



Firm Value in Transportation and Logistics Enhancing Economic Resilience and National Growth

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Article Info:	Abstract
Keywords: <i>Asta Gatra</i> ; Debt-to-Equity Ratio; Economic Resilience; Firm Value; Return on Assets.	Purpose: This study examines how return on assets (ROA) and the debt-to-equity ratio (DER) influence firm value, measured by price-to-book value (PBV), in Indonesia's transportation and logistics sector, and assesses the moderating role of DER in the ROA-PBV relationship. It also interprets the findings through the economic dimension of the eight aspects (<i>Asta Gatra</i>) framework to explain their relevance to economic resilience and national growth.
Article History: Received : 03-05-2025 Revised : 11-09-2025 Accepted : 30-09-2025	Study Design/Methodology/Approach: This study applies a quantitative approach using secondary panel data from transportation and logistics companies listed on the Indonesia Stock Exchange. Purposive sampling selected 27 companies from a population of 37 companies for the 2021-2024 period. The study analyses the data using panel-data regression and tests DER as a moderating variable.
Article DOI : 10.55960/jlri.v13i3.1318	Findings: ROA and DER positively and significantly affect PBV. The interaction between ROA and DER also has a positive and significant effect on PBV, indicating that DER strengthens the relationship between profitability and firm value. These findings show that effective asset utilisation and capital structure management strengthen firm value and support the financial resilience of transportation and logistics companies, with broader implications for economic resilience. Originality/Value: This study extends firm-value research by examining DER as a moderator of the ROA-PBV relationship in Indonesia's transportation and logistics sector. It also integrates an <i>Asta Gatra</i> perspective to connect firm-level financial performance with the broader discussion of economic resilience and national growth.
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INTRODUCTION

Indonesia's national resilience reflects a dynamic and multidimensional condition shaped by the interaction of eight interrelated dimensions of national life, collectively framed as Asta Gatra (Syadzily, 2025). The Asta Gatra framework positions firm-level economic performance within the broader national resilience system and highlights the strategic role of transportation and logistics in linking the economic gatra with Indonesia's archipelagic geography. The financial health of firms in the sector is therefore relevant to national resilience, although firm value does not directly measure resilience. Financially sound firms are better able to sustain investment, maintain operational continuity, and support the movement of goods, services, capital, and strategic supplies across regions, thereby strengthening economic continuity and reducing vulnerabilities arising from geographical dispersion and supply disruptions.

Distinguishing firm-level performance from national resilience is important for positioning the study within the broader resilience discourse. National resilience should not be treated merely as an extension of a conventional corporate finance model; the analytical link must explain how sectoral functions and financial capacity contribute to the national system's ability to absorb pressures and sustain essential economic activities. Transport infrastructure reduces spatial barriers and strengthens interregional connectivity (Susanto, 2020), while logistics systems support food availability through transportation, storage, and distribution (Miyasto, 2020). Cross-border trade likewise depends on transport costs, market size, and investment flows (Himmawan et al., 2021), whereas technological capability and route security influence the efficiency and continuity of maritime transport systems (Sarjito, 2023; Othman, 2023). At the macroeconomic level, Bank Indonesia (2023) places price stability and sustainable growth within broader efforts to strengthen national economic resilience, while the Asian Development Bank (2021) emphasises resilient and inclusive recovery supported by adequate financing and preparedness for future shocks. Taken together, the sectoral and macroeconomic evidence positions transportation and logistics as an enabling sector whose disruption can extend beyond individual firms to affect distribution networks, regional connectivity, economic stability, and recovery capacity.

Macroeconomic and logistics indicators provide further evidence of the environment in which transportation and logistics firms operate during the study period. National economic growth, sectoral expansion, price stability, and logistics performance are not direct measures of national resilience; rather, they provide contextual evidence of the conditions supporting distribution, connectivity, and economic continuity, as summarised in Table 1.

Table 1. Selected Macroeconomic and Logistics Indicators Relevant to Economic Resilience in Indonesia

Indicator	Evidence	Relevance to the Study	Source
National economic growth, 2023	5.05%	Provides the macroeconomic setting during the observation period	BPS (2024)
Transportation and storage growth, 2023	13.96%	Indicates the strong economic role of transportation and logistics	BPS (2024)

Indicator	Evidence	Relevance to the Study	Source
CPI inflation, December 2023	2.61% yoy	Reflects price stability within the broader economic environment	Bank Indonesia (2023)
Logistics Performance Index, 2023	Score 3.0; rank 61	Reflects Indonesia's logistics capability and international competitiveness	World Bank (2023)
Infrastructure component of LPI	2.9	Indicates the condition of logistics infrastructure supporting connectivity	World Bank (2023)
Timeliness component of LPI	3.3	Reflects the reliability of logistics services in moving goods	World Bank (2023)

Source: Authors' compilation.

The indicators reinforce the sectoral argument by showing that transportation and logistics operate within a broader environment shaped by economic growth, price stability, infrastructure capability, and delivery reliability. Their relevance to Asta Gatra lies primarily in the economic gatra and, through infrastructure and interregional connectivity, in the geographical gatra. Accordingly, the indicators provide contextual support for the national-resilience interpretation without becoming variables in the empirical ROA–DER–PBV model.

Geopolitical uncertainty, technological change, and recurring disruptions have intensified pressures on supply chains, making resilience an increasingly important concern. Recent international evidence shows that resilience and dynamic capabilities strengthen corporate performance by improving operational efficiency, adaptability, and resource utilisation in smart supply chains (Mohsin et al., 2025). In Indonesia, its archipelagic geography and uneven infrastructure amplify these pressures by increasing the cost of maintaining reliable inter-island connectivity. Strengthening the economic gatra therefore requires more than macroeconomic stability; it also depends on firms' capacity to sustain operations, finance productive assets, and adjust investment decisions under uncertainty. Profitability and capital structure consequently become central to this capacity because they influence internal returns, access to external financing, and market confidence.

Despite its strategic role, the transportation and logistics sector presents a valuation paradox: sectoral activity may continue to expand while firm-level market valuations remain uneven. Market value reflects expectations about future earnings, risk, and managerial capability, which means that sectoral growth does not necessarily indicate strong corporate fundamentals. Price-to-book value (PBV) therefore provides a useful measure by relating market valuation to recorded equity and showing how investors value a firm relative to its book value (Brigham & Houston, 2019; Hery, 2020). Return on assets (ROA) measures management's efficiency in generating profit from the asset base, whereas the debt-to-equity ratio (DER) reflects the extent of debt financing and the associated financial risk. For capital-intensive transportation and logistics firms, leverage can support investment in fleets, infrastructure, and technology, although excessive debt may increase exposure to interest costs, demand shocks, and refinancing pressures.

Previous empirical findings remain inconclusive. Tasiyah and Africa (2022) report that ROA has no significant effect on PBV, whereas DER has a positive and significant effect. Nurhanif et al. (2024) similarly identify a positive effect of DER on firm value, while Ramadhani and Yahya (2024) observe positive effects of both ROA and DER. The divergence leaves two issues unresolved. First, the extent to which profitability translates into higher market valuation may depend on whether capital structure enables or constrains the productive use of assets. Second, existing corporate finance studies offer limited explanations for why firm-level financial performance is important and why it matters to the resilience of a sector that supports national connectivity and distribution. The literature therefore leaves an empirical gap regarding the moderating role of capital structure and a contextual gap in linking corporate financial performance to the economic framework of national resilience.

Technological capability has become increasingly important to the development of Indonesia's maritime transport and logistics systems. The adoption of artificial intelligence, big data, and robotic automation can improve operational efficiency, productivity, and competitiveness, allowing technology to function not merely as operational support but as an instrument for maritime economic development (Sarjito, 2023). Maritime performance, however, also depends on the security and continuity of trade routes. Othman (2023) links maritime security with energy and food resilience in ASEAN, where maritime transport supports regional trade and the movement of strategic supplies. Taken together, technological capability and route security determine the ability of maritime transport and logistics systems to operate efficiently while maintaining the continuity required for broader economic resilience.

Uneven infrastructure, geographical dispersion, and differences in regional connectivity continue to constrain Indonesia's maritime potential. Sustainable infrastructure therefore requires not only innovation but also equitable access to transportation, energy, and digital networks (Salsabila et al., 2024). Mareta et al. (2025) similarly show that Indonesia's extensive maritime resources do not automatically translate into stronger economic performance without adequate technology, infrastructure, human resources, and governance. The combination of substantial maritime potential and persistent structural constraints reinforces the strategic importance of transportation and logistics within the economic and geographical dimensions of Asta Gatra.

A notable divergence exists between sectoral growth and firm-level market valuation, highlighting the sector's strategic importance. In 2024, the logistics sector recorded strong economic growth of 14.16 per cent (Ramadhan, 2024), while firm-level PBV remained below the industry average. At the same time, the Composite Stock Price Index contracted by 0.37 per cent during the year, indicating that market sentiment and wider economic conditions also influenced corporate valuation (Pratomo, 2024). Firm value therefore reflects not only sectoral expansion but also investors' assessment of profitability, financial risk, managerial capability, and prospects. PBV captures this assessment by comparing market value with recorded equity, while ROA reflects the efficiency of asset utilisation and DER indicates the extent to which firms rely on debt financing (Brigham & Houston, 2019; Hery, 2020).

The combination of sectoral growth, uneven market valuation, and mixed empirical evidence points to a gap that extends beyond conventional firm-value analysis. Existing

studies have established inconsistent relationships among profitability, leverage, and PBV but provide limited explanations of how capital structure alters the effect of profitability on market valuation and why that relationship matters for a strategically important sector. This study therefore examines the effect of ROA on PBV and tests DER as a moderating variable among transportation and logistics companies listed on the Indonesia Stock Exchange. By interpreting the findings through the economic and geographical dimensions of Asta Gatra, the study links firm-level financial performance with the capacity of the transportation and logistics sector to sustain connectivity, distribution, and economic continuity, thereby clarifying its relevance to national resilience.

LITERATURE REVIEW

Theoretical Studies

Signalling theory explains how firms convey information about their financial condition and prospects to reduce information asymmetry between management and investors (Choudhury, 2024). Market participants interpret financial information as signals when assessing firm value, making price-to-book value (PBV) relevant because it compares the market price of equity with its book value. A higher PBV generally reflects stronger market confidence in a firm's performance and growth prospects, whereas a lower PBV may indicate greater perceived risk or weaker expectations (Brigham & Houston, 2019; Hery, 2020).

Financial performance provides further signals through profitability and capital structure. Return on assets (ROA), measured by net income relative to total assets, indicates how efficiently management uses corporate assets to generate earnings; stronger ROA may therefore signal greater operating efficiency and support higher firm value (Brigham & Houston, 2019; Hery, 2020). Debt-to-equity ratio (DER), measured by total liabilities relative to equity, reflects the extent of debt financing and the financial risk associated with capital structure (Hery, 2020; Kasmir, 2021). Debt can support expansion and productive investment, although excessive leverage may increase financing costs and financial risk. Accordingly, investors may interpret ROA and DER jointly when assessing firm performance, risk, and market value.

Empirical Studies

Effect of ROA on PBV

Profitability reflects a firm's ability to generate returns from its asset base and therefore influences investors' assessment of firm value (Brigham & Houston, 2019). A higher ROA indicates more efficient asset utilisation and can strengthen market confidence in the firm's earnings prospects. Khasanah and Susilo (2024) found that ROA has a positive and significant effect on PBV, indicating that stronger profitability tends to be associated with higher market valuation. Firms that generate greater returns from their assets are, therefore, more likely to receive favourable assessments from investors. Based on this argument, the first hypothesis is formulated as follows:

H₁: ROA has a positive effect on PBV

Effect of DER on PBV

Capital structure also influences firm value because debt can provide additional financing for productive investment while increasing financial risk (Brigham & Houston, 2019). Effective use of debt can support expansion and improve future returns, whereas excessive leverage may increase interest obligations and weaken investor confidence. Ramadhani and Yahya (2024) found that DER has a positive and significant effect on PBV, suggesting that investors may respond positively when firms use debt productively and maintain sufficient capacity to meet their financial obligations. Based on this relationship, the second hypothesis is formulated as follows:

H₂: DER has a positive effect on PBV.

The moderating influence of DER on the correlation between ROA and PBV is analysed

Profitability and capital structure may jointly shape firm value because investors assess not only the returns generated from assets but also how firms finance those assets. Sirait et al. (2023) identify a strong relationship between DER and ROA, indicating that leverage can alter the contribution of profitability to firm value. When firms combine efficient asset utilisation with well-managed debt, external financing can support productive investment and strengthen the market signals generated by profitability. Conversely, poorly managed leverage may absorb operating gains through financing costs and reduce investor confidence. DER may therefore change the strength of the relationship between ROA and PBV. The third hypothesis is formulated as follows:

H₃: DER positively moderates the relationship between ROA and PBV.

The proposed relationships among ROA, DER, and PBV are presented in Figure 1:

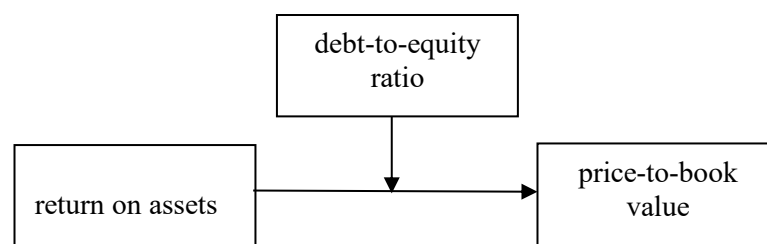


Figure 1. Theoretical Framework

Asta Gatra and the National-Resilience Relevance of Transportation and Logistics

The *Asta Gatra* framework provides the basis for interpreting the wider national-resilience relevance of the empirical model (Hasan Syadzily, 2025). The economic gatra represents the primary analytical dimension because ROA, DER, and PBV capture firm-level financial performance, while the geographical gatra reflects Indonesia's archipelagic structure and dependence on reliable inter-island connectivity; defence and security add a further cross-gatra dimension, as logistics continuity supports the movement of strategic resources and the reliability of maritime routes. Accordingly, this study applies *Asta Gatra* as an interpretive framework rather than a statistically measured construct, allowing firm-level financial findings to be linked with broader sectoral and

policy implications without treating them as direct measures of national resilience. Accordingly, applying *Asta Gatra* as an interpretive framework is consistent with prior studies showing that economic resilience depends on the capacity of productive actors and distribution systems to maintain continuity under pressure, including digital economic capability (Soemarwoto, 2022), connectivity and competitiveness (Wibowo, 2021), financial transparency (Mareta et al., 2025), and resilience capabilities with resource reconfiguration (Mohsin et al., 2025). Collectively, the evidence supports a micro-to-macro relationship in which financially viable and adaptive firms strengthen the sectoral capacity required to sustain connectivity, distribution, and economic activity, thereby providing a coherent basis for interpreting the wider relevance of the findings to national resilience.

METHODS

The research adopts a quantitative explanatory design using secondary panel data to examine the effects of return on assets (ROA) and the debt-to-equity ratio (DER) on price-to-book value (PBV), together with the moderating role of DER in the ROA-PBV relationship. The population comprises 37 transportation and logistics companies listed on the Indonesia Stock Exchange (IDX). Purposive sampling selected 27 companies that remained listed and provided the required financial data throughout 2021-2024, producing 108 firm-year observations. Panel-data regression using EViews 12 analyses the relationships among the variables, while the Chow, Hausman, and Lagrange Multiplier tests determine the most appropriate specification among the common, fixed, and random effects models. Following Basuki (2021), model diagnostics assess multicollinearity and heteroscedasticity before hypothesis testing.

Table 1. Operational Definition Variable

Variable	Operational Definition	Measurement	Scale
<i>Price-to-book value.</i>	Reflects market valuation relative to the firm's recorded equity	$\frac{\text{Share Price per share}}{\text{Book value per share}}$	ratio
Return on assets (ROA)	Reflects the efficiency of asset utilisation in generating profit	$\frac{\text{Total Debt}}{\text{Equity}}$	ratio
Debt-to-equity ratio (DER)	Reflects the proportion of debt financing relative to equity	$\frac{\text{Net Profit}}{\text{Total Assets}}$	ratio

Source: Adapted from Brigham and Houston (2019), Hery (2020), and Kasmir (2021).

RESULTS AND DISCUSSION

Result

Descriptive statistics for ROA, DER, and PBV are presented in Table 2. ROA records a minimum value of -0.580300 at PT Garuda Indonesia (Persero) Tbk (GIAA) in 2021 and a maximum value of 2.071800 at PT Express Transindo Utama Tbk (TAXI) in the same year. The mean value of 0.044231, which is lower than the standard deviation of 0.242499, indicates substantial variation in profitability across transportation and logistics firms during 2021-2024. The wide dispersion reflects differences in firms' ability to generate earnings from their asset base, ranging from operating losses to unusually high returns partly associated with financial restructuring.

DER records a minimum value of -19.62450 at PT Steady Safe Tbk (SAFE) in 2024 and a maximum value of 5.476300 at PT Indomobil Multi Jasa Tbk (IMJS) in 2021. The mean value of 0.191979 remains well below the standard deviation of 2.763956, indicating considerable variation in capital structure across firms. The negative minimum reflects negative equity rather than low leverage, whereas the upper value indicates substantial reliance on debt financing. PBV similarly ranges from -11.09780 at SAFE in 2024 to 9.941300 at PT Mitra Investindo Tbk (MITI) in 2021. The mean value of 1.406306, which is lower than the standard deviation of 2.556657, indicates wide variation in market valuation. Negative PBV reflects equity deficiency, while a high positive PBV indicates that the market values a firm considerably above its recorded book value. Overall, the descriptive results reveal pronounced heterogeneity in profitability, financing structure, and market valuation across the sampled firms, providing an appropriate basis for subsequent panel-data analysis.

Table 2. Descriptive Statistical Test

	ROA	DER	PBV
Minimum	-0.580300	-19.62450	-11.09780
Maximum	2.071800	5.476300	9.941300
Mean	0.044231	0.191979	1.406306
Standar Deviation	0.242499	2.763956	2.556657

Source: Processed data by authors' (2025)

Model selection through the Chow, Hausman, and Lagrange Multiplier tests identified the random-effects model as the most appropriate specification for estimating the panel data. Accordingly, hypothesis testing uses the random-effects moderation model, which estimates the effects of ROA and DER on PBV together with the interaction between ROA and DER. A probability value below 0.05 indicates statistical significance and supports the corresponding hypothesis.

Panel-data model selection identified the random-effects model as the most appropriate specification. The Chow test favoured fixed effects over common effects ($p = 0.0105$), whereas the Hausman test favoured random effects over fixed effects ($p = 0.3367$). The Lagrange multiplier test further supported random effects over common effects ($p = 0.0197$). Model diagnostics showed no serious estimation problems, as the highest correlation among the explanatory terms was 0.5436, below the 0.85 threshold

adopted in the analysis, while the Breusch-Pagan-Godfrey test produced a chi-square probability of 0.8016, indicating no evidence of heteroscedasticity. Accordingly, the random-effects model provides the basis for hypothesis testing. The random-effects moderation model estimates the effects of ROA and DER on PBV together with the interaction between ROA and DER. A probability value below 0.05 indicates statistical significance and supports the corresponding hypothesis.

Table 3. Random-Effects Moderation Model

Variable	Coefficient	t-statistic	p-value	Decision
Constant	1.217375	4.631089	0.0000	-
ROA	2.652363	3.044313	0.0030	H ₁ supported
DER	0.381526	3.933881	0.0002	H ₂ supported
ROA x DER	1.135306	2.041170	0.0438	H ₃ supported
Model statistics	Adjusted R ² = 0.328689	F = 18.29997	p < 0.001	Model Significant

Source: Processed data (2025)

The random effects estimates show that ROA has a positive and significant effect on PBV ($\beta = 2.652363$; $p = 0.0030$), supporting H₁. Higher profitability therefore corresponds to higher firm value within the observed sample. DER also has a positive and significant effect on PBV ($\beta = 0.381526$; $p = 0.0002$), supporting H₂ and indicating that capital structure contributes to differences in market valuation. The interaction between ROA and DER remains positive and significant ($\beta = 1.135306$; $p = 0.0438$), supporting H₃. A positive interaction coefficient indicates that increasing DER strengthens the relationship between ROA and PBV; each one-unit increase in DER increases the marginal effect of ROA on PBV by 1.135306 units, holding the remaining model components constant.

The adjusted R² of 0.328689 indicates that ROA, DER, and their interaction explain 32.87 per cent of the variation in PBV, while the remaining 67.13 per cent reflects factors outside the model. The F-statistic of 18.29997, with a probability value below 0.001, confirms that the explanatory variables jointly provide a statistically significant model of PBV. Accordingly, the empirical results support all three hypotheses and provide the basis for discussing how profitability and capital structure jointly shape firm value in the transportation and logistics sector.

Discussion

Effect of ROA on PBV

ROA has a positive and significant effect on PBV, indicating that stronger profitability is associated with higher market valuation. The finding supports Khasanah and Susilo (2024) and Wulandari and Dewi (2025), who report that higher ROA reflects more efficient asset utilisation and strengthens investors' assessments of a firm's value. Signalling theory provides a consistent explanation because profitability conveys information about management's ability to generate returns from available resources,

thereby reducing information asymmetry and strengthening market confidence (Choudhury, 2024; Brigham & Houston, 2019). For transportation and logistics firms, efficient asset utilisation has broader significance because fleets, terminals, warehouses, and supporting infrastructure form the operational base for distribution and interregional connectivity. Higher profitability therefore strengthens firm value while also improving the financial capacity required to maintain investment and operational continuity. From an *Asta Gatra* perspective, the result relates primarily to the economic gatra, while the sector's dependence on physical connectivity also links financial performance with Indonesia's geographical conditions. Stronger profitability at the firm level may consequently support the sectoral capacity needed to sustain economic activity and connectivity, although ROA does not directly measure national resilience.

Effect of DER on PBV

The debt-to-equity ratio has a positive and significant effect on price-to-book value. This empirical finding shows a linear regression result in the direction of the influence between variables, indicating that an increase in DER is in line with an increase in PBV. A negative DER value is caused by a capital deficiency due to accumulated losses exceeding equity. Despite relatively weak leverage and high debt levels, companies are still able to increase profitability by optimally utilizing debt. This condition reflects the market's continued positive assessment of several companies, reflecting PBV values that remain above the industry average. This indicates that the stock price is relatively higher than its book value. The DER increased sharply due to increased long-term debt, such as bank loans, lease liabilities, and related party debt. Equity improved through additional paid-in capital, maintaining optimal leverage. This situation boosted investor confidence, as reflected in the PBV, which was well above the industry average. Market optimism is driven by rising stock prices compared to book value growth, thus this sector is seen as having strong prospects. Conversely, during the research period, the DER decreased as companies strengthened equity through retained earnings and capital increases, while reducing debt. Low leverage reflects the suboptimal use of debt for expansion, which has a positive impact in the same direction as the decline in PBV.

The decline in PBV was due to a decline in share prices compared to the previous year, despite an increase in book value of equity. This sector is perceived as having strong growth prospects. Meanwhile, book value continued to increase due to increases in equity and assets, as well as more efficient asset utilization, driving higher profits and profitability. Hery, (2020) stated that an increase in DER can be followed by an increase in company value because effectively managed debt can be utilized for business expansion, although it still carries financial risks that must be controlled. Meanwhile, Anggareksa WP et. al. (2024) stated that DER reflects a company's ability to utilize debt to drive growth and increase PBV. A high and well-managed DER indicates that a company can use debt productively to finance expansion and profitable investments.

Ramadhani & Yahya (2024) stated that optimally managed DER reflects a company's ability to manage liabilities while supporting operations and investments. If debt is utilized productively and generates profits exceeding interest costs, the company's financial performance will improve. Good DER management demonstrates effective financial management and the appropriateness of its funding strategy. Therefore, companies with optimal DER tend to experience increased PBV due to increased market

confidence in the company's prospects. Nurhanif et al. (2024) stated that transportation companies listed on the Indonesia Stock Exchange tend to use external funding through debt, in addition to internal sources. A high debt portion is seen as a positive signal for investors because it reflects financing activities to support operations, expansion, and performance recovery after the pandemic. This aligns with the concept that optimal debt use can provide benefits through a greater debt tax shield compared to the risk of financial distress, thus potentially increasing company value.

Moderating Effect of DER on the ROA-PBV Relationship

The interaction between DER and ROA has a positive and significant effect on PBV, indicating that capital structure strengthens the relationship between profitability and market valuation. The finding supports Sirait et al. (2023), who argue that firm value reflects the interaction of several financial factors rather than the influence of a single indicator. DER also has a significant direct effect on PBV while simultaneously strengthening the effect of ROA, which is consistent with the quasi-moderating role described by Solimun (2021). Effective debt management can provide additional resources for productive assets, allowing profitability to generate a stronger market signal. Conversely, excessive financing costs may absorb operating gains and weaken investor confidence. The interaction therefore indicates that profitability contributes more strongly to firm value when supported by an appropriate capital structure.

The moderating effect also carries wider relevance for national resilience because transportation and logistics depend heavily on long-term investment and capital-intensive assets. Firms that combine profitable asset utilisation with sustainable financing are better positioned to maintain operations, expand capacity, and respond to economic disruptions. Such financial capacity strengthens the sectoral foundation of the economic *gatra* and supports the connectivity required by Indonesia's geographical structure. Within the *Asta Gatra* framework, firm-level financial resilience does not constitute national resilience directly; rather, it supports the operational capacity required to sustain distribution, investment, and interregional connectivity. The empirical evidence therefore reinforces the argument developed in the introduction that the financial condition of transportation and logistics firms matters to national resilience through its contribution to economic continuity and sectoral adaptability.

CONCLUSION

ROA and DER have positive and significant effects on PBV, while their interaction confirms that capital structure strengthens the relationship between profitability and firm value. Higher profitability therefore corresponds to stronger market valuation, whereas effectively managed leverage can support productive financing and reinforce the market signal generated by asset performance. For transportation and logistics firms, financial capacity is especially important because it supports investment continuity, efficient asset utilisation, and operational sustainability. Viewed through the *Asta Gatra* framework, the findings relate primarily to the economic *gatra* and, through the sector's role in interregional connectivity, also to Indonesia's geographical conditions. Firm-level financial strength does not directly represent national resilience, but it can support the sectoral capacity required to maintain distribution, connectivity, and economic continuity under pressure.

Policy and managerial responses should encourage productive long-term financing, prudent leverage management, efficient asset utilisation, and continued investment in transport infrastructure and logistics technology. Government agencies, financial institutions, and sector regulators may strengthen economic resilience by improving access to sustainable financing, monitoring financial distress in strategically important firms, and supporting investment that preserves distribution and connectivity. The study remains limited theoretically because *Asta Gatra* serves as an interpretive framework rather than a statistically tested construct, while signalling theory does not fully explain operational resilience. Empirically, the analysis focuses on listed transportation and logistics firms and relies on financial ratios that do not directly capture supply-chain disruption, regional connectivity, or national-resilience outcomes. Methodologically, the static random-effects approach may not fully capture dynamic adjustment, firm-specific shocks, or the influence of extreme financial conditions. Future research may extend the observation period, compare different types of firms, incorporate operational and regional resilience indicators, and apply dynamic panel, robust estimation, or mixed-method designs to clarify how firm-level financial capacity contributes to the economic and cross-*gatra* dimensions of national resilience.

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Author contributions

Zulkifli: Conceptualisation, methodology, investigation, data curation, formal analysis, and writing the original draft. Danto Sukmajati: Methodology, validation, supervision, and writing review and editing. Irwan Irawadi Barus: Investigation, validation, formal analysis, and writing review and editing. Nurhasanah: Data curation, visualisation, project administration, and writing review and editing. All authors reviewed and approved the final manuscript.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have influenced the work reported in this manuscript.

REFERENCE

- Anggareksa WP, B. F., & Ulupui, I Gusti Ketut Agung Yusuf, M. (2024). Pengaruh Profitabilitas, Likuiditas dan Solvabilitas Terhadap Nilai Perusahaan. *Jurnal Revenue: Jurnal Akuntansi*, 5(1), 705-725. <https://doi.org/10.46306/rev.v5i1.476>
- Arvis, J.-F., Ojala, L., Wiederer, C., Shepherd, B., Raj, A., Dairabayeva, K., & Kiiski, T. (2018). *The Logistics Performance Index and Its Indicators*. 1-69.
- Asian Development Bank. (2021). Asian development outlook 2021: Financing a green and inclusive recovery. <https://doi.org/10.22617/FLS210163-3>
- Bank Indonesia. (2023). Laporan perekonomian Indonesia 2023: Sinergi memperkuat ketahanan dan kebangkitan ekonomi nasional. Laporan Perekonomian Indonesia 2023
- Basuki, A. T. (2021). Analisis Data Panel dalam Penelitian Ekonomi dan Bisnis. In *Katalog Dalam Terbitan (KDT)*.
- Brigham, E., & Houston, J. (2019). *Fundamentals of Financial Management*. Cengage Learning.

- Carolin, J. Y., & Susilawati, C. (2024). Pengaruh Ukuran Perusahaan, Profitabilitas, dan Leverage Terhadap Nilai Perusahaan. *JESYA Jurnal Ekonomi & Ekonomi Syariah*, 7(1), 588-597. <https://doi.org/10.36778/jesya.v7i1.1447>
- Choudhury, M. M. (2024). Signaling Theory: An Approach to Organizational Behavior Research. *Journal of Accounting, Business and Management (JABM)*, 31(2), 98-120. <https://doi.org/10.31966/jabminternational.v31i2.1199>
- Hadiya, A. U., & Riski, T. R. (2023). Pengaruh Tobins Q, PBV, EPS dan Capital Gain Terhadap Harga Saham Pada Perusahaan Retail Yang Terdaftar Di Bursa Efek Indonesia Tahun 2016-2020. *Jurnal Ekonomi Dan Bisnis Dharma Andalas*, 25(1), 1-10. <https://doi.org/10.47233/jebd.v25i1.72>
- Hery. (2020). *Analisis Laporan Keuangan: Integrated and Comprehensive Edition*. PT. Grasindo.
- Himmawan, M. F., Sridadi, A. R., & Handoyo, R. D. (2021). Ketahanan nasional sektor ekonomi perdagangan: Pendekatan *gravity model approach*. *Jurnal Lemhannas RI*, 9(1), 80-87. <https://doi.org/10.55960/jlri.v9i1.378>
- International Monetary Fund. (2022). *World Economic Outlook Countering the Cost-of-Living Crisis*. <https://www.imf.org/en/publications/weo/issues/2022/10/11/world-economic-outlook-october-2022>
- Kasmir. (2021). *Analisis Laporan Keuangan* (ed. revisi). Rajawali Pers.
- Khasanah, A., & Susilo, D. (2024). Pengaruh ROA, DER, CR, Dan TATO Terhadap Nilai Perusahaan. *Jorunal of Accounting and Management's Student (JAM'S)*, 1(2), 1-10. www.jurnal.unikal.ac.id/index.php/jebi
- Mareta, S., C.M. Doktoralina, Lestari, Puspita Sari, R., & Christsetyo, P. A. M. A. (2025). Mediating Role of Financial Transparency in Strengthening Economic Resilience. *Jurnal Lemhannas RI*, 13(1), 17-36. <https://doi.org/10.55960/jlri.v13i1.1071>
- Miyasto, M. (2020). Strategi Ketahanan Pangan Nasional guna Meningkatkan Kemandirian dan Daya Saing Ekonomi dalam Rangka Ketahanan Nasional. *Jurnal Lemhannas RI*, 2(1), 17-34. <https://jurnal.lemhannas.go.id/index.php/jkl/article/view/151>
- Mohsin, A. K. M., Rashed, M., Gerschberger, M., Plasch, M., Ahmed, S. F., Dritan, O., & Islam, M. F. (2025). Smart supply chains: How do resilience and dynamic capabilities drive corporate performance? *The International Journal of Logistics Management*, 36(7), 330-363. <https://doi.org/10.1108/IJLM-12-2024-0783>
- Nurhanif, M. A., Malinda, S., & Yuliani, Y. (2024). Likuiditas, Leverage, Profitabilitas dan Pengaruhnya terhadap Nilai Perusahaan Sub Sektor Transportasi di Indonesia. *Al-Kharaj: Jurnal Ekonomi, Keuangan & Bisnis Syariah*, 6(2), 545-556. <https://doi.org/10.47467/alkharaj.v6i2.3611>
- Othman, I. (2023). Keamanan maritim, energi dan pangan ASEAN melalui praktik strategis berkelanjutan dan berbasis nilai. *Jurnal Lemhannas RI*, 11(4), 237-251. <https://doi.org/10.55960/jlri.v11i4.484>
- Pratomo, M. N. (2024). Daftar 20 Saham PER & PBV Terendah Jelang Santa Claus Rally & Window Dressing 2024. *Bisnis.Com*. <https://market.bisnis.com/read/20241129/7/1819949/daftar-20-saham-per-pbv-terendah-jelang-santa-claus-rally-window-dressing-2024>

- Putra, H. S. (2020). Pengaruh Current Ratio dan Total Assets Turnover Terhadap Price to Book Value Dengan Dimediasi Oleh Return On Equity pada Perusahaan Sub Sektor Farmasi Yang Terdaftar Di Bursa Efek Indonesia. *Maneggio: Jurnal Ilmiah Magister Manajemen*, 3(1), 92-106. <https://doi.org/10.30596/maneggio.v3i1.4856>
- Ramadhan, M. I. (2024). Sektor Logistik Jadi Penopang Ekonomi di Tengah Potensi Pelambatan. *Metrotv.News*. <https://www.metrotvnews.com/read/N9nCeny-sektor-logistik-jadi-penopang-ekonomi-di-tengah-potensi-pelambatan>
- Ramadhani, G. A. N., & Yahya. (2024). Pengaruh Kinerja Keuangan terhadap Nilai Perusahaan pada Sektor Transportasi dan Logistik. *Jurnal Ilmu Dan Riset Manajemen*, 13(8), 1-17. <https://jurnalmahasiswa.stiesia.ac.id/index.php/jirm/article/view/5998/6050>
- Salsabila, M., Slam, Z., Alamsyah, M. N., & Hilmi, H. D. (2024). National resilience in historical and geostrategic perspectives: Essence and conception. *Jurnal Lemhannas RI*, 12(4), 435-452. <https://doi.org/10.55960/jlri.v12i4.956>
- Sari, D. I., & Marsoyo, S. (2022). Pengaruh Profitabilitas Dan Struktur Modal Terhadap Nilai Perusahaan Manufaktur Terdaftar Di Bursa Efek Indonesia. *Artikel Ilmiah Sistem Informasi Akuntansi (AKASIA)*, 2(2), 186-194. <https://doi.org/10.31294/akasia.v2i2.1440>
- Sarjito, A. (2023). Peran teknologi dalam pembangunan kemaritiman Indonesia. *Jurnal Lemhannas RI*, 11(4), 219-236. <https://doi.org/10.55960/jlri.v11i4.483>
- Silalahi Br, N. N. S., Rahma, T. I. F., & Rahmani, N. A. B. (2022). Analysis of Stock Valuations in Estimating Stock Prices in the Covid-19 Period And Investment Decision. *EKONOMIKA SYARIAH: Journal of Economic Studies*, 6(1), 30-45. <https://doi.org/10.30983/es.v6i1.5377>
- Sirait, S., Sinaga, A. A. P., & Panjaitan, M. (2023). Pengaruh Total Asset Turn Over (TATO), Debt to Equity Ratio (DER) dan Return on Asset (ROA) Terhadap Nilai Perusahaan (Studi Empiris Pada Perusahaan Infrastruktur Utilitas dan Transportasi yang Terdaftar di Bursa Efek Indonesia Periode 2017-2019). *Jurnal Manajemen Dan Bisnis METHOFEMA*, 1(2), 417-427. <https://doi.org/10.46880/mfema/v1n2h417-427>
- Soemarwoto, S. (2022). Pemantapan ekonomi digital guna meningkatkan ketahanan nasional. *Jurnal Lemhannas RI*, 8(1), 1-6. <https://doi.org/10.55960/jlri.v8i1.299>
- Solimun. (2021). *Analisis Variabel Moderasi dan Mediasi*. Program Studi Statistika Universitas Brawijaya.
- Susanto, S. (2020). Percepatan Pembangunan Infrastruktur Transportasi Laut. *Jurnal Lemhannas RI*, 4(1), 55-59. Retrieved from <https://jurnal.lemhannas.go.id/index.php/jkl/article/view/141>
- Sutrismi, S., Minarni, E., Sisdiyantoro, K., & Defilatifah. (2023). Analisis Penilaian Saham Dengan Metode Price Book Value (PBV) Guna Keputusan Investasi. *Business, Entrepreneurship, and Management Journal (BEMJ)*, 2(2), 68-74. <https://doi.org/10.36563/bemj.v2i2.860>
- Syadzily, T. A. H. (2025). An examination of pesantren regulatory policy within the framework of national resilience. *Jurnal Lemhannas RI*, 13(2), 169-182. <https://doi.org/10.55960/jlri.v13i2.1099>

- Tasiyah, F. A., & Africa, L. A. (2022). Analisis Faktor Keuangan Terhadap Nilai Perusahaan Jasa Transportasi Yang Terdaftar Di Bursa Efek Indonesia. *J-MACC: Journal of Management and Accounting*, 5(2), 1-14. <https://doi.org/10.52166/j-macc.v5i2.3473>
- Tunisa, S., Jayanti, E., & Z. (2021). Pengaruh Return On Asset (ROA), Pertumbuhan Aset, Dan Pertumbuhan Penjualan Terhadap Nilai Perusahaan (Studi Kasus pada PT. Indofood Sukses Makmur Tbk Tahun 2016 - 2019). *Jurnal Ekonomi*, 11, 27-38.
- Utama, A. A., & Trisnawati, R. (2021). Pengaruh *corporate social responsibility*, keputusan investasi, struktur modal, kebijakan deviden, dan profitabilitas terhadap nilai perusahaan. *Jurnal Lemhannas RI*, 9(3), 1-12. <https://doi.org/10.55960/jlri.v9i3.397>
- Wismayana, W. M., & Pinatih, N. K. D. A. (2020). Pandemi dan tantangan ketahanan nasional indonesia: sebuah tinjauan kritis. *Jurnal Lemhannas RI*, 8(2), 93-100. <https://doi.org/10.55960/jlri.v8i2.312>
- Wulandari, P. C., & Dewi, P. E. D. M. (2025). Pengaruh Struktur Modal Profitabilitas Dan Growth terhadap Nilai Perusahaan (Studi Kasus pada Perusahaan Sub Sektor Basic Material yang Terdaftar di Bursa Efek Indonesia Periode 2021-2023). *Vokasi: Jurnal Riset Akuntansi*, 14(1), 156-165. <https://doi.org/10.23887/vjra.v14i1.100674>
- Wibowo, D. S. R. (2021). Mengungkit daya saing UMKM di masa pandemi COVID-19 guna memperkuat ketahanan ekonomi nasional. *Jurnal Lemhannas RI*, 9(4), 125-137. <https://doi.org/10.55960/jlri.v9i4.420>