RELATIONSHIP OF FINANCIAL LEVERAGE ON INVESTMENT DECISIONS AND FIRMS' VALUE: EVIDENCE FROM INDONESIA MANUFACTURING COMPANIES

Misrah[1]✉, Arifin[2]
[1]Universitas Megarezky, Makassar, Indonesia
[2]Universitas Ichsan Gorontalo, Gorontalo, Indonesia
✉misrahsosimm@gmail.com

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ABSTRACT

This study aims to analyze and empirically test the impact of financial leverage on investment decisions, firms' value, and the role of investment decisions as a mediator. This study uses a quantitative approach with secondary data. Manufacturing companies listed on the Indonesia Stock Exchange in 2016-2022 are the research population. Sampling was done using purposive sampling, and a sample of 117 companies was obtained. The data analysis technique used structural equation modeling. The study's results showed that leverage did not affect investment decisions. However, leverage showed a positive effect on firms' value. Investment decisions have a positive effect on firms' value. Investment decisions can mediate the effect of leverage on firms' value. This study theoretically offers a framework for understanding the role of financial leverage on firm value through investment decisions. In addition, this study can be a reference for further research. Practically, this study can be a reference for investors in choosing stock investments and stakeholders in manufacturing companies to overcome obstacles, maximize market value, and optimize capital structure.

Keywords: firms' value, investment decisions, financial leverage, manufacturing companies.

INTRODUCTION

The firm value measures a company's core strength, including earnings, cash flow, assets, and growth potential. This is significant in business and finance as it represents the comprehensive worth of a company in the market. A firm's valuation can impact the choices taken by investors, shareholders, and the firm's business strategies. Firm value becomes a key consideration in investment decisions as it reflects the financial performance and prospects of the firms (Vengesai 2023). However, inefficient investment choices may adversely impact a company's worth. Numerous investors emphasize steady appreciation in the worth of their stock market holdings to generate higher returns on their investments and optimize their wealth (Ofulue et al. 2022).

In addition, financial leverage has been critical in shaping investment decisions and firms' value, particularly in Indonesia's manufacturing sector. However, leverage can raise financial risk and result in more extraordinary capital expenses or financial trouble. Analytics of data from firms registered on the Indonesia Stock Exchange (IDX) revealed that leverage serves as a control. This implies that more considerable cash reserves do not automatically result in additional investment activity, as there may be financial limitations when pursuing external finance (Nugroho, Rizki, and Nasution 2019). The main

objective of companies that have gone public or have been listed on the IDX is to generate profits to increase shareholder prosperity through increasing firm value. Every investment involves uncertainty or risk (Liong et al. 2023). Moreover, The growth rate of shares of manufacturing businesses represented on the Indonesia Stock Exchange has varied throughout the past five years due to global economic developments (Sudiyatno et al. 2020). It also has the potential to reveal destructive projects, reduce entrepreneur motivation, and ultimately decrease overall efficiency (Nan and Wen 2023).

Understanding firms' value is significant in making stock investment decisions from an investor's perspective (Guo et al. 2021). This helps investors recognize stocks with growth potential and positive performance (Alexandridis et al. 2020; Jaya and Kholilah 2020). This analysis can be enhanced by understanding financial leverage, which reflects how much a company uses debt to finance its operations and investments (Kijkasiwat, Hussain, and Mumtaz 2022). The company uses financial leverage to outperform its fixed-cost fund costs (Hoang and Phung 2019). For company success, clear policies and procedures are needed. Along with this, changes in business and increasing complexity have increased the need for better governance (Kijkasiwat and Phuensane 2020; Li, Li, and Zeng 2020; Zhou, Li, and Chen 2021; Ngoc, Ichihashi, and Kakinaka 2022; Rostami, Kargar, and Samimifard 2022).

Several studies on financial leverage and firms' value have been conducted by Tarek (2019); Zuhroh (2019); Ibrahim and Isiaka (2021); Margono and Gantino (2021); Bon and Hartoko (2022) show that financial leverage positively affects a firm's value. A study by Alamgir and Cheng (2021); Alawiyah, Senewe, and Paulina (2023) shows that leverage negatively affects a firm's value. Contrary to other studies, such as the study of Al-Slehat (2019); Endri and Fathony (2020); Nandi and Banerjee (2024) stated that financial leverage does not affect firms' value. Several studies on financial leverage and investment decisions have been conducted by Hermuningsih, Sari, and Rahmawati (2020); Thach and Quynh (2022) showed that financial leverage positively affects investment decisions. Studies by Mondosha and Majoni (2018); Akca, Karan, and Yıldız (2021); Thi, Thu, and Thanh (2023); Jesuka, Vilela, and Cunha (2024) showed that leverage negatively affects investment decisions. Contrary to other studies, such as the study of Danso et al. (2019), which stated that financial leverage does not affect investment decisions for high-growth firms. Several studies on investment decisions and firms' value have been conducted by Fionita, Kufepaksi, and Hasnawati (2021); Meutia et al. (2021); Stiadi (2023) showed that investment decisions positively affect a firm's value. A study by Suteja et al. (2023) showed that investment decisions negatively affect a firm's value. Contrary to other studies, such as the study of Bon and Hartoko (2022), which showed that investment decisions do not affect firm value. Previous studies have shown inconsistent results, which could be a research gap.

However, research regarding the financial leverage on investment decisions and firms' value, especially in manufacturing companies in Indonesia, is still minimally studied. This study offers novelty in analyzing the relationship between financial leverage, investment decisions, and firm value. Given the limited existing research, positioning investment decisions as a mediating variable between leverage and firm value is a novel approach. This framework could

provide new insights by clarifying how leverage influences a firm's value through its impact on investment choices. While high leverage can restrict or shape investment decisions (due to risk aversion or financial constraints), those decisions directly impact the firm's value by influencing its growth potential, cash flow generation, and competitive positioning. By combining these three elements holistically, this research seeks to provide a deeper understanding of how the financial structure of manufacturing companies influences investment decisions and firms' value in Indonesia.

Based on the existing research gap and novelty, this research needs to be empirically studied. This would provide a more comprehensive contribution to understanding this sector's influence on the Indonesian economy. This study so can enrich academic literature by presenting an in-depth analysis of the relationship between financial leverage, investment decisions, and firm value, especially in the context of manufacturing companies in Indonesia. Therefore, this research aims to analyze and empirically test the effect of financial leverage on company value and investment decisions in the manufacturing company sector by considering it as a mediating variable. Along with the multiple effects of the manufacturing sector, this study also has the potential to produce more effective policy recommendations to support sustainable economic growth in Indonesia.

LITERATURE REVIEW

Signaling Theory

The signaling theory addresses resolving information imbalance in a competitive setting (Spence 1973). The idea primarily focuses on the goal of management to disseminate information and receive signals from the market, stakeholders, and society (Bae, Masud, and Kim 2018). The objective of signaling theory is to narrow this divide by enabling knowledgeable individuals to transmit visible signals to those who are less knowledgeable. In finance, positive signals encompass dividend payments, earnings releases, investment in new initiatives, and insider sales of business shares. These signals indicate to investors that the company possesses a robust financial position and hopeful future development opportunities (Taj 2016). Conversely, dividend reductions, insider selling of shares, or delays in project launches could be negative indicators, implying that the company may encounter financial difficulties or diminished growth potential.

Stakeholder Theory

Stakeholder theory is a principle in the field of business ethics and organizational management that proposes that firms should consider the concerns and welfare of all their stakeholders rather than exclusively focus on shareholders while making decisions (Freeman 1984; Freudenreich, Lüdeke-Freund, and Schaltegger 2020). This approach expands upon the conventional emphasis on increasing shareholder stock value by acknowledging that corporations also bear obligations towards diverse other stakeholders impacted by their activities. This emphasizes that companies have a moral obligation to consider the impact of their actions on others (Jones, Harrison, and Felps 2018). It moves away from the idea that profit is a company's only responsibility and instead suggests that businesses must contribute to the well-being of all stakeholders.

Trade-Off Theory

Trade-off theory is a concept in finance that explains how companies balance the benefits and costs associated with using debt in their capital structure (Kraus and Litzenberger 1973). According to static trade-off theory, every firm has a perfect capital structure that maximizes market value (Khoa and Thai 2021). Trade-offs can occur in various ways, such as a trade-off between the tax benefits of debt and the cost of capital distress related to the trade-off model (Jarallah, Saleh, and Salim 2019). Meanwhile, the widely used concept of trade-off theory explains the relationship between risk and the use of financial leverage (debt). The trade-off theory posits that tax advantages arise from using debt, prompting corporations to employ debt optimally to enhance corporate value. The core principle of the trade-off theory in capital structure is to equilibrate the advantages and disadvantages associated with loan utilization (Dierker, Lee, and Seo 2019). In the context of recent research Almustafa, Jabbouri, and Kijkasiwat (2023); Kalash (2023) highlight the importance of understanding uncertainty in economic policy and the negative impact of using financial leverage on future predictions and corporate performance. Companies with high leverage levels are at risk of failure if they cannot meet their interest and principal payment obligations (Arhinful and Radmehr 2023).

Firms Value

Firm value encompasses a collection of financial and economic concepts that elucidate how a company's total value is established and how it can be optimized (Jensen 2010). The firm value is the overall valuation of a corporation as accepted by the market, considering elements such as future profitability, assets, liabilities, and risk (Card et al. 2018). Firm value is often used in financial analysis to assess the health and potential of a company, both from the perspective of investors, shareholders, and other stakeholders (Jiao 2010). Firm value is essential for investors to provide an overview of the investment value and potential returns (Khan, Qureshi, and Davidsen 2020). In addition, it is essential as a basis for assessment when a company is acquired or merged (Jihadi et al. 2021). Then, it is essential for the company's financial strategy to help management determine strategic steps, such as funding or investment (Kadim, Sunardi, and Husain 2020). Firm value not only shows the company's current condition but also reflects market expectations regarding the company's future prospects (Jihadi et al. 2021). Tobin's Q is a popular proxy used to measure firm value. It compares the market value of a company's assets to their replacement cost (Tobin 1969). This ratio reflects whether a company is valued higher or lower than its book value. If Tobin's $Q > 1$, the firm is considered overvalued, meaning the market values the firm more than the replacement cost of its assets. If Tobin's $Q < 1$, The firm is considered undervalued, meaning its assets are valued lower than the cost to replace them.

Investment Decisions

Investment decisions are the process of assessing and selecting assets, projects, or investment opportunities to generate profits or achieve specific financial goals in the future (Roychowdhury, Shroff, and Verdi 2019). These decisions involve evaluating various investment alternatives based on potential

returns, risks, and organizational or individual goals (Jain, Walia, and Gupta 2019). The main objective of investment decisions is to optimize returns, so choose investments that provide maximum returns (Paiva et al. 2019). In addition, managing risk must ensure that investments align with risk tolerance (Aini and Lutfi 2019). Then, increasing shareholder value, in the context of a company, focuses on decisions that increase the value of the company (Roychowdhury, Shroff, and Verdi 2019). Net Present Value (NPV) is one of the methods commonly used to evaluate investment decisions (Dobrowolski and Drozdowski 2022). This method calculates the difference between the present value of cash inflows and outflows of a project or investment. If the NPV is positive, the investment is considered profitable; if negative, the investment is considered unfeasible.

Financial Leverage

Financial leverage is using debt or loan-based financing in a company's capital structure to increase potential returns for shareholders (Arhinful and Radmehr 2023). Evaluation of the return on loan capital can be carried out by monitoring the efficiency of the level of financial leverage, an essential consideration for the management of commercial organizations in determining the level of leverage before making decisions regarding loan parameters (Boyko et al. 2019; Al-Slehat 2019). The higher the level of financial leverage, the greater the risk of financial distress and potential bankruptcy for the company, and therefore, a higher cash ratio allocation becomes essential to reduce the likelihood of financial distress and ensure the availability of adequate borrowing capacity but also reflect the company's financial performance managed by management (Ahmed, Awais, and Kashif 2018; Minh, Thi, and Be 2022). However, internal control is needed to effectively restrain inefficient investment, whether over-investment or under-investment (Chen et al. 2021). Financial leverage has emerged as a prominent global strategy for accumulating capital in developing countries (Tarek 2019). Proxies and formulas such as the debt-to-equity ratio (DER) measure financial leverage (Arhinful and Radmehr 2023). A higher ratio indicates greater use of debt relative to equity, implying higher financial leverage and risk.

Hypothesis Development

Financial leverage refers to using debt to finance a company's assets. The higher the leverage, the greater the potential return for shareholders, and the higher the financial risk the company faces (Ibrahim and Isiaka 2021). Signaling theory indicates to investors that the company possesses a robust financial position and hopeful future development opportunities. Signaling theory suggests that financial leverage affects how the market perceives investment decisions. Using leverage as a source of investment funding is often considered a positive signal (Margono and Gantino 2021). In addition, the trade-off theory explains how companies balance the benefits and costs of using debt in capital structure. This affects how companies finance investments and make investment decisions. The level of leverage directly affects risk tolerance, cost of capital, and financial flexibility, ultimately affecting investment decisions. Studies conducted by

Hermuningsih, Sari, and Rahmawati (2020); Thach and Quynh (2022) showed that financial leverage positively affects investment decisions.

H1: Financial leverage has a positive effect on investment decisions.

Financial leverage refers to using debt in a company's capital structure to increase the potential return on investment. Using debt, a company can increase the capital available for investment without issuing additional shares (Nukala and Prasada Rao 2021). The relationship between financial leverage and firm value depends on how well the firm manages its debt, the risks involved, and other market factors. The trade-off concept elucidates the correlation between risk and the utilization of financial leverage. The trade-off theory posits that firms will optimize their firm value by utilizing debt to a certain extent, as it leads to tax advantages (Dierker, Lee, and Seo 2019). The main challenge in increasing financial leverage lies in managing financial risks that can arise from high debt accumulation (Danso et al. 2019; Dong et al. 2021; Papadimitri, Pasiouras, and Tasiou 2021; Rostami, Kargar, and Samimifard 2022). Well-managed leverage can increase the firm's value but also carries risks that must be considered to avoid harming stakeholders. Stakeholder theory encourages companies to make financial decisions that focus on shareholders and consider the interests of other parties involved to achieve sustainable company value. If the firm can generate a higher rate of return than the cost of debt, leverage can increase the firm's value. Studies conducted by Tarek (2019); Zuhroh (2019); Ibrahim and Isiaka (2021); Margono and Gantino (2021); Bon and Hartoko (2022) show that financial leverage positively affects a firm's value.

H2: Financial leverage has a positive effect on a firm's value.

Investment decisions, such as investing in new projects, expansions, or product developments, can increase a firm's future cash flows. If a company makes a profitable investment, such as an expansion that generates additional revenue or a product innovation that the market is interested in, the firm's value will increase because the market is projecting greater profits in the future (Pangestuti et al. 2022). Signaling theory explains how investment decisions made by a company can signal to the market about the firm's quality and prospects, which in turn affects the firm's value. Decisions that are considered wise can increase the firm's value. In addition, stakeholder theory states that good investment decisions consider short-term financial gains and their impact on other stakeholders. Investment decisions that consider the welfare of all stakeholders can strengthen relationships with them, reduce risk, and improve the firm's reputation, which ultimately contributes to increasing the firm's value (Chang et al. 2022). The right investment decisions can increase the company's profitability and growth in the future, which will directly increase the firm's value (Margono and Gantino 2021). Studies conducted by Fionita, Kufepaksi, and Hasnawati (2021); Meutia et al. (2021); Stiadi (2023) showed that investment decisions positively affect a firm's value.

H3: Investment decisions have a positive effect on a firm's value.

High investment decision information provides an excellent signal to investors about the firm's value. Sensible investment decisions augment a firm's value by fostering growth, increasing profitability, and bolstering market competitiveness (He et al. 2022). These characteristics enhance shareholder value, stock prices, and overall firm's value in the long term. By judiciously choosing

investments corresponding to strategic objectives, companies may guarantee ongoing value generation for the organization and its stakeholders. Trade-off theory views that investment decisions help determine the extent to which a company can use leverage optimally to increase the firm's value. Successful investment decisions can reinforce the positive signals from debt use, increasing the firm's value. Investment decisions serve as a link between financial leverage and the firm's value. Smart investment decisions can maximize the potential for financial leverage, increase returns on equity, and reduce debt-related risks, thereby increasing a firm's value (Tangngisalu et al. 2023).

H4: Investment decisions can mediate financial leverage's effect on firm value.

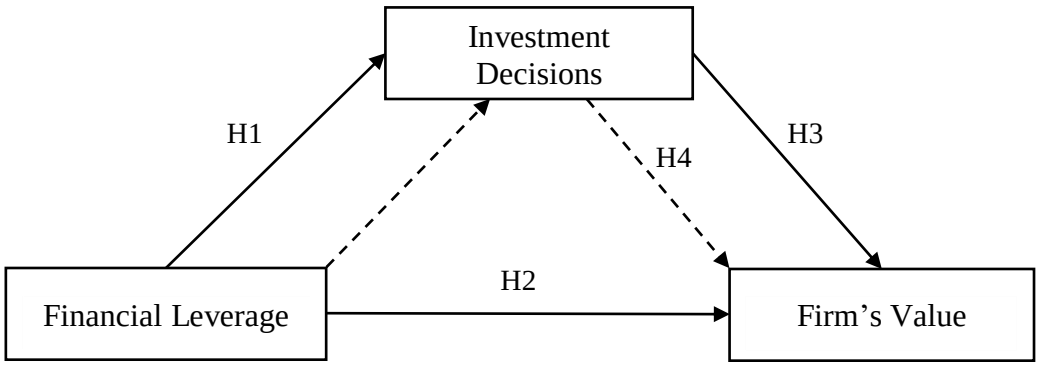

Figure 1 Research Framework

METHOD

This study used quantitative research, with data sources coming from secondary data. This cross-sectional study has a time series called panel data based on time and time sequence dimensions. The population in this study is all manufacturing sector companies listed on the Indonesia Stock Exchange (IDX), with an observation period from 2016 to 2022, namely 205 companies. The reasons for using this timeframe are as follows: First, this study used panel or pooled data, a combination of cross-sectional and time series data. So, the wider the period used, the greater the number of samples that can be obtained. Second, data for 2016 is used as the beginning of the period, with the hope that financial reports can be obtained with more objective company conditions because they are relatively far from the financial crisis that occurred in 1997. Third, the data for 2022 is used as the end of the period because, at the time of data collection, the Indonesia Stock Exchange (IDX) last published the Indonesian Capital Market Directory (ICMD) for 2022, which contains the company's financial statements for 2022.

The sampling technique used purposive sampling with the following criteria: (1) the company published financial reports from December 31, 2016, to 2022; (2) the company has information related to financial leverage, investment decisions, and company value. Based on these criteria, a sample of 117 companies was obtained, so the amount of data observed was 117 x 7 years = 819 observation data. The research variables consist of financial leverage as an independent variable, company value as a dependent variable and investment

decisions as a mediating variable (Table 1). This study uses structural equation modeling (SEM) to analyze the causal relationship between latent variables (Wang and Sun 2017). SEM with panel data uses SPSS software version 22.

Table 1 Operational Variables

Variables	Formula	Scale
Firm's Value	$\text{Tobin's Q} = \frac{\text{Market Value of Firm's Assets}}{\text{Replacement Cost of Firm's Assets}}$	Ratio
Financial Leverage	$\text{DER} = \frac{\text{Total Debt (Liabilities)}}{\text{Total Equity}}$	Ratio
Investment Decisions	$\text{NPV} = \sum_{t=0}^{n} \frac{C_t}{(1+r)^t} - C_0$	Ratio

C_t: Cash inflow or outflow at time t (where t=0 represents the initial investment).
r: Discount rate or required rate of return.
t: Time period (e.g., years).
n: Total number of periods.
C_0: Initial investment or cash outlay at t=0

RESULTS AND DISCUSSIONS

Descriptive Statistical

Descriptive statistical tests are used to see a general picture of data distribution through each variable's minimum, maximum, average, and standard deviation values . The results of the descriptive statistical tests can be seen in Table 2.

Table 2 Descriptive Statistical Results

Variables	Min	Max	Mean	Std. Deviation
Firm's Value	-20.86	936.97	8.5696	37.81828
Financial Leverage	-31.78	216.26	1.9368	8.52772
Investment Decisions	-1803.25	5478.72	24.8874	215.00815

Source: secondary data (processed, 2024)

Table 2 shows findings reflect a dataset with considerable variability in investment valuation (NPV) and firm value (Tobin's Q), likely influenced by differing strategies, market conditions, and financial positions across firms. The extreme values and large standard deviations across all three variables suggest that the sample contains high-growth firms with significant market valuations and more conservative or distressed firms, providing a broad perspective on firm investment and leverage behavior.

Normality Test

A normality test is conducted to determine whether the residual value of the data is normally distributed. The test is conducted using the Kolmogorov-Smirnov test if the asymp. sig. > 0.05, and then the data is normally distributed. Based on the results of the Kolmogorov-Smirnov test, the asymp sig. is known as 0.200 > 0.05, meaning that the data is normally distributed.

Hypothesis Test

The hypothesis is tested by comparing the p-values with a significance level of 0.05 and the t-statistic with 1.96. The hypothesis is influential if the p-values < 0.05 and the t-statistic > 1.96. Conversely, the hypothesis is not influential if the p-values > 0.05 and the t-statistic < 1.96. The results of the hypothesis test can be seen in Table 3.

Table 3 Hypothesis Test Results

Hypothesis	Coefficient	t-Statistic	p-values
H1: Financial Leverage → Investment Decisions	0.010	0.183	0.855
H2: Financial Leverage → Firm's Value	0.231	2,208	0.027
H3: Investment Decisions → Firm's Value	0.257	3,427	0.000
H4: Financial Leverage → Investment Decisions → Firm's Value	0.014	4.537	0.001

Source: secondary data (processed, 2024)

Table 3 shows the results, where the first hypothesis has a coefficient value of 0.010, t-statistic 0.183 < 1.96, and p-values 0.855 > 0.05, meaning that financial leverage has no effect (H1 is rejected). The second hypothesis has a coefficient value of 0.231, t-statistic 2.208 > 1.96, and p-values of 0.027, meaning that financial leverage positively and significantly affects the firm's value (H2 is accepted). The third hypothesis has a coefficient value of 0.257, t-statistic 3.427 > 1.96, and p-values 0.000 < 0.05, meaning that investment decisions positively and significantly affect a firm's value (H3 is accepted). The fourth hypothesis has a coefficient value of 0.014, a t-statistic of 4.537 > 1.96, and a p-values of 0.001 < 0.05, meaning that investment decisions can mediate the effect of financial leverage on a firm's value (H4 is accepted).

The Effect of Financial Leverage on Investment Decisions

The study results show that financial leverage does not affect investment decisions. This shows that high or low levels of financial leverage will not affect investment decisions at all. This is because the main focus of investment decisions is on the economic feasibility of investment, long-term growth strategy, and consistency with strategic objectives. Financial leverage is only relevant if it affects the firm's ability to fund the investment (Al-Slehat 2019). Financial leverage does not directly affect investment decisions because both have different focuses and analyses. However, financial leverage can affect investment decisions in extreme conditions through funding limitations or increased risk (Kling et al. 2021).

Signaling theory sees that financial leverage functions more as a tool to communicate information to investors than as a direct factor influencing investment decisions. So, financial leverage that does not affect investment decisions shows that the signal from financial leverage is relevant to investors, not management, in determining investment feasibility. Trade-off theory explains how financial leverage affects capital structure, not directly on investment decisions; financial leverage is used to optimize the cost of capital after making investment decisions (Yeh et al. 2020). This study's results align with the study conducted by

Danso et al. (2019), stating that financial leverage does not affect investment decisions for high-growth firms. This happens because, at that time, the level of information asymmetry is low so that financial leverage does not affect investment decisions. Financial leverage does not affect investment decisions, so market volatility caused by changes in interest rate policies or tighter credit access may be reduced. This is because investments are still made based on economic opportunities rather than financial conditions.

The Influence of Financial Leverage on Firm's Value

The study results show that financial leverage positively affects firm value. This illustrates that the higher the level of financial leverage, the higher the firm value. This happens because financial leverage allows companies to utilize debt funding to increase potential profits without using additional equity. Debt interest is a tax-deductible expense. Therefore, with debt, companies can reduce their tax burden, ultimately increasing net cash flow and firm value (Nurdani and Rahmawati 2020). By using debt, shareholders can earn higher returns on their investments, increasing the firm's shares' attractiveness and value. Financial leverage allows firms to fund large investments without having to issue additional equity; if the investment provides significant profits, the firm's value will increase (Ibrahim and Isiaka 2021).

The positive effect of financial leverage on firm value aligns with the principle of trade-off theory, which explains that companies need to maintain financial leverage at an optimal level to maximize firm value. Stakeholder theory also views that financial leverage positively affects firm value if financial leverage is managed by considering the welfare of all stakeholders. That way, the firm not only meets shareholder goals but also builds strong relationships with other stakeholders, which ultimately increases the company's value holistically. The results of this study are in line with studies conducted by Tarek (2019); Zuhroh (2019); Ibrahim and Isiaka (2021); Margono and Gantino (2021); Bon and Hartoko (2022) show that financial leverage positively affects a firm's value. With the positive influence of financial leverage on company value, management can design financial strategies aligned with the primary objective, namely maximizing shareholder welfare.

The Effect of Investment Decisions on Firm's Value

The study results show that investment decisions positively affect firm value. This depicts that the better investment decisions are made, the more firm value can be increased. This happens because suitable investments create growth potential, increase revenue, and strengthen the firm's competitive position and value. Investments in profitable assets generate greater cash flow in the future (Beladi, Deng, and Hu 2021). Investors appreciate stable and increasing cash flow because it shows the company's ability to create long-term value. Sound investment decisions show that management has a clear strategy and expertise to manage resources optimally to increase investor confidence, which can drive up stock prices and firm value (Appah et al. 2023). Then, in strategic investment decisions in various sectors, firms can reduce dependence on one source of income, thus providing more excellent stability for the firm's value (Hoskisson et al. 2018). Furthermore, investment decisions utilizing existing capital for

productive investment rather than saving it or allocating it inefficiently will create added value for shareholders (Cheng and Wu 2018).

Within the framework of signaling theory, investment decisions provide essential information to the market. Smart and strategic decisions convey that the company has the opportunity to increase profits, competitiveness, and growth, thereby increasing the firm's value in the eyes of investors. From a stakeholder theory perspective, effective investment decisions create value for all stakeholders. When companies make investments that consider the welfare of stakeholders, this results in solid relationships, increased trust, reduced risk, and created competitive advantages, thus indirectly supporting the increase in the firm's value (Hoskisson et al. 2018). Studies conducted by Fionita, Kufepaksi, and Hasnawati (2021); Meutia et al. (2021); Stiadi (2023) state that investment decisions positively affect a firm's value. With proper management, positive investment decisions can be the main driving force for increasing company value, ensuring sustainability, and strengthening competitive position in the market.

The Effect of Leverage on Firm Value Through Investment Decisions

The study results show that investment decisions can mediate the effect of financial leverage on firm value. This can happen because investment is a firm's primary mechanism to allocate resources to assets to increase profitability and firm value (Bon and Hartoko 2022). The use of debt in the capital structure allows companies to have access to additional funding sources. With increasing financial resources, companies can make more extensive or strategic investment decisions (Lee and Shin 2018). High leverage levels increase financial risk because the company must pay interest and principal on debt. However, if investment decisions generate sufficient cash flow, the leverage risk can be offset, thus positively impacting firm value (Habib et al. 2021). Leverage provides investment capacity, while investment decisions determine how this capacity is translated into increased firm value (Ibrahim and Isiaka 2021; Jihadi et al. 2021). Investment decisions mediate between financial leverage and firm value because investment decisions determine how leverage is used to create value. Optimal use of leverage, accompanied by the right investment decisions, can maximize the potential for increasing firm value.

Signaling theory is closely related to how investment decisions mediate the effect of financial leverage on firm value because investment decisions serve as a means to demonstrate how leverage is used to create value. Sound investment decisions send positive signals to the market, improving investor perceptions and firm value (Huang 2018). Within the framework of trade-off theory, financial leverage will only increase firm value if it is used to fund investment decisions that generate sufficient cash flows to cover the cost of debt. Firms must continually evaluate whether their investment decisions help achieve the optimal balance between the benefits and costs of leverage (Demarzo and He 2021). In the context of stakeholder theory, investment decisions ensure that leverage is used to create long-term value that considers all stakeholders' interests. By strategically allocating leverage to investments that support stakeholder interests, firms can increase value sustainably while mitigating risks to all parties involved (Alkaraan et al. 2023). Financial leverage is not only a financing tool but also strategically impacts investment decision-making, ultimately determining the firm's value.

Therefore, company management must manage leverage carefully so as not only to improve capital efficiency but also to create value for all stakeholders.

CONCLUSIONS

Financial leverage contributes significantly to a firm's value because it can increase the value of manufacturing companies in Indonesia. Investment decisions also positively affect firm value, indicating that larger investment decisions can increase firm value. Investment decisions act as a bridge, where leverage can positively or negatively affect the firms' value, depending on how well the company can identify and execute profitable investment opportunities. Thus, investment decisions play an important role in ensuring that the leverage taken by the company has a positive impact on the value of the company. Furthermore, financial leverage and strategic investment decisions drive firm value and promote growth and competitiveness in the Indonesian manufacturing sector.

The theoretical implications provide a conceptual structure for understanding the interrelationship between financial leverage, investment decisions, and firm value. In addition, this study can be a reference for further research. The practical implications involve the strategies and tangible challenges Indonesian manufacturing firms must overcome to enhance their market value and maximize their financial structure. The limitation of this study is in terms of the number of variables. Future studies suggested adding independent variables such as liquidity, firm size, and profitability, then adding control variables from external factors such as macroeconomic conditions, government policies, and market sentiment. Using non-linear data analysis models can better understand the complex dynamics between financial leverage, investment decisions, and a firm's value. Thus, further study will provide more profound and relevant insights for a practical understanding of business and finance. Future studies are also suggested to expand the scope, adopt a more contextual analysis approach, and consider dynamic market factors to increase the validity and relevance of the results.

REFERENCES

Ahmed, Farhan, Iqra Awais, and Muhammad Kashif. 2018. “Financial Leverage and Firms’ Performance: Empirical Investigation of KSE-100 Index.” *ETIKONOMI* 17 (1): 45–56. https://doi.org/10.15408/etk.v17i1.6102.

Aini, Nadya Septi Nur, and Lutfi Lutfi. 2019. “The Influence of Risk Perception, Risk Tolerance, Overconfidence, and Loss Aversion towards Investment Decision Making.” *Journal of Economics, Business, & Accountancy Ventura* 21 (3): 401–13. https://doi.org/10.14414/jebav.v21i3.1663.

Akca, Tuğba, Mehmet Baha Karan, and Yılmaz Yıldız. 2021. “The Effect of Financial Leverage on Investment Decisions: The Evidence from Emerging Markets.” In *Financial Strategies in Competitive Markets*, 137–50. Springer. https://doi.org/10.1007/978-3-030-68612-3_10.

Al-Slehat, Zaher Abdel Fattah. 2019. “Impact of Financial Leverage, Size and Assets Structure on Firm Value: Evidence from Industrial Sector, Jordan.” *International Business Research* 13 (1): 109.

https://doi.org/10.5539/ibr.v13n1p109.

Alamgir, Muhammad, and Ming-Chang Cheng. 2021. "Effect of Leverage on Firm Value and How the Contextual Variables Affect This Relationship: A Case of Pakistan." In *Proceedings of the International Conference on Electronic Business (ICEB)*, 144–53. International Consortium for Electronic Business. https://iceb.johogo.com/proceedings/2021/ICEB_2021_paper_73_full.pdf.

Alawiyah, Ucu Tuti, Seskia Pietyana Dewi Senewe, and Elin Paulina. 2023. "The Effect of Liquidity, Profitability and Leverage on Firm Value." In *Proceedings of the International Conference on Economics, Management and Accounting (ICEMAC 2022)*, edited by Prasetyo Hartanto, 473–86. Atlantis Press. https://doi.org/10.2991/978-94-6463-226-2_38.

Alexandridis, George, Nikolaos Antypas, Arman Gulnur, and Ilias Visvikis. 2020. "Corporate Financial Leverage and M&As Choices: Evidence from the Shipping Industry." *Transportation Research Part E: Logistics and Transportation Review* 133 (January): 101828. https://doi.org/10.1016/j.tre.2019.101828.

Alkaraan, Fadi, Mahmoud Elmarzouky, Khaled Hussainey, and V.G. Venkatesh. 2023. "Sustainable Strategic Investment Decision-Making Practices in UK Companies: The Influence of Governance Mechanisms on Synergy between Industry 4.0 and Circular Economy." *Technological Forecasting and Social Change* 187 (February): 122187. https://doi.org/10.1016/j.techfore.2022.122187.

Almustafa, Hamza, Imad Jabbouri, and Ploypailin Kijkasiwat. 2023. "Economic Policy Uncertainty, Financial Leverage, and Corporate Investment: Evidence from U.S. Firms." *Economies* 11 (2): 37. https://doi.org/10.3390/economies11020037.

Appah, Thapenes Roy, Sari Yuniarti, Nanik Sisharini, Sunarjo Sunarjo, and Nurhidayah Yahya. 2023. "Does Profitability Matter in the Relationship between Intellectual Capital and Firm Value?" *Media Ekonomi Dan Manajemen* 38 (1): 57. https://doi.org/10.56444/mem.v38i1.3255.

Arhinful, Richard, and Mehrshad Radmehr. 2023. "The Effect of Financial Leverage on Financial Performance: Evidence from Non-Financial Institutions Listed on the Tokyo Stock Market." *Journal of Capital Markets Studies* 7 (1): 53–71. https://doi.org/10.1108/JCMS-10-2022-0038.

Bae, Seong Mi, Md. Abdul Kaium Masud, and Jong Dae Kim. 2018. "A Cross-Country Investigation of Corporate Governance and Corporate Sustainability Disclosure: A Signaling Theory Perspective." *Sustainability* 10 (8): 2611. https://doi.org/10.3390/su10082611.

Beladi, Hamid, Jie Deng, and May Hu. 2021. "Cash Flow Uncertainty, Financial Constraints and R&D Investment." *International Review of Financial Analysis* 76 (July): 101785. https://doi.org/10.1016/j.irfa.2021.101785.

Bon, Sergius Fribontius, and Sri Hartoko. 2022. "The Effect of Dividend Policy, Investment Decision, Leverage, Profitability, and Firm Size on Firm Value." *European Journal of Business and Management Research* 7 (3): 7–13. https://doi.org/10.24018/ejbmr.2022.7.3.1405.

Boyko, A. A., V. V. Kukartsev, D. V. Eremeev, V. S. Tynchenko, V. V.

Bukhtoyarov, and A. A. Stupina. 2019. "Imitation-Dynamic Model for Calculating the Efficiency of the Financial Leverage." *Journal of Physics: Conference Series* 1353 (1): 012123. https://doi.org/10.1088/1742-6596/1353/1/012123.

Card, David, Ana Rute Cardoso, Joerg Heining, and Patrick Kline. 2018. "Firms and Labor Market Inequality: Evidence and Some Theory." *Journal of Labor Economics* 36 (S1): S13–70. https://doi.org/10.1086/694153.

Chang, Xin, Kangkang Fu, Yaling Jin, and Pei Fun Liem. 2022. "Sustainable Finance: ESG/CSR, Firm Value, and Investment Returns." *Asia-Pacific Journal of Financial Studies* 51 (3): 325–71. https://doi.org/10.1111/ajfs.12379.

Chen, Suyun, Zongze Li, Binbin Han, and Hengyun Ma. 2021. "Managerial Ability, Internal Control and Investment Efficiency." *Journal of Behavioral and Experimental Finance* 31 (September): 100523. https://doi.org/10.1016/j.jbef.2021.100523.

Cheng, Jia-Chi, and Ruei-Shian Wu. 2018. "Internal Capital Market Efficiency and the Diversification Discount: The Role of Financial Statement Comparability." *Journal of Business Finance & Accounting* 45 (5–6): 572–603. https://doi.org/10.1111/jbfa.12307.

Danso, Albert, Theophilus Lartey, Samuel Fosu, Samuel Owusu-Agyei, and Moshfique Uddin. 2019. "Leverage and Firm Investment: The Role of Information Asymmetry and Growth." *International Journal of Accounting & Information Management* 27 (1): 56–73. https://doi.org/10.1108/IJAIM-10-2017-0127.

Demarzo, peter M., and Zhiguo He. 2021. "Leverage Dynamics without Commitment." *The Journal of Finance* 76 (3): 1195–1250. https://doi.org/10.1111/jofi.13001.

Dierker, Martin, Inmoo Lee, and Sung Won Seo. 2019. "Risk Changes and External Financing Activities: Tests of the Dynamic Trade-off Theory of Capital Structure." *Journal of Empirical Finance* 52 (June): 178–200. https://doi.org/10.1016/j.jempfin.2019.03.004.

Dobrowolski, Zbysław, and Grzegorz Drozdowski. 2022. "Does the Net Present Value as a Financial Metric Fit Investment in Green Energy Security?" *Energies* 15 (1): 353. https://doi.org/10.3390/en15010353.

Dong, Kai, Ching-Ter Chang, Shaonan Wang, and Xiaoxi Liu. 2021. "The Dynamic Correlation among Financial Leverage, House Price, and Consumer Expenditure in China." *Sustainability* 13 (5): 2617. https://doi.org/10.3390/su13052617.

Endri, Endri, and Moch Fathony. 2020. "Determinants of Firm's Value: Evidence from Financial Industry." *Management Science Letters* 10 (1): 111–20. https://doi.org/10.5267/j.msl.2019.8.011.

Fionita, Ita, Mahatma Kufepaksi, and Sri Hasnawati. 2021. "CEO Overconfidence, Investment Decisions and Firm Value in Indonesia." *Economic Annals-XXI* 194 (11–12): 49–58. https://doi.org/10.21003/ea.V194-06.

Freeman, R Edward. 1984. *Strategic Management: A Stakeholder Approarch*. Massachusetts: Pitman.

Freudenreich, Birte, Florian Lüdeke-Freund, and Stefan Schaltegger. 2020. "A

Stakeholder Theory Perspective on Business Models: Value Creation for Sustainability." *Journal of Business Ethics* 166 (1): 3–18. https://doi.org/10.1007/s10551-019-04112-z.

Guo, Haifeng, Tenkir Seifu Legesse, Jiqiang Tang, and Zhen Wu. 2021. "Financial Leverage and Firm Efficiency: The Mediating Role of Cash Holding." *Applied Economics* 53 (18): 2108–24. https://doi.org/10.1080/00036846.2020.1855317.

Habib, Ashfaq, M. Ishaq Bhatti, Muhammad Asif Khan, and Zafar Azam. 2021. "Cash Holding and Firm Value in the Presence of Managerial Optimism." *Journal of Risk and Financial Management* 14 (8): 356. https://doi.org/10.3390/jrfm14080356.

He, Rong, Le Luo, Abul Shamsuddin, and Qingliang Tang. 2022. "The Value Relevance of Corporate Investment in Carbon Abatement: The Influence of National Climate Policy." *European Accounting Review* 31 (5): 1233–61. https://doi.org/10.1080/09638180.2021.1916979.

Hermuningsih, Sri, Pristin Prima Sari, and Anisya Dewi Rahmawati. 2020. "The Impact of Leverage on Investment for Firms Listed in the Indonesian Stock Exchange." *INOBIS: Jurnal Inovasi Bisnis Dan Manajemen Indonesia* 4 (1): 48–58. https://doi.org/10.31842/jurnalinobis.v4i1.165.

Hoang, Khanh Mai Thi, and Thu Anh Phung. 2019. "The Effect of Financial Leverage on Real and Accrual-Based Earnings Management in Vietnamese Firms." *Economics & Sociology* 12 (4): 299–312. https://doi.org/10.14254/2071-789X.2019/12-4/18.

Hoskisson, Robert E., Eni Gambeta, Colby D. Green, and Toby X. Li. 2018. "Is My Firm-Specific Investment Protected? Overcoming the Stakeholder Investment Dilemma in the Resource-Based View." *Academy of Management Review* 43 (2): 284–306. https://doi.org/10.5465/amr.2015.0411.

Huang, Jiekun. 2018. "The Customer Knows Best: The Investment Value of Consumer Opinions." *Journal of Financial Economics* 128 (1): 164–82. https://doi.org/10.1016/j.jfineco.2018.02.001.

Ibrahim, Umar Abbas, and AbdulQudus Isiaka. 2021. "Dynamic Modelling of the Relationship between Financial Leverage and Firm Value of Selected Firms Quoted on the Nigerian Stock Exchange." *International Journal of Research in Business and Social Science* 10 (3): 259–75. https://doi.org/10.20525/ijrbs.v10i3.1024.

Jain, Jinesh, Nidhi Walia, and Sanjay Gupta. 2019. "Evaluation of Behavioral Biases Affecting Investment Decision Making of Individual Equity Investors by Fuzzy Analytic Hierarchy Process." *Review of Behavioral Finance* 12 (3): 297–314. https://doi.org/10.1108/RBF-03-2019-0044.

Jarallah, Shaif, Ali Salman Saleh, and Ruhul Salim. 2019. "Examining Pecking Order versus Trade-off Theories of Capital Structure: New Evidence from Japanese Firms." *International Journal of Finance & Economics* 24 (1): 204–11. https://doi.org/10.1002/ijfe.1657.

Jaya, Tiara Juliana, and Kholilah Kholilah. 2020. "Effect Of Gross Domestic Regional Bruto, Provincial Minimum Wage, And Investment On Labor Absorption." *Jurnal Ekonomi Bisnis Dan Kewirausahaan* 9 (3): 236–49. https://doi.org/10.26418/jebik.v9i3.42642.

Jensen, Michael C. 2010. "Value Maximization, Stakeholder Theory, and the Corporate Objective Function." *Journal of Applied Corporate Finance* 22 (1): 32–42. https://doi.org/10.1111/j.1745-6622.2010.00259.x.

Jesuka, Duterval, Eunice Henriques Pereira Vilela, and Michele Aparecida Cunha. 2024. "The Impact Of Financial And Operational Leverage On Investment Decisions Of Brazilian Companies." In *XLVIII Encontro Da ANPAD - EnANPAD 2024At: Florianópolis - SC*. https://www.researchgate.net/publication/385529938.

Jiao, Yawen. 2010. "Stakeholder Welfare and Firm Value." *Journal of Banking & Finance* 34 (10): 2549–61. https://doi.org/10.1016/j.jbankfin.2010.04.013.

Jihadi, Muhammad, Elok Vilantika, Sayed Momin Hashemi, Zainal Arifin, Yanuar Bachtiar, and Fatmawati Sholichah. 2021. "The Effect of Liquidity, Leverage, and Profitability on Firm Value: Empirical Evidence from Indonesia." *The Journal of Asian Finance, Economics and Business* 8 (3): 423–31. https://doi.org/10.13106/jafeb.2021.vol8.no3.0423.

Jones, Thomas M., Jeffrey S. Harrison, and Will Felps. 2018. "How Applying Instrumental Stakeholder Theory Can Provide Sustainable Competitive Advantage." *Academy of Management Review* 43 (3): 371–91. https://doi.org/10.5465/amr.2016.0111.

Kadim, A., Nardi Sunardi, and T. Husain. 2020. "The Modeling Firm's Value Based on Financial Ratios, Intellectual Capital and Dividend Policy." *Accounting* 14 (1): 859–70. https://doi.org/10.5267/j.ac.2020.5.008.

Kalash, Ismail. 2023. "The Financial Leverage–Financial Performance Relationship in the Emerging Market of Turkey: The Role of Financial Distress Risk and Currency Crisis." *EuroMed Journal of Business* 18 (1): 1–20. https://doi.org/10.1108/EMJB-04-2021-0056.

Khan, Aima, Muhammad Azeem Qureshi, and Pål Ingebrigt Davidsen. 2020. "How Do Oil Prices and Investments Impact the Dynamics of Firm Value?" *System Dynamics Review* 36 (1): 74–100. https://doi.org/10.1002/sdr.1649.

Khoa, Bui Thanh, and Duy Tung Thai. 2021. "Capital Structure and Trade-Off Theory: Evidence from Vietnam." *Journal of Asian Finance, Economics and Business* 8 (1): 45–52. https://doi.org/10.13106/jafeb.2021.vol8.no1.045.

Kijkasiwat, Ploypailin, Anwar Hussain, and Amna Mumtaz. 2022. "Corporate Governance, Firm Performance and Financial Leverage across Developed and Emerging Economies." *Risks* 10 (10): 185. https://doi.org/10.3390/risks10100185.

Kijkasiwat, Ploypailin, and Pongsutti Phuensane. 2020. "Innovation and Firm Performance: The Moderating and Mediating Roles of Firm Size and Small and Medium Enterprise Finance." *Journal of Risk and Financial Management* 13 (5): 97. https://doi.org/10.3390/jrfm13050097.

Kling, Gerhard, Ulrich Volz, Victor Murinde, and Sibel Ayas. 2021. "The Impact of Climate Vulnerability on Firms' Cost of Capital and Access to Finance." *World Development* 137 (January): 105131. https://doi.org/10.1016/j.worlddev.2020.105131.

Kraus, Alan, and Robert H. Litzenberger. 1973. "A State-Preference Model Of Optimal Financial Leverage." *The Journal of Finance* 28 (4): 911–22.

https://doi.org/10.1111/j.1540-6261.1973.tb01415.x.

Lee, In, and Yong Jae Shin. 2018. "Fintech: Ecosystem, Business Models, Investment Decisions, and Challenges." *Business Horizons* 61 (1): 35–46. https://doi.org/10.1016/j.bushor.2017.09.003.

Li, Zhun, Qiang Li, and Yong Zeng. 2020. "Contraction Flexibility, Operating Leverage, and Financial Leverage." *Journal of Management Science and Engineering* 5 (1): 43–56. https://doi.org/10.1016/j.jmse.2020.02.002.

Liong, Harlina, Mahfudnurnajamuddin Mahfudnurnajamuddin, Muhammad Su'un, and Mapparenta Mapparenta. 2023. "The Influence of Growth Potential, Capital Structure and Profitability on Dividend Policy and Firm Value in Manufacturing Companies Listed on the Indonesia Stock Exchange." *Revista de Gestão Social e Ambiental* 17 (8): e03717. https://doi.org/10.24857/rgsa.v17n8-011.

Margono, Ferdy Prasetya, and Rilla Gantino. 2021. "Influence Of Firm Size, Leverage, Profitability, And Dividend Policy On Firm Value Of Companies In Indonesia Stock Exchange." *Copernican Journal of Finance & Accounting* 10 (2): 45–61. https://doi.org/10.12775/CJFA.2021.007.

Meutia, Rita, Apridar Apridar, Mursidah Mursidah, Rini Mastuti, and Muhammad Fuad. 2021. "Investment Decisions, Financing and Dividends to Increase Firm Value: A Case Study of Manufacturing Companies in Indonesia." *Economic Annals-XXI* 194 (11–12): 67–72. https://doi.org/10.21003/ea.V194-08.

Minh, Hung Phan Tran, Kim Nguyen Thi, and Loan Pham Thi Be. 2022. "The Non-Linear Impact of Financial Leverage on Cash Holdings: Empirical Evidence from Vietnam." *Cogent Business & Management* 9 (1): 2114304. https://doi.org/10.1080/23311975.2022.2114304.

Mondosha, Miriam, and Akios Majoni. 2018. "The Impact of Leverage on Investment Decisions for South African Firms with Different Growth Opportunities." *Journal of Economic and Financial Sciences* 11 (1). https://doi.org/10.4102/jef.v11i1.192.

Nan, Lin, and Xiaoyan Wen. 2023. "Financial Leverage, Information Quality, and Efficiency." *Contemporary Accounting Research* 40 (2): 1082–1106. https://doi.org/10.1111/1911-3846.12845.

Nandi, Rahul, and Pradipta Banerjee. 2024. "The Effect of Financial Leverage on Profitability and Value of Firms." In *Perspectives in Finance and Digital Transformations in Business*, 95–103. London: Routledge India. https://doi.org/10.4324/9781003470229-11.

Ngoc, Nguyen Thi Bich, Masaru Ichihashi, and Makoto Kakinaka. 2022. "The Link between Financial Leverage and Investment Decisions in Vietnam's Small and Medium-Sized Enterprises." *Asia-Pacific Journal of Accounting & Economics* 29 (4): 1090–1101. https://doi.org/10.1080/16081625.2019.1673196.

Nugroho, Ahmad Cahyo, A. Rizki, and Nina Andriany Nasution. 2019. "Investment Behaviour in Manufacturing Companies in Indonesia: Study on Leverage, Company Growth, and Cash Holding." In *Global Competitiveness: Business Transformation in the Digital Era*, 105–12. Routledge. https://doi.org/10.1201/9780429202629-21.

Nukala, Vasishta Bhargava, and S. S. Prasada Rao. 2021. "Role of Debt-to-Equity

Ratio in Project Investment Valuation, Assessing Risk and Return in Capital Markets." *Future Business Journal* 7 (1): 13. https://doi.org/10.1186/s43093-021-00058-9.

Nurdani, Ria, and Ika Yustina Rahmawati. 2020. "The Effect of Firm Sizes, Profitability, Dividend Policy, Asset Structure, Sales Growth and Free Cash Flow on Debt Policy." *AMAR (Andalas Management Review)* 4 (1): 100–119. https://doi.org/10.25077/amar.4.1.100-119.2020.

Ofulue, Igbodo, Charles Emenike Ezeagba, Nestor Ndubuisi Amahalu, and Juliet Chinyere Obi. 2022. "Financial Leverage And Financial Performance Of Quoted Industrial Goods Firms In Nigeria." *International Journal of Management Studies and Social Science Research* 4 (1): 172–81. https://www.ijmsssr.org/paper/IJMSSSR00604.pdf.

Paiva, Felipe Dias, Rodrigo Tomás Nogueira Cardoso, Gustavo Peixoto Hanaoka, and Wendel Moreira Duarte. 2019. "Decision-Making for Financial Trading: A Fusion Approach of Machine Learning and Portfolio Selection." *Expert Systems with Applications* 115 (January): 635–55. https://doi.org/10.1016/j.eswa.2018.08.003.

Pangestuti, Dewi, Ali Muktiyanto, Ira Geraldina, and Darmawan Darmawan. 2022. "Role of Profitability, Business Risk, and Intellectual Capital in Increasing Firm Value." *Journal of Indonesian Economy and Business* 37 (3): 311–38. https://doi.org/10.22146/jieb.v37i3.3564.

Papadimitri, Panagiota, Fotios Pasiouras, and Menelaos Tasiou. 2021. "Financial Leverage and Performance: The Case of Financial Technology Firms." *Applied Economics* 53 (44): 5103–21. https://doi.org/10.1080/00036846.2021.1915949.

Rostami, Vahab, Hamed Kargar, and Mahdis Samimifard. 2022. "The Effect of Managerial Myopia on the Adjustment Speed of the Company's Financial Leverage towards the Optimal Leverage." *Journal of Risk and Financial Management* 15 (12): 581. https://doi.org/10.3390/jrfm15120581.

Roychowdhury, Sugata, Nemit Shroff, and Rodrigo S. Verdi. 2019. "The Effects of Financial Reporting and Disclosure on Corporate Investment: A Review." *Journal of Accounting and Economics* 68 (2–3): 101246. https://doi.org/10.1016/j.jacceco.2019.101246.

Spence, Michael. 1973. "Job Market Signaling." *The Quarterly Journal of Economics* 87 (3): 355. https://doi.org/10.2307/1882010.

Stiadi, Doni. 2023. "Moderating Environmental, Social, and Governance (ESG) Risk in the Relationship between Investment Decisions and Firm Value." *IOP Conference Series: Earth and Environmental Science* 1177 (1): 012007. https://doi.org/10.1088/1755-1315/1177/1/012007.

Sudiyatno, Bambang, Elen Puspitasari, Titiek Suwarti, and Maulana Muhammad Asyif. 2020. "Determinants of Firm Value and Profitability: Evidence from Indonesia." *The Journal of Asian Finance, Economics and Business* 7 (11): 769–78. https://doi.org/10.13106/jafeb.2020.vol7.no11.769.

Suteja, Jaja, Ardi Gunardi, Erik Syawal Alghifari, Audrey Amelya Susiadi, Alfina Sri Yulianti, and Anggi Lestari. 2023. "Investment Decision and Firm Value: Moderating Effects of Corporate Social Responsibility and Profitability of Non-Financial Sector Companies on the Indonesia Stock Exchange." *Journal of Risk and Financial Management* 16 (1): 40.

https://doi.org/10.3390/jrfm16010040.

Taj, Saud A. 2016. "Application of Signaling Theory in Management Research: Addressing Major Gaps in Theory." *European Management Journal* 34 (4): 338–48. https://doi.org/10.1016/j.emj.2016.02.001.

Tangngisalu, Jannati, Abdul Halik, Marwan, and Edy Jumady. 2023. "Leverage Analysis, Investment Opportunity Set, and Ownership of Company Value." *Journal of Law and Sustainable Development* 11 (5): e992. https://doi.org/10.55908/sdgs.v11i5.992.

Tarek, Yasmeen. 2019. "The Impact of Financial Leverage and CSR on the Corporate Value: Egyptian Case." *International Journal of Economics and Finance* 11 (4): 74. https://doi.org/10.5539/ijef.v11n4p74.

Thach, Nguyen Ngoc, and Nguyen Thi Nhu Quynh. 2022. "Impact of Financial Leverage on Investment Decision: Case of Enterprises Listed on Ho Chi Minh Stock Exchange (Hose) in Vietnam." In *Financial Econometrics: Bayesian Analysis, Quantum Uncertainty, and Related Topics*, 285–96. Springer. https://doi.org/10.1007/978-3-030-98689-6_18.

Thi, Mo Tran, Ha Hoang Thi Thu, and Diep Nguyen Thi Thanh. 2023. "The Impact of Firm Leverage on Investment Decisions: The New Approach of Hierarchical Method." *Cogent Business & Management* 10 (2): 2209380. https://doi.org/10.1080/23311975.2023.2209380.

Tobin, James. 1969. "A General Equilibrium Approach To Monetary Theory." *Journal of Money, Credit and Banking* 1 (1): 15–29. https://doi.org/10.2307/1991374.

Vengesai, Edson. 2023. "Unveiling the Role of Investment Tangibility on Financial Leverage: Insights from African-Listed Firms." *Risks* 11 (11): 192. https://doi.org/10.3390/risks11110192.

Wang, Qingfeng, and Xu Sun. 2017. "Crude Oil Price: Demand, Supply, Economic Activity, Economic Policy Uncertainty and Wars – From the Perspective of Structural Equation Modelling (SEM)." *Energy* 133 (August): 483–90. https://doi.org/10.1016/j.energy.2017.05.147.

Yeh, Chin-Chen, Fengyi Lin, Teng-Shih Wang, and Chia-Ming Wu. 2020. "Does Corporate Social Responsibility Affect Cost of Capital in China?" *Asia Pacific Management Review* 25 (1): 1–12. https://doi.org/10.1016/j.apmrv.2019.04.001.

Zhou, Mengling, Kexin Li, and Zhongfei Chen. 2021. "Corporate Governance Quality and Financial Leverage: Evidence from China." *International Review of Financial Analysis* 73 (January): 101652. https://doi.org/10.1016/j.irfa.2020.101652.

Zuhroh, Idah. 2019. "The Effects of Liquidity, Firm Size, and Profitability on the Firm Value with Mediating Leverage." *KnE Social Sciences* 3 (13): 203–30. https://doi.org/10.18502/kss.v3i13.4206.