DOI:
10.37715/rme.v10i2.7012

– Submitted : 3 Aug 2026
– Revised : 18 Sept 2026
– Accepted : 7 Oct 2026

Does Profitability Drive Firm Value through Capital Structure? An Empirical Test of the Pecking Order Theory in Healthcare Firms

Afni Jamaluddin[1*], La Ode Sumail[2], Khaeril Khaeril[3]
[1, 2, 3] Makassar College of Economics (STIEM) Bongaya, Indonesia
*Corresponding author: afnijamaluddin123@gmail.com

Abstract

This research investigates how capital structure functions as a mediator between profitability and firm value, drawing on data from 24 healthcare firms listed on the Indonesia Stock Exchange across four years, yielding 96 observations in total. A pooled OLS approach was applied to assess the general associations among the three variables profitability, capital structure, and firm value without accounting for differences across firms or over time. Findings reveal that profitability positively influences firm value, yet it negatively affects capital structure, a pattern consistent with the Pecking Order Theory (POT), where firms lean toward internal funds rather than external debt. Capital structure itself is found to negatively impact firm value, implying that companies carrying heavier debt loads tend to be valued lower by the market. In addition, the analysis confirms that capital structure serves as a significant mediating variable linking profitability to firm value. Collectively, these results reinforce the applicability of POT within the healthcare industry of an emerging economy and underscore how retained earnings remain the preferred funding source for firms in this sector. What sets this study apart is its focus on the mediating function of capital structure specifically within Indonesia's healthcare industry.

Keywords: profitability; capital structure; firm value; Pecking Order Theory; healthcare sector

OPEN ACCESS
e-ISSN 2548-3552
p-ISSN 2548-3536

© 2026 School of Business and Management
Universitas Ciputra

INTRODUCTION

Three closely linked elements, such as profitability, capital structure, and firm value, fundamentally shape corporate finance. As markets grow more volatile, technology continues to disrupt business models, and investor expectations shift, grasping how financial performance drives firm value has become an increasingly critical concern. Firm value commonly captured through Tobin's Q or Price to Book Value (PBV) mirrors how the market perceives a company's capacity to generate earnings while pursuing financing strategies that are sustainable over time. Profitability, meanwhile, functions as a marker of how efficiently a firm operates and sends a favourable signal to investors, which in turn strengthens investor trust and lifts firm value (Ferriswara et al., 2022; Renata & Marlina, 2026; Tercero-Lucas, 2021). However, capital structure plays a moderating role in this dynamic. The Pecking Order Theory (POT) suggests that firms prioritise their financing decisions in a specific order, starting with retained earnings, then moving to debt, and only considering new equity as a last resort. As a result, firms with higher profitability tend to depend less on debt financing, leading to lower leverage levels and diminished financing risk (Abdelaziz et al., 2022; Tripathi et al., 2021).

Elevated profitability contributes to firm value in two ways: directly, by boosting earnings, and indirectly, by lowering financial risk through reduced dependence on debt (Pakhchanyan et al., 2018). This underscores capital structure's function as a key channel connecting profitability to firm value. Such a relationship holds particular significance in the healthcare industry, where sustained, large-scale, capital-intensive spending is required for research and development, technological advancement, regulatory adherence, and infrastructure development. Following the COVID-19 pandemic, surging demand pushed companies towards expansion, which in turn heightened their financing requirements. Yet relying too heavily on debt can amplify financial risk and agency costs while eroding firm value (Evalina & Gusni, 2024; Kalvari & Wirianata, 2024). Therefore—whether towards paying down debt or funding new investments—investors consider not only profit growth but also the company's ability to manage Consequently, investors weigh not just how much profit a company generates but also how effectively it manages its capital structure. Grasping the mediating function of capital structure within the profitability–firm value relationship carries important implications for managers, investors, and regulatory bodies overseeing the healthcare sector.

Studies exploring the interplay among profitability, capital structure, and firm value have yielded mixed results. Several studies conducted in developing economies, including Indonesia, point to profitability as having a favourable impact on firm value, largely by enhancing expectations of future cash flows and lowering perceived risk levels (Hartanti et al., 2019; Nyoman et al., 2021; Oktaviani et al., 2024; Utami & Astika, 2024). In contrast, Win & Hasibuan (2024) did not identify any meaningful relationship between the two. The effect of capital structure on firm value, meanwhile, continues to be a matter of debate. Certain research points to a positive effect, attributed to tax advantages and greater managerial discipline (Diantimala et al., 2021; Khan et al., 2021), whereas other work identifies a negative effect linked to elevated bankruptcy risk and agency-related conflicts (Dao & Ta, 2020; Roy & Bandopadhyay, 2022). Adding further complexity, Ferriswara et al. (2022), Hartanti et al. (2019), and Trafalgar & Africa (2019) found no significant effect of capital structure on firm value at all. Similarly unsettled is the relationship between profitability and capital structure. While the Pecking Order Theory anticipates a negative association, several studies report

results that are either insignificant or, in some cases, positive. Morais et al. (2020); Samo & Murad (2019); and Sheikh & Qureshi (2017), for instance, found the relationship to be positive and statistically significant. Beyond these studies, research treating capital structure as a mediating variable in the profitability–firm value link particularly within Indonesia's healthcare sector remains scarce.

Overlooking the mediating pathway risks producing a partial picture of how value is actually created. Even when a firm records strong profitability, the choices it makes about allocating those earnings, whether towards paying down debt or funding new investments, can shape firm value in markedly different ways. For this reason, investigating capital structure's mediating role matters not just for confirming whether profitability influences firm value but for uncovering the mechanism through which that influence takes place. Directing attention to the healthcare sector adds meaningful value here, given that the industry is capital-intensive, subject to extensive regulation, and holds substantial potential for long-term growth. In contrast to earlier research that has largely centred on manufacturing, property, and banking industries (Marques & Alves, 2021; Niyas & Kavida, 2022), this study seeks to fill that gap by offering empirical evidence more directly applicable to Indonesia's healthcare sector.

Drawing on the background discussion and the research gaps identified above, this study is designed to empirically test and analyze how profitability affects firm value among healthcare companies listed on the Indonesia Stock Exchange, with capital structure positioned as the mediating variable. The central contribution of this research lies in testing this mediation pathway, as doing so offers empirical support for the relevance of the Pecking Order Theory in accounting for the financing behavior of healthcare firms in Indonesia. Through a quantitative approach paired with panel data analysis, this study aims to deliver a thorough answer to the research question: "Does capital structure mediate the effect of profitability on firm value in the healthcare sector?"

This research offers contributions on both theoretical and practical fronts. From a theoretical standpoint, it adds to the body of corporate finance literature by exploring how capital structure mediates outcomes within the framework of the Pecking Order Theory, specifically in the healthcare sector of an emerging economy. On the methodological side, treating capital structure as a mediating variable yields a richer analysis than one limited to direct effects alone. In practical terms, the findings offer useful guidance for management in shaping financing policies that optimize firm value through sound capital structure decisions. Investors, meanwhile, can draw on these results when assessing financing choices and future company prospects, while regulators stand to benefit from the insights in promoting transparency and financial stability across the healthcare industry. The remainder of this article unfolds across five sections: a review of relevant literature and hypothesis development, the research methodology, results paired with discussion, and finally, conclusions along with implications and directions for future research.

LITERATURE REVIEW

Pecking Order Theory (POT)

Developed by Myers & Majluf (1984), the Pecking Order Theory (POT) holds that firms choose their financing sources based on a defined order of preference rather than aiming for some optimal capital structure. Companies typically favor drawing on retained earnings first, moving to debt as the next option, and treating the issuance of new shares as a last resort. This ordering stems

from the information asymmetry that exists between managers and outside investors. Because managers generally possess more complete knowledge of the firm's actual condition and future outlook, issuing new equity tends to be read as a negative signal; investors may interpret it as a sign that the company's shares are currently overvalued (Elkhal, 2019). Consequently, firms typically avoid issuing new shares until they have exhausted other financing options.

Within the POT framework, profitability stands out as a key determinant shaping a firm's capital structure choices (Naranjo et al., 2020; Sumail & Akob, 2022). Companies that generate higher profits are generally better positioned to fund their operations and investments through internal resources, which correspondingly lessens their need to rely on debt. Strong profitability also signals sound financial health, builds investor confidence, and conveys an optimistic outlook regarding the firm's future direction (Agyei et al., 2020). Even so, the way a company balances internal versus external financing can still shape how the market perceives it. When capital structure is managed effectively, firms can capture the advantages debt offers while keeping financial risk in control, ultimately contributing to greater firm value (Dierker et al., 2019).

POT carries particular relevance for the healthcare industry, given the sector's heavy reliance on substantial investment in research, medical technology, healthcare infrastructure, and ongoing innovation in products and services. Firms enjoying high profitability tend to draw on internal funds to fuel growth, which lessens their dependence on debt and, in turn, lowers financial risk. That said, employing debt at a reasonable level can still yield certain advantages, such as expanding investment capacity and capturing tax benefits through the tax shield effect (Becker, 2021). Healthcare companies therefore need to manage their capital structure with care, striking a balance that captures the upside of external financing without pushing bankruptcy risk higher, thereby supporting stronger firm value over time.

From this framework, it is important to look at how profitability affects firm value while also taking into account the role of capital structure from a POT perspective. Profitability not only signals financial performance that can enhance firm value, but it also influences the decision-making process regarding financing. Within healthcare companies specifically, capital structure operates as the mechanism explaining how generated profits translate into higher firm value, working through financing policies that give priority to internal funds in line with POT's core principles.

Profitability with Firm Value

Indonesia's healthcare industry poses a distinct financing challenge: it demands substantial capital, involves long-term investment horizons, and operates under considerable regulatory uncertainty. This study looks at how firms in this sector make financing choices, drawing on Pecking Order Theory (POT) as its guiding framework. POT suggests that firms prioritize internal funds due to information asymmetry, resort to debt when internal funds are inadequate, and consider equity issuance only as a last option. Drawing on panel data and a quantitative research design, the analysis shows that when investment and financing choices are well-matched, profitability translates into higher firm value (Meah & Chaudhory, 2019; Niyas & Kavida, 2022). Taken together, the results suggest that financing decisions consistent with POT contribute meaningfully to maximizing firm value within the healthcare sector.

Two theoretical lenses help explain why profitability shapes firm value: signaling theory and operational efficiency. When a company consistently generates strong profits, it sends the market a positive signal about the quality of its management and its future growth potential, which in turn

can push investors to value its shares more highly (Balvers et al., 2017; Wiryakusuma, 2019). At the same time, robust profitability shows that a firm can generate enough cash internally, easing its reliance on external financing—which tends to be costly given the information asymmetry problems described by Myers & Majluf (1984). Within the healthcare sector specifically, sustained profitability signals that a company's operational strategies and service innovations are working, and this success translates directly into greater market value (Reschiwati et al., 2020). This pattern echoes what prior empirical research has found: profitability consistently exerts a significant, positive influence on firm value across a range of industries and countries (Hartanti et al., 2019; Nyoman et al., 2021; Oktaviani et al., 2024; Utami & Astika, 2024). Given this body of evidence, the following hypothesis is put forward. **H1: Profitability has a positive relationship with firm value**.

Profitability with Capital Structure

That said, the link between profitability and capital structure isn't necessarily straightforward; when profitability climbs too high, it can fuel outsized market expectations, which in turn puts added pressure on management to sustain that level of performance (Dogan et al., 2026; Sumail, 2019). Still, POT's central prediction holds that profitability and capital structure move in opposite directions. The logic is that profitable firms typically build up enough retained earnings to fund operations internally before turning to debt (Myers & Majluf, 1984). Empirical evidence from several developing economies backs this theory up, consistently finding that more profitable firms carry lower leverage ratios (Agyei et al., 2020; Chandra et al., 2019; Dao & Ta, 2020). On this basis, the following hypothesis is proposed. **H2: Profitability has a negative relationship with capital structure.**

Capital Structure with Firm Value

This dynamic carries particular weight in healthcare, given the sector's dual nature—it demands heavy investment in research and development, yet still benefits from relatively predictable cash flows generated by recurring services. Healthcare firms that turn a solid profit can draw on retained earnings to fund expansion without taking on the extra interest costs and financial risk that come with debt (Basdekis et al., 2020; Limbago & Sulistiawan, 2019). This tilt toward internal financing also reflects a deliberate management strategy: avoiding bankruptcy-related costs and preserving financial flexibility amid the regulatory uncertainty that healthcare firms routinely face (Elkhal, 2019; Morais et al., 2021). As for why capital structure might drag down firm value, trade-off theory offers a useful explanation, framed around the tension between debt's tax advantages and the costs of financial distress. Classic trade-off theory holds that debt can boost firm value through tax shield effects, but once leverage climbs too high, the resulting financial distress and agency costs can outweigh those benefits (Dierker et al., 2019; Roy & Bandopadhyay, 2022). These risks are amplified in healthcare specifically, where firms are especially exposed to shifting health policy, unpredictable service demand, and litigation exposure (Khan et al., 2021). This lines up with earlier research showing that heavy reliance on capital structure can erode firm value, an effect that's especially pronounced in developing countries where capital markets tend to be less efficient (Diantimala et al., 2021; Khan et al., 2021). Ultimately, the effectiveness of financing decisions and the management of financial risk determine whether capital structure helps or hurts firm value. Building on this discussion, the following hypothesis is proposed: **H3: Capital structure has a negative relationship with firm value.**

Profitability with Firm Value through Capital Structure

Beyond that, heavier leverage tends to heighten investors' perceived risk, which shows up as higher required returns and, correspondingly, lower stock valuations (Becker, 2021; Samo & Murad, 2019). Given these findings, healthcare firms need to manage their capital structure with care to sidestep the value-eroding effects that excessive leverage can bring (Singgih et al., 2019). A key theoretical contribution of this study lies in identifying capital structure's mediating role between profitability and firm value. Finding that capital structure significantly mediates this relationship suggests profitability shapes firm value not just directly, but also indirectly, by working through financing decisions. In theoretical terms, more profitable firms have greater room to rely on internal financing, which lowers financial risk and, as a result, lifts firm value (Naranjo et al., 2020; Sheikh & Qureshi, 2017). This mediating function of capital structure is likewise backed by prior studies examining profitability and firm value (Baroon A. et al., 2026; Fairuznissa Pelita Adisty et al., 2024). That said, this mediation turns out to be partial—profitability retains a direct, significant effect on firm value even after accounting for capital structure. In other words, profitability operates through two channels: a direct one, via improved operational efficiency and favorable market signaling, and an indirect one, via sound capital structure management that keeps financial risk in check (Dogan et al., 2026). Building on this discussion, the following hypothesis is proposed. **H4: Profitability has a positive relationship with firm value through capital structure.**

METHODS

Grounded in the positivism paradigm, this study takes a quantitative, explanatory approach to uncover the causal links among profitability, capital structure, and firm value. Positivism posits that structured empirical evidence can objectively observe and measure phenomena (Creswell, 2022). Panel data analysis was chosen because it allows relationships between variables to be examined both across time and across differences in firm characteristics at once, while also curbing the influence of unobserved heterogeneity and yielding more reliable estimates (Wang et al., 2024). Grounded in Myers & Majluf's (1984) Pecking Order Theory, the analysis explores how highly profitable firms tend to lean on internal financing retained earnings before resorting to debt and how this choice ultimately shapes firm value. The data come from financial statements and annual reports of healthcare companies listed on the Indonesia Stock Exchange between 2021 and 2024, a period marking the post-COVID-19 economic recovery (OECD, 2023). To guard against bias stemming from this recovery-phase context, only audited financial statements and annual reports were used, with measurement procedures kept consistent across both firms and years. Before analysis, the data underwent a thorough examination for errors, missing values, inconsistencies, and outliers to strengthen overall reliability.

For the healthcare companies listed on the Indonesia Stock Exchange between 2021 and 2024, this study relies on pooled OLS to capture the overall relationships among profitability, capital structure, and firm value, without accounting for firm-specific or time-specific effects. Two regression equations form the basis of the estimation: the first captures how profitability affects capital structure, while the second captures how both profitability and capital structure jointly affect firm value. Capital structure's mediating role is then evaluated by examining the indirect effect that profitability exerts on firm value through this pathway.

Data were drawn from the official Indonesia Stock Exchange (IDX) database and company

websites, ensuring both authenticity and traceability. Out of a research population comprising 38 healthcare companies listed on the IDX, purposive sampling was applied using three criteria: (1) continuous listing on the IDX throughout 2021–2024; (2) publication of complete, audited annual financial reports; and (3) full data availability across all research variables. Applying these criteria narrowed the sample to 24 companies, yielding 96 total observations (24 companies across 4 years). This sample size comfortably clears the minimum threshold for panel data regression analysis. Joseph F. Hair et al. (2019) recommend at least a 15:1 ratio of observations to independent variables, whereas this study reaches a 48:1 ratio, well above that benchmark.

The study's independent variable, profitability, is captured through Return on Assets (ROA), the ratio of after-tax net income to total assets, which reflects how efficiently a company converts its assets into profit (Ehrhardt & Brigham, 2014). Using ROA aligns with prior research identifying profitability as a central driver of financing decisions under the POT framework (Berk & DeMarzo, 2014). Capital structure serves as the mediating variable, measured via the Debt-to-Equity Ratio (DER), total debt divided by total equity, which captures how much a firm leans on debt relative to equity. This measure carries particular relevance for 2021–2024, a period when healthcare firms grappled with financial uncertainty and shifting financing needs amid COVID-19 recovery. A higher DER signals heavier debt reliance and greater financial risk, while a lower DER points to more limited debt exposure, making it a fitting lens through which to examine how profitability, capital structure, and firm value interrelate. Firm value, the dependent variable, is measured through Price to Book Value (PBV), the ratio of market price per share to book value per share, which captures how investors perceive a company's growth prospects and is well-suited to assessing how financing decisions shape market perception (Ross et al., 2013). All variables are measured on a ratio scale.

The research model consists of three main equations.

1. Equation for H1 and H2: $CS_{it} = \alpha_1 + \beta_1 PROF_{it} + \varepsilon_{1it}$
2. Equation for H1 and H3: $FV_{it} = \alpha_2 + \beta_2 PROFit + \beta_3 CS_{it} + \varepsilon_{2it}$
3. Equation for H4: Mediation Effect: $Indirect\ Effect = \beta 1 \times \beta 3$

Where

FV_{it} = firm value of company *i* in year *t*
$PROF_{it}$ = profitability of company *i* in year *t*
CS_{it} = capital structure of company *i* in year *t*
α_2 = constant
β_1 = coefficient of the effect of profitability on capital structure
β_2 = coefficient of the effect of profitability on firm value
β_3 = coefficient of the effect of capital structure on firm value
ε_{2it} = error term.

RESULT

Looking at healthcare companies listed on the IDX during 2021–2024, the average Return on Assets (ROA) came in at 10.86%, with fairly limited variation, a sign that these firms generated profits consistently rather than erratically. The average Debt-to-Equity Ratio (DER) stood at 0.52, pointing to moderate debt usage and lending support to Pecking Order Theory's claim that profitable firms tend to favor internal financing over external debt. Meanwhile, the average Price-

to-Book Value (PBV) reached 3.85, suggesting the market held a generally favorable view of the sector's growth prospects, even as firm value varied noticeably from one company to another.

Table 1. Descriptive Statistics

Variable	N	Minimum	Maximum	Mean	Std. Deviation
ROA	96	2,89	25,99	10,8592	1,321
DER	96	0,11	1,59	0,5227	0,3907
PBV	96	0,1857	23,8421	3,8546	1,2817

Source: Author, 2026

To confirm the regression model's validity, a series of classical assumption tests were carried out. The One-Sample Kolmogorov–Smirnov normality test returned an Asymp. Sig. (2-tailed) value of 0.200—above the 0.05 threshold—confirming that the data follow a normal distribution. The Durbin–Watson statistic, used to test for autocorrelation, came in at 2.164, indicating the model is free of this issue. Multicollinearity was also ruled out, with a Variance Inflation Factor (VIF) of 1.224, far below the conventional cutoff of 10. Lastly, the heteroscedasticity test produced significance values of 0.817 for ROA and 0.409 for DER, both comfortably above 0.05, confirming that heteroscedasticity is not present. Taken together, these results confirm that the regression model meets the Best Linear Unbiased Estimator (BLUE) assumptions, giving confidence that the estimation results are sound enough to interpret further (Gujarati & Porter, 2009).

Table 2. Classical Assumption Test Results

Assumption Test	Instrument	Standard	Results	Conclusion
Normality	One-Sample Kolmogorov–Smirnov Test (Asymp. Sig. (2-tailed)	>0,05	0.200	Data are normally distributed
Autocorrelation	Durbin-Watson (DW)	DW < 2 → positive DW > 2 → negative	2,164	No autocorrelation
Multicollinearity	Variance Inflation Factor (VIF)	> 0,10 and VIF < 10	1,224	No indication of multicollinearity
Heteroscedasticity	Significance Value	Sig. > 0.05 (no heteroscedasticity occurs); Sig. ≤ 0.05 (heteroscedasticity occurs)	ROA (0,817) DER (0,409)	No heteroscedasticity is detected.

Source: Author, 2026

The goodness-of-fit results point to strong predictive power across both models. In the first

model examining how ROA and DER influence PBV, the coefficient of determination (R^2) reaches 0.483, meaning these two variables account for 48.3% of the variation in firm value. The second model, which looks at how ROA affects DER, produces an R^2 of 0.404, showing that profitability explains 40.4% of the variation in capital structure. Per Cohen's (1988) criteria, both figures qualify as large effect sizes, underscoring that the models carry substantial explanatory power for the relationships being studied.

Hypothesis testing relied on linear regression analysis to evaluate the study's four hypotheses. For the first, the results show that profitability exerts a positive, statistically significant effect on firm value ($\beta = 0.267$; $t = 4.873$; $p < 0.01$). Put differently, holding other factors constant, a one-unit rise in Return on Assets (ROA) corresponds to a 0.267 increase in Price-to-Book Value (PBV). Conceptually, this finding reinforces the idea that stronger profitability signals a firm's solid earnings capacity, which in turn bolsters investor confidence in its future cash flows and lifts its market value (Alathamneh et al., 2025; Bagh et al., 2025). Firms with robust profitability tend to be viewed more favorably by investors, largely because they're seen as holding onto sustainable competitive advantages (Zheng et al., 2026).

The second hypothesis test reveals that profitability has a negative, statistically significant effect on capital structure ($\beta = -0.449$; $t = 12.738$; $p < 0.01$), a result that lends strong support to Myers & Majluf's (1984) Pecking Order Theory. The theory holds that highly profitable firms tend to lean on internal financing, which lowers their need for external debt, while less profitable firms are more likely to turn to debt as an alternative funding source. This pattern mirrors POT's proposed financing hierarchy, in which firms prioritize internal funds first, debt second, and treat new equity issuance as a last resort (Kounouwewa & Azon, 2025). Taken together, these results suggest that Indonesian healthcare companies' financing behavior aligns closely with Pecking Order Theory principles.

The third hypothesis test shows that capital structure exerts a negative, statistically significant effect on firm value ($\beta = -0.792$; $t = 3.887$; $p < 0.01$), implying that a heavier reliance on debt tends to erode firm value. This aligns with trade-off theory, which addresses optimal debt levels, while PBV captures market valuation: excessive leverage raises financial risk and can dampen both investor confidence and firm value (Fischer & Jensen, 2024; Lindset et al., 2024). Given that the healthcare sector demands substantial, ongoing capital investment, high leverage there can heighten financial risk and weaken the market's otherwise positive view of the company (Choi et al., 2026; Tulcanaza-Prieto et al., 2024).

The fourth hypothesis test confirms that capital structure plays a significant mediating role in linking profitability to firm value ($\beta = 0.374$; $t = 10.023$; $p < 0.01$). This means profitability shapes firm value through two channels directly and indirectly via financing choices. Firms with higher profitability tend to rely less on debt, which lowers financial risk and, by extension, boosts firm value. These findings underscore that capital structure functions as a strategic bridge between a company's operational performance and its market valuation, rather than acting merely as a background variable in the model (Tian et al., 2024).

Table 3. Results of Liniear Regression

Variable	Coefficients	t	Sig	*R Square*	Result
ROA→PBV	0.267	4.873	0.000		Supported
ROA→DER	-0.449	12.738	0.005	0.404	Supported

DER→PBV	-0.792	3.887	0.000		Supported
ROA→DER→PBV	0.374	10.023	0.001	0.483	Supported

Source: Author, 2026

Taken as a whole, these findings position profitability as a central driver of firm value among Indonesian healthcare companies operating both directly and indirectly through the capital structure's mediating effect. Higher profitability is often associated with reduced reliance on debt, whereas increased debt levels negatively impact firm value. This points to a clear pattern: firms that can generate strong profits while keeping debt levels in control are more likely to earn favourable market valuations. These results align closely with Pecking Order Theory, which champions internal financing as the preferred funding route. On that basis, healthcare companies would do well to lean primarily on retained earnings for financing and pursue conservative debt policies—both to safeguard financial stability and to lift firm value over time.

DISCUSSIONS

Profitability, captured through Return on Assets (ROA), emerges as a meaningful driver of firm value in healthcare companies, as measured by Price-to-Book Value (PBV): firms that convert assets into profit efficiently tend to command higher market appreciation. Through the lens of Pecking Order Theory, strong profitability generates internal funds that reduce a company's need to lean on debt or issue new equity, a dynamic that lowers financial risk and bolsters investor confidence in the firm's growth trajectory. In a capital-intensive sector like healthcare, profitability thus becomes a crucial funding source for sustaining investment and long-term growth. These results reinforce the work of Hartanti et al. (2019), Nyoman et al. (2021), Oktaviani et al. (2024), and Utami & Astika (2024), adding further empirical weight to Pecking Order Theory's validity.

The negative, statistically significant relationship between profitability and capital structure (DER) lends further support to Pecking Order Theory, which holds that firms favour internal financing over debt. Healthcare companies posting higher ROA tend to fund operations and investments through retained earnings, reducing their reliance on external debt—a strategy that helps limit financial distress risk while preserving managerial flexibility. This points to a relatively conservative financing approach among Indonesian healthcare firms. Elevated debt levels erode firm value, as the associated financial risk and agency costs outweigh any tax advantages that debt might offer. These results reinforce prior work by Agyei et al. (2020), Chandra et al. (2019), and Dao & Ta (2020), further validating Pecking Order Theory empirically.

A higher DER heightens investors' perception of risk, prompting them to assign healthcare firms a lower valuation (PBV), a sign that the market prizes financial stability over the potential upside of aggressive debt use, especially in a sector that depends on stable cash flows. Beyond these findings, capital structure is shown to mediate the relationship between profitability and firm value: more profitable firms tend to keep debt levels lower, which reduces financial risk and lifts firm value. Together, these results confirm that financing decisions act as a key mechanism connecting operational performance to how the market values a firm. This study thus aligns with the conclusions of Diantimala et al. (2021) and Khan et al. (2021), lending additional empirical support to Pecking Order Theory.

The results back up H1, confirming a positive relationship between profitability and firm

value. Stronger profitability reflects a company's capacity to generate earnings and sustain financial performance, an especially valuable trait during the COVID-19 recovery period, when profitable healthcare firms had more internal resources to support operations, working capital, and investment. Robust profitability also eased investor concerns about financial risk and future performance, which translated into greater confidence and, ultimately, higher firm value. This suggests that during the recovery period, profitability served as a key marker of both corporate resilience and financial strength.

The results support H2, revealing a negative relationship between profitability and capital structure: more profitable firms tend to rely less on external debt, since they have adequate internal funds to cover their activities. During the COVID-19 recovery period, this approach allowed companies to preserve financial flexibility amid economic uncertainty—healthcare firms with stronger profitability could draw on retained earnings to fund operations and investment without significantly raising debt. In effect, profitability reduced the need for outside financing and supported better financial risk management, a pattern that fits squarely with Pecking Order Theory's emphasis on prioritising internal financing over external sources.

The results support H3, indicating a negative relationship between capital structure and firm value. Higher debt levels raise financial risk because firms must keep meeting interest and principal payments regardless of how well they're actually performing, a risk that mattered even more during the COVID-19 recovery period, as healthcare companies navigated uncertainty around operating conditions, costs, and cash flows. Firms carrying lower leverage enjoyed greater financial flexibility and faced less financial pressure, which likely led investors to view excessive debt as a risk factor capable of dragging down future performance and firm value. This suggests that conservative capital structure choices carried particular weight during a period of economic uncertainty.

The results support H4, showing that profitability boosts firm value indirectly, working through capital structure. Higher profitability lessens the need for external financing, and the resulting lower debt levels help contain financial risk and support firm value. During the COVID-19 recovery period, profitable healthcare companies were better positioned to draw on internal funds and preserve financial flexibility, meaning profitability shaped firm value along two tracks: directly, through stronger earnings, and indirectly, through reduced reliance on debt. This confirms capital structure's important mediating role between profitability and firm value, one that carried particular significance amid economic uncertainty.

On the theoretical front, this study makes a notable contribution by situating Pecking Order Theory within an industry that has its own distinctive traits. Healthcare's strict regulatory environment and heavy investment demands open up a fresh angle on how capital structure theory applies in practice, extending POT's reach beyond the manufacturing and financial sectors where it has traditionally been tested more extensively. The findings also push back against the trade-off theory assumption that firms consistently chase an optimal leverage target. Instead, Indonesian healthcare companies exhibit financing behaviour that fits more naturally within POT's hierarchy, where profitability becomes the primary factor shaping debt capacity. This suggests that in emerging markets marked by relatively high information asymmetry, the pull towards internal financing outweighs the drive to optimise capital structure for tax purposes.

These findings carry practical implications: healthcare management should work to boost profitability through operational efficiency while making fuller use of retained earnings as an internal financing source, and debt policies should be handled with care to keep leverage at safe levels

that support, rather than undermine, value creation. For investors, lower debt levels in otherwise profitable companies may serve as a positive signal worth watching. A few limitations are worth noting, including the length of the observation period, the reliance on PBV as a proxy for firm value, and the exclusion of macroeconomic factors—future research would benefit from extending the observation window, applying dynamic methods, and incorporating additional variables such as corporate governance and innovation. Overall, capital structure clearly plays a pivotal role: when profitability pushes the debt-to-equity ratio (DER) higher, this can ultimately work to strengthen firm value (Baroon A. et al., 2026; Fairuznissa Pelita Adisty et al., 2024).

CONCLUSION

This study finds profitability to be a key lever for boosting firm value. H1 holds up, with higher profitability linked to higher firm value; H2 is likewise supported, showing that more profitable healthcare companies tend to lean more on internal financing and less on debt. H3 also holds, indicating that greater leverage corresponds to lower firm value, likely due to the added financial risk it brings. Finally, H4 is supported as well, revealing that profitability exerts a positive indirect effect on firm value by way of capital structure. Altogether, these results position capital structure as a critical mechanism connecting profitability to firm value.

These findings hold clear relevance for healthcare companies navigating the COVID-19 recovery period. Management would do well to strengthen profitability, put retained earnings to efficient use, and keep leverage at prudent levels to protect both financial stability and firm value—with dividend policy also factoring in the need to preserve internal financing capacity. On the regulatory side, greater transparency in financial reporting could help narrow information asymmetry.

Future studies could compare these relationships across the pre-, mid-, and post-COVID-19 periods while also incorporating factors such as liquidity, firm size, growth opportunities, corporate governance, macroeconomic conditions. Drawing on alternative measures and panel-data methods may likewise strengthen the robustness of findings across different industries and emerging markets.

LIMITATION

This study is subject to several limitations that should be considered when interpreting its findings. First, the use of data from a single country and industry may limit the generalizability of the results to other institutional and industrial contexts. Second, the analysis does not differentiate among healthcare subsectors, which may exhibit distinct financing structures and financial decision-making patterns. Future research could extend this line of inquiry by conducting cross-country comparative analyses, incorporating additional explanatory variables such as corporate governance and R&D intensity, and employing qualitative or mixed-methods approaches to develop a more comprehensive understanding of corporate financing decisions. Overall, the findings suggest that profitability serves as a strategic determinant of financing decisions, highlighting the role of effective internal financing management in supporting corporate value creation.

REFERENCES

Abdelaziz, H., Rim, B., & Helmi, H. (2022). The Interactional Relationships Between Credit Risk, Liquidity Risk and Bank Profitability in MENA Region. Global Business Review, 23(3), 561–583. https://doi.org/10.1177/0972150919879304

Agyei, J., Sun, S., & Abrokwah, E. (2020). Trade-Off Theory Versus Pecking Order Theory: Ghanaian Evidence. SAGE Open, 10(3). https://doi.org/10.1177/2158244020940987

Alathamneh, M., Obeidat, M. I., Almomani, M. A., Almomani, T. M., & Darkal, N. (2025). The Mediating Role of Profitability in the Impact Relationship of Assets Tangibility on Firm Market Value. Journal of Risk and Financial Management, 18(2), 1–17. https://doi.org/10.3390/jrfm18020104

Bagh, T., Hunjra, A. I., & Corbet, S. (2025). The impact of corporate governance on firm value: Understanding the role of strategic change. International Review of Economics and Finance, 103(June 2024), 104472. https://doi.org/10.1016/j.iref.2025.104472

Balvers, R. J., Gu, L., & Huang, D. (2017). Profitability, Value, and Stock Returns in Production-Based Asset Pricing without Frictions. Journal of Money, Credit and Banking, 49(7), 1621–1651. https://doi.org/10.1111/jmcb.12426

Baroon A., I, D. D. A., & S, M. L. M. C. (2026). Mediating Role of Capital Structure Between Determinants of Capital Structure and Firm Value: A Path Analysis Using Econometrics Model. International Journal of Research and Innovation in Social Science (IJRISS), 10(19), 41–57. https://doi.org/10.47772/IJRISS

Basdekis, C., Christopoulos, A., Katsampoxakis, I., & Lyras, A. (2020). Profitability and optimal debt ratio of the automobiles and parts sector in the Euro area. Journal of Capital Markets Studies, 4(2), 113–127. https://doi.org/10.1108/jcms-08-2020-0031

Becker, D. M. (2021). The translation between the required return on unlevered and levered equity for explicit cash flows and fixed debt financing. Managerial Finance, 47(4), 466–486. https://doi.org/10.1108/MF-02-2020-0069

Berk, J., & DeMarzo, P. (2014). Corporate Finance. In Pearson Education, Inc (pp. 1–1141).

Chandra, T., Junaedi, A. T., Wijaya, E., Suharti, S., Mimelientesa, I., & Ng, M. (2019). The effect of capital structure on profitability and stock returns. Journal of Chinese Economic and Foreign Trade Studies, 12(2), 74–89. https://doi.org/10.1108/jcefts-11-2018-0042

Choi, Y., Hovakimian, A., & Won, J. (2026). Risk Perceptions and Corporate Financing Behavior. Financial Management, xxx(xxx), 1–31. https://doi.org/10.1111/fima.70040

Cohen, J. (1988). Statistical Power Analysis for the Behavioral Sciences Second Edition. In Lawrence Erlbaum Associates.

Creswell, J. W. (2022). Concise Introduction to Mixed Methods Research. In SAGE Publications, Inc. 2455,: Vol. Second Edi (pp. 1–169).

Dao, B. T. T., & Ta, T. D. N. (2020). A meta-analysis: capital structure and firm performance. Journal of Economics and Development, 22(1), 111–129. https://doi.org/10.1108/jed-12-2019-0072

Diantimala, Y., Syahnur, S., Mulyany, R., & Faisal, F. (2021). Firm size sensitivity on the correlation between financing choice and firm value. Cogent Business and Management, 8(1), 1–20. https://doi.org/10.1080/23311975.2021.1926404

Dierker, M., Lee, I., & Seo, S. W. (2019). Risk changes and external financing activities: Tests of the dynamic trade-off theory of capital structure. Journal of Empirical Finance, 52(February 2018), 178–200. https://doi.org/10.1016/j.jempfin.2019.03.004

Dogan, M. A., Guloglu, B., & Aydemir, R. (2026). Sustainability and profitability: The ESG impact on eurozone emission-intensive sectors. Borsa Istanbul Review, 26(3), 100807. https://doi.org/10.1016/j.bir.2026.100807

Ehrhardt, M. C., & Brigham, E. F. (2014). Financial Management: Theory and Practice. In Printed in the United States of America.

Elkhal, K. (2019). Business uncertainty and financial leverage: should the firm double up on risk? Managerial Finance, 45(4), 536–544. https://doi.org/10.1108/MF-10-2018-0491

Evalina, E., & Gusni, G. (2024). Institutional Ownership, Firm Size, and Agency Cost: A Moderating Role of Leverage. Jurnal Ilmu Keuangan Dan Perbankan (JIKA), 14(1), 105–116. https://doi.org/10.34010/jika.v14i1.13944

Fairuznissa Pelita Adisty, Mardi, & Ulupui, I. G. K. A. (2024). Revealing The Role Of Profitability In Mediating Leverage, Liquidity, And Company Size On Firm Value In Health Sector. Jurnal Pendidikan, 4(2), 226–232.

Ferriswara, D., Sayidah, N., & Buniarto, E. A. (2022). Do corporate governance , capital structure predict financial performance and firm value ? (empirical study of Jakarta Islamic index) Do corporate governance , capital structure predict financial performance and firm value ? Cogent Business & Management, 9(1). https://doi.org/10.1080/23311975.2022.2147123

Fischer, M., & Jensen, B. A. (2024). The tax shield increases the interest rate. Journal of Banking and Finance, 161(January), 107096. https://doi.org/10.1016/j.jbankfin.2024.107096

Gujarati, D. N., & Porter, D. C. (2009). Basic Econometrics. In McGraw-Hill (pp. 1–952). https://doi.org/10.2307/2230043

Hartanti, R., Yulandani, F., & Riandi, M. R. (2019). the Effect of Profitability, Capital Structure, and Implementation of Corporate Governance Mechanism on Firm Value. Jurnal Akuntansi Trisakti, 6(1), 83–98. https://doi.org/10.25105/jat.v6i1.4872

Joseph F. Hair, J., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). Multivariate Data Analysis : Multivariate Data Analysis : Why multivariate data analysis ? In Annabel Ainscow (Vol. 28, Issue 8). http://www.amazon.com/Discovering-Statistics-Introducing-Statistical-Methods/dp/0761944524

Kalvari, S. D., & Wirianata, H. (2024). Dampak Manajemen Laba, Asimetri Informasi, Dan Leverage Terhadap Biaya Modal Perusahaan. 2(2), 306–312.

Khan, A., Qureshi, M. A., & Davidsen, P. I. (2021). A system dynamics model of capital structure policy for firm value maximization. Systems Research and Behavioral Science, 38(4), 503–516. https://doi.org/10.1002/sres.2693

Kounouwewa, J., & Azon, A. T. (2025). Pecking Order Theory and Financing Decisions: Evidence from African Small and Medium-Sized Enterprises. International Journal of Economics and Financial Issues, 15(6), 677–685. https://econjournals.com/index.php/ijefi/article/view/21477

Limbago, E., & Sulistiawan, D. (2019). the Effect of Gender in the Board of Commissioners on Company Value With Family Control As a Moderation Variable in Indonesia. Review of Management and Entrepreneurship, 3(2), 155–168. https://doi.org/10.37715/rme.v3i2.1202

Lindset, S., Nygård, G., & Persson, S. A. (2024). Trade-Off Theory for Dual Holders. Journal of Money, Credit and Banking, 56(7), 1611–1643. https://doi.org/10.1111/jmcb.13128

Marques, B. P., & Alves, C. F. (2021). The profitability and distance to distress of European banks: do business choices matter? European Journal of Finance, 27(15), 1553–1580. https://doi.org/10.1080/1351847X.2021.1897638

Meah, M. R., & Chaudhory, N. U. (2019). Corporate Governance and Firm's Profitability: An Emerging Economy-based Investigation. Indian Journal of Corporate Governance, 12(1), 71–93. https://doi.org/10.1177/0974686219836544

Morais, F., Serrasqueiro, Z., & Ramalho, J. J. S. (2020). The zero-leverage phenomenon: A bivariate probit with partial observability approach. Research in International Business and Finance, 53(October 2019). https://doi.org/10.1016/j.ribaf.2020.101201

Morais, F., Serrasqueiro, Z., & Ramalho, J. J. S. (2021). The zero-leverage phenomenon in European listed firms: A financing decision or an imposition of the financial market? BRQ Business Research Quarterly, 53(xxx), 1–23. https://doi.org/10.1177/23409444211024653

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(2), 187–221. https://doi.org/10.1016/0304-405X(84)90023-0

Naranjo, P., Saavedra, D., & Verdi, R. S. (2020). The Pecking Order and Financing Decisions: Evidence From Changes to Financial-Reporting Regulation. Journal of Accounting, Auditing and Finance, xxx(xxx), 1–24. https://doi.org/10.1177/0148558X20945066

Niyas, N., & Kavida, V. (2022). Impact of financial brand values on firm profitability and firm value of Indian FMCG companies. IIMB Management Review, 34(4), 346–363. https://doi.org/10.1016/j.iimb.2023.01.001

Nyoman, N., Febrianty, A., & Mertha, I. M. (2021). Effect of Profitability, Investment Opportunity Set and Good Corporate Governance on Company Value. American Journal of Humanities and Social Sciences Research, 5(2), 238–246. www.ajhssr.com

Oktaviani, D., Satriansyah, A., & Widianingrum, E. (2024). The Effect of Profitability, Company Size and Leverage on Company Value. Jurnal Ilmiah Akuntansi Kesatuan, 12(1), 135–146. https://doi.org/10.37641/jiakes.v12i1.2464

Pakhchanyan, S., Prokop, J., & Sahakyan, G. (2018). Drivers of Bank Solvency, Risk Provisioning and Profitability in the Armenian Banking System. Journal of Emerging Market Finance, 17(3), 307–332. https://doi.org/10.1177/0972652718797815

R.Win, D. E., & Hasibuan, H. T. (2024). The Effect of Financial Performance on Firm Value: Dividend Policy's Moderating Role. E-Jurnal Akuntansi, 34(5), 1343–1356. https://doi.org/10.24843/eja.2024.v34.i05.p20

Renata, M., & Marlina, M. A. E. (2026). Uncovering the Triadic Relationship: IC, Profitability, and Sustainability Reporting in Southeast Asian Companies. Review of Management and Entrepreneurship, 10(1), 17–32. https://doi.org/10.37715/rme.v10i1.5297

Reschiwati, R., Syahdina, A., & Handayani, S. (2020). Effect of liquidity, profitability, and size of companies on firm value. Utopia y Praxis Latinoamericana, 25(Extra 6), 325–332. https://doi.org/10.5281/zenodo.3987632

Ross, S. A., Westerfield, R. W., & Jaffe, J. (2013). Corporate Finance. In McGraw-Hill: Vol. TENTH EDIT. https://doi.org/10.4324/9781003380610-11

Roy, K., & Bandopadhyay, K. (2022). Financial risk and firm value: is there any trade-off in the Indian context? Rajagiri Management Journal, 16(3), 226–238. https://doi.org/10.1108/ramj-03-2021-0021

Samo, A. H., & Murad, H. (2019). Impact of liquidity and financial leverage on firm's profitability – an empirical analysis of the textile industry of Pakistan. Research Journal of Textile and Apparel, 23(4), 291–305. https://doi.org/10.1108/RJTA-09-2018-0055

Sheikh, N. A., & Qureshi, M. A. (2017). Determinants of capital structure of Islamic and conventional commercial banks: Evidence from Pakistan. International Journal of Islamic and Middle Eastern Finance and Management, 10(1), 24–41. https://doi.org/10.1108/IMEFM-10-2015-0119

Singgih, M., Pricilia, V. P., & Lavista, E. (2019). Market To Book Value, Firm Size, and the Underpricing of Indonesian Initial Public Offerings. Review of Management and Entrepreneurship, 2(2), 75–90. https://doi.org/10.37715/rme.v2i2.964

Sumail, L. O. (2019). Governance and Financial Difficulties of Conventional Banks. Review of Management and Entrepreneurship, 2(2), 121–134. https://doi.org/10.37715/rme.v2i2.967

Sumail, L. O., & Akob, R. A. (2022). The Testing Of Pecking Order Theory For Behavior Financing In The Company ' s Life Stage. Jurnal Keuangan Dan Perbankan, 26(3), 580–598. https://doi.org/10.26905/jkdp.v26i3.7607

Tercero-Lucas, D. (2021). Nonstandard monetary policies and bank profitability: The case of Spain. International Journal of Finance and Economics, xxx(September 2020), 1–30. https://doi.org/10.1002/ijfe.2535

Tian, X., Wang, Y., & Kohar, U. H. A. (2024). Capital structure, business model innovation, and firm performance: Evidence from Chinese listed corporate based on system GMM model. PLoS ONE, 19(6), 1–23. https://doi.org/10.1371/journal.pone.0306054

Trafalgar, J., & Africa, L. A. (2019). The effect of capital structure, institutional ownership, managerial ownership, and profitability on company value in manufacturing companies. The Indonesian Accounting Review, 9(1), 27–38. https://doi.org/10.14414/tiar.v9i1.1619

Tripathi, S., Talukder, B., & Rangarajan, K. (2021). Do Supply Chain Performance Influence Firm Profitability? A Predictive Approach in the Context of the Indian Pharmaceutical Industry. IIM Kozhikode Society & Management Review, xxx(xxx), 1–8. https://doi.org/10.1177/22779752211003453

Tulcanaza-Prieto, A. B., Lee, Y., & Anzules-Falcones, W. (2024). The Moderating Role of Corporate Governance in the Relationship between Leverage and Firm Value: Evidence from the Korean Market. Risks, 12(1). https://doi.org/10.3390/risks12010011

Utami, N. C. R., & Astika, I. B. P. (2024). Profitabilitas, Arus Kas Bebas, dan Nilai Perusahaan. E-Jurnal Akuntansi, 34(4), 1079. https://doi.org/10.24843/eja.2024.v34.i04.p19

Wang, Y., Phillips, P. C. B., & Su, L. (2024). Panel data models with time-varying latent group structures. Journal OfEconometrics Journal, 240(xxx), 1–25.

Wiryakusuma, I. G. B. Y. (2019). the Effect of Corporate Governance on Return of Stock Price With Company Size As Control Variable. Review of Management and Entrepreneurship, 3(1), 77–90. https://doi.org/10.37715/rme.v3i1.1234

Zheng, Y., Pu, S., Sun, X., & Gu, J. (2026). Research on the Impact of ESG Performance on Firm Value. Polish Journal of Environmental Studies, 35(3), 4481–4498. https://doi.org/10.15244/pjoes/205507