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Firm Size, Liquidity, and Capital Structure as Determinants of Firm Value

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Abstract

Firm value remains a central consideration for investors; however, empirical evidence regarding the effects of firm size, liquidity, and capital structure among Sharia-compliant automotive companies remains inconsistent. This study aims to examine the partial and simultaneous effects of firm size, liquidity, and capital structure on firm value. A quantitative approach with an associative explanatory design was employed using data from 12 automotive companies listed in the Indonesian Sharia Stock Index during 2020–2024. Purposive sampling yielded 60 firm-year observations. Secondary data were collected from financial statements and market information and analyzed using panel data regression with EViews 12. The findings indicate that firm size has a negative and significant effect on firm value, whereas liquidity has a positive and significant effect. Capital structure has a negative but statistically insignificant effect on firm value. Simultaneously, the three variables significantly affect firm value, although the model explains only 15.39% of its variation. These findings extend the application of signaling theory by showing that investors interpret corporate financial information based on asset utilization, short-term financial capacity, and financing risk. The study contributes empirical evidence on the determinants

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of firm value in the context of Sharia-compliant automotive companies. Practically, companies should improve asset productivity, maintain efficient liquidity levels, and align debt decisions with their cash-flow capacity. Future research should incorporate additional determinants, including profitability, dividend policy, corporate governance, and macroeconomic conditions.

Keywords: Capital Structure; Firm Size; Firm Value; Liquidity; Sharia-Compliant Companies

INTRODUCTION

The global automotive industry is experiencing a period of rapid transformation shaped by technological innovation, changing consumer preferences, supply-chain uncertainty, and the transition toward low-emission mobility. The expansion of electric vehicles has encouraged automotive manufacturers and component suppliers to increase investment in production technology, battery systems, research and development, and supporting infrastructure. Such investments require considerable financial resources and place greater pressure on firms to maintain an appropriate balance between operational resilience and long-term growth. The International Energy Chynthiawati & Jonnardi (2022) reported that electric vehicle sales continued to expand across major and emerging markets, indicating that the automotive industry is becoming increasingly capital-intensive and competitive. Global production patterns have also shifted as manufacturers adjust their strategies to differences in regional demand, production costs, and technological readiness (Manufacturers, 2025). These developments make financial strength and market valuation increasingly important for automotive companies seeking to remain relevant in a changing industrial environment.

Indonesia's automotive sector faces similar pressures within a domestic economy that continues to attract investment while remaining sensitive to global financial conditions, exchange-rate movements, interest rates, and changes in household purchasing power. The Bank (2024) noted that Indonesia maintained relatively stable macroeconomic conditions in 2024, although manufacturing performance remained uneven and financing costs continued to require careful management. The Indonesian capital market also developed considerably, with the number of listed companies and capital-market investors continuing to increase. This expansion has provided companies with broader access to external financing while

giving investors more alternatives when allocating their funds (Manufacturers, 2025). Greater investment participation also means that listed firms are evaluated more closely through their financial statements, market performance, governance practices, and capacity to create sustainable value for shareholders and other stakeholders.

Firm value reflects the market's overall assessment of a company's current condition and future prospects. A higher valuation generally indicates that investors have confidence in management's ability to use available resources, manage financial risks, and generate future returns. Ningrum (2022) explains that firm value is closely related to shareholder wealth because market perceptions are reflected in share prices and valuation ratios. Financial statements consequently serve not only as records of past transactions but also as sources of information that investors use to interpret a firm's financial position and prospects Seto et al. (2023) Signaling theory provides a relevant explanation for this process. Spence (1973) argues that parties possessing better information can communicate credible signals to parties facing information limitations. Applied to corporate finance, financial ratios and financing decisions may serve as signals of managerial confidence, financial discipline, and future performance (Gumanti, 2009). Investors do not merely respond to numerical information; they also interpret what those numbers reveal about the quality and direction of managerial decisions.

Preliminary observations of automotive companies listed in the Indonesian Sharia Stock Index during 2020–2024 reveal a pattern that deserves further examination. The average firm-size measure increased gradually from 19.71 in 2020 to 19.91 in 2024, suggesting a steady expansion of corporate assets. Liquidity moved less consistently, declining from 2.99 in 2020 to 2.46 in 2021, rising to 2.93 in 2022, and then remaining at approximately 2.54–2.56 during 2023–2024. The average debt-to-equity ratio also decreased from 0.64 in 2020 to 0.46 in 2024. The firm-value measure, meanwhile, showed a pronounced upward movement accompanied by substantial differences among companies. These trends indicate that asset growth, short-term financial capacity, and lower reliance on debt did not always move proportionally with market valuation. The divergence suggests that investors may interpret each financial characteristic differently depending on asset efficiency, liquidity quality, business prospects, and the risks associated with financing decisions.

Firm size is commonly associated with a company's resources, operating capacity, market access, and ability to obtain external financing. Larger companies may attract stronger

investor confidence because they generally possess more assets, broader business networks, and greater resilience in responding to market disruption. Akbar & Fahmi (2020) found that firm size was relevant to corporate value and dividend decisions among Indonesian manufacturing companies, while Damayanti & Darmayanti (2022) reported a positive and significant relationship between firm size and firm value. Empirical evidence does not consistently support this expectation. Irawan & Kusuma (2019) and Widyawati & Aris (2024) identified a negative relationship between company size and firm value in their respective research settings. Ambri & Damayanthi (2024) also found that firm size negatively affected the value of automotive and component companies, suggesting that larger asset holdings do not automatically create higher market appreciation when those assets are not managed efficiently. Firm size should therefore be understood as a measure of economic capacity whose contribution depends on the quality of resource utilisation.

Liquidity represents a company's ability to meet short-term obligations without disrupting its operating activities. Adequate liquidity can reassure investors, creditors, employees, and suppliers that the firm possesses sufficient current resources to maintain day-to-day operations. Excessive liquidity, nevertheless, may reflect idle cash, accumulated inventories, or receivables that have not been converted efficiently into productive investment. Harfani & Nurdiansyah (2021) found that liquidity contributed to differences in firm value, while Chynthiawati & Jonnardi (2022) reported a significant relationship between liquidity and corporate valuation. Damayanti & Darmayanti (2022) similarly documented a positive effect of liquidity on firm value. Different findings were presented by Nugroho (2023), who concluded that liquidity did not have a significant positive effect on firm value. Ambri & Damayanthi (2024) found a negative effect in the automotive and component subsector, indicating that investors may respond unfavourably when high liquidity results from inefficient working-capital management. These contrasting results imply that the value of liquidity lies in its productive use rather than in the mere accumulation of current assets.

Capital structure concerns the proportion of debt and equity used to finance a company's assets and activities. Modigliani & Miller (1958) initially demonstrated that financing composition would not affect firm value under ideal market assumptions. Actual markets contain taxes, bankruptcy risks, agency problems, transaction costs, and information asymmetry, making financing choices relevant to investors. Myers (1984) explains that firms must consider the benefits and costs of debt when determining their financing policies. Moderate debt may provide tax advantages and support business expansion, whereas

excessive leverage can increase financial distress and reduce managerial flexibility. Widyawati & Aris (2024) found that capital structure affected firm value in Indonesian consumer-goods manufacturing companies. Widyakto et al. (2024), by contrast, reported that the debt-to-equity ratio had a negative but statistically insignificant effect on price-to-book value. Nugroho (2023) also found insufficient evidence that capital structure positively influenced firm value. Such inconsistencies show that the market response to leverage may depend on sectoral risk, debt utilisation, profitability, and the broader economic environment.

The research gap emerges from differences in research objects, observation periods, analytical models, and the direction of previous findings. Many earlier studies examined broad manufacturing, transportation, property, consumer-goods, or other non-automotive sectors. Several studies also used data that ended before the automotive industry had fully experienced the combined effects of the COVID-19 recovery, changes in consumer demand, and the acceleration of electric mobility. Ambri & Damayanthi (2024) investigated automotive and component companies during 2019–2022, while Widyakto et al. (2024) examined manufacturing firms during 2018–2021. The present research extends this discussion by examining automotive companies included in the Indonesian Sharia Stock Index over the 2020–2024 period. Its novelty lies in integrating firm size, liquidity, and capital structure within a more recent sector-specific and Sharia-compliant investment context. This framework allows the study to assess whether corporate scale, short-term financial strength, and financing composition provide consistent signals to investors when automotive firms are navigating industrial transition and post-pandemic adjustment.

The present study aims to examine and analyse the influence of firm size, liquidity, and capital structure on the value of automotive-sector companies listed in the Indonesian Sharia Stock Index during the 2020–2024 period, both individually and simultaneously. The study is expected to provide empirical evidence that clarifies the inconsistent findings of previous research while offering a more contextual understanding of how investors assess financial information in the automotive sector. The findings may assist corporate managers in making more responsible asset, working-capital, and financing decisions; help investors evaluate companies beyond changes in share prices alone; and contribute to the development of corporate-finance research within Indonesia's Sharia capital market.

METHODS

This study employed a quantitative approach with an associative and explanatory research design to examine the influence of firm size, liquidity, and capital structure on firm value. A quantitative approach was considered appropriate because the study tested relationships among measurable financial variables using statistical procedures. Quantitative research enables researchers to analyse numerical data systematically and draw objective conclusions from predetermined hypotheses (Aiman et al., 2022; Widodo et al., 2023). The research used a panel-data design that combined cross-sectional observations from automotive companies with annual time-series data for the 2020–2024 period. This design was selected because it allowed the study to capture differences across companies as well as changes within each company over time. The dependent variable was firm value, while firm size, liquidity, and capital structure were treated as independent variables.

The research population comprised 13 automotive-sector companies listed in the Indonesian Sharia Stock Index during the observation period. The sample was selected through purposive sampling, which allows research units to be chosen according to criteria that are directly relevant to the objectives of the study. The criteria required each company to be consistently listed in the Indonesian Sharia Stock Index and to publish complete financial data needed to calculate all research variables during 2020–2024. One company was excluded because the required information was incomplete, resulting in a final sample of 12 companies and 60 firm-year observations. The selected companies were Astra Otoparts Tbk, Indo Kordsa Tbk, Garuda Metalindo Tbk, Gajah Tunggal Tbk, Indospring Tbk, Multi Prima Sejahtera Tbk, Multistrada Arah Sarana Tbk, Mitra Pinasthika Mustika Tbk, Astra International Tbk, Goodyear Indonesia Tbk, United Tractors Tbk, and Selamat Sempurna Tbk. Secondary data were collected through documentation from annual financial statements and market information published on the official website of the Indonesia Stock Exchange. Firm size was measured using the natural logarithm of total assets, liquidity was represented by the current ratio, capital structure was measured using the debt-to-equity ratio, and firm value was represented by price-to-book value. These measurements provided comparable financial indicators across companies and observation years.

Data were processed using EViews 12 and analysed through descriptive statistics and multiple panel-data regression. Descriptive analysis was used to present the mean, minimum, maximum, and standard deviation of each variable. The empirical model was expressed as $Y = \alpha + \beta 1\ X1 + \beta 2\ X2 + \beta 2\ X3 + \varepsilon$, where (FV) denotes firm value, (SIZE) represents firm

size, (LIQ) represents liquidity, and (CS) represents capital structure. Panel-data estimation followed the common effect, fixed effect, and random effect approaches, while the most appropriate model was determined using the Chow, Hausman, and Lagrange Multiplier tests, as recommended in panel-data analysis procedures (Basuki & Prawoto, 2023; Savitri et al., 2022). Model adequacy was examined through normality, multicollinearity, heteroscedasticity, and autocorrelation tests. Hypothesis testing was conducted using the partial (t)-test, simultaneous (F)-test, and coefficient of determination at a significance level of 5%. The (t)-test assessed the individual effect of each independent variable, the (F)-test evaluated their joint effect, and the coefficient of determination indicated the proportion of variation in firm value explained by the estimated model.

RESULTS

1. Research Sample and Observation Structure

The study examined automotive-sector companies listed in the Indonesian Sharia Stock Index during the 2020–2024 period. The initial population consisted of 13 companies. Purposive sampling was applied by requiring each company to remain within the research scope and provide complete financial and market data for all variables throughout the observation period. One company was excluded because its required data were incomplete. The final sample therefore consisted of 12 companies and 60 firm-year observations, as presented in Table 1.

Table 1. Research Sample

No.	Company Code	Company Name
1	AUTO	PT Astra Otoparts Tbk
2	BRAM	PT Indo Kordsa Tbk
3	BOLT	PT Garuda Metalindo Tbk
4	GJTL	PT Gajah Tunggal Tbk
5	INDS	PT Indospring Tbk
6	LPIN	PT Multi Prima Sejahtera Tbk
7	MASA	PT Multistrada Arah Sarana Tbk
8	MPMX	PT Mitra Pinasthika Mustika Tbk
9	ASII	PT Astra International Tbk
10	GDYR	PT Goodyear Indonesia Tbk
11	UNTR	PT United Tractors Tbk
12	SMSM	PT Selamat Sempurna Tbk

Source: Research data processed from the Indonesia Stock Exchange, 2025.

Table 1 identifies the companies included in the analysis. The sample covers automotive manufacturers, component producers, tyre manufacturers, vehicle distributors, and diversified companies with substantial automotive operations. This composition provides variation in company scale, short-term financial capacity, financing structure, and market valuation.

2. Descriptive Statistical Results

Descriptive statistics were used to provide an initial account of the distribution and variability of the research variables. Table 2 presents the number of observations, minimum and maximum values, means, and standard deviations for firm size, liquidity, capital structure, and firm value.

Table 2. Descriptive Statistics of the Research Variables

Variable	Measurement	Observations	Minimum	Maximum	Mean	Standard Deviation
Firm Size	Natural logarithm of total assets	60	12.730000	29.130000	19.827000	5.033317
Liquidity	Current ratio	60	0.660000	12.040000	2.674667	2.256566
Capital Structure	Debt-to-equity ratio	60	0.000740	1.740000	0.587679	0.443652
Firm Value	Price-to-book value	60	0.000100	7,076.600000	429.763700	1,220.7260

Source: EViews 12 output, processed by the researchers.

Table 2 shows that all variables were analysed using 60 firm-year observations. Firm size had an average value of 19.827000, with values ranging from 12.730000 to 29.130000. The standard deviation of 5.033317 indicates meaningful differences in the scale of assets held by the sampled companies.

Liquidity had a mean of 2.674667, meaning that, on average, the companies possessed current assets equivalent to approximately 2.67 times their current liabilities. Its minimum value was 0.660000, while the maximum reached 12.040000. The relatively wide range indicates that short-term financial capacity differed considerably across companies and years.

Capital structure had an average debt-to-equity ratio of 0.587679. The lowest value was 0.000740 and the highest was 1.740000, with a standard deviation of 0.443652. These figures suggest that most sampled firms relied more heavily on equity than debt, although financing practices were not uniform across the sample.

Firm value showed the greatest dispersion, with values ranging from 0.000100 to 7,076.600000. Its mean was 429.763700, while the standard deviation reached 1,220.726000. The standard deviation exceeded the mean, indicating substantial differences in market valuation among the sampled automotive companies. Several observations were valued considerably higher than the rest of the sample, which contributed to the wide distribution.

3. Classical Assumption Testing

The residual normality test was conducted to assess whether the regression residuals followed an approximately normal distribution. The EViews histogram and Jarque–Bera output are presented in Figure 1.

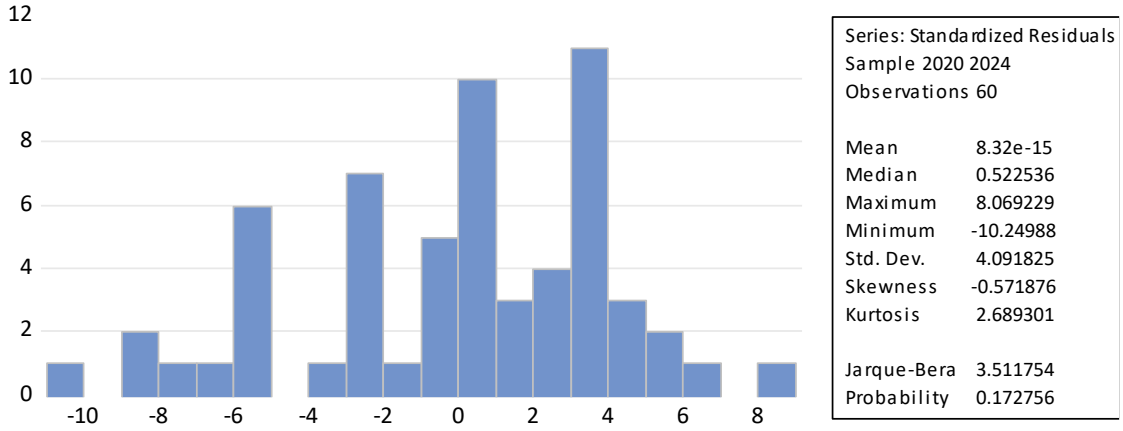


Figure 1. Residual Normality Test

Source: EViews 12 output, processed by the researchers.

Figure 1 shows a probability value of 0.172756. This value is higher than the 5% significance level, indicating that the null hypothesis of normally distributed residuals could not be rejected. The regression residuals were therefore considered to satisfy the normality assumption.

The multicollinearity, heteroscedasticity, and autocorrelation test results are summarised in Table 3.

Table 3. Results of the Classical Assumption Tests

Diagnostic Test	Indicator	Result	Threshold	Conclusion
Multicollinearity	Correlation between firm size and liquidity	0.458570	< 0.80	No high correlation
Multicollinearity	Correlation between firm size and capital structure	−0.288491	Absolute value < 0.80	No high correlation
Multicollinearity	Correlation between liquidity and capital structure	−0.460799	Absolute value < 0.80	No high correlation

Diagnostic Test	Indicator	Result	Threshold	Conclusion
Heteroscedasticity	Firm size probability	0.8202	> 0.05	No heteroscedasticity detected
Heteroscedasticity	Liquidity probability	0.8558	> 0.05	No heteroscedasticity detected
Heteroscedasticity	Capital structure probability	0.7397	> 0.05	No heteroscedasticity detected
Autocorrelation	Durbin–Watson statistic	1.144855	Study decision criterion	No serious autocorrelation indicated

Source: EViews 12 output, processed by the researchers.

Table 3 shows that the absolute correlations among the independent variables were below 0.80. Firm size and liquidity had a correlation coefficient of 0.458570, firm size and capital structure had a coefficient of −0.288491, and liquidity and capital structure had a coefficient of −0.460799. These results indicate that the independent variables did not exhibit a high degree of linear association, allowing all three variables to be retained in the regression model.

The Glejser test produced probability values of 0.8202 for firm size, 0.8558 for liquidity, and 0.7397 for capital structure. Each probability exceeded 0.05, indicating that the variance of the regression residuals was not systematically related to the independent variables. No heteroscedasticity problem was therefore detected.

The reported Durbin–Watson statistic was 1.144855. Based on the decision criterion adopted in the study, this result did not indicate a serious autocorrelation problem. Taken together, the diagnostic results suggest that the regression model was sufficiently appropriate for subsequent panel-data estimation and hypothesis testing.

4. Selection of the Panel-Data Regression Model

Three panel-data estimators were considered: the common effect model, fixed effect model, and random effect model. The Chow, Hausman, and Lagrange Multiplier tests were applied to determine the model that most appropriately represented the data. Table 4 presents the results of the model-selection tests.

Table 4. Panel-Data Model Selection Results

Test	Test Statistic	Probability	Model Comparison	Selected Model
Chow Test	Cross-section chi-square = 3.670284	0.8169	Common effect versus fixed effect	Common effect model
Hausman Test	Chi-square = 7.391961	0.0604	Random effect versus fixed effect	Random effect model

Test	Test Statistic	Probability	Model Comparison	Selected Model
Lagrange Multiplier Test	Breusch–Pagan cross-section	0.7941	Common effect versus random effect	Common effect model

Source: EViews 12 output, processed by the researchers.

Table 4 shows that the probability of the Chow test was 0.8169, which exceeded 0.05. The common effect model was therefore preferred to the fixed effect model. The Hausman test generated a probability of 0.0604, indicating that the random effect model was preferable to the fixed effect model. The Lagrange Multiplier test subsequently produced a probability of 0.7941, which was also higher than 0.05. This result indicated that the common effect model was more appropriate than the random effect model. The combined model-selection procedure therefore supported the use of the common effect model as the final panel-data estimator.

5. Panel-Data Regression Results

The common effect estimation produced the following regression equation:

$$Y = 64.07 - 2.35*X1 + 0.08*X2 - 4.69*X3 + [CX=R]$$

where (FV) denotes firm value, (SIZE) represents firm size, (LIQ) represents liquidity, (CS) represents capital structure, (i) refers to the company, (t) refers to the observation year, and (\varepsilon) represents the error term.

The estimated coefficients, statistical values, and significance levels are presented in Table 5.

Table 5. Common Effect Panel-Data Regression Results

Variable	Coefficient	t-Statistic	Probability	Statistical Result
Constant	64.07	—	—	—
Firm Size	−2.35	−2.221264	0.0304	Significant
Liquidity	0.08	2.710705	0.0089	Significant
Capital Structure	−4.69	−0.591719	0.5564	Not significant

Dependent variable: Firm value.

Source: EViews 12 output, processed by the researchers.

Table 5 shows that the constant was 64.07. This coefficient represents the estimated firm-value level when firm size, liquidity, and capital structure are held at zero. The constant mainly serves as the intercept of the statistical model and should not be interpreted as an actual market condition because a company cannot realistically operate with no assets, liquidity, or financing structure.

Firm size had a coefficient of −2.35. Holding liquidity and capital structure constant, a one-unit increase in the natural logarithm of total assets was associated with a 2.35-unit

decrease in firm value. The corresponding probability was 0.0304, which was below 0.05. Firm size therefore had a statistically significant negative effect on firm value.

Liquidity had a positive coefficient of 0.08. A one-unit increase in the current ratio was associated with a 0.08-unit increase in firm value, assuming the other variables remained unchanged. Its probability value was 0.0089, indicating a statistically significant positive relationship. Companies with stronger short-term financial capacity tended to receive higher market valuations during the observation period.

Capital structure had a coefficient of −4.69. The negative sign suggests that higher debt relative to equity was associated with lower firm value. Its probability value of 0.5564, however, was substantially higher than 0.05. The observed negative relationship was therefore not statistically significant, meaning that the available evidence did not establish an independent effect of capital structure on firm value.

6. Simultaneous Test and Explanatory Power

The simultaneous effect of firm size, liquidity, and capital structure was evaluated using the (F)-test. The explanatory capacity of the regression model was assessed through the adjusted coefficient of determination. Table 6 presents the model-level results.

Table 6. Simultaneous Test and Coefficient of Determination

Statistical Indicator	Value	Probability	Interpretation
F-statistic	4.576934	0.006168	The independent variables jointly affect firm value
Adjusted R^2	0.153889	—	The model explains 15.39% of the variation in firm value
Unexplained Variation	0.846111	—	84.61% of the variation is explained by factors outside the model

Source: EViews 12 output, processed by the researchers.

Table 6 shows that the (F)-statistic was 4.576934 with a probability of 0.006168. The probability was lower than 0.05, demonstrating that firm size, liquidity, and capital structure jointly had a statistically significant influence on firm value. The three financial characteristics were therefore relevant when considered collectively, even though capital structure did not show a significant individual effect.

The adjusted (R^2) value was 0.153889. This result means that firm size, liquidity, and capital structure explained approximately 15.39% of the variation in firm value. The remaining 84.61% was associated with factors outside the estimated model, such as profitability, dividend policy, sales growth, corporate governance, ownership structure, macroeconomic conditions, investor expectations, and market sentiment. The relatively

modest explanatory power suggests that firm value is shaped by a broader set of financial and non-financial considerations.

7. Summary of Hypothesis Testing

The decisions for each research hypothesis are summarised in Table 7.

Table 7. Summary of Hypothesis Testing

Hypothesis	Proposed Relationship	Coefficient	Probability	Decision
H1	Firm size affects firm value	−2.35	0.0304	Supported, with a negative effect
H2	Liquidity affects firm value	0.08	0.0089	Supported, with a positive effect
H3	Capital structure affects firm value	−4.69	0.5564	Not supported
H4	Firm size, liquidity, and capital structure jointly affect firm value	F = 4.576934	0.006168	Supported

Source: EViews 12 output, processed by the researchers.

Table 7 confirms that firm size had a significant negative influence on firm value, while liquidity had a significant positive influence. Capital structure did not have a statistically significant individual effect. The simultaneous test nevertheless showed that the three independent variables collectively contributed to changes in the market value of automotive companies listed in the Indonesian Sharia Stock Index during 2020–2024.

DISCUSSION

1. The Influence of Firm Size on Firm Value

The empirical results show that firm size had a negative and statistically significant effect on firm value, as indicated by a coefficient of −2.35, a (t)-statistic of −2.221264, and a probability value of 0.0304. The first hypothesis was therefore supported, although the direction of the relationship was negative. This result suggests that an increase in total assets did not automatically lead to a higher market valuation among automotive companies listed in the Indonesian Sharia Stock Index during 2020–2024. Larger companies may possess broader resources and stronger access to financing, but these advantages only create value when their assets are managed productively and generate returns that meet investor expectations.

The negative relationship may reflect investors' concerns regarding asset efficiency. Expansion in company size can be accompanied by higher operating costs, more complex organisational structures, slower decision-making processes, and increased managerial control problems. Investors may consequently interpret asset growth less favourably when

it is not followed by proportional improvements in profitability, sales, cash flow, or operational efficiency. From the perspective of signaling theory, a larger asset base does not always provide a positive signal. The market may distinguish between productive asset expansion and asset accumulation that does not contribute meaningfully to future earnings.

This finding is consistent with Irawan & Kusuma (2019) who reported that firm size had a negative and significant effect on firm value. A similar result was presented by Widianita et al. (2023), indicating that larger company size may reduce firm value when additional assets are not translated into stronger financial performance. The result differs from Akbar & Fahmi (2020) and Damayanti & Darmayanti (2022), who found that firm size positively influenced firm value. Such differences may arise from variations in industrial characteristics, research periods, company performance, and the ways in which firms use their assets. Automotive companies generally require substantial investment in production facilities, inventories, technology, and distribution networks. These investments may increase total assets without immediately improving the market's assessment of the company.

The result contributes to the literature by showing that company size should not be treated solely as an indicator of strength. Its effect on firm value depends on the efficiency and quality of asset utilisation. Managers should therefore avoid pursuing asset growth merely to increase corporate scale. Investment decisions need to be supported by realistic demand projections, operational efficiency, and a clear capacity to generate future cash flows. Investors should also evaluate whether increases in total assets are followed by improvements in earnings, productivity, and competitive position.

2. The Influence of Liquidity on Firm Value

Liquidity had a positive and statistically significant effect on firm value. The estimated coefficient was 0.08, with a (t)-statistic of 2.710705 and a probability value of 0.0089. The second hypothesis was therefore supported. This result indicates that automotive companies with a stronger capacity to meet their short-term obligations tended to receive more favourable market valuations.

Adequate liquidity can provide confidence to investors because it reflects a company's ability to maintain daily operations, settle maturing liabilities, and respond to unexpected financial needs. A sound current ratio may also reduce concerns about financial distress, particularly in an industry that requires considerable working capital for raw materials, inventories, production, and distribution. The finding supports the view that

liquidity conveys information about financial stability. Investors may regard sufficient liquid resources as a positive signal that management can preserve operational continuity without relying excessively on emergency financing.

The result is consistent with Damayanti & Darmayanti (2022) who found that liquidity had a positive and significant effect on firm value. It also supports the findings of Harfani & Nurdiansyah (2021) and Chynthiawati & Jonnardi (2022) , which showed that liquidity is relevant to market valuation. These studies suggest that the ability to meet short-term obligations can strengthen stakeholder confidence and reduce perceived financial risk.

The finding differs from Nugroho (2023), who reported that liquidity did not have a significant positive effect on firm value. Excessively high liquidity may sometimes indicate idle cash, slow-moving inventories, or unproductive current assets. The present findings nevertheless suggest that, within the sampled automotive companies, the benefits of liquidity were more visible than the potential inefficiencies associated with excessive current assets. The practical implication is that companies should maintain liquidity at a sufficient and productive level. Managers need to ensure that current assets are adequate to support operations while avoiding the accumulation of cash, receivables, or inventories that do not contribute to profitability.

3. The Influence of Capital Structure on Firm Value

Capital structure had a negative but statistically insignificant effect on firm value. The coefficient was −4.69, while the (t)-statistic was −0.591719 and the probability value was 0.5564. The third hypothesis was therefore not supported. Although the negative coefficient indicates that higher debt relative to equity was associated with lower firm value, the available evidence was not strong enough to establish a systematic relationship.

This result suggests that investors did not assess automotive companies solely on the basis of their debt-to-equity ratios. Debt can produce different consequences depending on how borrowed funds are used, the company's profitability, interest costs, cash-flow stability, and ability to meet repayment obligations. A higher debt level may support expansion and provide tax benefits when it finances productive investment. The same debt may weaken market confidence when it increases interest expenses and financial distress risk. These contrasting effects may explain why capital structure did not show a significant independent influence in the estimated model.

The finding is consistent with Nugroho (2023), who found insufficient evidence that capital structure positively influenced firm value. It also supports Adolph (2024), who concluded that capital structure did not significantly affect firm value. These results indicate that debt composition may not always serve as the primary information used by investors when assessing a company.

The finding differs from Ananda (2017) and Savitri et al. (2022) , who reported that capital structure influenced firm value. The divergence may be related to differences in industry, financial risk, profitability, and observation periods. The automotive sector is highly capital-intensive, making debt a common component of financing. Investors may therefore view leverage as a normal feature of the industry rather than an immediate indicator of either strength or weakness. The result is also compatible with the proposition of Modigliani and Miller that financing composition may have limited relevance under certain conditions, although actual markets remain affected by taxes, information asymmetry, agency costs, and bankruptcy risk.

The practical implication is that managers should not assume that increasing or reducing debt will automatically improve firm value. Financing decisions must be connected to investment quality, cash-flow capacity, and the expected return generated by borrowed funds. Creditors and investors need to examine not only the amount of debt but also its maturity, cost, purpose, and contribution to operating performance.

4. The Joint Influence of Firm Size, Liquidity, and Capital Structure

The simultaneous test produced an (F)-statistic of 4.576934 and a probability value of 0.006168. Firm size, liquidity, and capital structure therefore had a statistically significant joint influence on firm value. The fourth hypothesis was supported. This finding indicates that market valuation is better understood when the three financial characteristics are considered collectively rather than separately.

The simultaneous effect also shows that investors may evaluate the interaction between corporate resources, short-term financial stability, and financing decisions. A large company may not receive a favourable valuation when its liquidity is weak or its financing strategy creates substantial risk. Conversely, a company with moderate assets may be viewed positively when it manages working capital efficiently and maintains a responsible financing structure. Firm value consequently reflects a broader assessment of how financial resources are acquired, managed, and used to support sustainable operations.

The adjusted coefficient of determination was 0.153889, indicating that the three independent variables explained 15.39% of the variation in firm value. The remaining 84.61% was associated with factors outside the model. This modest explanatory power confirms that firm value is influenced by a wide range of financial and non-financial considerations. Profitability, dividend policy, sales growth, corporate governance, ownership structure, macroeconomic conditions, interest rates, investor sentiment, and expectations regarding the transition toward electric vehicles may also shape the market valuation of automotive companies.

Theoretically, the results extend signaling theory by demonstrating that financial indicators do not provide uniform signals to investors. Liquidity communicated a favourable signal of short-term financial strength, whereas larger asset size was interpreted less positively. Capital structure did not provide a sufficiently strong independent signal. The findings suggest that investors interpret financial information contextually rather than mechanically. The meaning of a financial ratio depends on how it relates to efficiency, risk, operational performance, and future business prospects.

5. Research Implications and Limitations

The findings provide practical implications for corporate managers and investors. Management should place greater emphasis on the productivity of assets rather than merely pursuing business expansion. Liquidity needs to be maintained at a level that supports operational continuity without creating excessive idle resources. Debt decisions should be based on repayment capacity and the expected return from financed activities. Investors should evaluate firm size, liquidity, and leverage together with profitability, cash flow, governance quality, and industry prospects before making investment decisions.

Several limitations should be considered when interpreting the findings. The study examined only 12 automotive companies listed in the Indonesian Sharia Stock Index, resulting in 60 firm-year observations. The limited sample may reduce the extent to which the results can be generalised to other sectors or to companies outside the Sharia capital market. The research covered the 2020–2024 period, which included unusual economic conditions associated with the pandemic, post-pandemic recovery, supply-chain disruption, and changes in the automotive industry.

The model also included only firm size, liquidity, and capital structure, while its adjusted indicates that most variation in firm value was explained by other factors. Firm

value was measured using price-to-book value, which may be sensitive to share-price movements and differences in accounting values across companies. Future studies may include profitability, dividend policy, sales growth, cash flow, corporate governance, and macroeconomic variables. A longer observation period, a broader sample, and alternative firm-value measures may also provide a more comprehensive understanding of corporate valuation in the automotive industry.

CONCLUSION

Based on the research findings and discussion, firm size, liquidity, and capital structure have different effects on the firm value of automotive companies listed in the Indonesian Sharia Stock Index during 2020–2024. Firm size has a significant negative effect, while liquidity has a significant positive effect on firm value. Capital structure has a negative but insignificant effect. Simultaneously, the three variables have a significant influence on firm value. These findings indicate that investors consider not only the amount of corporate assets but also how effectively those assets are managed. Companies should improve asset efficiency, maintain adequate liquidity, and manage debt according to their financial capacity. Future studies are expected to include broader samples, longer observation periods, and additional variables to provide a more comprehensive explanation of firm value.

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