Volume 17, Number 2, 2025, pp 221 – 238, Jurnal Akuntansi, Program Studi Akuntansi, Fakultas Hukum dan Bisnis Digital, Universitas Kristen Maranatha. ISSN 2085-8698 | e-ISSN 2598-4977. http://journal.maranatha.edu

Financial Factors and Market Value in the Consumer Services Industry: An Empirical Study in Indonesia and Singapore

Cynthia Liusca Winata[1*]
Fakultas Ekonomi dan Bisnis, Universitas Trisakti, Jakarta Barat, Indonesia
123012404018@std.trisakti.ac.id
*corresponding author

Regina Jansen Arsjah[2]
Fakultas Ekonomi dan Bisnis, Universitas Trisakti, Jakarta Barat, Indonesia
Regina.arsjah@trisakti.ac.id

Received 03 June 2025; Revised 19 June 2025; Accepted 09 October 2025

Abstract

Purpose – This study provides a new perspective by exploring the role of gross domestic product (GDP) as a moderating variable in the relationship between solvency, liquidity, and profitability with the market value of consumer service companies in Indonesia and Singapore. The novelty of this research lies in its holistic approach to the interaction between financial factors and macroeconomic conditions, which has rarely been examined in the context of the consumer services industry in both countries.
Design/Methodology/Approach – Data was collected from consumer service companies listed on the Indonesia Stock Exchange (IDX) and Singapore Exchange (SGX) during the 2019–2023 period. This study employs panel data regression with a moderation approach, providing deeper insights into how macroeconomic variables strengthen or weaken key financial relationships.
Findings – The findings indicate that solvency, profitability, and GDP have a positive impact on market value, whereas liquidity does not have a significant effect. Additionally, GDP as a moderator weakens the relationship between solvency and liquidity with market value but does not influence the relationship between profitability and market value, suggesting that profitability remains a key indicator of company value regardless of economic fluctuations.

Research limitations/Implications – These results have strategic implications for investors and policymakers, highlighting that macroeconomic considerations should be integrated into financial analyses when assessing the valuation of consumer service companies. The novelty of this research offers a fresh perspective in designing investment strategies and regulatory policies, particularly in Indonesia and Singapore, which have unique and interconnected economic dynamics.

Keywords: Consumer Services, GDP, Liquidity, Market Value, Profitability, and Solvency

Introduction

The services industry has unique characteristics compared to other sectors, as it relies more on non-physical aspects and service quality in creating value. However, despite its significance, the impact of financial factors on market value in this industry remains underexplored, particularly in the context of Indonesia and Singapore. This study introduces a novel approach by examining the role of gross domestic product (GDP) as a moderating factor, shedding new light on how macroeconomic conditions influence the financial dynamics of consumer service companies. In Indonesia and Singapore, services companies are growing rapidly, especially in the consumer services sector which includes retail, tourism, and food & beverage services.

According to data from BPS, the consumer services industry has a significant contribution to the gross domestic product (GDP) in Indonesia. Based on the latest data, the services sector as a whole contributed IDR 51,450 billion in the first quarter of 2025, up from IDR 50,861.80 billion in the previous quarter. Some sectors in the consumer services industry that contribute to GDP include wholesale and retail trade contributing around 13.07%, provision of accommodation and eating and drinking contributes around 2.90%, corporate services contribute around 1.88% to GDP, transportation and warehousing play a role in supporting consumer service activities with a contribution of around 4.04% (BPS, 2025). In Singapore, the consumer services industry plays a major role in the economy. The services industry accounts for about 72% of the country's total GDP. Some of the key sectors in the services industry that contribute to Singapore's GDP include wholesale and retail trade contributing 18% of total GDP, business services contributing around 16%, finance and insurance contributing around 13%, transportation and storage playing a role in supporting consumer service activities contributing around 10%, information and communication contributing around 5%.

The growth of the services sector in Singapore slowed down in the first quarter of 2024, with a growth rate of 3.4%, lower than the previous quarter which reached 4.6% (Trading

Economics, 2024) . The contribution of the consumer services industry to GDP reflects the important role of this sector in the economy. As the services industry grows, the dynamics of market value of companies in the sector become increasingly relevant to investors and stakeholders in assessing business prospects and investment opportunities.

Market value (stock price) is a company's equity determined by supply and demand in the capital market (Weston & Copeland, 1992).

Market value is influenced by information available in the market, including financial reports, government policies, and macro and micro economic conditions (Sharpe et al., 1999). Market value movements are influenced by various factors, both internal to the company and external. Investors usually pay attention to various fundamental aspects before making investment decisions. Fundamental aspects including financial factors such as solvency, liquidity, and profitability can affect market value (Ramadhani & Zannati, 2018). In the consumer services sector, market value shows high volatility, due to their sensitivity to changes in consumption behavior and variations in consumer purchasing power (Irfana et al., 2021).

Solvency is a financial indicator that shows how much the ratio between total debt and total company assets. The higher the level of solvency, the greater the company's risk in facing a financial crisis (Kasmir, 2016). Solvency shows the company's ability to meet long-term financial commitments, which can affect investment risk assessment. An optimal solvency ratio can increase investor confidence and company profitability (Zainati & Zahra, 2024). Solvency has a negative impact on market value in certain companies and the need for careful management of capital structure (Ayoush et al. 2021). Consequently, an examination of the influence of solvency in the consumer services industry is essential to offer a more comprehensive understanding. Solvency can be measured through several ratios, such as Debt to Equity Ratio (DER) and Total Debt to Total Assets Ratio, which reflect a company's resilience to external financial pressures (Hanafi & Halim, 2018) .

Liquidity in a financial context refers to the company's ability to meet its short-term obligations using its current assets (Lina & Rinaldy, 2025). According to Van Horne & Wachowicz, the liquidity ratio is used to measure how well a company can meet its financial obligations that are due in the near future. This ratio reflects the balance between current assets and current liabilities, which can be analyzed through several indicators such as current ratio and quick ratio. An increased level of liquidity can increase investor confidence, thus exerting a favorable influence on equity prices (Mumtaz & Irawati, 2025). However, research by Rimadani & Rahmat (2024) revealed that liquidity does not always have a significant impact on earnings growth in the consumer cyclical sector of the IDX. This finding suggests that the effect of liquidity may vary depending on the characteristics of the industry and the time factor surrounding it.

According to Brigham & Houston (2019) in Fundamentals of Financial Management, profitability is a measure of financial performance that shows the company's ability to generate profits from its operations. Profitability can be analyzed through various financial ratios, such as Return on Assets (ROA) and Return on Equity (ROE), which help assess a company's efficiency in using its assets and equity to generate profits. Companies with high levels of ROA and ROE tend to attract more investors, which in turn can increase demand for shares and increase their prices (Putri et al., 2025). However, research conducted by Isnaini et al. (2023) revealed that profitability is not always positively related to market value, especially in companies with volatile growth. Therefore, it is important to re-evaluate the impact of profitability in the consumer services sector, which has different business characteristics from other industries.

A study by Sholichah et al. (2021) focusing on the consumer goods sector listed on the IDX found that profitability, measured using Return on Assets (ROA), has a strong positive impact on market value.

Conversely, Lestari et al. (2022), examining the same sector, concluded that profitability does not significantly influence market value. Research by Ramadhani & Zannati (2018) revealed that both profitability and solvency do not significantly affect market value, whereas liquidity does show a significant effect. On the other hand, findings from Marsela & Yantri (2021) indicate that profitability and solvency have a significant positive relationship with market value, while liquidity, measured by the current ratio, does not exhibit a significant and even negative effect.

Based on various previous studies, the relationship between financial factors and market value in the consumer services industry still shows inconsistencies. Some studies have found significant effects of profitability, solvency and liquidity on market value, while others have shown different results, especially in the context of volatile corporate growth.

This gap highlights the need for further studies to understand how financial factors affect market value in the consumer services industry, both in Indonesia and Singapore. Therefore, this study aims to identify a clearer pattern of the relationship by considering the industry characteristics as well as the economic conditions of each country. Thus, it is hoped that this research can provide more comprehensive insights for investors, financial managers, and policy makers in making more accurate and data-driven strategic decisions.

Literature Review & Hypothesis

Literature Review

Signaling theory is a way to reduce information inequality between management and investors by using signals generated by the company. Signaling theory refers to actions taken by company management to provide investors with information about the company's future prospects (Setiawati & Veronica, 2020). This theory asserts that internally informed management will provide positive signals to show

the true value of the company (Deimling et al., 2022). This theory can help explain how financial factors, such as profitability, solvency, and liquidity, serve as signals for investors in assessing market value in the consumer services industry.

Efficient Market Hypothesis (EMH)

Market value reflects the perceived worth of a company in the capital market and is influenced by various internal and external factors, including financial performance, liquidity, and investor perceptions. In addition, fundamental aspects such as earnings and assets play an important role in determining the investment attractiveness of a company (Abdallah et al., 2022). Furthermore, changes in economic and regulatory conditions can also significantly impact movements in market value, reflecting the ever-evolving market dynamics.

Solvency is the company's ability to meet its long-term financial obligations with its resources (Dahiyat et al., 2021). A high solvency ratio reflects the company's financial stability and resilience to long-lasting financial risks, so it is an important indicator in assessing the financial health of a company. In addition, companies with strong solvency levels are more attractive to investors and creditors because they are considered to have the ability to survive in uncertain economic conditions.

Liquidity reflects a company's ability to meet its short-term obligations with its current assets. A high level of liquidity is often considered an indicator of good financial health, as it suggests that the company has enough resources to cover its financial obligations without experiencing difficulties. In addition, strong liquidity can increase investor confidence, as it signals the company's stability and ability to manage its cash flow. This can have a positive impact on the market value as well as the attractiveness of the company in the capital market (Wang et al., 2023).

However, too much liquidity can also be a sign that the company is not optimizing its investments for further growth.

Profitability reflects the efficiency of the company in generating profits from its operations (Almashhadani, 2021). Profitability ratios, such as Return on Assets (ROA) and Return on Equity (ROE), are often used as key indicators to assess the financial performance of a company. In addition, profitability also plays a role in attracting investors and increasing the value of companies in the capital market.

Gross Domestic Product (GDP) is the total income generated from the sale of goods and services in a country during a certain period, which reflects the level of public welfare. Rapid GDP growth is one of the main indicators of economic expansion, indicating an increase in business activity, production, and consumption in a region (Putra et al., 2022).

Based on the definition of the variables above, the conceptual framework in this study is as follows:

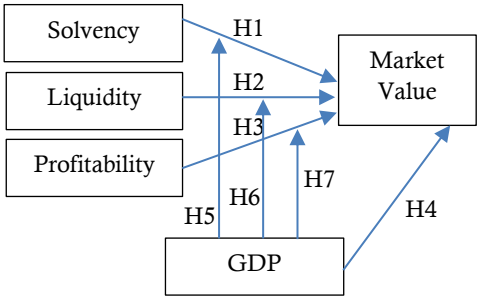

Figure 1
Conceptual Framework

Hypothesis

Solvency, typically measured through the Debt to Equity Ratio (DER), reflects a firm's ability to meet its long-term obligations and is closely tied to financial structure and stability. According to signaling theory, firms with an optimal capital structure send positive signals to investors regarding their long-term sustainability and creditworthiness (Deimling et al., 2022). A moderate level of debt is often perceived as a commitment to disciplined financial management, which can enhance investor trust and increase firm valuation.

Empirical studies provide support for this argument. Dahiyat et al. (2021) find that firms with healthier solvency positions are more attractive to investors due to reduced default risk. Similarly, Hanafi & Halim (2018) assert that investors often associate manageable debt levels with strategic financial planning, contributing to a higher stock price or market value. In the context of emerging markets, Marsela & Yantri (2021) and Zainati & Zahra (2024) report a significant positive relationship between DER and firm value, particularly in consumer-related sectors where financial resilience is crucial. These findings indicate that solvency plays a central role in shaping investor perceptions and influencing firm valuation.

Based on this theoretical and empirical background, the following hypothesis is proposed:

H1: Solvency has a positive effect on the market value of the consumer services industry in Indonesia and Singapore.

Liquidity refers to a firm's ability to meet its short-term obligations and maintain operational continuity. From a theoretical perspective, higher liquidity levels can be interpreted as a signal of financial health and managerial prudence, reducing the perceived risk of insolvency. Under signaling theory, liquidity enhances investor confidence by indicating that the firm can withstand short-term financial shocks and has sufficient working capital to support ongoing operations (Dahiyat et al., 2021; Hanafi & Halim, 2018).

Empirical research on liquidity's impact on market value has yielded mixed but often positive findings. Zainati & Zahra (2024) found that higher liquidity contributes positively to investor valuation in capital-intensive and consumer-facing industries, where cash flow management is critical. Marsela & Yantri (2021) also observed that liquidity, as measured by the current ratio, is positively associated with firm value due to its role in preserving operational flexibility and reducing financing constraints. Meanwhile, Anis & Hamdi (2022) emphasize that firms with higher liquidity tend to be viewed as safer investments,

particularly during periods of economic uncertainty.

Therefore, based on theoretical reasoning and prior empirical findings, the following hypothesis is proposed:

H2 : Liquidity has a positive effect on the market value of the consumer services industry in Indonesia and Singapore.

Profitability reflects a firm's efficiency in generating earnings relative to its assets, equity, or revenues. In capital markets, profitability is widely regarded as a key determinant of firm valuation because it indicates both current financial performance and future income potential. According to signaling theory, high profitability serves as a credible signal of firm quality, managerial effectiveness, and sustainable growth, thereby influencing investor confidence and increasing market value (Deimling et al., 2022; Hanafi & Halim, 2018).

The Efficient Market Hypothesis (EMH) also provides a relevant theoretical lens, suggesting that all publicly available financial information—such as Return on Assets (ROA)—is quickly incorporated into stock prices or market value. Thus, firms with superior profitability metrics are expected to command higher market valuations, as investors adjust their expectations about future cash flows accordingly (Read, 2013).

Empirical studies offer strong support for this proposition. Marsela & Yantri (2021) found that ROA has a significant and positive effect on firm value across firms in consumer-related sectors. Sihombing & Zakchona (2024) emphasize that profitability plays a central role in influencing stock prices, as investors place substantial weight on firms' earnings performance when making investment decisions. Sholichah et al. (2021) also report that profitability, particularly when sustained over time, enhances investor perceptions of firm stability and long-term viability, contributing to higher market value.

Given the theoretical reasoning and empirical evidence, the following hypothesis is proposed:

H3: Profitability has a positive effect on the market value of the consumer services industry in Indonesia and Singapore.

The relationship between a firm's solvency and its market value may not be uniform across economic conditions. According to contingency theory, the impact of internal organizational factors, such as financial structure, is often influenced by external environmental conditions (Donaldson, 2001). In this context, Gross Domestic Product (GDP) serves as a key macroeconomic indicator that reflects the overall health of an economy, influencing investor sentiment and risk perception.

During periods of strong economic growth—indicated by high GDP levels—investors may view firms with solid solvency ratios more favorably, as these firms are better positioned to leverage growth opportunities without incurring excessive financial risk. A higher GDP can amplify investor confidence in firms that demonstrate long-term financial sustainability through responsible capital structures. This aligns with signaling theory, which

posits that financial indicators such as solvency act as credible signals to the market. In a favorable macroeconomic environment, these signals may be interpreted more optimistically by market participants.

Empirical studies also support the moderating role of macroeconomic factors. D. Ayoush et al. (2021) found that macroeconomic conditions significantly shape how investors evaluate firm-level financial indicators. Similarly, Sholichah et al. (2021) emphasized that investor reactions to solvency metrics are more pronounced when economic indicators reflect growth and stability. These studies suggest that the positive effect of solvency on market value is likely to be stronger in high-GDP environments.

Given these theoretical and empirical insights, the following hypothesis is proposed:

H4 : GDP moderates the relationship between solvency and the market value of the consumer services industry in Indonesia and Singapore, such that higher GDP strengthens this positive relationship.

Liquidity, often assessed using the current ratio, indicates a company's capacity to fulfill its short-term liabilities and preserve financial adaptability. According to signaling theory, a high level of liquidity may serve as a favorable indicator to investors, indicating strong internal cash management and operational resilience, especially in uncertain market environments (Dahiyat et al., 2021; Hanafi & Halim, 2018). However, the effectiveness of liquidity as a signal may vary depending on the broader economic context.

Contingency theory suggests that the influence of internal financial indicators—such as liquidity—on firm performance is contingent on external factors such as macroeconomic conditions (Donaldson, 2001). In high-GDP environments, where consumer spending and business confidence are strong, investors may place greater value on firms that maintain healthy liquidity levels, as they are better positioned to capitalize on growth opportunities without facing short-term funding constraints. Empirical research supports this moderating effect. Zainati & Zahra (2024) find that liquidity becomes a more influential factor in determining firm value during favorable economic periods. Similarly, Marsela & Yantri (2021) argue that investors tend to reward liquid firms more when economic expansion increases the opportunity set for reinvestment and strategic growth. Anis & Hamdi (2022) further suggest that liquidity is more positively associated with market value in consumer-centric industries during phases of economic growth, as these firms need working capital to rapidly adjust to changing market demands.

Given this theoretical rationale and empirical evidence, the following hypothesis is proposed:

H5: GDP moderates the relationship between liquidity and the market value of the consumer services industry in Indonesia and Singapore, such that higher GDP strengthens this positive relationship.

Profitability, often measured by Return on Assets (ROA), is a fundamental indicator of firm performance and is commonly used by

investors to assess a firm's ability to generate earnings relative to its assets. From the standpoint of signaling theory, profitability serves as a powerful signal of managerial effectiveness, operational efficiency, and long-term value creation. In efficient capital markets, as posited by the Efficient Market Hypothesis (EMH), such performance metrics are quickly incorporated into a firm's market value.

However, the degree to which profitability affects market value may depend on broader economic conditions. Contingency theory explains that the impact of internal factors on performance is shaped by the external environment, including macroeconomic variables such as GDP (Donaldson, 2001). In periods of high GDP growth—signifying economic expansion and consumer optimism—investors may respond more positively to strong profitability, as they expect profitable firms to capitalize on market growth and sustain earnings in favorable conditions.

Several empirical studies reinforce this view. D. Ayoush et al. (2021) find that the valuation impact of profitability becomes more pronounced in high-growth economic contexts. Sholichah et al. (2021) & Sihombing & Zakchona (2024) highlight that macroeconomic indicators such as GDP influence investor interpretation of financial performance, especially in consumer-driven sectors. In such settings, profitability not only reflects operational success but also signals growth potential, thereby strengthening its influence on market value.

Thus, it is reasonable to expect that higher GDP will enhance the market's sensitivity to profitability as a value indicator, especially in the consumer services industry, where economic cycles closely affect demand patterns and investor sentiment.

Based on these considerations, the following hypothesis is proposed:

H6: GDP moderates the relationship between profitability and the market value of the consumer services industry in Indonesia and Singapore, such that higher GDP strengthens this positive relationship.

Research Method

This research employs a quantitative approach using secondary data, focusing on the consumer services industry in Indonesia and Singapore. A novel aspect of this study lies in its integration of GDP as a moderating variable, offering deeper insights into the interplay between financial factors and macroeconomic conditions. The sample selection uses a purposive sampling technique, ensuring the inclusion of companies that meet specific financial and macroeconomic criteria, which enhances the robustness and relevance of the analysis. The sample criteria in this study are as follows:

1. The consumer services industry listed on the Indonesia Stock Exchange in 2019-2023.
2. Consumer services industry listed on the Singapore Stock Exchange 2019-2023.

3. Publish annual report, financial report, and sustainability report 2019-2023.
4. Has a market value of 2019-2023.

The variable measurements in this study are attached to the table below.

Table 1
Variables Measurement

Variables	Measurement
Market Value (MV) (Mobonggi et al., 2022)	Period-end closing price
Solvency (N. J. Lenas & Aminah, 2022)	$\text{DER} = \frac{\text{Total Liabilities}}{\text{Total Equity}}$
Liquidity (Simamora et al., 2020)	$\text{CR} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$
Profitability (N.N. A. Suryandari & F. F. A. Mongan, 2025)	$\text{ROA} = \frac{\text{Earning After Tax}}{\text{Total Asset}}$
GDP (Aryawan, 2022)	Measures of goods production and total services of a country

The software used to analyze the data is Eviews12. For data analysis, this study uses multiple linear regression tests to evaluate the impact of two or more independent variables on one dependent variable (Tsabitah, 2025).

Common Effect Model (CEM) test is used to estimate panel data regression with the assumption that the relationship between independent and dependent variables is homogeneous across individuals and time periods. The Fixed Effect Model (FEM) test is used to test for differences in fixed characteristics between individuals in panel data, assuming that each subject has unique effects, while the slope of the relationship between variables remains similar across observations.

Random Effect Model (REM) test is used to test the effect of independent variables on the dependent variable by considering differences between individuals as part of a random error term.

The Hausman test is used to determine whether FEM or REM is more appropriate in panel data regression.

The Chow test is used in panel data regression to determine whether FEM is more appropriate than CEM by assessing the significance of the FEM model through the F statistical test. The Lagrange Multiplier (LM) test is used to determine whether REM is more appropriate than CEM in panel data regression.

In this study, several statistical tests are employed. The t-test is used to assess the individual effect of each independent variable on the dependent variable. The F-test evaluates whether all independent variables collectively have a significant influence on the dependent variable within the context of a multiple linear regression model.

Additionally, the coefficient of determination (R^2) is utilized to measure the extent to which the independent variables explain the variation in the dependent variable. The R^2 value ranges from 0 to 1, with values closer to 1 indicating a stronger explanatory power of the model.

This research also applies classical assumption testing to verify that the regression model fulfills the necessary conditions, ensuring the resulting estimates are valid, unbiased, and efficient. The classical assumption

tests include assessments for normality, multicollinearity, and heteroscedasticity.

Results and Discussion

Statistic Descriptive Analysis

Table 2
Statistic Description

	Mean	Max	Min	Std. Dev.
DER	0.9918	7.6752	0.0025	1.3021
CR	4.1435	123.7868	0.0255	11.1236
ROA	-0.0148	0.4740	-1.5646	0.194074
HI	371.3725	4200.000	0.0010	692.5141
GDP	0.1270	1.6077	-1.2574	0.306531

Source: EViews 12 (2025)

The descriptive statistics reveal considerable variation across the financial variables analyzed in this study. The Debt to Equity Ratio (DER) ranges from 0.0025 to 7.6752, with a mean of 0.9918 and a standard deviation of 1.3021. This suggests that while some firms operate with very low leverage, others are highly leveraged, indicating significant differences in capital structure strategies within the sample.

The Current Ratio (CR) shows a particularly wide spread, with a minimum of 0.0255 and a maximum of 123.7868. The mean is 4.1435, and the standard deviation is quite high at 11.1236. These values indicate that a number of firms hold unusually high levels of liquidity, possibly due to sector-specific cash flow practices or data outliers that may warrant further transformation or adjustment.

For Return on Assets (ROA), the values range from -1.5646 to 0.4740, with a low average of 0.0294 and a standard deviation of 0.1103. The presence of negative minimum values suggests that some firms were operating at a loss during the observation period, while the overall low mean indicates weak profitability across the sample.

The Market Value (represented by HI) ranges from 0.0010 to 4200.0000, with a mean of 210.2742 and a large standard deviation of 692.5141. This extreme variation may reflect differences in firm size, stock exchange dynamics, or currency effects between Indonesia and Singapore, and suggests that normalization techniques such as log transformation may be beneficial.

Lastly, the GDP variable ranges from -1.2574 to 1.6077, with a mean of 0.1270 and a standard deviation of 0.3065. The negative minimum reflects periods of economic contraction, possibly due to COVID-19, while the overall range is consistent with expected macroeconomic fluctuations in developing and developed markets.

Regression Test - Model Selection

Common Effect Model (CEM) Test

Table 3
CEM Test

R-squared	0.0579
Prob(F-statistic)	0.4728
Durbin-Watson stat	2.08

Source: EViews 12 (2025)

The CEM results show a low R-squared value (0.0579), indicating limited explanatory power. The F-statistic p-value (0.4728) suggests that the independent variables are not jointly significant. The Durbin-Watson value (2.08) may indicate

autocorrelation, warranting further diagnostic checks.

Fixed Effect Model (FEM) Test

Table 4
FEM Test

R-squared	0.3823
Adjusted R-squared	0.1121
Prob(F-statistic)	0.1025
Durbin-Watson stat	3.13

Source: EViews 12 (2025)

The FEM results show improved explanatory power (R-squared = 0.3823), but the low adjusted R-squared (0.1121) suggests limited prediction accuracy. The F-statistic p-value (0.1025) indicates the variables are not jointly significant, and the Durbin-Watson value (3.13) suggests potential autocorrelation.

Random Effect Model (REM) Test

Table 5
REM Test

R-squared	0.0566
Adjusted R-squared	0.0045
Prob(F-statistic)	0.4895
Durbin-Watson stat	2.32

Source: EViews 12 (2025)

The REM results show low explanatory power (R-squared = 0.0566; Adjusted R-squared = -0.0045), and the F-statistic p-value (0.4895) indicates no joint significance of the independent variables. The Durbin-Watson value (2.32) suggests possible mild autocorrelation.

Chow Test, Lagrange Multiplier (LM) Test, and Hausman Test - Model Selection Justification

To determine the most appropriate panel data regression model, a series of specification tests were conducted. The Chow Test compared the Common Effect Model (CEM) with the Fixed Effect Model (FEM), yielding a p-value greater than 0.05, indicating that FEM is not significantly better than CEM. The Lagrange Multiplier (LM) Test compared CEM and the Random Effect Model (REM), also resulting in a p-value above 0.05, suggesting no strong preference for REM over CEM. However, the Hausman Test, which distinguishes between REM and FEM, produced a p-value greater than 0.05, indicating that the REM is more appropriate than FEM since the random effects are uncorrelated with the independent variables. Despite all three models showing relatively low explanatory power, REM was chosen because it is more suitable for handling unobserved heterogeneity across firms in a cross-country setting (Indonesia and Singapore) and aligns with the statistical evidence from the Hausman Test. The REM also allows for more generalizable inferences under the assumption that firm-level differences are random rather than fixed.

Table 6
Summary of Tests

Test	Purpose	p-Value	Conclusion
Chow	CEM vs FEM	0.08	FEM not clearly preferred
LM	CEM vs REM	0.13	No strong preference
Hausman	REM vs FEM	0.32	Use REM

Classical Assumption Test

To ensure the reliability and validity of the regression model, classical assumption tests were conducted. The model passed all three key assumptions: normality, multicollinearity, and homoscedasticity, as summarized in the table below.

Table 7
Summary of Classical Assumption Test Results

Test Type	Result Summary	Conclusion
Normality (Jarque-Bera)	JB = 3.3516; p = 0.1724 (> 0.05)	Residuals are normally distributed
Multicollinearity	All correlation coefficients between independent variables are <	0.21
Heteroscedasticity	Prob (F-statistic) = 0.9987 (> 0.05); all variable p-values > 0.05	Homoscedasticity assumption met

Hypotheses Testing

F Test

The F-statistic value is 38.1172 with a probability of 0.000000, which is well below the 0.05 threshold. This indicates that the independent variables—Debt to Equity Ratio (DER), Current Ratio (CR), Return on Assets (ROA), and Gross Domestic Product (GDP)—jointly have a significant effect on market value (MV). The result confirms that the model as a whole has strong explanatory power, and that financial and macroeconomic indicators collectively influence firm value. This also validates the overall fit of the regression model and provides a solid basis for analyzing the individual effects of each variable in subsequent tests.

Coefficient of Determination (R^2 Test)

The R-squared value of 0.9475, or approximately 94.75%, indicates that the independent variables in the model—DER, CR, ROA, and GDP—collectively explain a substantial portion of the variation in market value (MV). This high level of explanatory power suggests that the regression model has a strong overall fit. The remaining 5.25% of the variation may be attributed to other factors not included in the model, such as industry-specific risks, investor sentiment, or unforeseen macroeconomic shocks.

Table 8
Moderated Regression Analysis (MRA) Test

Variable	Coefficient	Prob.
D(DER,2)	70.71213	0.0005
D(CR,2)	2.42033	0.2748
D(ROA,2)	193.134	0.0408
D(GDP,2)	327.9943	0.0015
D(DER*GDP,2)	-242.2265	0.0004
D(CR*GDP,2)	-3.457054	0.0069
D(ROA*GDP,2)	-12.83848	0.9634

Source: EViews 12 (2025)

Based on the table above, the regression equation in this study is as follows:

$$MV = \alpha + \beta1(DER) + \beta2(CR) + \beta3(ROA) + \beta4(GDP) + \beta5(DER*GDP) + \beta6(CR* GDP) + \beta7(ROA* GDP)$$

The table above presents the t-test results for the Random Effect Model, illustrating the individual effects of each independent variable on market value (MV). The Debt to Equity Ratio (DER) has a coefficient of 70.7121 with a p-value of 0.0005, indicating a positive and significant influence on MV. Conversely, the Current Ratio (CR) shows a coefficient of 2.4203 and a p-value of 0.2748, suggesting that its effect on MV is not statistically significant. Meanwhile, Return on Assets (ROA) exhibits a positive and significant impact, with a coefficient of 193.1340 and a p-value of 0.0408, implying that higher profitability is associated with increased market value. The Gross Domestic Product (GDP) also demonstrates a positive and significant effect on MV (coefficient = 327.9943, p = 0.0015), reflecting the relevance of macroeconomic conditions in influencing firm value.

Regarding the moderating role of GDP, the results are mixed. The interaction term DER × GDP shows a significant negative effect (coefficient = –242.2265, p = 0.0004), indicating that the positive impact of DER on MV weakens as GDP increases. Similarly, CR × GDP yields a negative and significant coefficient (–3.4571, p = 0.0069), suggesting a diminished influence of liquidity under stronger macroeconomic conditions. In contrast, ROA × GDP shows an insignificant moderating effect (coefficient = –12.8385, p = 0.9634), implying that the effect of ROA on MV remains stable across different GDP levels.

In summary, the results reveal that DER, ROA, and GDP individually have significant effects on market value, while GDP moderates the influence of DER and CR, but not ROA. This suggests that in times of stronger economic growth, investors may place less weight on solvency and liquidity indicators, while consistently valuing profitability.

Conclusion and Recommendation

Conclusion

Based on all the tests that have been carried out, the most suitable model in this study is the random effect model (REM), according to the statistical test results. This model fulfills the classical assumption test, as no multicollinearity or heteroscedasticity problems were found, so the regression results are considered valid and can be used as a basis for decision

making. In addition, based on the Moderated Regression Analysis (MRA) test, it is known that GDP as a moderating variable weakens the relationship between solvency and liquidity to market value, but does not affect the relationship between profitability and market value.

From the test results, it was found that five out of seven hypotheses were accepted, namely H1, H3, H4, H5, and H6, because they showed a positive and significant influence on the market value of the consumer services industry in Indonesia and Singapore, both directly and with GDP moderation. Meanwhile, two hypotheses were rejected, namely H2 and H7. Hypothesis H2 is rejected because the probability value is greater than 0.05, so liquidity has no significant effect on market value. Hypothesis H7 is also rejected because the test results show that GDP moderation does not affect the relationship between profitability and market value, so the effect of profitability on market value remains consistent without the influence of GDP.

The conclusion of this study confirms that the regression model used is valid without any disturbance of statistical assumptions, so the results of the analysis can be used to understand the factors that affect the market value of the consumer services industry in Indonesia and Singapore.

Recommendation

Based on the results of this study, there are several suggestions that can be considered for further research:

1. Adding Other Variables
   Future research can explore additional factors that influence the market value of the consumer services industry, such as inflation rates, interest rates, or policy-related variables. This can help both companies and government policymakers better understand the interaction between financial indicators and economic conditions, enabling more effective business strategies and regulatory frameworks.
2. Using Data with Longer Periods
   Extending the observation period can provide a more accurate picture of stock price trends and the long-term impact of financial variables. This would be beneficial for companies, as they could refine financial planning and investment decisions, while governments could use such insights to adjust economic policies that support sustainable market growth.
3. Using Different Sectors
   Expanding the research beyond the consumer services industry to sectors such as manufacturing or technology could provide a broader understanding of financial dynamics. This would help companies diversify their risk management strategies and allow governments to tailor sector-specific policies to maintain economic stability.
4. Comparative Analysis between Countries
   While this study focuses on Indonesia and Singapore, future research could compare these findings with other economies with different financial systems. This would be useful for governments,

offering insights into international financial trends and guiding cross-border policy adjustments, while companies could use such findings to optimize market entry strategies.

5. Conduct Robustness Tests for Model Validation
   To enhance the reliability of findings, future research can conduct robustness tests, such as bootstrapping methods or alternative estimation approaches. For companies, this would help ensure that financial decisions are based on strong empirical evidence, while governments could rely on more accurate financial models when designing policies that promote economic resilience.
6. Developing Policy and Business Strategy Frameworks
   Future research can focus on creating practical frameworks that integrate financial and macroeconomic factors into decision-making models for policymakers and businesses. For governments, this could help in shaping regulatory policies and fiscal strategies that support economic stability and growth. For companies, it would provide guidance on optimizing financial planning, market positioning, and competitive strategies, ensuring long-term sustainability in a dynamic economic environment.

With further development, it is hoped that further research can provide deeper insights into the factors that influence the market value of the consumer services industry and its implications for investors and economic stakeholders.

References

Abdallah, A. A., Saleh, I., Afifa, M. A., & Alsufy, F. (2022). Determinants of Market Stock Price: New Evidence From an Emerging Market. *Information Sciences Letters*, *11*(2), 549–558. https://doi.org/10.18576/isl/110223

Almashhadani, M. (2021). Internal Control Mechanisms, CSR, and Profitability: A Discussion. *International Journal of Business and Management Invention (IJBMI)*, *10*(2), 38–42.

Anis, M., & Hamdi, B. (2022). Liquidity Risk in Economic Uncertainty: Evidence From Indonesian Islamic Banks. *Ekonomi dan Keuangan Islam*, *8* (1), 32–46.

Aryawan, I. G. (2022). Gross Domestic Product, BI Rate dan Sensitivitas Kurs Terhadap Return Saham Perusahaan Terindeks LQ45. *Wacana Ekonomi (Jurnal Ekonomi, Bisnis dan Akuntansi)*, *21*(1), 64–71.

Brigham, E. F., & Houston, J. F. (2019). *Fundamentals of Financial Management* (15th ed.). Cengage Learning Publishing.

BPS. (2025, March 11). Produk Domestik Bruto Atas Dasar Harga Konstan 2010 Menurut Lapangan Usaha (miliar rupiah), 2022. https://www.bps.go.id/id/statistics-table/3/VWtsTFNuRlpabk16TWxKaVNXcE1PRXhKT0RJclFUMDkjMw==/produk-domestik-bruto-atas-dasar-harga-konstan-2010-menurut-lapangan-usaha--miliar-rupiah-.html?year=2022

D. Ayoush, M., A. Toumeh, A., & I. Shabaneh, K. (2021). Liquidity, Leverage, And Solvency: What Affects Profitability of Industrial Enterprises The Most? *Investment Management and Financial Innovations*, *18*(3), 249–259. https://doi.org/10.21511/imfi.18(3).2021.22

Dahiyat, A., Weshah, S., & Al-dahiyat, M. (2021). Liquidity And Solvency Management and its Impact on Financial Performance: Empirical Evidence From Jordan. *Journal of Asian Finance Economics and Business*, *8* (5), 135–141.

Deimling, C. A., Eßig, M., & Glas, A. H. (2022). *Signalling Theory*. Edward Elgar Publishing.

Donaldson, L. (2001). *The Contingency Theory of Organizations*. SAGE Publications, Inc. https://doi.org/10.4135/9781452229249

Hanafi, M. M., & Halim, A. (2018). *Analisis Laporan Keuangan*. Salemba Empat.

Irfana, M., Hasan, Md. M., Ahmedc, E., & Shaikhd, Z. H. (2021). Stock Market Volatility: A Pre-Post Covid19 Analysis of Emerging Markets. *Accounting and Financial Sciences Conferences*, *01*(01), 1–16. https://doi.org/10.46988/ICAF.01.12.2021.002

Isnaini, Hariyanto, D., & Ferdian, R. (2023). Analisis Pengaruh Likuiditas, Solvabilitas, Profitabilitas Terhadap Harga Saham. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, dan Akuntansi*, *1*(2), 163–175. https://doi.org/10.62421/jibema.v1i2.15

Kasmir. (2016). *Analisis Laporan Keuangan*. PT Raja Grafindo Persada.

Lestari, M. D., Karim, N. K., & Hudaya, R. (2022). Pengaruh Profitabilitas, Leverage dan Likuiditas terhadap Return Saham Perusahaan Manufaktur di Bursa Efek Indonesia. *Riset, Ekonomi, Akuntansi Dan Perpajakan (Rekan)*, *3*(1), 1–16. https://doi.org/10.30812/rekan.v3i1.1704

Lina, L., & Rinaldy, N. W. (2025). Environmental, Social, and Governance Disclosure on Firm Value: The Moderating Role of Profitability. *Jurnal Akuntansi*, *17* (1), 210–220. https://doi.org/10.28932/jam.v17i1.11629

Marsela, P., & Yantri, O. (2021). Pengaruh Profitabilitas, Likuiditas dan Solvabilitas Terhadap Harga Saham pada Sektor Transportasi yang Terdaftar di BEI Tahun 2014-2018. *Zona Keuangan*, *11*(1), 41–53.

Mobonggi, I. D., Achmad, N., Resmawan, R., & Hasan, I. K. (2022). Analisis Regresi Data Panel Dengan Pendekatan Common Effect Model dan Fixed Effect Model Pada Kasus Produksi Tanaman Jagung. *Interval : Jurnal Ilmiah Matematika*, *2*(2), 52–67. https://doi.org/10.33751/interval.v2i2.6516

Mumtaz, R. A., & Irawati, Z. (2025). Pengaruh Profitabilitas Likuiditas dan Leverage Terhadap Return Saham Perusahaan Industri Manufaktur Sub Makanan dan Minuman yang Terdaftar Dalam BEI 2021-2023. *Paradoks: Jurnal Ilmu Ekonomi*, *8*(2), 1047–1058.

N. J. Lenas, M., & Aminah, A. (2022). Analisis Rasio Solvabilitas Untuk Menilai Kinerja Keuangan Pada Perumda Air Minum Tirta Bantimurung Kabupaten Maros. *Jurnal Online Manajemen ELPEI*, *2*(2), 403–415. https://doi.org/10.58191/jomel.v2i2.100

N.N. A. Suryandari, & F. F. A. Mongan. (2025). Does Financial Characteristics Matters? Evidence From Firms Value on Banking Sector. *International Journal on Social Science, Economics and Art*, *14*(4), 410–417.

Putra, P. P., Darma, I. K., & Azis, I. S. A. (2022). Pengaruh Gross Domestic Product (GDP), Inflasi dan Profitability Terhadap Return Saham pada Sektor Infrastruktur yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2012-2019. *Warmadewa Economic Development Journal (WEDJ)*, *5*(2), 75–83.

https://doi.org/10.22225/wedj.5.2.2022.75-83

Putri, A. D., Susilowati, D., & Moorcy, N. H. (2025). Pengaruh Likuiditas, Solvabilitas, Profitabilitas, Dan Nilai Pasar Terhadap Harga Saham Perusahaan Sub sektor Food and Beverage. *Management Studies and Entrepreneurship Journal (MSEJ)*, *6*(1), 174–189.

Ramadhani, I., & Zannati, R. (2018). Pengaruh Profitabilitas, Likuiditas, Solvabilitas Terhadap Harga Saham. *Jurnal Manajemen Strategi dan Aplikasi Bisnis*, *1*(2), 59–68.

Read, C. (2013). *The Efficient Market Hypothesists*. Palgrave Macmillan UK. https://doi.org/10.1057/9781137292216

Rimadani, E. F., & Rahmat, K. (2024). Pengaruh Likuiditas, Solvabilitas dan Profitabilitas Terhadap Pertumbuhan Laba pada Sektor Consumer Cyclical yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2019 – 2023. *INNOVATIVE: Journal of Social Science Research*, *4*(4), 16868–16879.

Setiawati, M., & Veronica, E. (2020). Pengaruh Profitabilitas, Struktur Aset, Ukuran Perusahaan, Risiko Bisnis, Pertumbuhan Penjualan, Pertumbuhan Perusahaan, Likuiditas Terhadap Struktur Modal pada Perusahaan Sektor Jasa Periode 2016-2018. *Jurnal Akuntansi*, *12*(2), 294–312. https://doi.org/10.28932/jam.v12i2.2538

Sharpe, W. F., Alexander, G. J., & Bailey, J. V. (1999). *Investments: International Edition* (6th ed.). Prentice Hall International Inc.

Sholichah, F., Asfiah, N., Ambarwati, T., Widagdo, B., Ulfa, M., & Jihadi, M. (2021). The Effects of Profitability and Solvability on Stock Prices: Empirical Evidence from Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(5), 885–894.

Sihombing, P., & Zakchona, E. (2024). Determinants of Profitability, Liquidity, Solvency, and Activity Ratios on The Stock Price With Dividend Payout as Moderating Variable. *Jurnal Ekonomi dan Bisnis*, *27*(2), 1–24. https://doi.org/10.24914/jeb.v27i2.10268

Simamora, F., Novita, H., & Cantona, Y. (2020). Pengaruh Likuiditas, Profitabilitas, Solvabilitas dan Ukuran Perusahaan Terhadap Nilai Perusahaan Aneka Industri yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2015-2017. *Jurnal Ilmiah Manajemen, Ekonomi, & Akuntansi (MEA)*, *4*(3), 566–587.

Trading Economics. (2024). Singapore GDP Growth Annual. https://id.tradingeconomics.com/singapore/gdp-growth-annual

Tsabitah, A. Z. (2025). Pengaruh Current Ratio (CR) dan Debt to Equity Ratio (DER) Terhadap Harga Saham pada PT Humpus Intermoda Transportasi Tbk Periode 2014 – 2023. *Jurnal Intelek Insan Cendikia*, *2*(2), 3019–3031.

Wang, K., Li, T., San, Z., & Gao, H. (2023). How Does Corporate ESG Performance Affect Stock Liquidity? Evidence From China. *Pacific-Basin Finance Journal*, *80*(6), 102087. https://doi.org/10.1016/j.pacfin.2023.102087

Weston, J. F., & Copeland, T. E. (1992). *Managerial Finance*. Dryden Press.

Zainati, R., & Zahra, Z. (2024). Pengaruh Likuiditas Dan Solvabilitas Terhadap Profitabilitas Pada Perusahaan Sektor Industri Barang Konsumsi yang Terdaftar di BEI Periode 2020-2023. *Jurnal Administrasi Bisnis*, *4*(2), 88–94. https://doi.org/10.31294/jab.v4i2.4490