Strategies by reducing long-term debt to improve stock valuation and investor confidence while exploring alternative financing options such as equity financing and retained earnings should be considered to mitigate financial distress.
- ii. Firms should focus on Business Model Optimization that align their business models with market needs and execute them effectively to enhance value relevance while investing in continuous innovation, cost efficiency, and strategic market expansion that should be incorporated into business models to strengthen firm valuation.
- iii. Regulatory bodies should consider policies that encourage firms to maintain sustainable leverage levels while promoting financial transparency and also strengthen capital market regulatory framework which could enhance investor confidence and improve overall market stability.

References

- Abideen, A. Z., Pyeman, J., Sundram, V. P. K., Tseng, M. L., & Sorooshian, S. (2021). Leveraging capabilities of technology into a circular supply chain to build circular business models: A state-of-the-art systematic review. *Sustainability*, 13(16), 8997.
- Abuaja, H., & Ukpong, E. G. (2022). Value relevance of sustainability reporting: Evidence from listed oil and gas firms in Nigeria. *AKSU Journal of Administration and Corporate Governance (AKSUJACOG)*, 2(1), 8-22.
- Abubakar, S., & Abubakar, M. (2015). Intangible assets and value relevance of accounting information of listed high-tech firms in Nigeria. *Research Journal of Finance and Accounting*, 6(11), 60-79.
- Acciarini, C., Cappa, F., Boccardelli, P., & Oriani, R. (2023). How can organizations leverage big data to innovate their business models? A systematic literature review. *Technovation*, 123, 102713
- Alzubi, K., & Bani-Hani, A. (2021). Determinants of debt-to-equity and its impact on the performance of industrial companies listed on Amman stock exchange. *Journal of Governance and Regulation*, 10(4) 353-364.

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- Amedu, J. M., Iliemena, R. O., & Umaigba, F. T. (2019). Value relevance of sustainability reporting in Nigerian manufacturing companies. *Journal of Global Accounting*, 6(2), 131-147.
- Baboukardos, D., & Rimmel, G. (2016). Value relevance of accounting information under an integrated reporting approach: A research note. *Journal of Accounting and Public Policy*, 35(4), 437-452.
- Bhatia, M., & Mulenga, M. J. (2019). Value relevance of accounting information: A review of empirical evidence across continents. *Jindal Journal of Business Research*, 8(2), 179-193.
- Bustani, B., Kurniaty, K., & Widyanti, R. (2021). The effect of earning per share, price to book value, dividend payout ratio, and net profit margin on the stock price in Indonesia stock exchange. *Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship*, 11(1), 1-18.
- Bustos, O., & Pomares-Quimbaya, A. (2020). Stock market movement forecast: A systematic review. *Expert Systems with Applications*, 156, 113464.
- Chowdhury, E. K., Dhar, B. K., & Stasi, A. (2022). Volatility of the US stock market and business strategy during COVID-19. *Business Strategy & Development*, 5(4), 350-360.
- Ebiaghan, O. F. (2017). Risk analysis of public-private partnership (PPP) projects. *EBSU Journal of Social Sciences and Humanities*, 4(1).
- Forster, R., Lyons, A., Caldwell, N., Davies, J., & Sharifi, H. (2025). A lifecycle analysis of complex public procurement: an agency-institutional theory perspective. *International Journal of Operations & Production Management*, 45(1), 62-87.
- Hafiz, M. M., Bagudo, M. M., & Abubakar, S. (2022). Value relevance of international financial reporting standard four of listed Nigerian insurance firms. *Gusau Journal of Accounting and Finance*, 3(1), 23-23.
- Hasanuddin, R., Darman, D., Taufan, M. Y., Salim, A., Muslim, M., & Putra, A. H. P. K. (2021). The effect of firm size, debt, current ratio, and investment opportunity set on earnings quality: an empirical study in Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(6), 179-188.
- Huy, D. T. N., Nhan, V. K., Bich, N. T. N., Hong, N. T. P., Chung, N. T., & Huy, P. Q. (2021). Impacts of internal and external macroeconomic factors on firm stock price in an expansion econometric model—a case in Vietnam real estate industry. *Data Science for Financial Econometrics*, 189-205.
- Ibrahim, U. A., & Isiaka, A. (2020). Effect of financial leverage on firm value: Evidence from selected firms quoted on the Nigerian stock exchange. *European Journal of Business and Management*, 12(3), 124-135.
- Ibrahim, M., & Yaya, O. (2020). Corporate governance and the value relevance of financial information: Evidence from Nigerian listed firms. *Journal of Financial Reporting and Accounting*, 18(3), 345-362.
- Innocent, O., Ibanichuka, E. A. L., & Micah, L. C. (2020). Accounting information and stock prices of quoted manufacturing firms: Multi-variant panel data evidence from Nigeria. *Asian Finance & Banking Review*, 4(1), 1-16.
- Inrawan, A., Sembiring, L. D., & Loist, C. (2025). The Moderating Role of Liquidity in the Relationship between Leverage, Firm Size, and Profitability. *International Journal of Business, Law, and Education*, 6(1), 54-68.
- Jeroh, E. (2012). Interest rate variations and stock market capitalization in Nigeria: an empirical analysis. *Acta Universitatis Danubius. (Economica)*, 8(5), 5-14.

- Jeroh, E. (2020). Corporate financial attributes and the value of listed financial service firms: The Nigerian evidence. *Academy of Accounting and Financial Studies Journal*, 24(2), 1-13.
- Jihadi, M., Vilantika, E., Hashemi, S. M., Arifin, Z., Bachtiar, Y., & Sholichah, F. (2021). The effect of liquidity, leverage, and profitability on firm value: Empirical evidence from Indonesia. *The Journal of Asian Finance, Economics and Business*, 8(3), 423-431.
- Khaldi, H., & Hamama, F. (2024). Value relevance of accounting information in uncertain economic policy context: Evidence from Tunisia. *Journal of Accounting and Management Information Systems*, 23(3), 570-595.
- Lestari, E. (2023). Debt to equity ratio (DER) and firm size toward firm value: the mediating role of return on asset. *Return: Study of Management, Economic and Business*, 2(11), 1095-1109.
- Macgregor, T. C., & Ibanichuka, E. (2021). Accounting Information Quality and Firm Performance of Quoted Oil and Gas Companies in Nigeria. *International Journal of Advanced Academic Research*, 7 (6) 1-24.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American journal of sociology*, 83(2), 340-363.
- Moro-Visconti, R. (2025). From business models to business planning. In *Startup Valuation: From Strategic Business Planning to Digital Networking*. Cham: Springer Nature Switzerland, 21-80
- Ngatno, Apriatni, E. P., & Youlianto, A. (2021). Moderating effects of corporate governance mechanism on the relation between capital structure and firm performance. *Cogent Business & Management*, 8(1), 1866822.
- Nukala, V. B., & Prasada Rao, S. S. (2021). Role of debt-to-equity ratio in project investment valuation, assessing risk and return in capital markets. *Future Business Journal*, 7(1), 13.
- Odhiambo, A., Koske, N., & Limo, P. (2022). Debt-Equity Ratio, CEO Power and Financial Performance of Listed Companies at the Nairobi Securities Exchange, Kenya. *European Journal of Business and Management Research*, 7(2), 330-338.
- Ogieh, A. S., & Jeroh, E. (2022). Corporate governance and the value relevance of earnings. *Himalayan Journal of Economics and Business Management*, 3(5), 55-63.
- Oryina, E., & Suleiman, S. (2020). Effect of intangible assets on value relevance: evidence from listed manufacturing firms in Nigeria. *Journal of Economics and Sustainability*, 2(2), 13-13.
- Otiedhe, M. G., & Jeroh, E. (2022). Value relevance of accounting information of quoted Nigerian firms in the industrial goods sector: assessment of the pre-and post-IFRS era. *Finance & Accounting Research Journal*, 4(5), 296-309.
- Onyinye, N. P., & Ebiaghan, O. F. (2023). Off-Balance Sheet (Non-Financial) information disclosures and financial performance of quoted firms in the Nigerian industrial sector. *Gulf Journal of Advance Business Research*, 1(1), 73-81.
- Rabberti, R., & Hariyanto, D. (2024). The Influence of Return on Asset, Debt to Total Asset Ratio, and Economic Value Added, on Company Value with Dividends as a Moderating Variable in Industrial Sector Companies. *International Journal Papier Public Review*, 5(4), 55-67.
- Salim, G. (2023). The influence of debt-to-equity ratio, capital intensity ratio, and profitability on effective tax rate in the tourism sector. *J. Gov. Regul*, 12(1), 53-67.
- Salsabila, W. G., Putri, A., & Mohammad, W. (2023). The Effect of Debt-to-Equity Ratio (DER) and Current Ratio (CR) on Return on Equity (ROE) in the Food and Beverage Companies. *Himeka: Journal of Interdisciplinary Social Sciences*, 1(1), 1-12.

Moderating Role of Leverage on the Relationship Between Business Models and Value Relevance of Accounting Information

- Sinebe, M.T. (2023). Firm Performance and Dividend Policy: Evidence from Listed Service Firms in Nigeria. *Central Asian Journal of Innovations on Tourism Management and Finance*, 4(6), 129-139.
- Sinebe M.T. & Jeroh, E. (2023). Corporate governance and financial statements' fraud: Evidence from listed firms in Nigeria. *Asian Journal of Management and Commerce*, 4 (2) 118-123.
- Sinebe, M. T. (2024). Board Composition and Market Valuations in Nigeria. *Journal of the Management Sciences*, 61(6), 35–46.
- Srivastava, A., & Muharam, H. (2022). Value relevance of accounting information during IFRS convergence period: Comparative evidence between India and Indonesia. *Accounting Research Journal*, 35(2), 276-291.
- Sulaiman, A. S., & Khalid, K. M. (2024). Moderating effect of firm size on debt capital and financial performance of listed agricultural firms in Nigeria. *FULafia International Journal of Business and Allied Studies*, 2(1), 91-106.
- Teece, D. J. (2018). Business models and dynamic capabilities. *Long range planning*, 51(1), 40-49.
- Ugboduma, J., & Ebiaghan, F. O. (2023). An assessment of the nexus between working capital management and financial performance: Nigerian evidence. *Gulf Journal of Advance Business Research*, 1(2), 174-187.
- Utama, S., Purmono, B. B., Malini, H., Mustarudin, M., & Wendy, W. (2023). The influence of debt equity ratio and times interest earned ratio through return on assets on banking companies' share price. *International Journal of Applied Finance and Business Studies*, 11(3), 418-429.
- Yanto, E., Christy, I., & Cakranegara, P. A. (2021). The influences of return on asset, return on equity, net profit margin, debt equity ratio and current ratio toward stock price. *International Journal of Science, Technology & Management*, 2(1), 300-312.