**Examining the Impact of Capital Structure on Firm Performance: A European study**

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**Abstract**

This study investigates the impact of capital structure and gender diversity on a firm’s financial performance for over 1,000 financial institutions across 41 European countries from 2000 to 2022. Using fixed effects regression models in a panel data framework, this study assesses capital structure’s critical metrics like capital ratios, firm size, leverage, and debt-to-equity ratio against the backdrop of significant economic events such as the Eurozone debt crisis and the COVID-19 pandemic. The findings of this study revealed that capital ratios and firm size significantly and positively impact financial performance, but leverage has a significant negative influence. Furthermore, the gender diversity of the board does not significantly influence the financial performance in this dataset. The results contribute to the ongoing debate on corporate governance and financial stability by providing empirical evidence to help policymakers and executives make informed decisions. Further investigations should examine sector-specific elements and governance methodologies to enhance our comprehension of the dynamics of financial performance across various economic contexts.

Keywords: Financial performance; Capital structure; Capital ratio; Firm’s size; Financial risk.

**1. Introduction**

The Eurozone debt crisis in 2008 signified an abundance of bankruptcy events among European firms, mostly because of financial instability (Iqbal et al., 2014). Afterward, the European firms also had to adopt additional regulatory changes that hindered the strengthening of financial stability within the short-term period. In addition, the COVID-19 pandemic has posed added financial challenges among European firms. Despite these challenges, many European firms have achieved remarkable financial performance afterward, which beacons hope for the rest of the world (Recine et al., 2011).The literature revealed ample evidence favoring distinct capital structures among European firms, which lead to their recommendable performance (Harrison et al., 2014). This study examined the financial performance of European financial firms from 2000 to 2022, pinpointing the factors that had influenced their financial performance and capital structure.

The capital structure works as the source of funds for a firm’s operation and expansion, significantly influencing its financial performance. A combination of capital ratios, financial risk, equity, and firm size determines a firm's capital structure—evidence of long-term creditability can influence its financial performance. (Arhinful et al., 2023; Harrison et al., 2014). Furthermore, to maintain consistent financial performance, a firm must optimize its profitability. These financial indicators strengthen a firm's capital structure, leading to profitability regarding return on assets. Furthermore, the control variable – board gender diversity may significantly impact a firm's financial stability and performance. Therefore, it underpinned the modern expansion of board operations and indicates that the most important motivation for gender diversity for firms is to oversee changes in their capital structure.

This study investigated the role of board gender diversity - a crucial governance that influences decision-making and problem-solving, to observe whether this control variable directly correlates with a firm’s capital structure. Furthermore, as previously mentioned, the capital structure significantly influences financial performance, implying that corporate governance may also impact financial performance. These relationships continue to provoke debate in numerous studies, while some suggest strong correlations between these variables and financial outcomes (Abubakar et al., 2018; Utami, 2023; Yahaya et al., 2023). García and Herrero (2021) This study stated that a firm’s small and independent board with a higher percentage of female directors tends to reduce financial distress. On the other hand, evidence from Japan (Wang et al., 2024) indicates a negative relationship between the firm's performance and board gender diversity.

To bridge this gap, this study reckons on a profound theory on European firms, examining the impact of capital structures and board gender diversity on their financial performance. This paper used a sample of over 1,000 financial institutions from 41 European countries from 2000 to 2022. Furthermore, we selected return on assets as a financial performance indicator to identify profitability. Previous literature demonstrates both the significance and insignificance of the previous impact of different financial metrics (Abubakar et al., 2018; Azim et al., 2021; Wang et al., 2024; Zaheer et al., 2016). Furthermore, the capital ratio and firm size were used to evaluate the firm's asset condition. Additionally, we used leverage and the debt-to-equity ratio to measure its financial risk. These financial metrics, taken together, have provided valuable insights into the firm's financial health.

We broadly divide this study into five significant sections to explore the impact of many financial metrics—capital structures and board gender diversity—on firm performance. Section 2 outlines the literature review, underpins its theoretical framework, and builds hypotheses. Section 3 covers the methodology and calculations, which include data collection methods, variable selection, and various econometric models to enhance robustness. Section 4 contains the empirical analysis that shows the regression model results and their interpretation. Finally, Section 5 discusses the findings of the work in summary, and the conclusion brings forward implications for corporate governance and capital structures, with suggestions for future research to further improve such insights.

2. Literature review

Different sets of financial indicators can outline capital structure differently, although this differentiates capital structures mainly focusing on enhancing firms' financial health and maintaining robust financial performance. Several studies have analyzed capital structure and its impact on profitability and financial performance through different sets of financial indicators. We used a certain standard number of financial metrics to analyze capital structure and predict financial performance by considering the most critical factors for a firm's growth, such as the capital ratio, firm’s size, leverage ratio, and debt-to-equity ratio. These studies (Abubakar et al., 2018; Azim et al., 2021; Utami, 2023) have validated the substantial influence of capital structure on financial performance using these and other financial indicators. Conversely, a few studies have demonstrated that some of these financial indicators do not significantly influence financial performance (Shamki et al., 2016). As a result, there is a lack of research to determine whether or not these particular financial indicators can influence capital structure and impact financial performance.

A fundamental financial indicator of capital structure is the capital ratio, which examines its financial capacity to meet operational and credit obligations and may considerably affect its financial performance. Firms with elevated capital ratios generally exhibit less financial risk, resulting in better financial performance in profitability and solvency. Several studies (Shamki et al., 2016; Zaheer et al., 2016; Rabiu, 2017; Irawati et al., 2019; Azim et al., 2021) they examined the impact of capital ratio, defined as total equity divided by total assets, on a firm's financial performance. (Rabiu 2017; Irawati et al. 2019; Azim et al., 2021) These studies demonstrated that capital ratio significantly influences a firm’s performance by impacting profitability. In contrast, several studies have not identified any substantial effect of the capital ratio (Shamki et al. 2016). This study asserts the following hypothesis based on an abundance of research indicating a strong beneficial effect on profitability:

**H1:** The capital ratio has a significant positive impact on profitability.

A firm’s size is another financial indicator of capital structure and may impact a firm’s financial performance. The size of a firm determines its access to various resources, which directly impacts financial performance. Conceptually, larger companies have better access to finance and other resources and can benefit from economies of scale, leading to a higher profit margin and favorable financial performance. Furthermore, several studies (Abubakar et al., 2018; Irawati et al., 2019) have demonstrated a significant relationship with profitability. In contrast, some other studies' evidence has indicated an insignificant relationship between size and profitability (Shamki et al., 2016; Azim et al., 2021). According to Rabiu (2017), there is a negative and insignificant relationship between company size and insurance companies' performance metrics. Therefore, this study proposes this hypothesis to investigate the impact of a firm's size on profitability:

**H2: A firm’s size has a** significant positive impact on profitability.

According to regulations, financial risk is an important factor in gaining insights into a firm's ability to meet its financial obligations, which may influence financial performance. A balanced and lower financial risk indicates a sound capital structure, and we used the leverage ratio to measure the financial risk. Financial risk aids in understanding potential threats to firms' long-term survival, and the leverage ratio is critical in formulating strategies that mitigate potential adverse effects. Leverage ratios offer valuable insights into a firm's debt management effectiveness, which is necessary for assessing its profitability. Research has shown that firms with higher leverage ratios exhibit superior financial performance through profitability (A, et al., 2018). Conversely, Azaria et al. (2021) demonstrated that while leverage has a significant impact, it does so negatively, indicating that a highly profitable organization will have low leverage. Following this concept between profits and debt, this study proposes the following hypothesis:

**H3**: The leverage ratio has a significant negative impact on profitability.

As already stated, the significance of financial risk in maintaining a balanced capital structure to evaluate the firm’s financial performance and debt-to-equity ratio is another indicator for measuring financial risk. The debt-to-equity ratio is another method to measure financial risk, as is the ability of a firm to manage its debt and equity. Research on the debt-to-equity ratio’s impact on financial performance through profitability has been observed in many studies. This study Afolabi et al. (2019) examined the impact on financial performance by debt-to-equity metrics and found a positive and significant effect through profitability. However, the study by Utami (2023) demonstrates that the debt-to-equity ratio has no straight relationship with financial risk, which indicates that if no significant relationship exists, it may not directly impact profitability. By acknowledging this issue and observing the relationship, we propose the following hypothesis:

**H4**: The debt-to-equity relationship has no significant impact on profitability.

We have already highlighted the importance of board gender diversity in corporate governance, and its growing recognition is a crucial factor to include in the study. Furthermore, the increasing amount of gender diversity on the board positively impacts firms. However, this study aims to determine whether or not there is a direct relationship with profitability. The study by García et al. (2021) found that a small, independent board with more female directors reduces financial distress, while Wang et al. (2024) discovered a negative relationship. Furthermore, another study by Govindan et al. (2023a) examined how board structure (BS) influences corporate financial performance (CFP) in the logistics sector and showed that having female directors does not have much of an effect on CFP. Similarly, other studies indicate that board diversity, specifically female and independent directors, does not enhance financial performance or company value(Azaria et al., 2021; Yahaya et al., 2023). Based on these findings, this study proposes the following hypothesis:

**H5**: Board gender diversity has no significant impact on profitability.

**3. Data and Methodology**

**3.1 Data collection and variables**

Thomson Reuters provides data for 41 countries; most of these firms are European financial institutions. The data set encompassed financial and non-financial information from over 1,000 organizations, including- women in executive and board positions and women managers, and these all combined as the diversity of board gender, which serves as the study's control variable. The series is from 2000 to 2022.

This study applied an integrated approach with mathematical and inferential analysis using various financial metrics that established solid and robust evidence. We used the ROA as the dependent variable to determine the performance of the firm regarding profitability. This study has included the capital ratio (CAP), firm size (SIZE), leverage ratio (LEV), and debt-to-equity ratio (DER) as independent variables to investigate the impact of capital structure to determine the financial stability and flexibility of the firm. These variables build a strong capital structure that can observe the firm's financial risk, asset quality, and operational efficiency. The study has used board gender diversity as a control variable to look into any change within the firm's financial performance that is linked with the capital structure. This study seeks to identify which variables would most influence financial performance. Table 1 presents the measurement overview for the research variables in this study.

***Table -1:*** Variable Description

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Variable** | **Description** | **Formula** | **Expected impact** | **References** |
| **Dependent variable:**  **Return on Assets** | **Return on assets** is a dependent variable that measures how well these companies use their assets to generate profit. | Net income divided by Total Assets |  | (Amimakmur et al., 2024) |
| **Independent variables:** |  |  |  |  |
| **CAP** | The **Capital Ratio** measures a company's financial strength, indicating how much of the company's assets are funded by equity.Top of Form  Bottom of Form | Total Equity divided by Total Assets | + | (Cantero-Saiz et al., 2024) |
| **SIZE** | These organizations' **size** | Ln of Total Assets | + OR N/A | (Cantero-Saiz et al., 2024; Govindan et al., 2023) |
| **LEV** | **The leverage ratio** can indicate the amount of debt these companies have | Total Debt divided by Total Assets | +/- | (Mansour et al., 2024) |
| **DER** | The **debt-to-equity ratio (DER)** measures the company's debt relative to its shareholders' equity. | Total Liabilities divided by Shareholder’s Equity | - | Anugrahwati (2018) |
| **Control Variable:**  **Board Gender Diversity** | **Board gender diversity** functions as a control variable, indicating whether or not the company has gender diversity | Corporate Governance Analytic Board Female, Analytic Executive Members Gender Diversity, Women Managers, Policy Board Diversity—if any of these variables exhibit diversity, BGD signifies 1 and 0 otherwise. | + | (Mansour et al., 2024) |

***Note:*** This table outlines the definition and description of each variable. The definition column indicates each variable's calculation or measurement process, while the description section emphasizes the introduction and importance of each variable.

**3.2 Methodology**

The main goal of this study was to determine which part of the capital structure impacts a firm's financial performance through various variables. The literature reviewed the necessity of different financial metrics using different variables to predict a firm's profitability through ROA. We observed the outcome by analyzing a panel data regression test to fulfill the study's objective. However, before the regression test, this study conducted various tests that ensured a robust panel data regression model.

As previously stated, various tests provided different insights, allowing us to analyze the outcome confidently. One such test was the descriptive statistics test, which helped this study achieve a robust outcome by observing the quantity of independent and dependent variables and ensuring consistency. Afterward, the Pearson correlation matrix provides valuable insights into the relationships among variables, and previous studies(Azim et al., 2021; Dey et al., 2018; Jaishi, 2020) have standardized similar methods. Furthermore, this study (Azaria et al., 2021) determined that the fixed effect model was the optimal regression procedure by conducting the Hausman test; similarly, this study (Mardawiyah et al., 2020)followed the same method to assume a suitable model among fixed and random effects. We also conducted a Hausman test to determine the most suitable model, adhering to the same procedures as the previous studies. Another study by Utami (2023) initially recommends conducting informal autocorrelation and heteroscedasticity tests. We have employed fixed effects regression models with robust and clustered standard errors to address potential issues of heteroskedasticity and autocorrelation. Lastly, panel data regression with a fixed effect model was used to determine the final robust effect. This ensured the r-square value was high enough for a robust outcome and predicted how ROA would relate to other dependent variables. Therefore, we estimated the research model using the following equation:

ROAit ​=β0​+ β1​CAPit ​+β2​SIZEit​ + β3​LEVit​ + β4​DERit​ + β5​BGDit​ + ϵit​

**4. Analysis**

This descriptive table -2 contains generic information about all variables conducted in this study, which had an immense number of observations. Here, Return on Assets is the dependent variable, Board Gender Diversity is the control variable, and the others are independent variables.

***Table- 2:*** Descriptive statistics

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | N | Mean | Std. Dev. | min | max | p25 | Median | p75 | kurtosis | skewness |
| Return on Assets | 13312.000 | -0.539 | 27.505 | -2379.818 | 42.466 | -0.000 | 0.009 | 0.043 | 5929.290 | -74.467 |
| CAP | 13306.000 | -0.441 | 76.096 | -8681.500 | 1.134 | 0.089 | 0.292 | 0.836 | 12736.009 | -111.915 |
| SIZE | 13324.000 | 19.581 | 3.612 | 5.914 | 28.645 | 16.967 | 19.274 | 22.237 | 2.653 | 0.151 |
| LEV | 13287.000 | 0.299 | 10.592 | 0.000 | 1189.273 | 0.000 | 0.044 | 0.202 | 11961.065 | 107.109 |
| DER | 12427.000 | 7.572 | 115.119 | -6534.000 | 6317.000 | 0.156 | 1.953 | 9.660 | 2849.159 | 22.652 |
| Board Gender Diversity | 24220.000 | 0.056 | 0.229 | 0.000 | 1.000 | 0.000 | 0.000 | 0.000 | 16.013 | 3.875 |

***Notes***: The following symbols—N, mean, standard deviation, min, max, p25, median, p75, kurtosis, and skewness—indicate the number of observations, mean, standard deviation, minimum, maximum, 25th percentile, median (50th percentile), 75th percentile, kurtosis, and skewness.

***Table 3:*** Pairwise correlation analysis

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Variables | (1) | (2) | (3) | (4) | (5) | (6) |
| (1) Return on Assets | 1.000 |  |  |  |  |  |
|  |  |  |  |  |  |  |
| (2) CAP | 0.703\* | 1.000 |  |  |  |  |
|  | (0.000) |  |  |  |  |  |
| (3) SIZE | 0.059\* | 0.032\* | 1.000 |  |  |  |
|  | (0.000) | (0.000) |  |  |  |  |
| (4) LEV | -0.746\* | -0.146\* | -0.038\* | 1.000 |  |  |
|  | (0.000) | (0.000) | (0.000) |  |  |  |
| (5) DER | 0.001 | 0.001 | 0.054\* | -0.001 | 1.000 |  |
|  | (0.893) | (0.951) | (0.000) | (0.941) |  |  |
| (6) Board Gender Diversity | 0.007 | 0.003 | 0.465\* | -0.003 | 0.023\* | 1.000 |
|  | (0.438) | (0.764) | (0.000) | (0.704) | (0.009) |  |
| *\*\*\* p<0.01, \*\* p<0.05, \* p<0.1* | | | | | | |

***Notes***: Pairwise correlation analysis was performed to examine the relationships between variables that helped interpret the results of the regression analysis. The P-value ranges indicate the levels of statistical significance.

Table 3 presents the pairwise correlation of each financial indicator, and here, every pairwise coefficient is less than 0.8, indicating no multicollinearity exists; therefore, the possibility of a robust regression result has increased. ROA is highly and positively correlated with the capital ratio (CAP), implying that such a relationship is significant at 0.1%. ROA is also weakly positively correlated with the size of a firm (SIZE), which means that larger firms have an equal opportunity to improve on ROA, but it may not be significant. Additionally, ROA is strongly negatively correlated with leverage ratio (LEV). The correlation between the debt-to-equity ratio (DER) and ROA is almost zero at 0.001, hence not significant, as observed from the high p-value of 0.893. Moreover, board gender diversity was the control variable, providing a weak and insignificant positive correlation.

**Hausman test:** This study also conducted a Hausman test to predict which one best fitted between the fixed-effect and random-effect models. The resultant **Chi-square (26) is 180.88 with the prob > Chi2 being 0.0000**, indicating that the difference between coefficients is statistically significant. This result suggests that a fixed-effects model fits this study better; thus, the fixed-effect model was adopted when performing panel data regression.

**Panel Data Autocorrelation**: Testing for autocorrelation is essential for improving accuracy and reliable predictions. Therefore, the test of Wooldridge was applied to see the existence of first-order autocorrelation in panel data. The null hypothesis is that there is no first-order autocorrelation. This is confirmed through F (1, 805) = 8.063 and Prob > F = 0.0046. Because this p-value is less than the standard significance, 0.05, the null hypothesis is rejected.

**Fixed Effects with Robust SE and Clustered SE:** After detecting the presence of autocorrelation, the use of clustered standard errors has provided a better context of the model's performance and actual significance of the variables. Clustered standard errors address heteroskedasticity and autocorrelation within clusters by clustering the standard errors at some predefined level. The robust standard errors, on the other hand, account for heteroskedasticity but ignore autocorrelation within clusters.

Coefficients between the two methods and clustered standard errors are the same, which means the estimated relationships are stable. In this model, most of the indicators' results are significant.

In the case of the CAP, both the fixed effects with robust SE and those with clustered SE have the same coefficient of 0.219 with a standard error of 0.001. Additionally, this implies that for every unit increase in CAP, the dependent variable increases by 0.219, which at such a standard error of 0.001 is significant at 1%. In both models, the SIZE estimated coefficient is 1.117 with a standard error of 0.560; therefore, it implies that with one unit increase of the SIZE variable, the dependent variable increases by 1.117 units significantly at a 5% level. Another variable, LEV, has an estimated coefficient of -1.763 and a standard error of 0.023 in both models. For every 1-unit increase in the LEV, the dependent variable decreases by -1.763, which is significant at 1%. For the DER and Board Gender Diversity, the results are constant in both models but have no significant impact.

|  |
| --- |
| ***Table – 4*: Estimations with Panel Data** |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | (1) | (2) | (3) | (4) |
| VARIABLES | FIXED EFFECTS | FIXED EFFECTS | FIXED EFFECTS | FIXED EFFECTS |
|  |  |  |  |  |
| CAP | 0.243\*\*\* | 0.242\*\*\* | 0.219\*\*\* | 0.219\*\*\* |
|  | (0.002) | (0.002) | (0.001) | (0.001) |
| SIZE |  | 1.903\*\*\* | 0.691 | 1.117\*\* |
|  |  | (0.709) | (0.507) | (0.560) |
| LEV |  |  | -1.712\*\*\* | -1.763\*\*\* |
|  |  |  | (0.079) | (0.023) |
| DER |  |  |  | -0.000 |
|  |  |  |  | (0.000) |
| Board Gender Diversity | -0.334 | -0.815 | -0.523 | -0.534 |
|  | (0.375) | (0.517) | (0.320) | (0.337) |
| Constant | -0.206 | -36.110\*\*\* | -13.049 | -21.134\*\* |
|  | (0.165) | (13.297) | (9.565) | (10.569) |
|  |  |  |  |  |
| Observations | 13,297 | 13,297 | 13,261 | 12,378 |
| R-squared | 0.470 | 0.474 | 0.919 | 0.934 |
| Number of ID | 849 | 849 | 849 | 849 |
| Robust SE | YES | YES | YES | YES |
| Year Dummy | YES | YES | YES | YES |

Robust standard errors in parentheses

\*\*\* p<0.01, \*\* p<0.05, \* p<0.1

***Notes***: The table displays the results of panel data regressions with fixed effects for four model specifications (1 through 4). These models are designed to estimate the impact of various independent variables on the dependent variable, **Return on Assets (ROA)**.

Before conducting this panel data fixed model regression, this research conducted another regression capable of establishing a 95% confidence interval. The fixed effect models examined data from 12,378 to 13,297 observations. A positive and highly significant Capital coefficient at p < 0.01 implied that an increase in CAP would significantly appreciate ROA. In model 2, the SIZE coefficient is 1.903 and statistically significant (p < 0.01), indicating with its positive sign that this was positively affecting ROA. However, this decreased in model 3 to 0.691 (not statistically significant) but increased again in model 4 to 1.117 (p < 0.05). Correspondingly, leverage had negative and statistically significant coefficients in models 3 and 4: -1.712 and -1.763, p < 0.01. Thus, the higher the use of leverage, the lesser the ROA. The Debt-to-Equity Ratio coefficient was -0.000 in model 4, which is not significant and has a minimal effect on ROA. Control variable Board Gender Diversity presented negative coefficients in all models but is not statistically significant; hence, it has no significant effect on ROA. The constant varied; model 2 has a significant constant of -36.110, p < 0.01. While this is an increase from 0.470 in Model 1 to 0.934 in Model 4, this indicated that the extra predictors could add more explanatory power, especially in Model 4, which explained 93.4% of the variance in ROA. This model is further supported by the statistical robustness of the coefficients, which uses robust standard errors and year dummies to increase the reliability and precision of the estimates in the analysis of the main variables.

A high R-squared value indicates that the model explains a significant portion of the variance in the dependent variable, suggesting explanatory solid power, particularly in Model 4, where the R-squared is notably high. The consistently statistically significant coefficients reflect the model's substantial stability and robustness. The use of robust standard errors further enhances the estimates' reliability. Additionally, including year dummies ensures that the outcomes are not biased by time-varying external factors, enhancing the precision and reliability of the analysis of key variables such as CAP, SIZE, and LEV.

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**5. Discussion and Conclusions**

The study's findings significantly indicate that these capital structure financial metrics' CAP, SIZE, and LEV influence financial performance. This study observed a highly significant positive impact of the CAP on ROA. The size of firms has also had a significant positive impact on firms, while LEV has a significant negative relationship; this result has also been confirmed in another research study. (Mansour et al., 2024). Study by Anugrahwati (2018) found that a low debt-to-equity ratio correlates with a high level of funding. In contrast, this research found no significant impact of DER on financial performance. In this study, the Board Gender Diversity (BGD) exhibits a negative correlation as a control variable.

 Despite including board gender diversity as a control variable in the paper, the statistically insignificant adverse effects on profitability indicate that gender diversity does not significantly impact profitability in this data set. However, it does not apply to all other contexts or industries. Further research should be done on what would moderate the relationship between board diversity and financial performance.

Although the study had some limitations, it highlights the significance of regulatory frameworks and economic conditions that shape financial strategies for different economies, with valuable implications for European markets. The paper then concludes by emphasizing the main findings and implications for companies and policymakers and strengthening the importance of this study. This research paper will add to the existing investigation of the relationship between capital structure and financial performance. The study provides detailed information on how the capital ratio, firm size, and leverage ratio, as critical financial indicators, affect profitability. It has addressed the gap in the literature by providing an all-encompassing analysis across multiple models.

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**References**

A, A., O, W., & OL, Q. (2018). Capital structure and financial performance of listed manufacturing firms in Nigeria. *Journal of Research in International Business and Management*, 05(01), 1- 15. Retrieved from https://doi.org/10.14303/jribm.2018.018

Abubakar, A., Sulaiman, I., & Haruna, U. (2018). *Effect of Firms Characteristics on Financial Performance of Listed Insurance Companies in Nigeria*. *African Journal of History and Archaeology*, *3*(1), 45-59. Retrieved from www.iiardpub.org

Afolabi, A., Olabisi, J., Kajola, S. O., & Asaolu, T. O. (2019). Does leverage affect the financial performance of Nigerian firms? *Journal of Economics and Management*, 37, 5–22. Retrieved from https://doi.org/10.22367/jem.2019.37.01

Amimakmur, S. A., Saifi, M., Damayanti, C. R., & Hutahayan, B. (2024). Assessing the moderating effect of IT innovation on the interplay among company size, financial performance, and company value. *Journal of Open Innovation: Technology, Market, and Complexity*, *10*(3), 100318. Retrieved from https://doi.org/10.1016/j.joitmc.2024.100318

Anugrahwati, M., Suharto, & Sodikin, A. (2018). The effect of employee wages and discipline in improving organizational performance through motivation variables in PT. Geo Services. *International Journal of Business and Management Invention*, 7(12). Retrieved from [www.ijbmi.org](http://www.ijbmi.org)

Arhinful, R., Mensah, L., & Seth Owusu-Sarfo, J. (2023). The Impact of Capital Structure on the Financial Performance of Financial Institutions in Ghana. *International Journal of Finance and Banking Research , 9(2), 101-117*. Retrieved from https://doi.org/10.11648/j.ijfbr.20230902.11

Azaria, D., Murhadi, W. R., & Silvia, B. (2021). Board diversity and financial performance in Indonesia. *Journal of Entrepreneurship and Business*, 2(2), 86-95. <https://doi.org/10.24123/jeb.v2i2.4537>

Azim, M. R., & Nahar, S. (2021). Effect of Bank Specific Factors on Financial Performance of Commercial Banks in Bangladesh. *Saudi J Econ Fin*, 5(9), 376–385. Retrieved from https://doi.org/10.36348/sjef.2021.v05i09.004

Cantero-Saiz, M., Polizzi, S., & Scannella, E. (2024). ESG and asset quality in the banking industry: The moderating role of financial performance. *Research in International Business and Finance*, *69*, 102221. Retrieved from https://doi.org/10.1016/j.ribaf.2024.102221

Dey, R. K., Hossain, S. Z., & Rahman, R. A. (2018). Effect of Corporate Financial Leverage on Financial Performance: A Study on Publicly Traded Manufacturing Companies in Bangladesh. *Asian Social Science*, 14(12), 124. Retrieved from https://doi.org/10.5539/ass.v14n12p124

García, C. J., & Herrero, B. (2021). Female directors, capital structure, and financial distress. *Journal of Business Research*, 136, 592–601. Retrieved from https://doi.org/10.1016/j.jbusres.2021.07.061

Govindan, K., Karaman, A. S., Uyar, A., & Kilic, M. (2023a). Board structure and financial performance in the logistics sector: Do contingencies matter? *Transportation Research Part E: Logistics and Transportation Review*, 176. Retrieved from https://doi.org/10.1016/j.tre.2023.103187

Harrison, B., & Widjaja, T. W. (2020). The determinants of capital structure: Comparison between before and after the financial crisis. *Federal Reserve Bank*. Retrieved from <https://www.federalreserve.gov>

Iqbal, A., & Kume, O. (2018). Impact of financial crisis on firms’ capital structure in the UK, France, and Germany. *International Journal of Financial Studies*, 6(3), 30. https://doi.org/10.3390/ijfs6030030

Irawati, N., Maksum, A., Sadalia, I., & Muda, I. (2019). Financial performance of Indonesia’s banking industry: The role of good corporate governance, capital adequacy ratio, non-performing loans, and size. *International Journal of Scientific & Technology Research*, 8(10), 1334-1340. Retrieved from [www.ijstr.org](http://www.ijstr.org)

Jaishi, B. (2020). Capital Structure and its Impact on Financial Performance in Insurance Companies of Nepal. *Journal of Nepalese Business Studies*, 13(1), 89–106. Retrieved from https://doi.org/10.3126/jnbs.v13i1.34708

Mansour, M., Al Zobi, M., Abu alim, S., Saleh, M. W. A., Marashdeh, Z., Marei, A., … Lutfi, A. (2024a). Eco-innovation and financial performance nexus: Does company size matter? *Journal of Open Innovation: Technology, Market, and Complexity*, 10(1). Retrieved from https://doi.org/10.1016/j.joitmc.2024.100244

Mardawiyah, W., Riasky, D., Dewanti, W., & Farras, R. (2020). Financial ratio analysis of PT Unilever Indonesia Tbk to measure financial performance. *International Journal of Business, Economics and Law*, 23(1), 1-10. DOI: 10.19034/ijbel.v23i1.5018.

Rabiu, S. (2017). The Impact Of Bank Specific Variables On The Financial Performance Of Nigerian Deposit Money Banks. *International Journal of Innovative Research and Advanced Studies (IJIRAS)*, 4. Retrieved from www.ijiras.com

Recine, F., & Teixeira, P. G. (2011). The new financial stability architecture in the EU. *SSRN Electronic Journal*, 1(1). <https://doi.org/10.2139/ssrn.1509304>

Shamki, D., Alulis, I. K., & Sayari, K. (2016). Financial Information Influencing Commercial Banks Profitability. *International Journal of Economics and Finance*, 8(6), 166. Retrieved from https://doi.org/10.5539/ijef.v8n6p166

Utami, S. W. (2023). The Effect of Financial Performance and Capital Structure on Company Value With Company Size as a Moderation Variable. *Asian Journal of Economics, Business and Accounting*, 23(24), 112–123. Retrieved from https://doi.org/10.9734/ajeba/2023/v23i241191

Wang, K., Ma, J., Xue, C., & Zhang, J. (2024). Board Gender Diversity and Firm Performance: Recent Evidence from Japan. *Journal of Risk and Financial Management*, 17(1). Retrieved from https://doi.org/10.3390/jrfm17010020

Yahaya, O. A., Gambo, J. S., Abubakar, A. A., Adabenege Yahaya, O., & Gambo Joshua, S. (2023). Board Characteristics and Financial Performance. *Asia-Pacific Journal of Financial Studies*, 52, 7–19. Retrieved from https://doi.org/10.1111/ajfs.1232x

Zaheer, R., & Jamil, H. (2016a). *Culture and Religion www.iiste.org ISSN 2422-8443 An International Peer-reviewed*. *Journal of Philosophy* (Vol. 16). Retrieved from www.iiste.org