

Exploring The Impact of Ratio-Based Financial Behavior on the Financial Performance: Evidence from Micro, Small, and Medium Enterprises (MSMEs)

Indria Widyastuti¹, Umi Widyastuti², Etty Gurendrawati³

¹ Universitas Bina Sarana Informatika, Indonesia

^{2,3} Universitas Negeri Jakarta, Indonesia

Info Artikel

Article history:

Received Sep, 2026

Revised Sep, 2026

Accepted Sep, 2026

Kata Kunci:

Ratio, Financial Behaviour,
Financial Performance, UMKM

Keywords:

Ratio, Financial Behavior,
Financial Performance, MSMEs

ABSTRAK

Penelitian terdahulu umumnya menggunakan konsep perilaku keuangan sebagai penentu kinerja keuangan UMKM, namun penelitian ini menerapkan konsep yang berbeda, yaitu perilaku keuangan yang didasarkan pada rasio keuangan. Hal ini berarti perilaku keuangan tidak sekadar dipahami sebagai praktik pengelolaan uang secara umum, melainkan diukur secara objektif melalui indikator rasio keuangan seperti: rasio likuiditas, rasio utang, dan rasio profitabilitas. Sebagian besar penelitian mengenai UMKM mengukur variabel keuangan menggunakan persepsi responden; namun, pendekatan semacam itu memiliki kelemahan, termasuk bias persepsi, bias *social desirability* (kecenderungan memberikan jawaban yang dianggap dapat diterima secara sosial), dan objektivitas yang rendah. Sebaliknya, penelitian ini menggunakan indikator rasio keuangan sebagai proksi untuk perilaku keuangan. Akibatnya, pengukuran menjadi lebih objektif, dapat diukur secara empiris, dan memiliki landasan akademis yang kuat. Metode penelitian yang digunakan adalah penelitian kuantitatif eksplanatori dengan pendekatan survei *cross-sectional*, yang bertujuan untuk menguji hubungan kausal antara perilaku keuangan berbasis rasio dan kinerja keuangan UMKM penerima layanan keuangan mikro. Secara keseluruhan, penelitian ini menemukan bahwa perilaku keuangan berbasis rasio merupakan faktor strategis yang menjembatani kesenjangan antara akses terhadap keuangan mikro dan peningkatan kinerja keuangan UMKM. Temuan ini memperkuat pandangan bahwa keberhasilan UMKM tidak hanya bergantung pada ketersediaan modal, tetapi juga pada kemampuan pemilik usaha dalam memanfaatkan informasi keuangan secara efektif untuk mengelola, mengevaluasi, dan mengembangkan usaha mereka.

ABSTRACT

Previous studies have generally used the concept of financial behavior as a determinant of MSME financial performance, but this study employs a different concept, namely financial behavior based on financial ratios. This means that financial behavior is not merely understood as general money management practices but is objectively measured through financial ratio indicators such as: Liquidity Ratio, Debt Ratio, Profitability Ratio. Most studies on MSMEs measure financial variables using respondents' perceptions, however these approaches have weaknesses, including perceptual bias, social desirability bias, and low objectivity. In contrast, this study uses financial ratio indicators as a proxy for financial behavior.

Consequently, the measurement becomes more objective, empirically measurable, and academically robust. The research method used was explanatory quantitative research employing a cross-sectional survey approach with the aim of testing the causal relationship between ratio-based financial behavior and the financial performance of MSMEs receiving microfinance. Overall, this study found that Ratio-Based Financial Behavior is a strategic factor that bridges the gap between access to microfinance and improved financial performance of MSMEs. These findings reinforce the view that the success of MSMEs depends not only on the availability of capital, but also on the business owners' ability to effectively use financial information to manage, evaluate, and develop their businesses.

This is an open access article under the [CC BY-SA](#) license.



Corresponding Author:

Name: Indria Widyastuti

Institution Address: Universitas Bina Sarana Informatika. Jl Kramat Raya No.98, Kwitang Senen, Central Jakarta 10450

e-mail: indria.iwi@bsi.ac.id

1. INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of Indonesia's economy, contributing more than 61% to the Gross Domestic Product (GDP) and employing more than 97% of the workforce. However, despite their strategic role, MSMEs still face various challenges, particularly limited access to financing, poor financial management capabilities, and weak financial practices that support business sustainability (Alwi et al., 2025).

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of the economy in many developing countries. MSMEs contribute significantly to job creation, economic growth, and income distribution. However, despite their important role, MSMEs often face difficulties accessing formal financing sources, particularly the working capital and long-term investment needed for business expansion. (Agliardi et al., 2023) These obstacles are often caused by limited collateral, a lack of credit history, and conservative risk assessments by formal financial institutions such as commercial banks. As a result, many MSMEs rely on microfinance institutions (MFIs) to obtain business loans (Hasanah et al., 2024). Microfinance loans are credit facilities provided by MFIs to small businesses or individuals with limited creditworthiness.

The primary objective of these credit facilities is not only to provide capital but also to promote financial inclusion, economic empowerment, and the development of microenterprises. MFIs offer loan products with more flexible terms than traditional banking institutions, including unsecured schemes or group lending approaches (Vos et al., 2007).

Most previous studies have focused on the impact of financial literacy, digitalization, innovation, and working capital on MSME performance. Research by (Meldona et al., 2023) indicates that financial literacy influences MSME performance, both directly and through innovation capacity and risk attitudes. Meanwhile (Pratama et al., 2026) found that the financial well-being of MSME owners is determined not only by financial knowledge but primarily by financial behavior manifested in disciplined budgeting, record-keeping, saving, and debt management practices.

On the other hand, the study by (Brammah et al., 2021) shows that efficient working capital management—such as the management of accounts receivable, inventory, accounts payable, and the cash conversion cycle—has a significant impact on SME profitability. These findings indicate that

financial decisions, as reflected in various financial ratios, actually represent a company's financial behavior.

Nevertheless, there remains a research gap. Most previous studies have viewed financial ratios merely as performance indicators or tools for financial analysis, rather than as manifestations of business actors' financial behavior. In fact, decisions regarding liquidity, working capital turnover, funding structure, and profitability reflect the recurring financial behavior of MSME actors.

Based on the latest critical literature review on MSMEs, microfinance, financial literacy, financial behavior, and financial performance, there are several research gaps that can serve as a strong foundation for this study, namely:

1) Conceptual Gap

Previous studies generally used the concepts of financial literacy, financial capability, financial behavior, financial inclusion, and access to capital as determinants of MSME financial performance (Rahayu et al., 2023). However, this study employs a different concept: financial discipline based on financial ratios. This means that financial discipline is not merely understood as general money management behavior but is objectively measured through financial ratio indicators.

2) Measurement Gap

Most studies on MSMEs measure financial variables using respondents' perceptions, Likert scales, or simple self-assessments, even though these approaches have weaknesses, including perceptual bias, social desirability bias, and low objectivity (Alwi et al., 2025). In contrast, this study uses financial ratio indicators as a proxy for financial discipline. Consequently, the measurement becomes more objective, empirically measurable, and academically robust.

3) Research Context Gap (Contextual Gap)

Previous studies have largely examined MSMEs in general without distinguishing their sources of financing (Siregar et al., 2023), whereas this study focuses on MSMEs that are recipients of microfinance. MSMEs that receive microfinance have specific characteristics, namely limited capital, high risk levels, unstable cash flow, periodic payment obligations, and monitoring by microfinance institutions. These characteristics make financial discipline a far more critical factor compared to ordinary MSMEs.

4) Empirical Gap

The results of previous studies remain inconsistent, as some studies have found that financial literacy has a positive effect on MSME performance, while others have found that financial management or literacy has no significant effect on performance (Pratama et al., 2026). This inconsistency suggests that the variables used in previous studies may not have been able to accurately capture the quality of financial management. Ratio-based financial discipline is expected to yield results that are more representative, more concrete, and closer to the actual financial conditions of MSMEs. Thus, this study is expected to: explain the inconsistencies in previous research findings.

5) Theoretical Gap

Most previous studies have used the Theory of Planned Behavior, Financial Literacy Theory, or the Resource-Based View (Jain & Goyal, 2024). In contrast, this study aims to develop an integrated framework combining Financial Discipline Theory, Signaling Theory, Agency Theory, and Financial Ratio Analysis.

6) Methodological Gap

Previous studies have largely used simple regression, perception-based SEM, and standard cross-sectional designs (Mawardi et al., 2025).

However, few have integrated actual financial ratio data, microfinance repayment history, and financial discipline indicators based on accounting metrics.

Based on this background, the following research questions can be posed:

- a. How does financial behavior, as reflected by the liquidity ratio (current ratio), affect the financial performance (ROA) of MSMEs?
- b. How does financial behavior, as reflected by the leverage ratio (debt-to-equity ratio), affect the financial performance (ROA) of MSMEs?
- c. How does financial behavior, as reflected by both the liquidity ratio and the leverage ratio, affect the financial performance (ROA) of MSMEs?

The objectives of this study are:

- a. To analyze the significant impact of key financial ratios (such as the current ratio and debt-to-equity ratio) on the return on assets (ROA) of MSMEs.
- b. To evaluate the effectiveness of working capital management practices in improving the operational efficiency and profitability of MSMEs.

2. LITERATURE REVIEW

2.1 (*Agliardi et.al, 2023*)

The study's findings conclude that a company's environmental status is a key characteristic that distinguishes financial behavior and risk in the capital markets.

2.2 (*Ilan & Mugerman, 2025*)

This study highlights the importance of broader financial education policies and the use of technology (such as robo-advisors) to help vulnerable groups make better financial decisions.

2.3 (*Rahayu et al., 2023*)

This study underscores the importance of improving financial literacy and fostering a positive attitude toward finance among MSME actors, as well as the need for increased education on fintech to support the role of MSMEs as drivers of the economy.

2.4 (*Pratama et al., 2026*)

The researchers suggest that MSME development programs prioritize behavioral interventions and psychological empowerment alongside traditional capital access programs, particularly in areas facing economic and geographic vulnerabilities.

2.5 (*Agliardi et al., 2023*)

This study concludes that companies with a dynamic (transitional) environmental profile demonstrate the best performance in terms of risk-adjusted returns. No significant relationship was found between ESG performance and stock returns during the COVID-19 crisis or the impact of the Russia-Ukraine war.

2.6 (*Meldona et al., 2023*)

This study found that knowledge management and financial literacy have a positive effect on MSME performance. Innovation capabilities (such as product innovation) and risk attitudes (seizing opportunities) were found to be variables that partially mediate this relationship

2.7 (*Evinita et al., 2025*)

Research on MSMEs in the agriculture, fisheries, and tourism sectors in North Sulawesi shows that digitalization, sustainable development practices, and innovation have a substantial positive impact on financial performance

2.8 (*Braimah et al., 2021*)

Based on an analysis of MSME data in Ghana, this study concludes that working capital management (WCM) has a significant impact on profitability

2.9 (*Esomar et al., 2025*)

This article conducts a systematic literature review (SLR) of 48 articles from 2014 to 2024 to analyze the relationship between financial literacy and financial resilience among MSMEs. The findings indicate that financial literacy significantly enhances the

financial resilience of MSMEs by improving financial management skills, facilitating sound investment decisions, and expanding access to financial resources. A thematic analysis reveals a post-pandemic shift in focus toward digitalization and business sustainability. Although financial literacy helps MSMEs adapt to economic shocks, this study also warns of the risk of “overconfidence,” which can lead to excessive risk-taking if not accompanied by critical risk awareness.

2.10 (Pagaddut, 2021)

This study identifies the financial factors that influence the performance of MSMEs in the Philippines using financial ratios from audited financial statements. The results indicate that the debt ratio and asset turnover ratio have a significant negative effect on Return on Assets (ROA), while the gross profit margin has a significant positive effect. The current ratio was found to have no significant effect on ROA. This study categorizes these ratios into two main groups: “Sustainability” ratios (debt and asset turnover) and “Efficiency” ratios (liquidity and profit margin). It is concluded that MSMEs must remain financially independent without relying excessively on debt, and optimize their operations to generate sales by managing resources efficiently.

2.11 Research Novelty

- 1) Previous research has predominantly used a behavioral approach (Jain & Goyal, 2024), whereas this study focuses on the quantitative measurement of financial discipline based on financial statements and ratios.
This represents an important theoretical contribution because it links:
 - a. financial behavior theory,
 - b. agency theory,
 - c. financial management theory,
 - d. with the analysis of MSME financial ratios.
- 2) This study narrows its focus to the relationship between financial discipline and MSME performance within the microfinance ecosystem, an area that has rarely been specifically researched.
- 3) This study can establish a new model showing that financial discipline, as reflected in financial ratios, serves as an internal control mechanism for MSMEs that influences their sustainability and financial performance

Table 1. Position of Novelty

Aspect	Previous Research	Present Research
Main Variable	Financial Literacy / Financial Behavior	Financial Discipline
Financial Measurement	Perception / Likert Scale	Ratio
Data	Self Assessment	Financial Ratio Evidence

2.12 Grand Theory

A grand theory is needed to explain the relationship between financial management behavior and a company's financial performance. The grand theory serves as a conceptual framework that forms the basis for developing hypotheses, research models, and the interpretation of research results.

The grand theory most relevant to this study is Resource-Based Theory (RBT), supported by the Theory of Financial Management and Dynamic Capability Theory. These three theories explain how the disciplined management of financial resources can create a competitive advantage and increase business profitability.

1) Resource-Based Theory (RBT) as the Primary Grand Theory

Resource-Based Theory was first developed by Birger Wernerfelt and later expanded by Jay Barney. This theory states that an organization's success is largely

determined by the company's ability to manage its resources effectively and efficiently. (Nogueira et al., 2025).

According to RBT, a company's resources consist not only of physical assets but also include:

- a. Financial resources
- b. Human resources
- c. Organizational resources
- d. Knowledge and managerial capabilities
- e. Control and governance systems

In the context of MSMEs, financial resources are one of the strategic assets that are crucial to business sustainability. Limited capital, restricted access to financing, and high business risks make financial management a critical factor in achieving optimal performance.

The Relationship Between RBT and Financial Discipline

Financial discipline can be viewed as an organization's ability to manage financial resources consistently, measurably, and responsibly. Financial discipline is reflected in an SME's ability to maintain:

- a. A healthy level of liquidity.
- b. An optimal capital structure.
- c. Controlled use of debt.
- d. Efficient use of assets.
- e. The ability to meet financial obligations.

From an RBT perspective, the ability to manage liquidity and solvency is an internal capability that can serve as a source of competitive advantage. SMEs that are able to maintain sound financial conditions will have greater flexibility in conducting operations, making investments, and dealing with business uncertainties. These conditions will ultimately improve profitability as an indicator of financial performance

The Relevance of RBT to the Research Variables

in this study:

- a. Liquidity Ratios reflect the ability of MSMEs to manage cash and current assets.
- b. Solvency Ratios reflect the ability of MSMEs to manage their funding structure and financial risks.
- c. Profitability Ratios reflect the final outcome of the effectiveness of financial resource management.

Thus, Resource-Based Theory explains that financial discipline based on financial ratios is a form of strategic capability that enables MSMEs to achieve better financial performance.

2) Theory of Financial Management as a Supporting Theory

In addition to RBT, this study is also supported by the Theory of Financial Management, which explains that the primary objective of financial management is to maximize corporate value through the effective management of financial resources. (Liu et al., 2025).

This theory emphasizes three key financial decisions:

- a. Investment Decisions
A company must allocate funds to assets capable of generating optimal returns.

b. Financing Decisions

A company must determine the most efficient mix of funding sources between equity and debt.

c. Working Capital Management Decisions

A company must maintain a balance between liquidity and profitability.

In this study, liquidity ratios and solvency ratios serve as indicators of MSMEs' success in implementing these decisions. Excessively low liquidity can make it difficult to meet short-term obligations. Conversely, excessively high liquidity may indicate the presence of unproductive idle funds. Similarly, excessive reliance on debt can increase the risk of bankruptcy and reduce profitability.

Therefore, the Theory of Financial Management explains that sound financial discipline leads to financial balance, which ultimately enhances the profitability of MSMEs.

3) Dynamic Capability Theory as a Contextual Framework

Another relevant theory is the Dynamic Capability Theory developed by David Teece.

This theory states that organizations must have the ability to:

- a. Integrate resources.
- b. Adapt to environmental changes.
- c. Continuously develop internal competencies. (Sinanović & Johnson, 2007)

In a dynamic business environment, MSMEs often face changing market conditions, inflation, competition, and economic uncertainty. Therefore, the ability to maintain liquidity and solvency is not only a financial control tool but also a dynamic capability that enables MSMEs to survive and thrive.

Good financial discipline enables MSMEs to:

- a. Anticipate financial risks.
- b. Adjust their capital structure.
- c. Manage cash flow more effectively.
- d. Enhance their ability to generate sustainable profits

Thus, Dynamic Capability Theory reinforces the argument that the management of financial ratios is part of a company's strategic capabilities that impact financial performance.

Integration of the Grand Theory with the Research Model

Conceptually, the relationships among the research variables can be explained as follows:

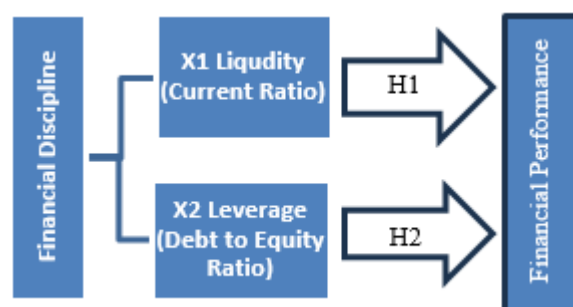


Figure 1. Conceptual Relationships Between Variables

Within this framework, Resource-Based Theory explains that the management of financial resources is a source of a company's internal advantage. The Theory of Financial Management explains the mechanisms of efficient financial management, while Dynamic Capability Theory explains the adaptability of MSMEs in maintaining financial performance through disciplined management of financial ratios.

3. METHODS

3.1 Type of Research

This study employs a quantitative approach using the explanatory research method. The quantitative approach was chosen because the study aims to test the causal relationship between independent and dependent variables, which are measured using numerical Explanatory research aims to explain the influence of financial discipline—represented by liquidity ratios and solvency ratios—on financial performance, which is measured through the profitability ratios of MSMEs. With this approach, the researchers not only describe the financial condition of MSMEs but also empirically test whether financial discipline, as reflected in liquidity management and capital structure, can improve the financial performance of these businesses. (Inayah & Susliyanti, 2025) data in the form of financial ratios.

This study is deductive in nature, meaning it develops hypotheses based on financial theories and prior research, then tests these hypotheses using empirical data obtained from MSMEs as the research subjects.

In addition, the study may employ a cross-sectional design—in which data collection takes place during a specific period—or a panel data design, in which SME financial data is collected over several consecutive years, thereby enabling a more in-depth analysis of changes in financial performance over time.(Mawardi et al., 2025).

3.2 Subject and Object of the Study

3.2.1 Research Subjects

The research subjects are MSME operators who serve as the source of research data. The selected MSMEs are businesses that have been operating continuously and have financial statements that can be analyzed.

The criteria for MSMEs serving as research subjects include:

- 1) They are officially registered with the relevant government agency.
- 2) They have financial statements covering at least the last two or three years.
- 3) They have previously received financing or business loans from formal financial institutions.
- 4) They are willing to provide the data and information required for the study.
- 5) They are still actively operating during the study period.

Research subjects may include business owners, financial managers, business treasurers, or parties responsible for managing the MSME's finances.

3.2.2 Research Object

The research object is the variable under study, namely

Independent Variable (X)

Financial Discipline based on financial ratios, consisting of:

- 1) Liquidity Ratios
These ratios describe the ability of MSMEs to meet their short-term obligations. Indicators that can be used include: Current Ratio (CR) (Wiagustini et al., 2023)
- 2) Solvency Ratios
These ratios indicate a company's ability to meet all of its obligations, both short-term and long-term. Indicators used include: Debt-to-Equity Ratio (DER) (Safarli & Hasanov, 2024)

Dependent Variable (Y)

Financial Performance, measured using profitability ratios, including: Return on Assets (ROA) (Susanti & Putra, 2025).

Through these measurements, the study can assess whether sound financial discipline can enhance MSMEs' ability to generate profits.

3.3 Time and Location of the Research

3.3.1 Research Location

The research was conducted among MSMEs operating in a specific region, namely the City and Regency of Bandung.

The selection of the location was based on the high number of active MSMEs and their contribution to the regional economy.

3.3.2 Research Timeline

The research was conducted over approximately 6 months, covering the following phases:

Phase	Duration
Proposal development	1 month
Literature review	1 month
Instrument development	1 month
Data collection	1 month
Data processing and analysis	1 month
Report preparation	1 month

Meanwhile, the financial data analyzed may be from the 2021–2025 period

3.4 Instrument Research

Research instruments are tools used to collect research data.

In this study, there are two main types of instruments.

3.4.1 Financial Statement Documentation

The main instrument consists of MSME financial statements, which include:

- 1) Balance sheet
- 2) Income statement
- 3) Sales summary
- 4) Financing or credit summary

These documents are used to calculate liquidity, solvency, and profitability ratios.

3.4.2 Interview Guidelines

Interviews are used to obtain supporting information regarding MSME financial management practices that cannot be obtained through financial statements.

3.5 The Sampling Method

The study population consists of all MSMEs that meet the study criteria within the designated area.

Since the population size is typically quite large, a sampling technique is used.

3.5.1 Purposive Sampling

Purposive sampling: a technique for selecting samples based on specific criteria is the most appropriate method for this study.

The sampling criteria include:

- 1) MSMEs that have been actively operating for at least 3 years.
- 2) Possess complete financial statements.
- 3) Have previously received financing from a financial institution.
- 4) Be willing to provide research data.

- 5) Have a turnover that meets the MSME category as defined by government regulations. (Mandagie et al., 2024)

The purposive sampling technique was chosen because not all MSMEs have adequate financial statements for analysis.

3.5.2 Determining Sample Size

To enhance the validity of the doctoral research findings, the recommended sample size is at least 100 (Anggraini & Khairunnisa, 2025).

In light of this, the researcher used data from 30 MSMEs as the units of analysis, utilizing financial statements from the 2023–2025 period, resulting in 75 data points ready for analysis.

3.6 Data Collection Method

Data collection was conducted using the following methods.

3.6.1 Document Review

- 1) The researcher collected:
- 2) Financial statements
- 3) Income statements
- 4) Data on assets and liabilities

This data was used to calculate all financial ratios.

3.6.2 In-Depth Interviews

Interviews were conducted to obtain information regarding:

- 1) Cash management
- 2) Financing policies
- 3) Strategies for improving profitability

3.6.3 Literature Review

The researcher also collected references from:

- 1) Scopus-indexed international journal articles
- 2) Web of Science (WoS) articles
- 3) Finance and accounting books
- 4) Government regulations related to MSMEs

3.7 Data Analysis Method (Data Analysis Method)

In this dissertation research, which examines the effect of financial discipline based on financial ratios on the financial performance of MSMEs, the use of the EViews software is highly appropriate because it is capable of processing financial data in the form of cross-sectional, time-series, and panel data. EViews excels in performing descriptive statistical analysis, testing classical assumptions, linear regression, panel data regression, and various hypothesis tests required in quantitative research (Ragulskis et al., 2026).

3.7.1 Research Model Development

This study uses:

Independent Variables (X):

Financial Discipline, Measured using:

X1 = Current Ratio

X2 = Debt-to-Equity Ratio

Dependent Variable (Y):

Financial Performance Measured using: Return on Assets (ROA)

The regression equation model used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + eY$$

Note:

Y = Financial Performance

α = constanta

β_1 = Likuidity

β_2 = Leverage

e = Error term

3.8 Research Hypothesis

H1: The liquidity ratio has a positive effect on the financial performance of MSMEs.

H0₁: The liquidity ratio has no effect on the financial performance of MSMEs.

H2: Solvency ratios have an effect on the financial performance of MSMEs.

H0₂: Solvency ratios have no effect on the financial performance of MSMEs.

H3: Liquidity ratios and solvency ratios simultaneously have an effect on the financial performance of MSMEs.

H0₃: Liquidity ratios and solvency ratios simultaneously have no effect on the financial performance of MSMEs.

4. RESULT AND DISCUSSION

4.1 Data Collection Result

Based on the sample data for the years 2023–2025, which consisted of 30 companies with a total of 90 observations, the minimum, maximum, mean, and standard deviation were calculated as follows:

Table 1. Descriptive Statisticks of Dependent and Independent Variables

	Y	X1	X2
Mean	0.083444	2.690756	0.842978
Median	0.076000	2.501000	0.403000
Maximum	0.334000	6.579000	5.873000
Minimum	-0.203000	0.321000	0.051000
Std. Dev.	0.089604	1.657894	1.124482
Skewness	0.279378	0.591023	2.394701
Kurtosis	3.896622	2.395966	8.860079
Jarque-Bera	4.185517	6.607842	214.7958
Probability	0.123346	0.036739	0.000000
Sum	7.510000	242.1680	75.86800
Sum Sq. Dev.	0.714572	244.6266	112.5369
Observations	90	90	90

Source : Data Processed Using Eviews 14

Financial performance, or variable Y, has a median value of 0.076000 and a mean value of 0.083444. The standard deviation of Y is 0.089604, and the range of values for variable Y is from -0.203000 to 0.334000. Average price. The data distribution for variable Y is relatively high, as evidenced by a standard deviation that is higher than average. Financial performance results appear to vary considerably among MSMEs during the study period.

The median value of the liquidity variable X1 is 2.501000, while its mean is 2.690756. The range of values for variable X1 is from 6,579,000 to 0.321,000, and its standard deviation is 1.657894. Average cost. Because the deviation is greater than normal, the data dispersion for variable X1 is somewhat large. This indicates that the ability of MSMEs to meet their short-term obligations varied slightly during the study period. MSMEs often maintained a stable cash position.

The median value for variable X2, which represents solvency, is 0.403000, while its mean is 0.842978. The standard deviation of variable X2 is 1.124482, and its range is from 5.873000 to 0.051000. The very high standard deviation (Std. Dev.) indicates a highly dispersed distribution of values for variable Y. This demonstrates how the amount of debt utilized varied over the study period. To carry out their operations, each company has diverse financial policies, as indicated by this criterion.

4.2 Model Selection Tests

4.2.1 Chow Test

To determine whether the constant-effects or general-effects model is better for estimating the regression, we can use the Chow test. When using the Chow test, note the following:

- 1) A cross-sectional chi-square probability value > 0.05 indicates that the CEM is the selected model.
- 2) If the cross-sectional chi-square probability value is < 0.05 , then the FEM is the selected model.

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	10.023606	(14,73)	0.0000
Cross-section Chi-square	96.514480	14	0.0000

Source: Data Processed using Eviews 14

The figure shows that FEM is the selected model, since the resulting cross-sectional chi-square value is $0.0000 < 0.05$.

4.2.2 Hausman Test

For panel data regression estimation, the Hausman test determines whether the REM or FEM is more appropriate. To perform the Chow test, the following conditions must be met:

- 1) If the probability value is > 0.05 , then the REM model is selected.
- 2) If the probability value is < 0.05 , then the FEM is selected as the model.

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	1.977417	2	0.3721

Figure 3. Hausman Test

Source: Data Processed using Eviews 14

Based on the figure, the cross-sectional chi-square value is $0.3721 > 0.05$; therefore, it can be concluded that the model selected in this Hausman test is REM.

4.2.3 Lagrange Test

The Lagrange test is used to determine whether the REM or CEM1 model is most appropriate for estimating panel data regression models. The following are the criteria for selecting the Chow test:

- 1) The REM model is used if the probability value is < 0.05 .
- 2) The CEM model is selected if the probability value is > 0.05 .

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	70.44310 (0.0000)	0.009751 (0.9213)	70.45285 (0.0000)
Honda	8.393039 (0.0000)	-0.098745 (0.5393)	5.864951 (0.0000)
King-Wu	8.393039 (0.0000)	-0.098745 (0.5393)	4.220776 (0.0000)
Standardized Honda	9.449413 (0.0000)	0.178038 (0.4293)	3.340898 (0.0004)
Standardized King-Wu	9.449413 (0.0000)	0.178038 (0.4293)	1.777202 (0.0378)
Gourieroux, et al.	--	--	70.44310 (0.0000)

Figure 4. Lagrange Test

Source: Data Processed using Eviews 14

The REM model was selected for this long-term test because the image-based findings showed a chi-square value of $0.0000 < 0.05$.

4.2.4 Panel Data Regression Model Test

Based on the results of the panel data model selection test using the Chow, Hausman, and Larange tests, this equation model should be estimated using REM.

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 05/26/26 Time: 23:01
Sample: 2020 2025
Periods included: 6
Cross-sections included: 15
Total panel (balanced) observations: 90
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.056084	0.022774	2.462612	0.0158
X1	0.019701	0.005641	3.492201	0.0008
X2	-0.030428	0.006818	-4.462751	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.053140	0.6258
Idiosyncratic random		0.041093	0.3742

Weighted Statistics			
R-squared	0.336353	Mean dependent var	0.025121
Adjusted R-squared	0.321096	S.D. dependent var	0.049867
S.E. of regression	0.041088	Sum squared resid	0.146875
F-statistic	22.04686	Durbin-Watson stat	1.879322
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.472554	Mean dependent var	0.083444
Sum squared resid	0.376899	Durbin-Watson stat	0.732360

Figure 5. Panel Data Regression Model Test

Source: Data Processed using Eviews 14

4.3 Classical Assumption Testing

4.3.1 Normality Test

The Following are the result of the normality test:

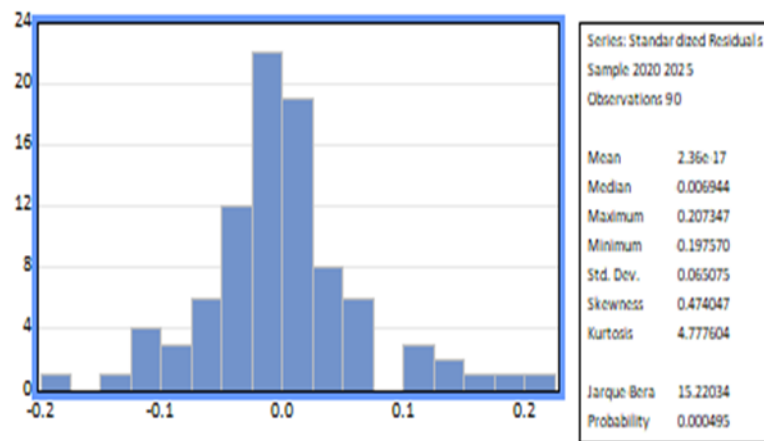


Figure 6. Normality Test

Source : Data Processed using Eviews 14

Based on the results of the normality test shown in the figure, which indicate a Jarque-Bera probability value of $0.000495 < 0.05$, the data in this study are not normally distributed. Therefore, the researcher assumed the data followed a normal distribution based on the Central Limit Theorem, which states that for large samples—particularly those with more than 30 observations ($N > 30$)—the distribution is considered normal (Usriya & Usriya, 2021). Since the sample size in this study is greater than 30 ($90 > 30$), the normality test indicates that the data are normally distributed.

4.3.2 Multicollinearity Test

To identify a regression model with strong linear relationships, a multicollinearity test was conducted among the independent variables. Inaccurate regression coefficients would result if it were impossible to isolate the effects of each independent variable due to high levels of correlation among them. The findings of the multicollinearity test are as follows:

	X1	X2
X1	1.000000	-0.487595
X2	-0.487595	1.000000

Figure 7. Multikolineritas Test

Source: Data Processed using Eviews 14

Based on the figure, it can be seen that X1 and X2 have values of $-0.487595 < 0.85$; therefore, it can be concluded that the sample does not exhibit multicollinearity among the independent variables.

4.3.3 Heteroscedasticity Test

To avoid potential confounding variables that could influence the independent variables and to ensure that the regression model does not have disproportionate residual variances, a heteroscedasticity test was conducted. Since the p-value is > 0.05 , the researchers in this study

concluded that the variables do not exhibit heteroscedasticity based on the Glejser test. The following is the heteroscedasticity test used by the researchers:

Dependent Variable: ABS(RESID)
 Method: Panel EGLS (Cross-section random effects)
 Date: 05/23/26 Time: 20:15
 Sample: 2020 2025
 Periods included: 6
 Cross-sections included: 15
 Total panel (balanced) observations: 90
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.036214	0.016952	2.136242	0.0355
X1	0.002308	0.004371	0.527943	0.5989
X2	0.002889	0.005446	0.530548	0.5971

Figure 8. Heteroskedastisitas Test

Source: Data Processed using Eviews 14

No heteroscedasticity was found in this study for X1 (probability value $0.5989 > 0.05$) and X2 (probability value $0.5971 > 0.05$), as shown in the figure. The results of this study indicate that X1 and X2 do not exhibit heteroscedasticity.

4.3.4 Autocorrelation Test

In a regression model, an autocorrelation test is used to establish the relationship between the error term at period t and the error term at period $t-1$. Autocorrelation is absent if $dU < dW < 4 - dU$. The autocorrelation test in this study is as follows

R-squared	0.336353	Mean dependent var	0.025121
Adjusted R-squared	0.321096	S.D. dependent var	0.049867
S.E. of regression	0.041088	Sum squared resid	0.146875
F-statistic	22.04686	Durbin-Watson stat	1.879322
Prob(F-statistic)	0.000000		

Figure 9. Autokorelasi Test

Source: Data Processed using Eviews 14

Based on the figure, the Durbin-Watson statistic is 1.879322, with DL at 1.6112, 4-DL at 2.3888, DU at 1.7026, and 4-DU at 2.2974. Therefore, if $dU < dW < 4 - dU$ —meaning $1.7026 < 1.879322 < 2.2974$ —it can be concluded that there is no autocorrelation in the regression model.

4.3.5 Panel Data Regression Testing

The model tests conducted in this study, including the Chow, Hausman, and Larange tests, led to the selection of the REM model. The following is a visual representation of the results of the REM panel data regression test.

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 05/26/26 Time: 23:01
Sample: 2020 2025
Periods included: 6
Cross-sections included: 15
Total panel (balanced) observations: 90
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.056084	0.022774	2.462612	0.0158
X1	0.019701	0.005641	3.492201	0.0008
X2	-0.030428	0.006818	-4.462751	0.0000

Effects Specification		S.D.	Rho
Cross-section random		0.053140	0.6258
Idiosyncratic random		0.041093	0.3742

Weighted Statistics			
R-squared	0.336353	Mean dependent var	0.025121
Adjusted R-squared	0.321096	S.D. dependent var	0.049867
S.E. of regression	0.041088	Sum squared resid	0.146875
F-statistic	22.04686	Durbin-Watson stat	1.879322
Prob(F-statistic)	0.000000		

Unweighted Statistics			
R-squared	0.472554	Mean dependent var	0.083444
Sum squared resid	0.376899	Durbin-Watson stat	0.732360

Figure 10. Data Panel Regression Test

Source: Data Processed using Eviews 14

Based on the results above, the panel data regression equation can be formulated as follows:
The interpretation of the above regression is as follows:

- 1) Assuming that X1 and X2 are constant or move in the same direction, the constant term of 0.056084427123 indicates that financial performance remains constant despite changes in the independent variables.
- 2) Liquidity variable (X1): Financial performance will increase by 1.97% for every 1% increase in liquidity, according to the regression coefficient of 0.0197009540676. This indicates a positive correlation between the liquidity ratio and the financial performance of MSMEs.
- 3) A 3.04% decrease, or -0.0304283635486, in a company's financial performance is associated with every 1% increase in solvency, according to the regression coefficient for the solvency variable (X2). This indicates that the financial performance of healthcare companies is negatively correlated with their solvency. Therefore, it is clear that a company's ability to generate cash can be affected if its financial structure relies heavily on debt.

The panel data regression equation shows that between 2020 and 2025, the financial performance of healthcare companies is positively correlated with liquidity and negatively correlated with solvency.

4.4 Hypothesis Testing

4.4.1 t-Test

The t-test, which examines the relationship between two sets of variables (dependent and independent variables), is one method for testing hypotheses. The t-test in this study

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.056084	0.022774	2.462612	0.0158
X1	0.019701	0.005641	3.492201	0.0008
X2	-0.030428	0.006818	-4.462751	0.0000

Figure 11. t Test

Source: Data Processed using Eviews 14

Based on the results of the data analysis in the figure above, the following conclusions can be drawn:

- 1) The Effect of Liquidity on the Financial Performance of MSMEs
H1: MSMEs in the 2023–2025 period are influenced by X1, which has a strong positive (negative) effect on financial performance
The t-statistic value for the liquidity ratio is 3.492201, and the probability value is $0.0008 < 0.05$. Thus, from 2023 to 2025, there is a positive and partial relationship between the liquidity ratio and the financial performance of MSMEs.
- 2) The Effect of Solvency on the Financial Performance of MSMEs for the 2023–2025 Period
H2: From 2023 to 2025, MSMEs will be significantly affected financially by X2, either positively or negatively
The solvency ratio has a t-statistic of -4.462751 and a p-value of $0.0000 < 0.05$. As a result of this solvency ratio, the financial performance of MSMEs from 2023 to 2025 will be significantly lower.

4.4.2 F-Test

By applying the F-statistic, we examine how each model variable relates to the dependent variable. In a concurrent test, a significance level of 0.05 is used. If the p-value (sig.) is less than 0.05, the null hypothesis is rejected because the dependent variable is influenced by the independent factors concurrently.

The following are the results of the completed F-test

F-statistic	22.04686
Prob(F-statistic)	0.000000

Source: Data Processed using Eviews 14

Based on the results of the data analysis in the figure above, the following conclusions can be drawn:

H3: For the years 2023–2025, (X1) and (X2) jointly influence Financial Performance (Y)

The combined effect of the two independent variables, with a probability value (F-statistic) of $0.0000 < 0.05$ and an F-statistic of 22.04686, is evident based on the findings of the F-test in the figure above using the least-squares panel model. From 2023 to 2025, the MSMEs studied are likely to see a positive impact from liquidity and solvency ratios, both individually and simultaneously.

4.4.3 R-Square

To determine whether the model is sufficiently capable of explaining the variance of the dependent variable using the independent variables, the R-squared test was used. The following are the results of the R-squared test after data processing:

R-squared	0.336353
Adjusted R-squared	0.321096

Source: Data Processed using Eviews 14

Liquidity and solvency factors can explain financial performance after controlling for other variables. Among the MSMEs studied for the years 2023–2025, (X1) and (X2) jointly influence financial performance (Y). Thus, after taking all factors into account, the research model can explain only 32.11 percent of the variance in financial performance; the remaining 68.09 percent is attributed to factors unrelated to this study.

4.4.4 The Effect of Liquidity Ratios on the Financial Performance of MSMEs for the 2023–2025 Period

It can be seen that the t-statistic is 3.492201 and the probability value is $0.0008 < 0.05$ for variable X1, which represents the liquidity ratio using the CR indicator. The significance level is $< 5\%$ (0.05); therefore, H1 is accepted as true, indicating a positive effect of the liquidity ratio on financial performance for the 2023–2025 period.

The findings of this study indicate that fulfilling financial commitments is a key component of sound financial management. The ability to conduct operational activities and mitigate the risk of financial difficulties is a sign of strong financial health, as evidenced by a high liquidity ratio. MSMEs can improve their financial performance with the support of sound liquidity conditions, which enable more efficient use of corporate resources.

4.4.5 The Effect of the Solvency Ratio on Financial Performance Among the MSMEs Studied During the 2023–2025 Period

The solvency variable (X2), measured by the DER indicator, has a probability value of $0.0000 < 0.05$ and a t-statistic of -4.462751 , according to the results of the significance test (t-test). H2 is accepted because the probability value is $< 5\%$ (0.05). The financial performance of MSMEs for the 2023–2025 period is significantly and negatively influenced by the solvency ratio.

These findings indicate a correlation between a higher debt-to-equity ratio (DER) and poorer financial performance for businesses. The higher the debt-to-equity ratio, the greater the financial pressure the company must face. When a business carries too much debt, it must set aside money each month to pay interest and the principal on its loans. The company's financial performance will be disrupted due to a reduced ability to generate profits. Consequently, MSMEs may not perform well financially from 2023 to 2025 if their solvency is high, as this indicates a reliance on external funding sources.

4.4.6 The Simultaneous Effect of Liquidity and Solvency Ratios on the Financial Performance of MSMEs for the 2023–2025 Period

Both independent variables have a substantial simultaneous impact based on the findings of the F-test in the panel least squares model, which shows a probability value (F-statistic) of $0.0000 < 0.05$ and an F-statistic of 22.04686. MSMEs in the 2023–2025 period are significantly influenced by liquidity and solvency ratios simultaneously. Thus, we accept hypothesis H3.

The findings of this study indicate that SMEs' capacity to manage liquidity and solvency simultaneously impacts financial performance. Having sufficient cash to pay short-term obligations and implementing strong solvency management can help businesses better manage their financial risks. Consequently, improved financial performance is greatly facilitated by prudent asset and debt management.

The liquidity and solvency variables were found to explain financial performance, with an adjusted R-squared value of 0.321096, or 32.11%, after accounting for the number of independent factors in the research model. Thus, after all relevant factors such as operational efficiency, company growth, profitability, and other internal and external factors are taken into account, the research

model can explain only 32.11% of the variance in financial performance. The remaining 67.89% is influenced by factors outside the scope of

5. CONCLUSION

The following are the findings from a study conducted on 30 MSME units analyzed for the 2023–2025 period:

The CR indicator and liquidity ratio (X1) have a t-statistic of 3.492201 and a p-value of 0.0008 < 0.05. The financial performance of MSMEs for the 2023–2025 period is significantly and positively influenced by the liquidity ratio.

A t-statistic of -4.462751 and a p-value of 0.0000 < 0.05 are associated with the Solvency Ratio (X2) and the DER indicator. For the years 2023–2025, MSMEs are negatively affected by the solvency ratio, according to the research findings.

The F-statistic is 22.04686, and the probability value (Liquidity and Solvency Ratios) is 0.0000 < 0.05. MSMEs in the 2023–2025 period will be significantly influenced by the liquidity and solvency ratios, both separately and in combination.

The following are several recommendations made by the author based on the study's findings that should be considered by businesses, investors, and researchers in the future:

1) For Companies

MSMEs are advised to manage and control their debt levels so that they do not exceed the company's ability to meet its obligations. High debt levels can increase financial risk and reduce the ability to generate profits. Therefore, companies need to implement appropriate financing policies to maintain a balance between debt and equity in order to support sustainable improvement in financial performance.

2) For Investors and Stakeholders

Information regarding solvency and liquidity serves as the basis for analysis and investment decision-making by stakeholders and investors. The ability to pay short-term debt and maintain smooth operations is a key indicator of a company's liquidity level, which in turn affects its financial performance. Meanwhile, the use of debt financing is common in companies with high debt-to-equity (DER) ratios, which can lead to higher financial risk and poorer financial performance. To gain a deeper understanding of a business's financial situation, risk level, and decision-making processes, investors should thoroughly evaluate both ratios.

3) For Future Researchers

Additional factors that may influence the financial success of healthcare organizations should be included in future studies. This is because the financial performance of healthcare companies varies widely, so liquidity and solvency factors alone cannot adequately explain it. Profitability, activity ratios, revenue growth, business size, capital structure, and corporate governance are some aspects that can be explored in future studies. Additionally, expanding the research to other industries could allow for a more comprehensive comparison of the factors influencing financial success across various types of businesses.

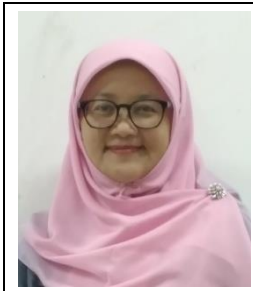
DAFTAR PUSTAKA

- Agliardi, E., Alexopoulos, T., & Karvelas, K. (2023). The environmental pillar of ESG and financial performance: A portfolio analysis. *Energy Economics*, 120(April 2022), 106598. <https://doi.org/10.1016/j.eneco.2023.106598>
- Alwi, S., Ba, M. Y., Kasim, S., Napu, F., Sari, I., Soeparyanto, W. W., & Tourism, K. B. A. Y. (2025). Гласник Српског Географског Друштва Bulletin of the Serbian Geographical Society Human Resource Development of Tourism Service Providers Through Literacy, Self-Efficacy, and Financial Literacy. 105(2), 57–76.
- Anggraini, F. D., & Khairunnisa, K. (2025). Transformasi Ekonomi Digital dan Kinerja UMKM: Analisis Pengaruh Digitalisasi Akuntansi Terhadap. *Al Dzahab*, 6(2), 95–110. <https://doi.org/10.32939/dhb.v6i2.5791>

- Braimah, A., Mu, Y., Quaye, I., & Ibrahim, A. A. (2021). Working Capital Management and SMEs Profitability in Emerging Economies: The Ghanaian Case. *SAGE Open*, 11(1). <https://doi.org/10.1177/2158244021989317>
- Esomar, M. J. F., Sumiati, S., Wijayanti, R., & Aisjah, S. (2025). Digital Financial Literacy and Resilience in MSMEs: A Bibliometric Systematic Literature Review. *International Journal of Business Innovation and Research*, 38(8). <https://doi.org/10.1504/ijbir.2025.10074779>
- Evinita, L. L., Tangkau, J. E. M., Pesak, P. J., & Cahyono, S. (2025). Policy Framework to Improve MSME Competitiveness and Financial Performance with Indonesia's Asta Cita Vision Goals. *Journal of Risk and Financial Management*, 18(12), 1–25. <https://doi.org/10.3390/jrfm18120692>
- Hasanah, S. U., Syahriza, R., & Syakir, A. (2024). Influence of the Role of Mentoring and Internal Training on Improving Access to Financial Services for Small and Medium. *Jurnal Manajemen Bisnis*, 11(2), 1766–1781.
- Ilan, M., & Mugeran, Y. (2025). Misguided mortgage choices: Financial literacy, inflation expectations, and borrowing decisions. *Journal of Behavioral and Experimental Finance*, 47(June), 101077. <https://doi.org/10.1016/j.jbef.2025.101077>
- Inayah, A., & Susliyanti, E. D. (2025). The Impact of Cloud-Based Accounting Systems on SME Financial Performance in the Digital Era. *Atestasi: Jurnal Ilmiah Akuntansi*, 8(2), 138–145. <https://doi.org/10.57178/atestasi.v8i2.1486>
- Jain, M. A., & Goyal, N. (2024). Behavioural Finance: a Bibliometric Analysis Using Scopus Database. *Sachetas*, 3(1), 26–33. <https://doi.org/10.55955/310004>
- Liu, J., Zhang, J., & Chen, Z. (2025). The effect of stock market manipulation on investor behavioral bias. *Journal of Behavioral and Experimental Finance*, 47(March), 101090. <https://doi.org/10.1016/j.jbef.2025.101090>
- Mandagie, W. C., Susanto, K. P., Endri, E., & Wiwaha, A. (2024). Corporate governance, financial performance and sustainability disclosure: Evidence from Indonesian energy companies. *Uncertain Supply Chain Management*, 12(3), 1791–1800. <https://doi.org/10.5267/j.uscm.2024.3.003>
- Mawardi, M. C., Handayati, P., Mukhlis, I., Hermawan, A., & Soetjipto, B. E. (2025). Financial behavior, self-efficacy, and entrepreneurial skills: Uncovering the determinants of culinary business performance. *Economics and Finance Letters*, 12(2), 306–313. <https://doi.org/10.18488/29.v12i2.4230>
- Meldona, Soetjipto, B. E., Utaberta, N., Wardoyo, C., & Hermawan, A. (2023). Innovation capability and risk attitude mediate the effects of knowledge management and financial literacy on MSME performance. *Journal of Social Economics Research*, 10(4), 194–214. <https://doi.org/10.18488/35.v10i4.3555>
- Nogueira, M. C., Almeida, L., & Tavares, F. O. (2025). Financial Literacy, Financial Knowledge, and Financial Behaviors in OECD Countries. *Journal of Risk and Financial Management*, 18(3), 1–15. <https://doi.org/10.3390/jrfm18030167>
- Pagaddut, J. G. (2021). The financial factors affecting the financial performance of philippine msmes. *Universal Journal of Accounting and Finance*, 9(6), 1524–1532. <https://doi.org/10.13189/ujaf.2021.090629>
- Pratama, R., Sumiati, Wijayanti, R., & Indrawati, N. K. (2026). Behavior-First finance: Reframing digital literacy and self-efficacy as drivers of MSME well-being. *Multidisciplinary Science Journal*, 8(7), 1–8. <https://doi.org/10.31893/multiscience.2026430>
- Ragulskis, T., Darškuvienė, V., Kizys, R., & Misiūnas, D. (2026). A new ESG scoring methodology for small and medium-sized enterprises. *Annals of Operations Research*. <https://doi.org/10.1007/s10479-026-07045-9>
- Rahayu, F. S., Risman, A., Firdaus, I., & Haningsih, L. (2023). The Behavioral Finance of MSME in Indonesia: Financial Literacy, Financial Technology (Fintech), and Financial Attitudes. *International Journal of Digital Entrepreneurship and Business*, 4(2), 95–107. <https://doi.org/10.52238/ideb.v4i2.127>
- Safarli, A., & Hasanov, R. (2024). Financial Performance Analysis: a Case Study of Industrial Enterprise Governance. *Journal of Governance and Regulation*, 13(3), 115–123. <https://doi.org/10.22495/jgrv13i3art10>
- Sinanović, S., & Johnson, D. H. (2007). Toward a theory of information processing. *Signal Processing*, 87(6), 1326–1344. <https://doi.org/10.1016/j.sigpro.2006.11.005>
- Siregar, R. H., Rizan, M., & Febrilia, I. (2023). Pengaruh Product Quality Dan Service Quality Terhadap Repurchase Intention Dengan Customer Satisfaction Sebagai Intervening: Studi Kasus Pada Pengunjung Di Salah Satu Toko Retail Di Jakarta Timur. *Indonesian Journal of Economy, Business, Entrepreneurship and Finance*, 3(3), 491–505. <https://doi.org/10.53067/ijebe.v3i3.120>
- Susanti, & Putra, R. (2025). Financial Literacy and MSME Performance: The Role of Access to Financing Products and Perception of Financial Risk. *Quality - Access to Success*, 26(207), 258–269. <https://doi.org/10.47750/QAS/26.207.27>

- Usriya, D., & Usriya, D. (2021). Pengaruh Non Performing Financing (NPF), Kecukupan Likuiditas, Kecukupan Modal dan Inflasi Terhadap Biaya Operasional Terhadap Pendapatan Operasional (BOPO) Pada Bank Umum Syariah Periode 2011-2017. *El-Amwal*, 4(1), 37. <https://doi.org/10.29103/el-amwal.v4i1.3947>
- Vos, E., Yeh, A. J. Y., Carter, S., & Tagg, S. (2007). The happy story of small business financing. *Journal of Banking and Finance*, 31(9), 2648–2672. <https://doi.org/10.1016/j.jbankfin.2006.09.011>
- Wiagustini, N. L. P., Ramantha, I. W., & Putra, I. M. W. (2023). Financial Literacy and Financial Behavior Encouraging Business Sustainability by Mediation of Financial Performance. *Quality - Access to Success*, 24(192), 226–234. <https://doi.org/10.47750/QAS/24.192.27>

BIOGRAPHIES OF AUTHORS



Indria Widyastuti

Since 2015, I have been actively teaching accounting at BSI University, Jakarta. I am currently pursuing a doctoral degree in accounting at Jakarta State University. For the past five years, I have been actively conducting research on MSMEs and contributing to their development through community service activities.

Email address: indria.iwi@bsi.ac.id