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Financial Determinants of Return on Assets: Evidence from Indonesia's Media and Entertainment Sector

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Abstract: The media and entertainment sector in Indonesia is projected to grow at a compound annual growth rate of 8.4% over 2025–2029, yet the average Return on Assets (ROA) of listed firms in this sector declined from -8.62% in 2022 to -13.42% in 2023 before fluctuating through 2025, indicating unstable profitability. Prior studies on the determinants of ROA report inconsistent findings for Cash Ratio (CR), Debt to Asset Ratio (DAR), and Total Asset Turnover (TATO), and have mostly examined the food and beverage, retail, pharmaceutical, and automotive sectors, leaving the media and entertainment sector largely unexamined. This study aims to examine the partial and simultaneous influence of CR, DAR, and TATO on ROA in media and entertainment companies listed on the Indonesia Stock Exchange during 2022–2025. Using purposive sampling, 15 of 19 listed companies were selected, yielding 60 firm-year panel observations analyzed with panel data regression in EViews. The results show that DAR has a significant negative effect on ROA, while CR and TATO have no significant partial effect; however, the three variables jointly and significantly affect ROA, with an adjusted R-squared of 8.81%. The novelty of this study lies in providing the first sector-specific empirical evidence on these financial ratios for Indonesia's media and entertainment industry, showing that leverage, rather than liquidity or asset efficiency, is the dominant financial determinant of profitability in this sector.

Keyword: Cash Ratio, Debt to Asset Ratio, Total Asset Turnover, Return on Assets, Panel Data Regression

Indonesian Abstract: *Sektor media dan hiburan di Indonesia diproyeksikan tumbuh dengan laju pertumbuhan majemuk tahunan (Compound Annual Growth Rate/CAGR) sebesar 8,4% sepanjang 2025–2029, namun rata-rata Return on Assets (ROA) dari perusahaan-perusahaan yang terdaftar di sektor ini turun dari -8,62% pada 2022 menjadi -13,42% pada 2023 sebelum berfluktuasi hingga 2025, yang mengindikasikan profitabilitas yang tidak stabil. Penelitian terdahulu mengenai faktor-faktor yang memengaruhi ROA menunjukkan hasil yang tidak konsisten untuk Cash Ratio (CR), Debt to Asset Ratio (DAR), dan Total Asset Turnover (TATO), serta sebagian besar berfokus pada sektor makanan dan minuman, ritel, farmasi, dan otomotif, sehingga meninggalkan sektor media dan hiburan yang sebagian besar belum diteliti. Penelitian ini bertujuan untuk menguji pengaruh parsial dan simultan dari CR, DAR, dan TATO terhadap ROA pada perusahaan media dan hiburan yang terdaftar di Bursa Efek*

Indonesia selama periode 2022–2025. Menggunakan metode purposive sampling, sebanyak 15 dari 19 perusahaan yang terdaftar terpilih, menghasilkan 60 observasi panel data tahun-perusahaan (firm-year) yang dianalisis menggunakan regresi data panel di EViews. Hasil penelitian menunjukkan bahwa DAR berpengaruh negatif signifikan terhadap ROA, sedangkan CR dan TATO tidak memiliki pengaruh parsial yang signifikan; namun, ketiga variabel tersebut secara bersama-sama dan signifikan memengaruhi ROA, dengan nilai Adjusted R-squared sebesar 8,81%. Kebaruan (novelty) dari penelitian ini terletak pada penyediaan bukti empiris spesifik sektor yang pertama mengenai rasio-rasio keuangan tersebut untuk industri media dan hiburan di Indonesia, yang menunjukkan bahwa leverage, alih-alih likuiditas atau efisiensi aset, merupakan faktor determinan keuangan yang dominan terhadap profitabilitas di sektor ini.

Kata Kunci: *Cash Ratio, Debt to Asset Ratio, Total Asset Turnover, Return on Assets, Panel Data Regression*

INTRODUCTION

Advances in information and communication technology have driven a fundamental shift in the media and entertainment sector. The transition of public consumption patterns from conventional to digital media requires companies in this sector to continuously adapt to sustain competitiveness. The emergence of digital platforms, social media, streaming services, and digital advertising has created both opportunities and challenges for companies seeking to optimize their asset management schemes to achieve the highest possible level of profitability.

Indonesia's media and entertainment industry is experiencing accelerated growth in line with the expanding reach of internet penetration and digital device usage. PricewaterhouseCoopers (2025) projects the industry to grow at a compound annual growth rate (CAGR) of 8.4% over 2025-2029, higher than the global average of 4.2%, driven by growth in digital content consumption, digital advertising, and streaming services. Despite these favorable prospects, not all companies in this sector achieve optimal financial performance; differences in business strategy, funding structure, asset management capability, and liquidity conditions produce varying levels of profitability across firms.

Return on Assets (ROA) is widely used as the primary measure of profitability because it reflects a firm's capacity to generate net profit from its total assets. Data from the Indonesia Stock Exchange (IDX) show that the average ROA of media and entertainment companies declined from -8.62% in 2022 to -13.42% in 2023, before recovering to 0.61% in 2024 and falling again to -2.20% in 2025. This unstable trend indicates that the profitability of firms in this sector has not been consistent from year to year, reinforcing the need to examine the financial factors that drive ROA in this industry.

This study focuses on three financial ratios representing the dimensions of liquidity, solvency, and activity: Cash Ratio (CR), Debt to Asset Ratio (DAR), and Total Asset Turnover (TATO). CR reflects a firm's readiness to settle short-term obligations using cash and cash equivalents; adequate liquidity supports smooth operations and strengthens the potential for profit generation. DAR reflects the proportion of debt used to finance total assets; while debt can provide additional capital for operational and business expansion, excessive reliance on debt increases financial risk and may threaten profitability. TATO reflects the efficiency of asset utilization in generating sales revenue; a higher turnover ratio indicates more effective management of company resources to generate income.

The relationship between CR, DAR, TATO, and ROA in this study is explained through trade-off theory, particularly to describe the linkage between capital structure and profitability. According to Brigham and Houston (2017), trade-off theory explains that firms weigh the tax-efficiency benefits of debt financing against the risk of financial distress; moderate debt levels can increase firm value through tax shields, but leverage beyond the optimal point creates financial uncertainty and undermines productivity. This theory is applied primarily to explain the effect of DAR on ROA, while the liquidity dimension (CR) and asset-efficiency dimension (TATO) are also considered as factors that may influence a firm's capacity to generate profit.

Beyond the theoretical foundation, this study is motivated by inconsistent findings in prior research. For the CR-ROA relationship, Firmanza et al. (2021) found a positive effect, Dinanti and Janudin (2024) found a negative effect, while Ferdiyansah and Simangunsong (2025) found no significant effect. For the DAR-ROA relationship, Pangestika et al. (2021) reported a negative effect, whereas Hartanti et al. (2023) found no significant relationship. For the TATO-ROA relationship, Pangestika et al. (2021) reported a positive effect, while Widjayanti and Aslamiyah (2024) found no significant effect. These inconsistencies indicate that the direction and significance of these relationships remain empirically unsettled.

In addition to this research gap, the academic literature examining the effect of CR, DAR, and TATO on ROA specifically in the media and entertainment sector on the Indonesia Stock Exchange remains very limited; most prior studies have focused on the food and beverage, retail, pharmaceutical, and automotive sectors. This is a meaningful gap because the media and entertainment sector has distinctive characteristics, being highly dependent on digital innovation, shifting public lifestyles, and the fast-moving creative economy. Based on this phenomenon, the theoretical framework, and the identified research gaps, this study seeks to examine whether Cash Ratio, Debt to Asset Ratio, and Total Asset Turnover influence Return on Assets both partially and simultaneously in media and entertainment companies listed on the Indonesia Stock Exchange during the 2022-2025 period.

METHOD

This study employs a quantitative approach with an associative research design, aimed at testing the influence of Cash Ratio (CR), Debt to Asset Ratio (DAR), and Total Asset Turnover (TATO) as independent variables on Return on Assets (ROA) as the dependent variable. The population comprises companies in the E6 Media & Entertainment subsector listed on the Indonesia Stock Exchange (IDX). Using purposive sampling with the criteria of continuous listing status, complete annual financial statements for 2022-2025, and availability of data for all research variables, 15 of 19 listed companies were selected as the research sample, yielding 60 firm-year observations in a balanced panel structure (15 companies × 4 years).

Secondary data were obtained through the documentation technique, sourced from the annual financial statements of sample companies published on the official IDX website and each company's corporate website. The variables were measured as follows: ROA = Net Income / Total Assets × 100%; CR = (Cash and Cash Equivalents) / Current Liabilities × 100%; DAR = Total Debt / Total Assets × 100%; and TATO = Net Sales / Total Assets. All variables were measured on a ratio scale.

Data were analyzed using panel data regression with the aid of EViews software, given that the data combine a cross-sectional dimension (15 media and entertainment companies) with a time-series dimension (2022-2025). The panel regression model used in this study is specified as:

$$ROAit = \alpha + \beta 1CRit + \beta 2DARit + \beta 3TATOit + \varepsilon it$$

where ROAit, CRit, DARit, and TATOit denote the respective variables for company i in year t; α is the constant; β1, β2, β3 are the regression coefficients; and εit is the error term. Model selection followed three sequential tests: the Chow test to choose between the Common Effect Model (CEM) and the Fixed Effect Model (FEM); the Lagrange Multiplier (LM) test to choose between CEM and the Random Effect Model (REM); and, where relevant, the Hausman test to choose between FEM and REM. Following model selection, classical assumption tests (normality, multicollinearity, heteroscedasticity, and autocorrelation) were conducted, and hypotheses were tested using the coefficient of determination (R^2), the F-test (simultaneous), and the t-test (partial), with a significance level of 5%.

RESULTS AND DISCUSSION

Table 1 presents the descriptive statistics of the research variables for the 60 firm-year observations.

Table 1. Descriptive Statistics

Statistic	ROA	CR	DAR	TATO
Mean	-5.9085	87.9663	57.6410	0.6300
Median	-2.1900	28.7600	37.5050	0.3350
Maximum	66.7300	817.8800	165.0400	3.3700
Minimum	-89.1200	0.0300	4.7400	0.1000
Std. Dev.	19.6842	166.2639	47.2712	0.7183
Observations	60	60	60	60

Source: EViews output, processed data (2026).

The average ROA of -5.91% confirms that media and entertainment issuers generally suffered losses and had not yet succeeded in generating profit from their assets during the observation period, with the highest value recorded by PT Visi Media Asia Tbk (VIVA) at 66.73% in 2024 and the lowest by PT Arkadia Digital Media Tbk (DIGI) at -89.12% in 2022. The standard deviation of ROA (19.68%) exceeding its mean indicates a very high degree of variability across the sample firms.

CR shows an average of 87.97% with an extreme range from 0.03% to 817.88%, reflecting a large disparity in cash-liquidity capacity, with capital-light business models such as film production and radio broadcasting recording substantially higher CR than capital-intensive pay-TV operators. DAR shows an average of 57.64%, indicating that more than half of sample firms' assets are financed through debt; PT Visi Media Asia Tbk (VIVA) recorded the highest DAR of 165.04% in 2023, indicating negative equity, while PT MD Pictures Tbk (FILM) recorded the lowest at 4.74% in 2022. TATO averages only 0.63 times, indicating that companies in this sector have generally not optimally utilized their assets to generate revenue, with intangible-asset-heavy business models (e.g., content production) partly, but not fully, explaining the low turnover observed.

The Chow test produced a cross-section Chi-square probability of 0.0846 (> 0.05), leading to acceptance of H0 and confirming that the Common Effect Model (CEM) is more appropriate than the Fixed Effect Model (FEM). The subsequent Lagrange Multiplier (Breusch-Pagan) test produced a cross-section probability of 0.6429 (> 0.05), confirming that CEM is also more appropriate than the Random Effect Model (REM). Because both tests favored CEM over the alternative models, the Hausman test which only compares FEM and REM was not required. The Common Effect Model was therefore selected as the final panel regression model.

The Jarque-Bera normality test produced a statistic of 161.55 with a probability of 0.0000 (< 0.05), indicating that the residuals are not normally distributed, driven mainly by extreme ROA observations for VIVA and DIGI. Given the relatively adequate sample size (n = 60), the hypothesis testing results remain usable, with this non-normality noted as a limitation. The multicollinearity test shows that the highest correlation among independent variables is only -0.31 (between CR and DAR), well below the 0.80 threshold, indicating no multicollinearity problem. The Panel Cross-section Heteroscedasticity Likelihood Ratio test detected heteroscedasticity in the cross-section dimension (probability 0.0000) but not in the period dimension (probability 0.9001); this was confirmed by the Glejser test, in which DAR significantly explained the absolute residuals (probability 0.0051). To correct for this, the CEM estimation was re-estimated using White cross-section standard errors, which is appropriate given the panel's relatively short time dimension (T = 4) relative to the number of cross-sections (N = 15). The Durbin-Watson statistic of 1.6930 falls between dU (1.689) and (4-dU) (2.311), indicating the absence of autocorrelation.

Table 2 presents the final CEM estimation results after correction for heteroscedasticity using White cross-section standard errors.

Table 2. Common Effect Model Estimation with White Cross-Section Standard Errors

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	4.333749	3.493740	1.240432	0.2200
CR	-0.005941	0.006859	-0.866178	0.3901
DAR	-0.149602	0.066484	-2.250183	0.0284
TATO	-1.740399	5.199512	-0.334724	0.7391

R-squared = 0.1345; Adjusted R-squared = 0.0881; F-statistic = 2.9005; Prob(F-statistic) = 0.0428; Durbin-Watson = 1.6930. Source: EViews output, processed data (2026).

Source: research data

The adjusted R-squared of 0.0881 indicates that CR, DAR, and TATO jointly explain only 8.81% of the variation in ROA, with the remaining 91.19% explained by factors outside this model. The F-test produced a probability of 0.0428 (< 0.05), leading to rejection of H0 and confirming that CR, DAR, and TATO jointly and significantly affect ROA (H4 supported), even though the model's overall explanatory power is limited. At the partial level, only DAR has a significant effect on ROA (coefficient -0.1496; probability 0.0284 < 0.05), so H2 is supported. CR (probability 0.3901) and TATO (probability 0.7391) show no significant partial effect, so H1 and H3 are not supported.

Cash Ratio shows no significant effect on ROA in this study. This suggests that the amount of cash and cash equivalents held by media and entertainment companies is not closely tied to how efficiently their assets generate profit, plausibly because profitability in this sector is driven more by content monetization, advertising revenue, and distribution activity than by cash reserves per se. This result is consistent with Ferdiyansah and Simangunsong (2025), who also found no significant CR effect, but contrasts with Firmanza et al. (2021), who found a positive effect, and Dinanti and Janudin (2024), who found a negative effect. These divergent findings are plausibly attributable to differences in research objects: both of those studies focused on a single firm in the retail and automotive sectors respectively, whereas this study uses cross-firm panel data from a sector with highly heterogeneous business models.

Debt to Asset Ratio has a significant negative effect on ROA, and is the only variable that maintains this significance consistently across CEM, FEM, and REM specifications. This finding is consistent with trade-off theory: debt can provide a tax-shield benefit up to an optimal capital structure point, but beyond that point, the interest burden and financial-distress risk erode net income and thereby reduce the efficiency with which total assets generate profit. This result aligns with Pangestika et al. (2021) and Dinanti and Janudin (2024), who also found a negative DAR effect, but differs from Hartanti et al. (2023) and Ferdiyansah and Simangunsong (2025), who found no significant relationship likely reflecting the different capital-structure needs and investment patterns of the automotive sector relative to media and entertainment.

Total Asset Turnover shows no significant effect on ROA. This indicates that the speed of asset turnover is not closely associated with profitability in this sector, plausibly because intangible assets such as broadcasting rights, digital content, and licenses assets that do not directly drive conventional sales turnover make up a meaningful share of total assets for some sample firms, although this pattern is not consistent across the full sample. This finding is consistent with Widjayanti and Aslamiyah (2024) but contrasts with Pangestika et al. (2021) and Dinanti and Janudin (2024), who found a significant positive effect in the food and beverage and automotive sectors, industries that rely more heavily on physical asset turnover (inventory and production assets) than the media and entertainment sector.

Simultaneously, CR, DAR, and TATO significantly affect ROA, confirming that these three financial ratios collectively carry explanatory relevance for profitability in this sector, even though their combined explanatory power remains limited (adjusted R^2 = 8.81%). This indicates that factors outside the scope of this study such as firm size, corporate governance quality, or digital revenue growth are likely more dominant in explaining ROA variation among media and entertainment companies. The novelty of this study lies in providing sector-specific empirical evidence, previously unavailable in the literature, showing that among liquidity, leverage, and activity ratios, leverage (DAR) is the dominant and most consistent financial determinant of profitability in Indonesia's media and entertainment sector, while liquidity and asset-turnover efficiency do not exhibit a comparable role.

CONCLUSION

This study concludes that Cash Ratio does not have a significant effect on Return on Assets in media and entertainment companies listed on the Indonesia Stock Exchange during 2022-2025, indicating that the volume of cash and cash equivalents held by these companies does not determine their capacity to generate profit from total assets. Debt to Asset Ratio has a significant negative effect on Return on Assets, confirming that a greater reliance on debt to finance total assets weakens the efficiency with which companies in this sector generate profit, consistent with the trade-off theory perspective applied in this study. Total Asset Turnover does not have a significant effect on Return on Assets, indicating that the speed of asset turnover is not closely associated with the profitability of companies in this sector during the observation period. Simultaneously, Cash Ratio, Debt to Asset Ratio, and Total Asset Turnover significantly affect Return on Assets, with an adjusted R-squared of 8.81%, confirming that these three variables jointly carry statistical relevance for explaining profitability, even though their combined explanatory power remains limited and a large share of ROA variation is explained by factors beyond the scope of this study.

This study has several limitations. The observation period is relatively short at four years (2022-2025), limiting the within-firm variation available for estimation and constraining the interpretation of the Total Asset Turnover finding in particular; the period also coincides with the post-pandemic economic recovery transition, so the financial condition of sample companies during this period may not yet fully reflect the industry's normal long-term operating conditions. In addition, the residuals of the final model do not fully satisfy the normality assumption, reflecting the presence of extreme ROA observations among sample firms, and the model's explanatory power is limited (adjusted R^2 = 8.81%), indicating that important determinants of profitability in this sector lie outside the three variables examined.

Company management in the media and entertainment sector is advised to maintain a controlled proportion of debt relative to total assets, for example by setting an internal maximum leverage threshold and re-evaluating the mix of debt versus equity financing before taking on additional liabilities, so that debt used to finance digital expansion or technology investment does not excessively erode profitability. Investors are advised to treat Debt to Asset Ratio as a key risk-mapping indicator when evaluating media and entertainment issuers, given its consistent and significant relationship with profitability, while exercising caution in relying on Cash Ratio or Total Asset Turnover alone as predictors of profitability in this sector. Future researchers are encouraged to extend the observation period to capture greater time-series variation, incorporate additional explanatory variables such as firm size, digital revenue growth, or corporate governance quality given the limited explanatory power of this model, and explore alternative heteroscedasticity-correction methods such as Panel Corrected

Standard Errors (PCSE) or Feasible Generalized Least Squares (FGLS), particularly when working with a longer panel.

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