Debt, Equity, and Financial Performance: Evidence from the Dow Jones Industrial Average

Abstract

This study examines the influence of capital structure on firm performance in the United States of America during the post-Global Financial Crisis period (2009-2020), using data from the Dow Jones Industrial Average (DJIA). Employing a rigorous quantitative framework, the analysis applies standardized multiple regression techniques to evaluate the impact of leverage, proxied by the total debt-to-total equity (TDTE) ratio, on Earnings per Share (EPS) and Return on Equity (ROE). The model also incorporates a set of key control variables. The empirical findings reveal that leverage does not exert a statistically significant effect on either EPS or ROE, suggesting a diminished role of debt in influencing performance during the post-crisis period. The study contributes to the literature by highlighting the predominance of structural and macroeconomic factors over capital structure decisions in shaping firm performance.

Keywords:

Advanced Economy; Capital Structure; Financial Performance; Regression; United States of America

1. Introduction

Capital structure choices form the foundation of corporate financial policy. Executives devote significant attention to determining strategies for capital sources, both external and internal, as each option carries unique advantages and drawbacks. Debt financing, for instance, allows firms to retain ownership and generally provides a lower cost of capital. Yet, an overdependence on debt heightens the likelihood of financial distress and potential insolvency (Chandra, 2011). Equity financing reduces solvency risk but requires the firm to relinquish a portion of ownership and managerial control (Chandra, 2011). Internal financing through retained earnings offers an alternative that avoids both insolvency risk and dilution of control, though its availability is constrained by the company's profitability. Achieving an appropriate balance among these sources, which is commonly referred to as the "optimal capital structure", is critical for financial managers aiming to maximize firm value while safeguarding flexibility in financial decision-making.

Financial managers, often regarded as the "strategic custodians" of corporate resources, bear the responsibility of formulating financing strategies that sustain day-to-day operations, ensure long-term organizational resilience, and advance shareholder wealth. It is crucial to note that the durability of a firm's growth and survival prospects is closely tied to the strength of its capital structure planning. To achieve consistent and sustainable financial performance, companies must remain adaptable to dynamic macroeconomic prospects while securing adequate long-term funding. These financing choices influence not only the cost of capital and the firm's exposure to financial risk but also exert lasting effects on profitability, market valuation, the ability to protect the competitive edge, and competitive standing within the industry. Foundational theories in corporate finance, such as Modigliani and Miller's propositions (1958, 1963), the Trade-off Theory, the Pecking Order Theory given by Myers and Majluf (1984), and the Agency Cost Theory propounded famously by Jensen and Meckling (1976), offer varied conceptual frameworks for understanding capital structure decisions. However, empirical evidence frequently demonstrates that these theoretical models must be interpreted and applied with sensitivity to contextual factors, including institutional settings, regulatory environments, and broader macroeconomic conditions.

2. Literature Review

The relationship between capital structure and firm performance has been one of the most enduring debates in corporate finance. Since the seminal works of Modigliani and Miller (1958,

1963), scholars have sought to understand how leverage decisions influence shareholder value. Between 2009 and 2020, research in the United States and other G7 economies revisited this question in the context of post-crisis recovery, prolonged low interest rates, and evolving corporate governance structures. This literature review synthesizes empirical findings from studies conducted during this period, focusing on the impact of debt-to-equity ratios on Earnings Per Share (EPS) and Return on Equity (ROE).

The aftermath of the 2008 Global Financial Crisis provided fertile ground for examining capital structure decisions. Frank and Goyal (2009) highlighted that U.S. firms adjusted leverage cautiously, preferring equity issuance to mitigate risk exposure. Their findings suggested that while moderate debt improved EPS through tax shields, excessive leverage reduced ROE due to heightened financial distress costs. Similarly, Graham and Leary (2001) emphasized the role of firm size and profitability, noting that large U.S. corporations were better able to sustain EPS growth despite leverage, whereas smaller firms experienced declining ROE under high debt burdens. Lemmon and Zender (2010) demonstrated that capital structure choices in U.S. firms were remarkably persistent, with debt ratios strongly correlated with long-term performance outcomes. They found that firms with stable leverage maintained consistent EPS, but ROE was more volatile, reflecting sensitivity to interest obligations. In a sectoral analysis, Dang (2013) observed that technology firms in the U.S. leveraged equity financing to preserve EPS growth, while industrial firms relied more on debt, which negatively affected ROE during downturns.

Beyond the U.S., research in other G7 nations revealed institutional variations in the leverage-performance nexus. Antonious et al. (2008) provide cross-country evidence on capital structure, showing that firms in bank-based financial systems such as Germany and Japan rely more heavily on debt financing, whereas firms in market-based systems like the UK and the US exhibit different financing patterns. The study highlights that institutional and financial system differences play a crucial role in shaping leverage decisions across countries. Kayo and Kimura (2011) further argued that institutional environments shaped capital structure outcomes, with firms in Canada and France displaying more balanced debt–equity mixes that stabilized EPS but limited ROE gains. A study by Alti (2010) on equity market timing in G7 economies found that firms issuing equity during favorable market conditions achieved higher EPS growth, but ROE gains were short-lived, as dilution effects offset leverage benefits. Similarly, Jong et al. (2012) examined multinational firms across G7 countries and concluded

that debt financing was negatively associated with ROE, particularly in periods of macroeconomic uncertainty, while EPS remained relatively insulated due to scale advantages.

Several studies explored sectoral differences as well. Rajan and Zingales (1995) provide cross-country evidence from G7 nations, showing that firm-level characteristics such as size, asset tangibility, and profitability play a crucial role in determining capital structure. Their findings suggest that leverage patterns are broadly consistent across countries, although variations may arise due to industry characteristics and institutional differences. Chen and Strange (2005) analysed a sample of 739 UK firms over the period 2006-2015 to examine the effect of leverage on firm performance. While the study employs multiple performance indicators, including return on assets (ROA), Tobin's Q, EPS, and ROE. The findings indicate that the impact of capital structure on EPS and ROE is significant, though the nature and strength of this relationship vary across model specifications. Overall, the results suggest that leverage influences shareholder-oriented performance measures in a nuanced manner, with firm size also emerging as an important control variable in explaining these outcomes.

Hasriani et al. (2025) investigated the direct impact of leverage on shareholder-oriented performance measures. Using firm-level data from the banking sector, the analysis specifically focuses on earnings per share (EPS) and return on equity (ROE) as key indicators of financial performance. The findings indicate that financial leverage plays a significant role in influencing both EPS and ROE, highlighting the sensitivity of profitability measures to financing decisions. The study reinforces the view that leverage not only affects firm risk but also directly shapes returns available to shareholders.

Collectively, the post-2009 literature in the U.S. context points to a nuanced and non-linear relationship between debt–equity ratios and firm performance. While moderate leverage can enhance EPS through tax shields and efficient capital utilisation, ROE appears more sensitive to increases in debt and is often negatively affected under high leverage conditions. The evidence consistently suggests that EPS tends to remain relatively stable across varying leverage levels, whereas ROE is more volatile and responsive to changes in financial structure. These findings reinforce the importance of balanced capital structure decisions, particularly in a post-crisis environment characterised by heightened risk awareness and evolving financial strategies.

3. Research Methodology

3.1.Sample Details

This study is based on studying the impact of capital structure on financial performance at an economy-level, for the United States of America (USA), between the years 2009 and 2020, using the secondary, stock index financial data of the Dow Jones Industrial Average (DJIA) index, representative of the American economy.

The USA continues to hold its position as the world's largest economy, with a nominal GDP estimated at approximately USD 30.51 trillion in 2025 (IMF, 2025). Despite its enduring dominance, recent indicators point to heightened volatility, market uncertainty, and subdued growth prospects. These developments occur against a backdrop of evolving trade dynamics, geopolitical realignments, and diminishing global confidence in the U.S. dollar as the premier reserve currency. While the country remains a leader in technological innovation, particularly in artificial intelligence, structural and policy-related vulnerabilities have tempered economic momentum in early 2025.

The Dow Jones Industrial Average (DJIA), established in 1896, is one of the oldest and most widely recognized stock market indices in the United States (S&P Global, 2025). Initially comprising 12 firms, it now includes 30 prominent corporations across diverse sectors. It is a price-weighted index and is designed to reflect the overall performance of the U.S. economy. Financial data from the DJIA has been selected as the U.S. sample, ensuring that the analysis captures large-cap companies indicative of broader economic trends.

3.2. Data Collection and Research Method

To study the impact of capital structure on financial performance, the data analysis is bifurcated into two separate specifications and incorporates the following variables:

a) Capital Structure variable: Total Debt to Total Equity (TDTE)

The TDTE is a key financial leverage indicator that measures the relative proportion of a firm's total debt to its shareholders' equity. It reflects the extent to which a company finances its operations through external borrowings as opposed to internally generated funds. The ratio is calculated by dividing total debt by total equity and serves as an important metric for assessing a firm's capital structure and financial risk. A higher D/E ratio indicates greater reliance on debt financing, which may enhance returns but also increases the firm's exposure to financial

distress, whereas a lower ratio suggests a more conservative financing approach with lower risk.

b) Financial Performance variables

i. Earnings per Share (EPS)

It is a widely used profitability indicator that measures the portion of a company's net earnings attributable to each outstanding equity share. It reflects the firm's ability to generate returns for its shareholders on a per-share basis and is often considered a key determinant of shareholder value. EPS is calculated by dividing net income available to equity shareholders by the total number of outstanding shares.

ii. Return on Equity (ROE)

It is a fundamental financial performance measure that evaluates a firm's ability to generate profits from shareholders' equity. It indicates how effectively management utilizes the invested capital of equity holders to produce net income. ROE is computed as the ratio of net income to total shareholders' equity and serves as a critical indicator of managerial efficiency and overall profitability. A higher ROE suggests efficient utilization of equity and superior financial performance, while a lower ROE reflects suboptimal use of shareholders' funds. In capital structure research, ROE is particularly significant as it captures the impact of financial leverage on shareholder returns.

3.3. Data Collection and Research Method

The data for this study are drawn from the Bloomberg database, ensuring reliability and comparability across contexts. Data analysis was conducted using IBM's SPSS software, and to ensure comparability and avoid scale biases, all the variables were standardized into Z-scores. Standardized multiple linear regression was applied to quantify the relationship between capital structure variables and financial performance, while controlling for macroeconomic conditions. Two regression model specifications have been incorporated in the study:

a) EPS specification: To study the impact of Total Debt to Total Equity (TDTE) on Earnings per Share (EPS)
b) ROE specification: To study the impact of Total Debt to Total Equity (TDTE) on Return on Equity (ROE)

3.4. Hypotheses of the Study

This research work, therefore, aims to test the following hypotheses:

- H_0:There is no significant impact of capital structure (measured by Total Debt to Total Equity, TDTE) on financial performance (gauged by Earnings per Share, EPS) when the statutory tax rate, firm size, inflation, and GDP growth rate are controlled.
- H_0: There is no significant impact of capital structure (measured by Total Debt to Total Equity, TDTE) on financial performance (gauged by Return on Equity, ROE) when the statutory tax rate, firm size, inflation, and GDP growth rate are controlled.

3.5. Data Analysis Techniques

A series of diagnostic and analytical procedures was undertaken to ensure the robustness of the regression modelling and the reliability of the results. Multicollinearity was examined using the Variance Inflation Factor (VIF) and the Condition Index (CI), with supplementary measures such as Tolerance and SPSS-generated outputs enhancing interpretive accuracy. Autocorrelation was tested through the Durbin-Watson (DW) statistic, where values approaching 2.0 indicated independence of residuals, while heteroscedasticity was assessed using residual statistics to detect unequal variance across observations. The overall significance of the regression models was evaluated through the Analysis of Variance (ANOVA) framework. Further insights into the strength, direction, and statistical significance of relationships between dependent and independent variables were derived from the coefficients table, interpreted through coefficient magnitudes, signs, and associated p-values.

4. Data Analysis and Interpretation

As highlighted in Section 3, the study has adopted two important regression specifications to study the impact of capital structure on financial performance, using financial data of the DJIA index.

a) <u>Impact of TDTE on EPS</u>

$$Z\_EPS_{it}=\beta_0+\beta_1(Z\_TDTE_{it})+\beta_2(Z\_Inflation_{it})+\beta_3(Z\_TaxRate_{it})+\beta_4(Z\_FirmSize_{it})+\beta_5(Z\_GDPGrowth_{it})+\beta_6(Z\_CAB_{it})+\varepsilon_{it}$$

where,

- Z_EPS_{it}**:** Standardized Earnings per Share at time 't' ranging from 1 to 12.
- β_0: Intercept term

- Z_TDTE_{it}: Standardized Total Debt to Total Equity Ratio at time 't' ranging from 1 to 12.
- $Z\_Inflation_{it}$: Standardized Inflation Rate at time 't' ranging from 1 to 12.
- $Z\_TaxRate_{it}$: Standardized Tax Rate for firm 'i' at time 't' at time 't', ranging from 1 to 12.
- $Z\_FirmSize_{it}$: Standardized Firm Size for firm 'i' at time 't' at time 't', ranging from 1 to 12.
- $Z\_GDPGrowth_{it}$**:** Standardized GDP Growth Rate
- Z_CAB_{it}: Standardized Current Account Balance (percentage of GDP)

table 1- Model summary for the regression with EPS

Model Summary					
Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	.988[a]	.886	.841	.1124940	2.622
a. Predictors: (Constant), Statutory Tax Rate, CAB (Percent of GDP), Inflation Rate, GDP Growth Rate, Firm Size, TDTE					
b. Dependent Variable: EPS					

The model summary for the regression with EPS as the dependent variable indicates a strong model fit and a near-perfect positive correlation between the predicted and actual EPS values, with an R-value of 0.988. The reasonably high adjusted R^2 value confirms that the model remains robust and that a significant proportion of the variation in the model is explained by the variables. The Durbin-Watson (DW) of 2.622, being slightly higher than 2.0, shows a sign of negative autocorrelation.

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.594	6	.432	34.158	.001[b]
	Residual	.063	5	.013		
	Total	2.657	11			
a. Dependent Variable: EPS						
b. Predictors: (Constant), Statutory Tax Rate, CAB (Percent of GDP), Inflation Rate, GDP Growth Rate, Firm Size, TDTE						

table 2- ANOVA table for the regression model with EPS

The ANOVA table for the regression model with EPS as the dependent variable demonstrates that the model is highly statistically significant. The F-statistic is 34.158**,** with a p-value of 0.001, which is significantly lower than the conventional threshold of 5% significance level. This indicates that the combination of predictors significantly improves the model's ability to

explain variations in EPS compared to a model with no predictors. The regression sum of squares (2.594) accounts for the vast majority of the total variation (2.657) in EPS, further confirming that the independent variables collectively offer strong explanatory power. The residual sum of squares is minimal (0.063), implying a low level of unexplained variance. Overall, the ANOVA results validate the statistical robustness and reliability of the model in predicting EPS.

Coefficients								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	7.243E-6	.032		.000	1.000		
	TDTE	-.043	.141	-.050	-.307	.771	.179	5.587
	Firm Size	.298	.104	.447	2.871	.035	.197	5.079
	Inflation Rate	-.051	.046	-.103	-1.108	.318	.551	1.815
	GDP Growth Rate	.091	.052	.185	1.759	.139	.432	2.314
	CAB (Percent of GDP)	.088	.050	.180	1.751	.140	.453	2.208
	Statutory Tax Rate	-.299	.060	-.609	-5.002	.004	.321	3.112
a. Dependent Variable: EPS								

table 3-Regression Coefficients and Collinearity Statistics for Predictors of EPS

Among the predictors, firm size and statutory tax rate are statistically significant. Firm size shows a positive and statistically significant effect on EPS ($\beta = 0.447$, $p = 0.035$), indicating that larger firms tend to report higher earnings per share. In contrast, the statutory tax rate has a strong negative and significant impact on EPS ($\beta = -0.609$, $p = 0.004$), suggesting that higher tax rates are associated with lower EPS. Other variables are not statistically significant at the 5% level, as their p-values exceed 0.05. The VIF values for TDTE and Firm size suggest moderate multicollinearity. However, tolerance values are all above 0.1, indicating that collinearity is not severe enough to invalidate the model. From the statistical results, it may be concluded that there is indeed no significant impact of TDTE on the EPS, and thus the null hypothesis is not rejected.

b) Impact of TDTE on ROE

The second regression specification is as follows:

$Z\_ROE_{it}=\beta_0+\beta_1(TDTE_{it})+\beta_2(Inflation_{it})+\beta_3(TaxRate_{it})+\beta_4(FirmSize_{it})+\beta_5(GDPGrowth_{it})+\beta_6(CAB_{it})+\varepsilon_{it}$

where,

- Z_ROE_{it}**:** Standardized Return on Equity at time 't' ranging from 1 to 12.
- β_0: Intercept term
- Z_TDTE_{it}: Standardized Total Debt to Total Equity Ratio at time 't' ranging from 1 to 12.
- $Z\_Inflation_{it}$: Standardized Inflation Rate at time 't' ranging from 1 to 12.
- $Z\_TaxRate_{it}$: Standardized Tax Rate for firm 'i' at time 't' at time 't', ranging from 1 to 12.
- $Z\_FirmSize_{it}$: Standardized Firm Size for firm 'i' at time 't' at time 't', ranging from 1 to 12.
- $Z\_GDPGrowth_{it}$**:** Standardized GDP Growth Rate
- Z_CAB_{it}: Standardized Current Account Balance (percentage of GDP)

Model Summary					
Model	R	R Square	Adjusted R-Square	Std. Error of the Estimate	Durbin-Watson
1	.979[a]	.858	.809	.1076798	2.485
a. Predictors: (Constant), Statutory Tax Rate, CAB (Percent of GDP), Inflation Rate, GDP Growth Rate, Firm Size, TDTE					
b. Dependent Variable: ROE					

table 4- Model summary for the regression with ROE

The model summary for the ROE-regression specification reveals strong explanatory power and indicates a very high correlation between the observed and predicted values of ROE of 0.979. With an adjusted R^2 value of 0.809, the model signifies its robustness. Also, the DW statistic of 2.485, which is slightly above the ideal value of 2, indicates some degree of negative autocorrelation in the residuals. It indicates that a high value of the variable is most likely to be followed by a low value, thereby suggesting an alternating pattern. Overall, the model appears statistically strong and suitable for explaining variations in ROE.

table 5- ANOVA table for the regression model with ROE

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.337	6	.223	19.216	.003[b]
	Residual	.058	5	.012		
	Total	1.395	11			
a. Dependent Variable: ROE						

b. Predictors: (Constant), Statutory Tax Rate, CAB (Percent of GDP), Inflation Rate, GDP Growth Rate, Firm Size, TDTE

The ANOVA table shows that the overall model is statistically significant at the 5% level. The F-statistic and the p-value (19.216 and 0.003, respectively) indicate that the selected set of independent variables collectively contributes to explaining a significant portion of the variation in ROE. The regression sum of squares (1.337) is substantially higher than the residual sum of squares (0.058), suggesting that the model accounts for most of the variability in ROE. Overall, the ANOVA results confirm that the regression model fits the data well and provides statistically meaningful insights into the factors influencing ROE.

Coefficients								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	-.001	.031		-.022	.983		
	TDTE	.174	.135	.276	1.283	.256	.179	5.587
	Firm Size	-.064	.099	-.133	-.649	.545	.197	5.079
	Inflation Rate	-.083	.044	-.233	-1.893	.117	.551	1.815
	GDP Growth Rate	.099	.049	.277	1.997	.102	.432	2.314
	CAB (Percent Of GDP)	-.035	.048	-.099	-.731	.498	.453	2.208
	Statutory Tax Rate	-.328	.057	-.920	-5.719	.002	.321	3.112
a. Dependent Variable: ROE								

table 6-

Regression Coefficients and Collinearity Statistics for Predictors of ROE

The coefficients table for the regression model shows that among the independent variables, statutory tax rate emerges as the only statistically significant predictor at the 5% level. This indicates a strong and significant negative relationship between statutory tax rate and ROE, as tax rates increase, ROE tends to decrease, holding all other variables constant. Other variables are not statistically significant at the 5% level. This implies that while these variables may have some directional influence on ROE, their effects are not strong enough to reach conventional significance thresholds in this sample. It can thus be concluded that TDTE has no significant impact on ROE, leading us to not reject the null hypothesis.

In terms of multicollinearity diagnostics, the VIF values for all variables are below 10, and tolerances well above 0.1, suggesting no multicollinearity concerns in the model. Overall, the

model highlights the statutory tax rate as the dominant predictor of ROE, while other factors contribute less substantially in a statistical sense.

5. Findings and Discussion

The analysis indicates that firm size was a significant determinant of financial performance, particularly in relation to EPS. The positive and statistically significant coefficient of firm size with EPS suggests that larger U.S. multinational corporations such as Apple, Microsoft, and Amazon consolidated their dominance during the study period. These firms have most likely benefited from digital transformation, extensive global supply chains, and effective management of customer concentration risks, enabling them to consistently generate strong EPS. This outcome underscores the role of scale and technological innovation in sustaining shareholder value.

On the other hand, the relationship between the leverage measure and ROE was weak and statistically not significant. Despite the prolonged period of low interest rates following the Global Financial Crisis, leverage does not emerge as a critical driver of equity returns, as evident from the statistical results. Extant literature highlights a cautious approach reflecting the corporate climate of the immediate post-crisis recovery years (i.e., post 2009), where financial flexibility and resilience were prioritized over aggressive debt-financed growth. Additionally, empirical studies of U.S. and European firms from extant literature during the same period similarly found that high leverage was negatively associated with ROE, reinforcing the observation that conservative financing strategies were more effective in preserving shareholder value (Harper & Thomas, 2009).

Taken together, these findings suggest that in the pre-COVID era, EPS was largely driven by firm size and technological progress, while ROE remained relatively unaffected by debt levels due to conservative financing strategies. The evidence highlights the nuanced ways in which capital structure decisions intersect with performance metrics, reinforcing the importance of contextual factors such as firm scale, innovation, and post-crisis risk management in shaping financial outcomes.

6. Conclusion

The findings from the U.S., post-GFC 2008 and the pre-COVID era (2009-2020) demonstrate that capital structure decisions had only a limited direct impact on equity-based performance

measures such as ROE and EPS. Firms, cautious in the aftermath of the GFC, avoided heavy reliance on long-term debt and instead favored short-term financing or equity issuance, thereby insulating ROE from leverage effects. In contrast, EPS was strongly influenced by firm size, with large multinational corporations consolidating their dominance through technological innovation, global integration, and effective risk management. These results underscore that in advanced economies, like the USA, shareholder value creation during this period was driven less by leverage and more by structural advantages and fiscal policy shifts. The evidence highlights the need to interpret capital structure theories within the broader institutional and macroeconomic context, where firm-specific characteristics and policy frameworks often outweigh the direct role of debt ratios in shaping financial outcomes.

7. Implications for Future Research

A key limitation of this study lies in its temporal and geographical scope, as the analysis is confined to the pre-COVID era and focuses on the United States. While this provides valuable insights into capital structure and financial performance under relatively stable macroeconomic conditions, it does not account for the structural disruptions induced by the pandemic or the heterogeneity of financial practices across various other nations. Consequently, the findings may not fully capture the evolving global financial environment or the diverse institutional contexts that shape corporate financing decisions. This limitation naturally points toward the need for future research that extends the analysis to post-COVID data. Future research should extend this analysis by examining how the pandemic era altered the relationship between capital structure and performance metrics such as EPS and ROE. The path ahead can focus on industry-specific investigations or sectoral analysis. Longitudinal studies that incorporate post-COVID data may also be empirically tested to assess whether the resilience strategies adopted during the post-GFC crisis period have persisted or evolved in response to new macroeconomic challenges.

8. References

Antoniou, A., Guney, Y., & Paudyal, K. (2008). The Determinants of Capital Structure: Capital Market-Oriented versus Bank-Oriented Institutions. *The Journal of Financial and Quantitative Analysis*, *43*(1), 59–92.

Chandra, P. (2011). *Financial Management - Theory and Practice* (8th ed.). Tata McGraw Hill Education Private Limited.

Chen, J., & Strange, R. (2005). The Determinants of Capital Structure: Evidence from Chinese Listed Companies. *Economic Change and Restructuring*, *38*, 11–35.

Dang, V. A. (2013). Testing capital structure theories using error correction models: evidence from the UK, France and Germany. *Applied Economics*, *45*(2), 171–190.

Frank, M. Z., & Goyal, V. K. (2009). Capital Structure Decisions: Which Factors Are Reliably Important? *Financial Management • Spring*, *38*, 1–37. https://mpra.ub.uni-muenchen.de/22525/

Graham, J. R., & Harvey, C. R. (2001). The theory and practice of corporate finance: Evidence from the field. *Journal of Financial Economics*, *60*, 187–243. https://doi.org/https://doi.org/10.1016/S0304-405X(01)00044-7

Harper, I., & Thomas, M. (2009). Making Sense of the GFC: Where did it Come from and what do we do Now? *Economic Papers*, *28*(3).

Hasriani, H., Sugianto, S., Nursyamsuriana, N., Sutriana, S., & Mauna, R. (2025). The Effect of Financial Leverage on Earnings Per Share and Return on Equity. *Journal La BIsecoman*, *6*(4).

IMF. (2025). *Fiscal Monitor: Fiscal policy under Uncertainty*. International Monetary Fund.

Jensen, M. C., & Meckling, W. H. (1976). THEORY OF THE FIRM: MANAGERIAL BEHAVIOR, AGENCY COSTS AND OWNERSHIP STRUCTURE. *Journal of Financial Economics*, *3*, 305–360.

Jong, A. de, Verbeek, M., & Verwijmeren, P. (2012). Does Financial Flexibility Reduce Investment DIstortions? *The Journal of Financial Research* .

Kayo, E. K., & Kimura, H. (2011). Hierarchical determinants of capital structure. *Journal of Banking & Finance*, *35*(2), 358–371.

Lemmon, M. L., & Zender, J. F. (2010). Debt Capacity and Tests of Capital Structure Theories. *The Journal of Financial and Quantitative Analysis*, *45*(5), 1161–1187.

Modigliani, F., & Miller, M. H. (1958). The Cost of Capital, Corporation Finance and the Theory of Investment. *The American Economic Review*, *48*(3), 261–297. https://www.jstor.org/stable/1809766

Modigliani, F., & Miller, M. H. (1963). Corporate Income Taxes and the Cost of Capital: A Correction. *The American Economic Review*, *53*(3), 433–443. https://www.jstor.org/stable/1809167

Myers, S. C., & Majluf, N. S. (1984). Corporate Financing and Investment Decisions when Firms have Information that Investors Do Not Have. *Journal of Financial Economics*, *13*, 187–221.

Rajan, Raghuram. G., & Zingales, L. (1995). What Do We Know about Capital Structure? Some Evidence from International Data. *The Journal of Finance*, *50*(5), 1421–1460. https://doi.org/10.1111/j.1540-6261.1995.tb05184.x

S&P Global. (2025). *Dow Jones Averages Methodology*.